



## Long Island Sound Study National Estuary Program

### REQUEST FOR PROPOSALS

#### GIS-Based Eelgrass Habitat Suitability Model

**April 2024**

NEIWPCC, in cooperation with the Long Island Sound Study National Estuary Program and its partners, is inviting proposals for the development of a GIS-based eelgrass habitat suitability model. The purpose of this project is to aid Long Island Sound Study (LISS) partners in the implementation of LISS program objectives, particularly in the protection and restoration of a vulnerable species and its habitat. The results of the project will update and enhance the existing Long Island Eelgrass Habitat Suitability Index Model to include new data that is current with the new threats, environmental conditions, and needs.

Applicants must submit proposals in accordance with the procedures set forth below no later than **12:00 p.m. (noon) on May 31, 2024**.

NEIWPCC's award decisions are contingent on the proponent's successful negotiation of a contract with NEIWPCC. NEIWPCC contract resources are available [here](#). To expedite the contracting process, NEIWPCC expects applicants to review NEIWPCC's standard contract terms before submitting a proposal. NEIWPCC will add a negotiated scope of work or workplan and budget to the standard contract terms after the award decision. NEIWPCC generally does not negotiate the standard contract terms.

This request for proposals (RFP) includes information on:

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- II. **Project Goal**
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### I. Overview

#### NEIWPCC

NEIWPCC is a regional commission that helps the states of the Northeast preserve and advance water quality. We engage and convene water quality professionals and other interested parties from New England and New York to collaborate on water, wastewater, and environmental science challenges across shared regions, ecosystems, and areas of expertise. Our mission is to advance clean water in the Northeast through collaboration with, and service to, our member states. NEIWPCC's vision is for clean and sustainable water throughout the Northeast. We base our work on the core values of leadership, collaboration, education, service, and science.

#### Long Island Sound Study

Long Island Sound is one of North America's most urban and biologically diverse estuaries. Although the Sound is a resource of extraordinary productivity, it is under significant stress. Accordingly, in 1985 the states of Connecticut and New York and the U.S. Environmental Protection Agency (EPA) recognized Long Island Sound as an Estuary of National Significance. In 1994, the state and federal partners approved the [Long Island Sound Study Comprehensive Conservation and Management Plan](#) (LISS CCMP), which established an overall plan to restore and protect the Sound. In 2015, the CCMP was revised to set ambitious but achievable goals and ecosystem targets. A second revision of the CCMP is expected to be released in [2025](#).

Applicants are encouraged to review the LISS website (<http://www.longislandsoundstudy.net>) for general information about the LISS program. Applicants are also encouraged to discuss their project plans with the RFP topic contacts (identified in Section IX).

### II. Project Goal

The LISS has identified eelgrass meadows (*Zostera marina* L.) to be a priority habitat for conservation and restoration in the CCMP. Globally, eelgrasses provide nursery habitat, predation refuge, and food sources for key species. Characterized as an ecosystem target under the Thriving Habitats and Abundant Wildlife theme within the CCMP, eelgrass extent has dramatically declined due to a die-off induced by wasting disease (caused by fungus *Labryinthuyla macrocyctis*). Following the die-off, eelgrass returned, but only to the eastern Sound in Connecticut and the north fork of Long Island, Plum Island, and Fishers Island in New York. Additional influences such as nitrogen inputs and limited light availability (Koch and Beer, 1996) have slowed redistribution and productivity eelgrass meadows to their former historic spread, particularly in western Long Island Sound (LIS). In a pledge to memorialize eelgrass extent, LISS created a goal to restore and maintain an additional 2,000 acres of eelgrass by 2035 from a 2012 baseline of 1,893 acres. Before LISS can accomplish this goal, management of existing beds along with modelling of current and potential eelgrass extent is needed to gain insight on distribution and future restoration efforts.

There is a lack of proactive management and restoration efforts due to knowledge gaps related to distribution trends and their drivers. Furthermore, water quality and climate issues pose major impacts to eelgrass

meadows' distribution and productivity, threatening eelgrass extent in Long Island Sound. Before LISS can effectively restore eelgrass meadows, there is a need to better understand the distribution and productivity drivers and limitations on eelgrass meadows in Long Island Sound. In order to effectively address this issue, the EPA Region 2's Long Island Sound Office convened a group of local experts to develop a targeted [Long Island Sound Eelgrass Management and Restoration Strategy](#). Over the course of three meetings, held in 2022, the group outlined recommendations and specific actions to implement starting in Federal Fiscal Year 2023 (October 1, 2022). The strategy provides guidance for short and long-term actions that should be taken to manage and restore eelgrass meadows in the Long Island Sound and act as a resource for other estuaries in the region facing similar issues. One action, to be implemented in year 1-2 of the strategy, is to update and enhance the existing Long Island Eelgrass Habitat Suitability Index Model to include new data that is current with the new threats, environmental conditions, and needs.

In FY2009, NEIWPC completed the development of the [Long Island Sound Eelgrass Habitat Suitability Index \(EHSI\) Model](#) to assist in the evaluation of potential restoration sites by identifying areas where water quality conditions are ideal for eelgrass growth. Dr. Jamie Vaudrey (University of Connecticut) and colleagues developed the EHSI Model and generated maps of areas most suitable for eelgrass growth starting with the following parameters: bathymetry, mean tidal amplitude, and percent light reaching the bottom. Comparison of the model output with current eelgrass distribution, and the siting of successful and failed restoration attempts, indicates the model will be useful when making future plans for restoration efforts.

