CALL FOR PRELIMINARY PROPOSALS
2019-2021 LONG ISLAND SOUND RESEARCH

OPENING DATE: May 10, 2018
CLOSING DATE: June 20, 2018

Connecticut Sea Grant (CTSG) and New York Sea Grant (NYSG) announce the Long Island Sound Study (LISS) extra-mural research program. The intent of this program is to fund research that will support the management of Long Island Sound (LIS) and its resources. The LISS is a regional, community-based partnership to protect and restore LIS. Information on the LISS can be obtained at www.longislandsoundstudy.net.

Preliminary proposals are invited for the funding period of March 1, 2019 to February 28, 2021. Any investigator seeking support for this period (or portion thereof) must submit a preliminary proposal via NYSG's electronic submission web site www.NYSGproposal.org for receipt by **5:00 p.m. EDT on Wednesday June 20, 2018.** Hard copy, email, and fax submissions will NOT be accepted. Approximately $1,200,000 in funding is expected to be available for one or two year projects. The first year of the funding period covered by this Call for Preliminary Proposals begins on March 1, 2019. Allocation of Year 2 funds, if applicable, will be contingent on satisfactory progress in Year 1. Projects chosen for funding require approval of a Quality Assurance Project Plan (QAPP) prior to their start.

1. Topic Areas

Topic Areas
Topic areas address the 2015 Long Island Sound Comprehensive Conservation and Management Plan (CCMP), specifically the research required to address the **Ecosystem Targets** and the Outcomes, Objectives, Strategies, and Implementation Actions outlined in the CCMP.

The purpose of this Call is to *support research that will produce and integrate information to fill identified gaps in our understanding and extend the ability of managers to make informed decisions and take appropriate management actions to prevent, reduce, or mitigate anthropogenic stressors and enhance the health and sustainability of the Sound.* Referring to specific Ecosystem Targets and Strategies identified in the CCMP will facilitate reviewers' assessment of proposals for responsiveness and relevance. (Technical explanations of the Ecosystem Targets can be found in Appendix B, page 61, of the CCMP or on the LISS

web site).

Preliminary proposals (i.e., pre-proposals) in any of the five **Topic Areas** listed below are invited in this funding cycle:

1. Synthesize information that contributes directly to our ability to understand and manage anthropogenic perturbations to LIS. Example topics include but are not limited to: syntheses of LIS water quality, habitat, and/or other monitoring data to illuminate long-term trends, highlight changes, and test relationships among drivers and response variables. These syntheses need to address major LIS Ecosystem Targets as described in the 2015 CCMP such as Extent of Hypoxia and Coastal Habitat Extent or others. Such projects could use data from a variety of sources, including the CT DEEP water quality monitoring, phytoplankton and zooplankton data, Interstate Environmental Commission western LIS monitoring data, Long Island Sound Coastal Observing System (LISICOS), satellite imagery, and others. Synthetic studies could potentially combine datasets to test novel hypotheses (The Buzzards Bay[1] and Tampa Bay[2] National Estuary Programs have recently published syntheses of water quality monitoring data to demonstrate trends and improvements. A large group associated with the Chesapeake Bay Program[3] also synthesized 30 years of submerged aquatic vegetation (SAV) distribution data.).

[1] Rheuban et al. 2016. Spatial and temporal trends in summertime climate and water quality indictors in coastal embayments of Buzzards Bay, Massachusetts. Biogeosciences, 13, 253-265.

[2] Greening et al. 2014. Ecosystem responses to long-term nutrient management in an urban estuary: Tampa Bay, Florida, USA. Estuarine, Coastal and Shelf Science, Volume 151, A1–A16.

[3] Lefcheck, J.S., R.J. Orth, W.C. Dennison, D.J. Wilcox, R.R. Murphy, J. Keisman, C. Gurbisz, M. Hannam, J.B. Landry, K.A. Moore, C.J. Patrick, J. Testa, D.E. Weller, and R.A. Batiuk. 2018. Long-term nutrient reductions lead to the unprecedented recovery of a temperate coastal region. *Proc Natl Acad Sci U S A*.

2. Determine the magnitude and variability, both spatially and temporally, of water column respiration in LIS and the controls on this process. A recent review[1] has shown that in estuaries more than 20 m deep, most of the oxygen utilization occurs in the water column. This use of oxygen in the water column is a major contributor to LIS hypoxia in the Western Sound and an important parameter for the next generation of LIS models, but is presently not well-constrained. Emphasis should include identification of the components and sources of organic matter, both from in-situ production and allochthonous watershed sources.