Improvement and incorporation of additional data into the existing EHSI model is needed to better understand impacts influential to eelgrass growth. For example, the bathymetry data included in the original model lacked shallow water mapping and the ability for researchers to identify minimum depth suitable for eelgrass at low tides. Additionally, since 2013, availability of temperature data from water quality monitoring groups (i.e., [Save the Sound's Unified Waters Study](#)) has increased and can be used to highlight prominent limiting parameters previously not included in the model. With a recently completed project led by CT DEEP assessing depth profiles for embayments using NOAA data and the Bio-Optical Model developed by Stony Brook University for Peconic Estuary, the following environmental factors dictating suitable habitat will be identified: depth profiles, light, temperature, depth, wind exposure, and hardened shorelines (O'Toole, 2020).

The incorporation of updated and additional data to the EHSI in collaboration with ongoing aerial mapping surveys is paramount to our understanding of eelgrass extent, restoration, and conservation.

### **III. Scope of Work**

The primary objectives of updating the EHSI Model are to expand the evaluation of sites being considered for eelgrass restoration efforts in the Long Island Sound (LIS) area and to identify areas where environmental or climate factors reduce or eliminate the potential for natural eelgrass colonization. Suggested model parameters and methodology are described in Appendix D.

#### **Project Tasks**

- A. Develop a Quality Assurance Project Plan (QAPP). This project will involve environmental data operations and therefore the contractor is responsible for developing the project QAPP and submitting it for review (see Quality Assurance & Quality Control Requirements on page seven).
- B. Gather newly collected data (both already existing parameters in the 2013 model and new parameters to be added) to create a preliminary model.
- C. Design and conduct fieldwork based on the output of the preliminary model. Collect necessary data to test the model at a defined subset of sites.
- D. Develop a predictive model to run scenario models (see Appendix D).

- E. Develop interpretive materials allowing others to use the model.
- F. Completion of quarterly and final project status reports. These reports will be required to be provided to the NEIWPC Project Manager (see contact information in Section IX) for review. Delivery of reports on time and approval by NEIWPC oversight will be a condition of payment to the selected applicant.

**Anticipated Project Meetings**

Meeting Type	Purpose	Potential Participants
Technical Advisory Committee (TAC)	Project kick-off	Contractor and TAC members
TAC	Preliminary model data source review	Contractor and TAC members
TAC	Preliminary model review	Contractor and TAC members
TAC	Predictive model scenarios review	Contractor and TAC members

**Desired Outcome**

The desired outcome is to update the Eelgrass Habitat Suitability Index (EHSI) model to incorporate additional data and allow for a greater understanding of current and future eelgrass extent. An example description of the project’s outcomes, including environmental benefits to Long Island Sound, are listed below. Elements, outputs, and outcomes are taken from the LISS CCMP update found [here](#).

Table of Project Deliverables/Outputs and Environmental Outcomes					
LISS Program Element/ Work Plan Activity	Project Deliverable/Output	Environmental Outcome	2020-2024 CCMP Update IA # (up to 3 for each activity/task)	Percent of Time Spent on Activity	Target Date(s)
Habitat Restoration and Protection	Gather newly collected data (both already existing parameters in the 2013 model and new parameters to be added) to create a preliminary model	2-1, 2-4	HW-5, HW-12, SM-26	20	2025
Habitat Restoration and Protection	Design and conduct fieldwork based on output of preliminary model	1-3, 2-1, 4-3	WW-27, HW-7, SM-26	20	2025
Habitat Restoration and Protection	Collect necessary data to test the model at a defined subset of sites	1-3, 2-1, 4-3	WW-27, HW-7, M-26	20	2025
Habitat Restoration and Protection	Develop a predicative model to run future scenarios	2-1, 4-3	HW-7, SM-26	20	2026

Habitat Restoration and Protection	Develop interpretive materials allowing others to use the model	2-1, 2-4	HW-5, HW-7, HW-23, HW-25	20	2026
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The following priority implementation actions will be addressed in this eelgrass model proposal (a comprehensive list is available [here](#)):

- HW-5: Use remote sensing, mapping tools, modeling, and field verification to determine sites that are likely to be impacted by sea level rise, and which sites are ideal for habitat migration.
- HW-25: Continue Long Island Sound eelgrass abundance surveys and promote eelgrass management.
- SM-26: Incorporate climate change-driven factors such as temperature, acidification, and sea level rise in model applications to assess factors that can influence future attainment of water quality standards and habitat protection and restoration goals.

#### **IV. General Guidelines for Applicants**

##### **Eligibility**

Applicants that are eligible to submit proposals in response to this RFP include: state or local government agencies, interstate water pollution control agencies, private non-profit organizations and institutions, for-profit organizations, and educational institutions, including colleges, universities, and public or private elementary and secondary schools. Eligible applicants located outside of the Long Island Sound watershed may submit a proposal as long as the proposal documents that its objectives support the technical requirements and management priorities of the LISS.

##### **NEIWPCC COVID-19 Policy**

Applicants must agree to abide by the following NEIWPCC Covid-19 Policy:

##### **OFFICE VISITORS**

NEIWPCC is committed to providing a working environment that keeps all staff and visitors as safe as possible and promotes the well-being of our community. NEIWPCC encourages attendees to take CDC recommendations and their individual circumstances into account when deciding about preventative actions. It is recommended that all individuals who enter NEIWPCC offices during business hours be fully vaccinated, however this is no longer a requirement. Visitors should NOT enter the NEIWPCC office if they display any symptoms of COVID-19. Anyone who has tested positive for COVID-19 within the last ten (10) days must test negative prior to visiting the office.

##### **CONFERENCE, MEETING, AND TRAINING ATTENDEES**

NEIWPCC is committed to providing an event environment that keeps all participants as safe as possible and promotes the well-being of our community. It is recommended that all individuals who participate at NEIWPCC events be fully vaccinated, however this is no longer a requirement to attend. NEIWPCC encourages attendees to take CDC recommendations and their individual circumstances into account when deciding about preventative actions. By voluntarily choosing to attend NEIWPCC events, participants assume all risks associated with exposure to COVID-19. Attendees should NOT participate at NEIWPCC events if they display any symptoms of COVID-19. Anyone who has tested positive for COVID-19 within ten (10) days of the event must test negative prior to attending.

This policy also applies to the contractor’s subcontractors.

### Schedule

The project should take no more than 24 months, with all final reports and paperwork received by **June 30, 2026**. However, it is desirable for projects to be completed earlier.

The schedule\* for this RFP is as follows:

Proposals Due to NEIWPC	May 31, 2024, 12:00 PM EST (noon)
Applicants Notified of Funding Decisions	June 14, 2024
Detailed Project Work Plans Due	July 8, 2024
Project Start Date	July 22, 2024
Quality Assurance Project Plan (QAPP)	To be completed prior to data collection activities
Quarterly Reports	10th of the month following each quarter’s close
Final Report and Deliverables Due to NEIWPC	June 30, 2026

\*Schedule is subject to change.

### Funding

There is \$200,000 available for this project and it is anticipated that one successful project will be chosen. Proposals with budgets that exceed the identified funding cannot be considered. Awarded funds may be used for expenses specifically related to the proposed project, including wages and consultant fees. Expendable and non-expendable equipment directly related to the proposed project may qualify for funding but requires pre-approval (prior to proposal submission) by NEIWPC and must be justified in the proposal. Indirect costs are allowed but must be in line with the following procedures: Applicants with a valid Negotiated Indirect Cost Rate Agreement with their cognizant federal agency must use that rate and must provide documentation of the negotiated rate. Applicants that do not have a Negotiated Indirect Cost Rate Agreement may charge a maximum indirect rate of 10 percent of direct costs.

### Match

Although cost share or match is not required, projects providing non-federal cost share or match will receive favorable consideration over projects without cost share or match.

Cost share or match can be satisfied with cash or in-kind services, or a combination of both. Cash contributions are those funds used to purchase goods or services associated with the project. In-kind contributions represent the value of non-cash contributions provided by the applicant. Any contributions must be clearly explained in the proposal and must be documented.

### Deliverables

The primary deliverables for this project will be the following:

1. **Quarterly reports** delivered to the NEIWPC project manager no later than the 10<sup>th</sup> day of January, April, July, and October during the duration of the project.
2. Approved Quality Assurance Project Plan. See below for additional information about this deliverable.
3. Preliminary model using existing and newly collected data (Task B).

4. Design and conduct fieldwork based on the output of the preliminary model (Task C).
5. Collect necessary data to test the model at a defined subset of sites (Task D).
6. Develop a predictive model to run future scenarios (Task E).
7. Develop interpretive materials allowing others to use the model (Task F).
8. **Final report** to be submitted for review to the project manager as a draft in Microsoft Word before being delivered in Adobe .pdf format as final.
9. All data generated should be done so in accordance with a NEIWPC- approved Quality Assurance Project Plan. The award recipient should additionally compile available data, shape files, etc. related to eelgrass in Long Island Sound and propose the components and layout of the suitability index model. By the end of the project period, the award recipient should deliver and explain the site suitability index model. The recipient should provide maps of areas in Long Island Sound that could be currently targeted for restoration, as well as maps of potential eelgrass habitat in Long Island Sound that could be targeted for restoration if water quality is improved. The recipient should deliver and explain recommendations for improvement of site or resource data in the future, and a system for collecting, organizing, and incorporating future data enhancements into the suitability index model.

All deliverables are to be submitted in draft form in Microsoft Word or suitable electronic format for review by project partners and approval by the project manager (See Contact Information in Section IX). All final reports are to be delivered in Adobe .pdf format upon approval by the project manager.

#### **Quality Assurance & Quality Control Requirements**

The NEIWPC- Quality Management Plan requires that Quality Assurance Project Plans (QAPPs) are developed and approved for all projects involving environmental information operations (i.e., collection, analysis, and/or manipulation of environmental data). For projects that involve environmental information operations, the contractor will be responsible for developing the project QAPP and submitting it to EPA and NEIWPC- staff for review after the start of the contract period. NEIWPC- will provide guidelines for QAPP development. The QAPP must be approved by the EPA, the NEIWPC- Project Manager, and the NEIWPC- Quality Assurance Program Manager prior to any information collection or analysis. If your proposed project will include environmental information operations, development of the QAPP can be completed as a task under this project and should be included in the proposal narrative, timeline, and budget. While preparing your proposal, please account for the additional time and resources necessary for QAPP development. Allow a minimum of 30 days for the development of your QAPP and 90 days for the review and approval of your QAPP by NEIWPC- and EPA QA officers. It is appropriate for an applicant to utilize or build upon an existing, relevant, approved QAPP if one exists.