[1]Boynton, W.R., M.A.C. Ceballos, E.M. Bailey, C.L.S. Hodgkins, J.L. Humphrey, and J.M. Testa. 2017. Oxygen and nutrient exchanges at the sediment-water interface: a global synthesis and critique of estuarine and coastal data. *Estuaries and Coasts* 41: 301-333.

3. Improve our knowledge of LIS ecosystem parameters important to management using remote sensing. This research could involve parameters such as temperature, salinity, chlorophyll *a*, sediments, colored dissolved organic matter (CDOM), and others. It could utilize archived data to address climate and other changes over time and use or develop proxies for other parameters not readily measured by satellite or other remote sensing platforms. Remote sensing-related proposals will address major LIS Ecosystem Targets such as Coastal Habitat Extent, Water Clarity, or other parameters like chlorophyll *a* which is related to the

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[Nitrogen Loading Ecosystem Target](#) . Proposals should demonstrate how remote sensing can be validated for integration with ongoing observation programs to improve understanding of Long Island Sound in ways critical for management.

4. Identify and address impediments to increasing eelgrass acreage in LIS. The 2015 CCMP has two Ecosystem Targets specifically focused on eelgrass: [Improve Water Clarity](#) by 2035 to support healthy eelgrass communities and attainment of the eelgrass extent target, and [Eelgrass Extent](#): restore and maintain an additional 2,000 acres of eelgrass by 2035 from a 2012 baseline of 2,061 acres. Eelgrass is currently confined to the eastern end of LIS, although in theory a much larger area of the Sound should be available for colonization (See the [LIS Habitat Suitability Index Model](#). Preliminary information from the most recent 2017 eelgrass survey indicates a possible 23% loss of eelgrass from the previous total of 2,061 acres in 2012. Research is needed to identify factors which may limit eelgrass in LIS, including water clarity, temperature, water quality, and others, and to develop management strategies for addressing these limitations. Research is also needed to clarify factors that limit the success of restoration projects. Research projects may involve a variety of methods, though investigators contemplating remote sensing applications to eelgrass coverage may want to contact those involved in the current regional [EPA RARE Eelgrass Project](#).

5. Assess the knowledge and engagement of Long Island Sound watershed residents in Connecticut and New York relating to enhancing behaviors that contribute to environmental stewardship. The LISS supported a 2006 [Public Perception Survey](#)[1] (PPS) to better understand the perceptions, knowledge, and behaviors of Long Island Sound watershed residents. The survey provided information on the relationship between citizens' perception of water quality and their enjoyment of Long Island Sound as well as on whether knowledge and awareness of environmental issues increased willingness to practice behaviors that reduce pollution. LISS is seeking further social science research that will provide an update and comparison to the 2006 study, and assess if other factors such as community norms influence behaviors, in addition to perceptions, awareness, and knowledge. The information should help LISS and its partners identify the direction of future behaviors and develop educational and outreach efforts. The research could also help LISS track the CCMP's [Public Engagement and Knowledge Ecosystem Target](#) by providing new data points to the 2006 baseline. Relevant topics, include, but are not limited to:

- Homeowners' understanding of the contribution of lawn care practices to water pollution and their willingness to adopt new behaviors.
- Homeowners' understanding of the impacts of other behaviors that impact the Sound, such as improper disposal of pet waste, trash, including plastics and other pollutants such as used motor oil.
- Greater understanding of how citizens' perceptions of Long Island Sound impact their enjoyment of recreational activities such as swimming, fishing, boating, or consuming local fish and shellfish.

- Greater understanding of what motivates Long Island Sound residents to volunteer and engage in community activities to improve the Sound.

[1] Stony Brook University Center for Survey Research. 2006. Public Perception Survey of Long Island Sound Watershed Residents. Department of Political Science, Stony Brook University.

Applicants must specify which Topic Area or Areas (1-5) their pre-proposal addresses. Applicants must clearly identify and provide specific examples of how their research projects can inform management decisions and help to address impairments to LIS. Submissions that merely state that the information generated has value to managers, without adequate elaboration, will likely not be sufficiently compelling.

For the purposes of this RFP, research is defined as scientific endeavors with **explicit and testable hypotheses** that strive to answer "why" and "how" questions. Research questions may be derived from either the natural or social sciences. Within the scope of this RFP, proposals that focus primarily on describing or monitoring conditions and do not identify or test a specific hypothesis will not be considered.