For more information about QAPPs, see [NEIWPC-'s Quality Management Program](#) and [EPA's Quality Assurance Plan Standard](#).

Questions regarding the QAPP process or the necessity of a QAPP for a proposed project should be directed to the NEIWPC- Project Manager (see contact information in Section IX) by **May 7, 2024**.

#### **Deliverables, Ownership, and Credit Due**

All materials, software, maps, studies, reports, and other products or data, regardless of physical form or characteristics, produced as a result of this solicitation and funded, in whole or in part, under an agreement with NEIWPC- shall be made available to NEIWPC-, LISS, and the U.S. EPA in the formats in which it is stored or maintained. NEIWPC-, LISS, and the U.S. EPA shall have an unrestricted right to use any materials, software, maps, studies, reports, and other products or data generated using assistance funds or specified to be delivered. The contractor shall not obtain, attempt to obtain, or file for a patent, copyright, trademark, or any other interest in any such materials, software, maps, reports, and other products or data without the express, written

consent of NEIWPCC and subject to any other approvals required by state or federal law. Reports and other deliverables will credit NEIWPCC, LISS, and U.S. EPA for any work completed under the grant award.

### **Geographic Information System (GIS) Data Requirements**

GIS data produced under this project must adhere to the requirements of [EPA's Data Management Policy, Standards, and Procedures](#). Specifically, the selected contractor must provide documentation for all produced data, including source information for each digital data layer (i.e., scale and accuracy, map projection, coordinate system, etc.), and specific information about the data layer itself (i.e., method used, geographic extent of data layer, file format, date of creation, staff contact, description and definition of data fields and their contents, related files, if any, and description of data quality and quality assurance methods used). The EPA Metadata Editor (EME) was developed to simplify and standardize metadata development and is a recommended tool for streamlining production of required metadata. The EME and related training materials can be downloaded [here](#). Specific technical guidance on geospatial deliverables and acceptable formats can be found [here](#). GIS data produced under this project will be submitted to NEIWPCC as a deliverable.

### **Insurance Requirements**

Prior to the start of work, NEIWPCC requires its contractors to procure and maintain, at their sole cost and expense, General Liability, Automobile, Workers' Compensation insurance and, if required by state law, Disability Benefits coverage. Please note that NEIWPCC's insurance specifications are required elements of NEIWPCC's contracts. Please review the insurance specifications carefully before you decide whether to apply for this funding opportunity.

## **V. Proposal Requirements**

Proposals must include a (1) cover letter, (2) title page with abstract, (3) narrative with citations, (4) timeline, (5) budgets (both overall and task-based budget formats), (6) budget justification, (7) description of qualifications, and (8) letters of commitment or support. Page limits for each of these components are provided in the individual descriptions below. Proposals that do not contain all of the information requested and/or do not meet the format requirements will be eliminated from consideration. Pages that exceed the maximum number specified for each section will not be reviewed.

### **Cover Letter**

Please include a one-page cover letter, printed on official letterhead and signed by an authorized representative of the lead agency, firm, or institution, with each proposal. The cover letter must state that:

- You are applying for funds under this program.
- You acknowledge that funding is provided per a task-based schedule for tasks completed.
- You have read and understand NEIWPCC's COVID-19 policy as stated within the RFP.

### **Title Page**

For your convenience, an electronic version of the title page is available as a Microsoft Word document at <http://neiwppc.org/about-us/working-with-neiwppc/>. The title page must adhere to the format provided in Appendix A and include all of the following information, using a maximum of one single-spaced, one-sided, typed 8.5" x 11" page with 11-point font and 1-inch margins:

- Project Name: Use the exact project name as it appears throughout the proposal.
- Organization: Provide the organization name.
- Primary Investigator Name and Contact Information: Provide the name, title, and affiliation of the primary investigator, as well as mailing address, phone number, and email address.



- Financial Contact Name and Contact Information (if applicable): Provide the name, title, and affiliation of the individual responsible for financial/contractual negotiations (if different from primary investigator), as well as mailing address, phone number, and email address.
- Project Partners (if any): Provide the names, titles, affiliations, for each of the additional investigators or support staff who will significantly contribute to the project (if any).
- Funds Requested: Provide the amount of money you are requesting from NEIWPC for the project.
- Matching Funds: Provide the amount of matching funds you and/or your partners will be contributing to the project (if any).
- Federal Tax Identification Number (FID)
- Unique Entity Identifier (UEI) Number: All eligible U.S. applicants must have a Unique Entity Identifier (“UEI”) number. Contractors can obtain an UEI through [the System for Award Management \(SAM\)](#). This SAM-generated number will become the official identifier for doing business with the U.S. Government and NEIWPC.<sup>1</sup>
- Certified Disadvantaged Business Enterprise (DBE): Indicate if your organization is a DBE.
- Project Location Description (City, State): Provide the state and city where of the primary location where work will be completed.
- Project Location Coordinates (Latitude, Longitude): Provide the latitude and longitude coordinates for the primary location where work will be completed.
- NEIWPC’s COVID-19 Policy: Confirm you have read and understand NEIWPC’s COVID-19 policy as stated within the RFP.
- Abstract: The abstract must accurately describe the project being proposed and include: (1) the objectives of the project, (2) the methodology to be used (which should give an accurate description of the project as described in the proposal), and (3) the expected outputs and outcomes of the project and how it addresses this RFP, including environmental benefits to Long Island Sound. **The abstract must fit within the title page.**

### Proposal Narrative

The proposal narrative must not exceed five consecutively numbered, single-spaced, typed 8.5" x 11" pages with 11-point font and 1-inch margins. The five-page narrative must include all of the following information:

- **Problem Description:** Briefly describe the project and the Long Island Sound management need your project will address. This section can also include brief background or introductory information.
- **Objectives:** Outline how the project will achieve the goal of this RFP.
- **Methodology:** Outline the project’s design and describe the methods and techniques that will be used to meet the project’s goal and tasks. QAPP development must be identified as a task.
- **Expected outputs and outcomes:** Describe the project’s expected outputs and outcomes, and list and describe each of the specific deliverables and end-products. Elements, outputs and outcomes are from the LISS CCMP update found here (<https://longislandsoundstudy.net/wp-content/uploads/2021/01/LISSCCMP-Update-2020-2024.pdf>). (See Appendix D for more detail on expected objectives and 2013 EHSI methodology).
- Briefly discuss the **process to be used to evaluate the effectiveness and success** of the project.
- **Roles and Responsibilities:** Define the roles and responsibilities of all project participants.
- **Citations:** Include references as appropriate within the proposal narrative.

### Timeline

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<sup>1</sup> In April 2022, the federal government will stop using the DUNS number to uniquely identify entities registered in the System. All NEIWPC Contractors will be required, as part of the contract process, to submit their UEI as part of the agreement process. The DUNS number will no longer be used as a unique entity identifier and only the Sam.gov created number will be accepted.

Provide a detailed timeline for meeting identified tasks and completing deliverables, with a completion date no later than **June 30, 2026**. All timelines should be stated in terms of Month #1, #2, #4, etc. rather than specific dates, e.g. "March 5, 2012." Although the project start date is anticipated to be on or about **July 22, 2024**, this date may change based on the time the actual agreement is established. The timeline must be no more than one 8.5" x 11" page with 1" margins and 11-point font.

### **Budget**

The project budget must be provided in two formats:

First, provide a complete, detailed budget using the format provided in Appendix B. For your convenience, an electronic version of the budget form is available at <http://neiwpc.org/about-us/working-with-neiwpc/>. The budget must be no more than one 8.5" x 11" page with 1" margins and 11-point font. Along with this budget, provide a brief justification (one page maximum) for the proposed costs in terms of meeting project objectives. Include an explanation of how indirect costs are calculated. Justify subcontracts, if any. Identify and describe current and pending financial resources (including the source) for non-federal cost share or matching funds that are intended to support the project. Entities intending to use a Negotiated Indirect Cost Rate must provide documentation of their rate. This documentation does not count toward the page limit.

Second, prepare a budget that is broken down by project tasks as shown in Appendix C. For your convenience, an electronic version of the budget form is available at <http://neiwpc.org/about-us/working-with-neiwpc/>. As you develop this budget, keep in mind that contractual payments will be made based on this budget. This budget must be no more than two 8.5" x 11" pages with 1" margins and 11-point font. Matching funds should not be included in the task-based budget.

### **Qualifications**

The applicant chosen for this project should possess the academic and/or professional expertise and certifications in the relevant subject areas and have a strong track record in delivering projects of this nature and facilitating successful working relationships. Attention to detail in documenting qualifications that meet the scoring requirements is strongly advised. The qualifications section, including resumes, CVs, descriptions of past projects, etc. must not exceed three pages.

### **Letters of Support**

Projects undertaken in partnership with other organizations, particularly where the partner will provide a service or action must include support letters from each partner stating their specific commitments. If your project includes matching funds and the match is to be provided by partners, letters of commitment for the match from those partners must be included. General "letters of support" should not be included with the application.

### **Justice, Diversity, Equity, and Inclusion**

NEIWPC and LISS are committed to advancing justice, diversity, equity, and inclusion across our work. Proposals demonstrating benefits to environmental justice communities will be given additional weight during the proposal evaluation process. Please review the [LISS Environmental Justice Work Group](#) webpage for more information as well as links to additional resources.

## **VI. Submission Process**

Proposals must be submitted by no later than **12:00 PM EST (noon) on May 31, 2024**. No late submissions will be considered. Applicants **must submit their proposals electronically** through the NEIWPC website. Unless

prior approval is given, proposals received through e-mail, postal delivery, or any other delivery method will not be accepted.

To submit your proposal, go to <http://neiwpsc.org/about-us/working-with-neiwpsc/contractor-proposal-submissions/> and follow the instructions provided for uploading your file(s). It is highly preferred that the proposal and all supporting information are submitted as a single PDF document. This requires Adobe Acrobat or similar Adobe product (the free Adobe Reader does not allow the conversion of documents into PDF format), or a scanner. If multiple files are to be submitted, you will need to create an archive file (.zip, or .rar) containing all of the files you wish to submit. The file name should be in the following format: "LISS ESHI NAME OF YOUR ORGANIZATION." Once you have clicked the "submit" button, please allow adequate time for your submission to process and do not hit the back button or close your browser window. The process is not considered complete until you have reached the confirmation page. If submitted successfully, you will receive an email from NEIWPC (mailto:neiwpsc.org) with the subject line "RFP Submission Confirmation" confirming your submission. For questions regarding submission of proposals, contact Alexander DuMont, NEIWPC, [adumont@neiwpsc.org](mailto:adumont@neiwpsc.org), (978)349-2526.