2. Duration and Funding
The program anticipates awarding approximately $1,200,000 to cover the entire duration of all selected projects. The program will support one or two year projects. **The maximum amount of funding available per project is $200,000/year for a maximum of $400,000/project and this must include all direct plus indirect costs**. Proposals that exceed this amount will be discarded without review.

***NEW THIS YEAR: This funding Call requires that at least 25% of the aggregate federal dollars received under any award made through this Call must be matched by state or private funds. This Call therefore requires that proposals include at least a 25% match, i.e. $1.00 in non-federal match for every $4.00 requested.

3. Eligibility
Pre-proposals from the following eligible categories will be considered for funding:
   A. Faculty at universities and colleges,
   B. Researchers at not-for-profit institutions,
   C. Researchers who are personnel of state or local agencies, and
   D. Researchers at for-profit institutions or companies.

Eligibility is not limited to individuals from New York and Connecticut. However, the primary professional base of the lead investigator must be in the United States. U.S. citizens located in other countries are not eligible. Federal employees and institutions are not eligible to receive compensation, equipment, or budgeted items of any sort, but they may be involved with the project. Students and NYSG and CTSG staff cannot serve as Principal Investigators, co-PIs, or Associate Investigators. Members of the STAC may serve as PIs or co-PIs and may receive funding under this initiative.

4. Review
All pre-proposals that meet all specified requirements will be screened by a Panel established by CTSG and NYSG that will include scientific peers from unaffiliated institutions and one representative each from CTSG, NYSG, EPA, NYSDEC and CTDEEP. The Panel will use the following criteria, scoring, and weighting in rating pre-proposals:
   A. Likelihood that the project will be successful in fulfilling its objectives (0-5) 30%
   B. Rationale and responsiveness to the Topic Areas identified in the Call (0-5)   30%
   C. Usefulness of the anticipated results, as described in the submission, to inform and direct management of LIS and its resources (0-5)   40%

Pre-proposals will be ranked on their average total scores. Each lead investigator will receive a summary of the Panel scores for his/her pre-proposal. Full proposals will be encouraged only from those prospective principal investigators with the highest-ranked preliminary proposals. The estimated pool for funding is $1,200,000 but note that there is no *a priori* projection or target for the number of proposals that will ultimately be supported. Instructions for full proposal submissions will be provided to the PIs for those full proposals which are encouraged.

5. Preliminary Proposal Requirements
A preliminary proposal, while not as detailed as a full proposal, should clearly and succinctly define the objectives, approach, and rationale for the project. The anticipated benefits (i.e., the usefulness) of the proposed work must also be described, that is, specifically how the proposed work will enhance understanding and management of Long Island Sound. **General statements simply expressing that there will be value in the information generated from the proposed research will not be sufficiently compelling**.

Pre-proposals requesting funding that is complementary to that sought from other sponsors are welcome. In this case, other funding sources and amounts should be disclosed, and work being funded or proposed elsewhere should be distinguished from, and not duplicative of, work proposed under this Call.

All preliminary proposals must be submitted using the format and categories described at the end of this announcement. No appendices or other attachments are permitted. Investigators should ensure that all information is provided and that pre-proposal components follow the specified format.

The preliminary proposal project description must conform to stated page limitations, including minimum 1-inch margins and 12-point font of Times New Roman or equivalent. Illustrations and tables must be of legible size, and are *included* in the page limitation. References cited may be included as a separate section, *in addition* to stated page limits.

The completed Pre-proposal Submission Form (see end of this announcement) must be received via www.NYSGproposal.org as a single pdf by the closing ***deadline of 5:00 p.m. EDT on June 20, 2018***. Hard copy, email, and fax submissions will NOT be accepted. Please note that, although the submissions are to NYSG's web site, this is a jointly administered funding opportunity and all the submissions will be processed by both programs, CTSG and

NYSG, as a single pool. *Preliminary proposals that are not received by this deadline will be discarded without review, as will preliminary proposals that fail to comply with content, format, budget, and other requirements. Note that submissions with sections that exceed specified page limitations will be rejected, not truncated.* We want all submissions to have a fair and equal opportunity, so please be sure to carefully follow the instructions. Unless required by your institution, it is not necessary for your University (or institution) sponsored programs office to formally approve your preliminary proposal prior to submission.

Each lead applicant will be notified by August 13, 2018**,** about whether or not a full proposal is encouraged. A summary of Panel results will be provided by August 30, 2018. Note that submission of full proposals will only be encouraged for those prospective principal investigators with the highest-ranked preliminary proposals following the Panel review and evaluation. For those investigators encouraged to submit full proposals, the deadline for these full proposals is Wednesday, October 3, 2018 at 5:00 p.m. EDT.