### Pre-Application Conference Call

A conference call will be held on **Friday, May 10, 2024, at 11:00 AM EST** to answer clarifying questions submitted by potential applicants. If you want to participate in the conference call, please send a request to participate to Alexander DuMont, [adumont@neiwpsc.org](mailto:adumont@neiwpsc.org) by **12:00 PM on May 7, 2024**. Your request should include: your name, affiliation, email, and phone number, and any questions you would like answered. Only questions submitted by email prior to the call will be answered and no additional questions will be answered after the conference call. It is not necessary to submit a question to participate in the call. All interested applicants will be contacted by email with details for joining the call.

## VII. Proposal Evaluation Process

NEIWPC and the EPA Project Lead will screen all proposals to ensure that they meet all requirements of this RFP. If a proposal is found to be incomplete, the proposal will be eliminated from the competition and NEIWPC will notify the applicant. To be considered complete, proposals must include all of components described in Section V. Proposal Requirements. Pages more than the limits specified for each component will not be reviewed. Complete and eligible proposals will be reviewed by a panel composed of scientists and managers from LISS partner agencies. Proposals may also be submitted for external peer reviews. The review team will evaluate the proposals based upon the following criteria:

1. **Addresses Desired Outcome (0-25 points).** Degree to which the proposal can accomplish the desired outcomes. Clarity and measurability of deliverables/outputs within specific and reasonable time frame(s), including relationship of expected results/benefits to addressing this RFP's topic and improving management of LIS. Potential to advance justice, equity, diversity, and inclusion across LIS.
2. **Technical Merit (0-25 points).** Adequacy of the proposed methodology, project design, and/or technical approach to accomplish stated project objectives. If appropriate, inclusion of a technically valid, specific performance assessment plan describing measurement and reporting of outputs and outcomes.
3. **Performance Capability (0-15 points).** Ability of the applicant to accomplish the proposed project given its history of past performance, experience, qualifications, facilities, and resources.
4. **Appropriate and Cost-Effective Budget (0-15 points).** Proposals with costs up to \$200,000 will be considered, but cost and the relative value of work products will be a factor in evaluating submissions. Adequacy of the proposed budget to accomplish objectives, and adequacy of justification in explaining the need for resources for this project. If reviewing similar projects, is this project cost-effective

compared with other similar projects under review? Indication of leveraged funds from other organizations. Provision of matching non-federal funds.

5. **Transferability of Results to Similar Projects and/or Dissemination to the Public (0-10 points).** Degree of transferability of data or project results to the LISS program partners. If applicable, inclusion of a public outreach or public education component that documents and/or distributes results of the project to the appropriate audience or summarizes data for LISS distribution.
6. **Coordination with Ongoing Efforts (0-10 points).** Degree to which the project builds upon existing efforts. Demonstration of knowledge of similar efforts occurring in the watershed.

Proposals will be ranked and evaluated based upon the review teams' recommendations, external peer reviews, and the relative priority of commitments in LISS CCMP. Award notification is expected by **June 14, 2024**.

### **VIII. Notification of Awards**

Award notification to applicants is expected by **June 14, 2024**. Award recipients may be asked to submit a revised work plan, timeline, and budget at this time. Projects cannot start until the contract is signed by both parties and all mandatory documentation, including proof of General Liability Insurance and Worker's Compensation, is received by NEIWPC. If your project includes environmental data operations, this work may not begin until the QAPP is approved. NEIWPC will not pay for expenses incurred prior to the contract start date. Payment for costs incurred will be on a reimbursement basis per the contract payment schedule and contingent upon completion of quarterly progress reports and project deliverables.

### **IX. Contact**

NEIWPC and EPA will accept questions about this RFP by email or phone through **May 7, 2024, at noon EST**.

For information regarding the application process, contact **Alexander DuMont**, NEIWPC's LISS Project Manager:

Alexander DuMont  
NEIWPC  
650 Suffolk Street, Suite 410  
Lowell, MA 01854  
(978) 349-2526  
[adumont@neiwpc.org](mailto:adumont@neiwpc.org)



**Appendix B: Overall Budget Table Format**

<b>PROJECT BUDGET</b>		
<b>BUDGET CATEGORY</b> <i>(Add/remove itemizing lines below major categories as necessary, but do NOT delete major categories)</i>	<b>MATCH</b>	<b>GRANT REQUEST</b>
<b>A. PERSONNEL</b> (list individual names and titles below)	\$	\$
	\$	\$
	\$	\$
	\$	\$
<b>B. FRINGE BENEFITS</b> _____ % of _____ (e.g., 10% of total personnel costs) <b>TOTAL:</b>	\$	\$
<b>C. TRAVEL</b> (estimate number/purpose of trips below)	\$	\$
	\$	\$
	\$	\$
	\$	\$
<b>D. EQUIPMENT</b> (itemize below) <b>TOTAL:</b>	\$	\$
	\$	\$
	\$	\$
	\$	\$
<b>E. SUPPLIES</b> (itemize below) <b>TOTAL:</b>	\$	\$
	\$	\$
	\$	\$
	\$	\$
<b>F. CONTRACTS</b> (identify & itemize below) <b>TOTAL:</b>	\$	\$
	\$	\$
	\$	\$
	\$	\$
<b>G. OTHER</b> (identify & itemize below) <b>TOTAL:</b>	\$	\$
	\$	\$
	\$	\$
<b>H. TOTAL DIRECT COSTS (SUM OF A-G)</b>	\$	\$
<b>I. INDIRECT COSTS</b> _____ % of _____ (e.g., 10% of total direct costs) <b>TOTAL:</b>	\$	\$
<b>J. TOTAL PROJECT COST (SUM OF H+I)</b>	\$	\$

**APPENDIX C: TASK-BASED BUDGET FORMAT**

Cost	Task Number	Task Name	Expected Date of Completion

## Appendix D: Eelgrass Habitat Suitability Index Objectives and Methodology Information

### Objectives

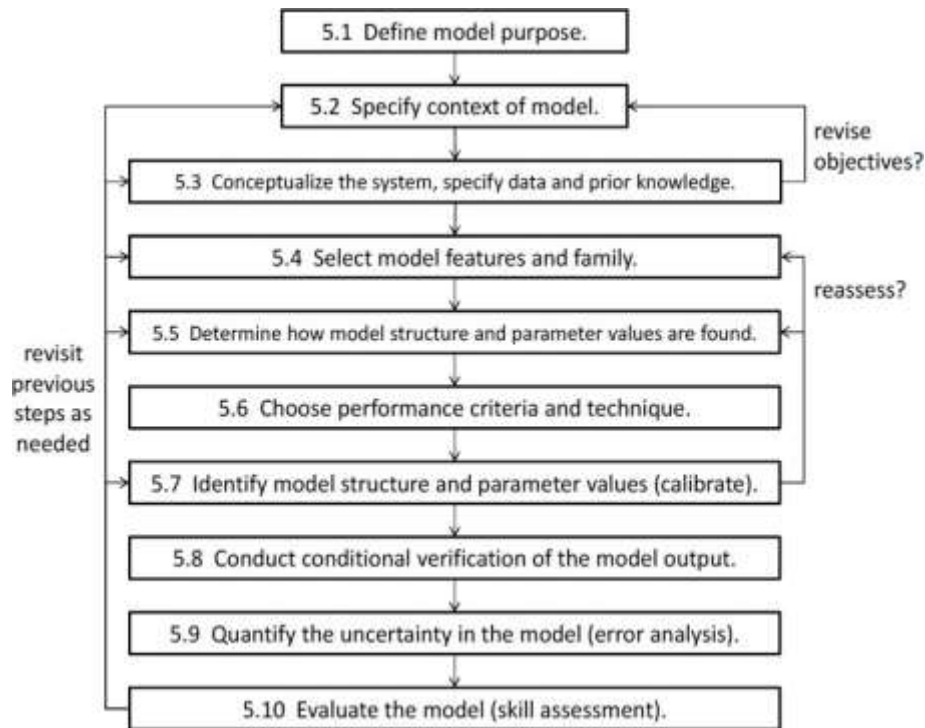
The primary objectives of updating the Eelgrass Habitat Suitability Index Model (EHSI Model) are to expand the evaluation of sites being considered for eelgrass restoration efforts in the Long Island Sound (LIS) area and to identify areas where environmental or climate factors reduce or eliminate the potential for natural eelgrass colonization.

- a. Parameters to be considered in the update:
  - i. Nutrient inputs and transportation
  - ii. Bathymetry data in the shallow end of coastlines
  - iii. Climate conditions:
    1. Temperature – rising temperatures are a main driver of eelgrass die-offs.
    2. Wave exposure – changes to the shorelines impact eelgrass growth.
    3. Hardened shoreline impacts - changes to the shorelines impact eelgrass growth.
    4. Currents – restoration techniques are being used to combat wave exposure/currents (i.e., rock planting method).
    5. Frequency/intensity of storms – extreme weather events can alter freshwater and nitrogen inputs into embayments, therefore increasing nutrients and altering salinity.
    6. Sea level rise – viable habitat potential for eelgrass is changing; with previous habitat becoming less suitable due to increase depth and new shallow habitat becoming available. While previous modeling has shown that eelgrass will be able to tolerate sea-level rise (Carr et al., 2012), the change in suitable habitat needs to be taken into consideration for future restoration projects.
    7. Sulfide Concentration – although not directly linked to climate, increased temperatures can have a major impact on the sediment- plant interactions by influencing sulfide concentration (Koch et al., 2007). Therefore, it is recommended to sample sulfide concentration in mid-July to early September when sulfide is most problematic.
    8. Groundwater Inputs – There is evidence that submarine groundwater discharge areas to may act as temperature refugia for extant populations and/or restoration in embayments. USGS groundwater models and CT DEEP model for groundwater budgets and transfers may prove useful to provide insight on this potential restoration technique.
  - iv. Scenario models – future scenarios related to water quality management, restoration implementation, and predictions of changing parameters may provide useful information to aid in making more informed decisions regarding these types of projects and how techniques/practices that would be most successful in future environments (i.e., sea level rise, temperature, precipitation, etc.)
  - v. Incorporation of more resilient populations into the model:
    1. If populations of eelgrasses are identified to be more resilient to higher temperature (2°C increase) or other parameters (i.e., bathymetry), additional habitat could become available within the EHSI model.
  - vi. Other parameters based on contractor’s expertise and data availability.