The total budget request for a project may not exceed $400,000 for the entire project, or $200,000 for each year, including all direct and indirect costs.

Please double-check your Pre-proposal Submission Form file before uploading at the submission web site www.NYSGproposal.org to make sure it is a PC-readable pdf and that it is your final version. ***Warning!!*** **Do not wait until just before the deadline** in case you encounter technical difficulties with your computer or unexpected network issues. Note that the deadline time is based on the server clock and not your computer clock. Be sure to pay attention to the server time and remaining time as displayed on the submission form page. For best results, it is recommended that you use your office computer at your institution to submit your pre-proposal. Allowing yourself plenty of time (at least several hours, if not days) to submit is highly recommended. Sending a test submission is allowable, if you identify it as such. You will receive an auto-receipt with a time and date stamp from the web site confirming your submission, but this is not an indication that your file is readable. If the file contains a virus or is unreadable, your submission cannot be accepted.

6. Schedule
- May 10, 2018 -- Sea Grant announces Call for Pre-proposals
- June 20 -- Pre-proposals are due by 5:00 p.m. EDT via www.NYSGproposal.org
- August 13 -- Sea Grant notifies lead investigators about whether or not a full proposal is encouraged
- August 30 -- Sea Grant distributes to all lead investigators a summary of Pre-proposal Review Panel results for his/her submission
- October 3 -- Full proposals are due by 5:00 p.m. EDT via www.NYSGproposal.org
- December 17 -- Sea Grant notifies lead investigators about decisions
- January 7 -- Provide peer reviews and a summary of Full Proposal Review Panel results

- March 1, 2019 -- Year 1 funding starts; the completion, submission and approval of a QAPP is required. No data collection can be conducted by PIs until a QAPP has been approved.
- March 1, 2020 -- Year 2 funding starts if a QAPP has been submitted and approved and Year 1 progress is satisfactory.

7. If you have questions, contact:

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Please be sure to use the format and provide the information as described below. Submissions that do not include the required sections and information will be rejected as incomplete. Likewise, submissions that do not follow the specified instructions below or as indicated elsewhere in the Call will also be rejected as not meeting the submission requirements.

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

2. BRIEF PROJECT TITLE:

3. INVESTIGATOR(S) and ELIGIBILITY: List **all** principal, co-principal, and associate investigators, including name, address, telephone, and email for each. *Also* indicate eligibility category for each (see Section 3 and specify A, B, C, or D).

4. PROJECT TOPIC AREA(s): Specify by number(s) (1-5) the Topic Area or Areas listed in Section 1 of the Call that the pre-proposal addresses.

5. BUDGET: Total of direct plus indirect costs ($400,000 max).
    A. Estimated Funding Request $_____

    B. Anticipated Non-Federal Cost-Share Provided (25% required) $_____

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

6. BRIEF DESCRIPTION OF PROJECT: Starting on a *new* page, use <u>up to two pages</u> of text with the following a-c headings to describe your proposed project. Use all-around margins of at least 1" and a font size no less than #12 Times New Roman or equivalent.

a) **OBJECTIVES and APPROACH:** List the overall objectives of your proposed study, with a statement of the hypothesis(es) to be tested. Or, if this is model development or a synthesis effort, clearly state the intent. Include brief information about the approach to be used and whether there are linkages to other past, current, or proposed efforts.

b) **RATIONALE, and RESPONSIVENESS TO THE TOPIC AREA:** Explain the rationale for, and significance of, the proposed project to Long Island Sound in addressing the Topic Area(s) you have identified above in #4.

c) **USEFULNESS OF THE ANTICIPATED RESULTS TO MANAGEMENT:** Explain how the research and anticipated results can be used to inform and direct management of Long Island Sound and its resources. It is up to the pre-proposal to provide specific examples.

7. LITERATURE CITED: Starting on a new page, present the full citations for any work referenced under #6, where they may be labeled as (1), etc. The space required to list the literature cited is not counted under the 2-page maximum for #6 (Brief Description of Project).

8. REVIEWERS: You are invited to list three potential peer reviewers who would not have a conflict of interest with you, your team, or your institution, in case you are encouraged to submit a full proposal. We may or may not use these peers, so there is no need for you to contact them. If there is anyone who you feel should *not* be asked to provide a review, you may list up to two people and we will do our best to accommodate this request. Leaving Section 8 blank is acceptable.