### Methodology

This proposal is to fund NEIWPC to conduct an update of the EHSI model to incorporate additional data and allow for a greater understanding of current and future eelgrass extent. Recent [topobathy data](#) from NOAA surveying is available for use. Methodology for the updated EHSI should follow initial model development as described in Figure 1 (Vaudrey et al., 2013) with the inclusion of the new parameters listed above.

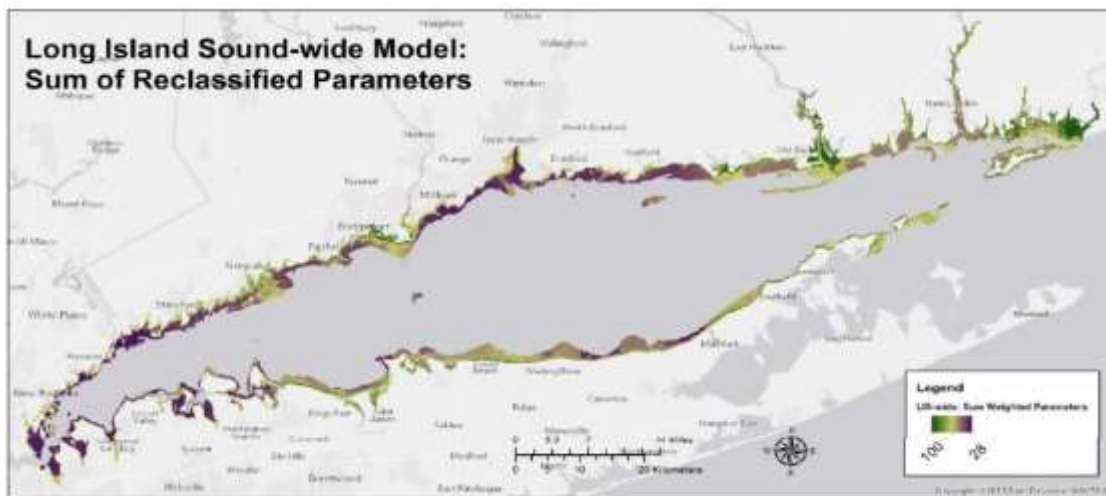




**Figure 1.** Ten step overview of basic modelling. Numbers in boxes refer to the sections of Vaudrey et al., 2013 where the step is described in detail.

The 2013 model first generated an exclusive band based on bathymetry data, mean tidal amplitude, and clarity of the water column, as light is a primary requirement for eelgrass growth. In this update, shallow bathymetry data will be incorporated during this stage along with any parameters that fluctuate water clarity. A cut off >2% of light reaching the bottom will be used for inclusion.

Following this stage, a Sum of Reclassified Parameters map will be generated using parameters likely to influence eelgrass success from the 2013 model (total nitrogen, total phosphorus, sediment grain size - % silt & clay, sediment organic content, maximum water temperature, chlorophyll a, total suspended solids, pH, and salinity), along with new parameters (i.e., sulfide concentration, temperature, climate impacts - wave exposure, hardened shorelines, storms, sea level rise, etc.) to determine which of the ecosystems identified by bathymetry and light penetration data will be suitable for eelgrass colonization. The addition of climate parameters in this step will also help to evaluate climate change vulnerability. The model generates a score for each area based on the identified parameters on a 0-100 scale (least to most suitable) and maps the gradient along the LIS coastline (Figure 2).



**Figure 2.** The Eelgrass Habitat Suitability Index Model output showing the most suitable areas for eelgrass growth in green, and the least suitable in purple. Source: Vaudrey et al., 2013

**Cited:**

Carr JA, P D’Odorico, KJ McGlathery, and PL Wiberg. 2012. Modeling the effects of climate change on eelgrass stability and resilience: future scenarios and leading indicators of collapse. *Marine Ecology Progress Series*, 448: 289-301 <https://doi.org/10.3354/meps09556>

Koch EW and S Beer. 1996. Tides, light and the distribution of *Zostera marina* in Long Island Sound, USA. *Aquatic Botany*, 53: 97-107

Koch MS, S Schopmeyer, C Kyn-Hansen, and CJ Madden. 2007. Synergistic effects of high temperature and sulfide on tropical seagrass. *Journal of Experimental Marine Biology and Ecology*, 341(1): 91-101 <https://doi.org/10.1016/j.jembe.2006.10.004>

O’Toole K. 2020. Living on the edge: Analysis of *Zostera marina* and the potential for restoration in Peconic Bay (Long Island, NY). MS Thesis, Stony Brook University.

Vaudrey JMP, J Eddings, C Pickerell, L Brousseau, and C Yarish. 2013. Development and Application of a GIS-based Long Island Sound Eelgrass Habitat Suitability Index Model. *Department of Marine Sciences*. 3. [https://opencommons.uconn.edu/marine\\_sci/3](https://opencommons.uconn.edu/marine_sci/3)