



## Long Island Nitrogen Action Plan (LINAP) - Newsletter Long Island Sound Study (LISS) Update

In this newsletter, we highlight the ongoing nitrogen reduction related initiatives led by our LINAP partners at the Long Island Sound Study.

- Long Island Sound Eelgrass Management and Restoration Strategy
- Long Island Sound Bi-State Sustainable and Resilient Communities Workshop
- Long Island Sound Study Grant Programs:
  - Research Grant Program
  - Grant Program to Assist Disadvantaged Communities in the Sound
  - Futures Fund
- Grant Opportunity – NOAA Transformational Habitat Restoration and Coastal Resilience Grants

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### Long Island Sound Eelgrass Management and Restoration Strategy

Eelgrass (*Zostera marina*) is the most common type of seagrass found in New York and Connecticut waters and is vital to our shores. It stabilizes bottom sediments, improves water quality and provides a critical habitat for numerous marine species. Unfortunately, populations of eelgrass have been declining due in part to increased nitrogen pollution.

In 2022, LISS convened a group of local experts from federal and state agencies, nonprofit organizations, and academia to develop a targeted Long Island Sound Eelgrass Management and Restoration Strategy. The group identified current issues, threats, resources, and gaps, and established a prioritization system for management areas and next steps. The finalized strategy provides guidance for short and long-term actions that should be taken to manage and restore eelgrass meadows in the Sound and act as a resource for other estuaries in the region facing similar issues. In the coming months, a new story map “Diving into Long Island Sound’s Seagrass Meadows” will be posted on the website. The story map will provide an overview of the importance of eelgrass, its current conditions and threats, and the actions to protect and restore it.

In the past year, progress was also made on a web tool that helps study how water quality and climate affect eelgrass. This tool uses smart computer techniques to estimate where eelgrass is and how healthy it is by looking at satellite imagery. Eelgrass data layers will then be overlaid with bay-specific water and sediment quality parameters (such as temperature, water clarity, and sediment grain size) to better understand their impacts on eelgrass beds in each bay.

The EPA is working with LISS partners to validate the web tool. They're looking at eelgrass data collected in the field (i.e., how many shoots there are, how much it weighs, and how big the leaves are) to ensure the tool can accurately say how well the eelgrass is growing in the Sound. LISS is also funding multiple partners to expand this project to effectively map the extent, density, and health of eelgrass in the long term.

To learn more about LISS's eelgrass restoration efforts, visit the webpage [here](#).



Eelgrass Beds off Plum Island. Photo Credit: Long Island Sound Study.

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## **Long Island Sound Bi-State Sustainable and Resilient Communities Workshop**

The first annual Long Island Sound Bi-State Sustainable and Resilient Communities Workshop brought together more than 260 people virtually on December 1, 2022, to learn more about opportunities to increase the resilience of the Sound's communities to climate change and other environmental threats.

Interactive sessions included opportunities to learn more about the [Sustainable and Resilient Communities Extension Professionals'](#) needs assessment findings and recommendations, the newly released [Long Island Sound Resilience Grant Writing Assistance Program](#), and tips for success with LIS funding opportunities. Concurrent breakout sessions highlighted the work of partners related to shoreline planning and implementation, using green infrastructure for stormwater management, sustainable climate planning for relocation, and new sustainability/resilience tools available in both New York and Connecticut.

Videos of the workshop can be accessed [here](#).

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## Long Island Sound Study Research Grant Program

Recognizing the important role that research plays in decision-making, the EPA Long Island Sound Office, Connecticut Sea Grant (CTSG), and New York Sea Grant (NYSG) developed a cooperative program to fund research in support of the Long Island Sound Study. Initiated in 2000, the Long Island Sound Research Grant Program awards funds to researchers whose work helps meet the needs of decision-makers to improve the management of the Sound.

This year, nine new research projects were funded through the Program totaling \$4.2 million. The projects began in the spring and will be conducted over two years. Cumulatively, this represents the largest research investment in the Sound. Some of the projects that address nitrogen pollution include:

- **Using geohistorical baselines to assess responses of benthic macroinvertebrate communities to the nitrogen TMDL management intervention in Long Island Sound**
  - Scientists will look at the remains of mollusks buried beneath the seafloor to understand past ecological conditions in the LIS. The molluscan geohistorical record could provide location-specific information about levels of nitrogen relevant for decades-long time periods that is not available from any other source.
- **An integrated targeting tool for nitrogen-reduction behavior change campaigns**
  - This project will use a survey of households to predict residential fertilizer lawn use for the coastal counties and municipalities across the LIS watershed. A model combining this information with water quality data will be used to inform prospective behavior-change campaigns to identify and prioritize the areas or types of households that would have the greatest impact on reducing nitrogen from lawn fertilizer and its impact on the Sound.
- **Satellite water-quality data products in LIS for improved management and societal benefits**
  - Human-caused climate change as well as other anthropogenic factors can intensify harmful algal blooms (HABS) in the LIS. Observations of the entire ecosystem, over different seasons and across a range of conditions, including during extreme weather events, can be obtained from satellite data. This project will help water resource managers better understand when and where HABS form and the conditions contributing to them. In turn they can use the information to develop actions to reduce the occurrence and impact of HABS in the Sound.

Descriptions of all the projects can be found [here](#).

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## New Grant Program to Assist Disadvantaged Communities in the Sound

The Long Island Sound Community Impact Fund (LISCIF) is a partnership between Restore America's Estuaries, the U.S. Environmental Protection Agency, and the LISS. Funding for

LISCIF is provided by EPA through the [Bipartisan Infrastructure Law](#) and will help meet the goals of the [Justice40 initiative](#), which calls for 40 percent of the benefits of these investments to flow to disadvantaged communities that are marginalized, underserved, and overburdened by pollution. The purpose of LISCIF is to build capacity for organizations to address the disproportionate environmental and human health risks faced by some communities. Additionally, the Fund seeks to provide technical assistance for organizations in historically underserved areas and support proposals that ultimately improve access to the LIS, while reducing overall environmental health risks.

Projects that will be eligible for funding include but are not limited to:

- Projects that result in quantifiable pollutant prevention or reduction.
- Planning and design that sets—the-stage for implementation of water quality projects, eligible habitat restoration projects and resilience projects.
- Projects that enhance community resilience and sustainability.
- Projects that foster a diverse balance and abundant populations of fish, birds, and wildlife.
- Public engagement, knowledge and stewardship.
- Community-based science projects.

The first round of requests for proposals will be announced soon. Check the [LISCIF web page](#) for updates. If you have specific questions about the Fund, please contact the Program Director, Shahela Begum at [sbegum@estuaries.org](mailto:sbegum@estuaries.org).

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## **LISS Futures Fund**

The Long Island Sound Study initiated the [Long Island Sound Futures Fund](#) in 2005 through the EPA's Long Island Sound Office and the [National Fish and Wildlife Foundation](#). The Long Island Sound Futures Fund supports projects in local communities that aim to protect and restore the LIS. Awards for the 2023 grants will be announced in Autumn 2023.

Since its inception, the Futures Fund has invested \$42 million in 570 projects and generated an additional \$54 million in grantee match for a total conservation impact of \$97 million. Projects have opened 119 river miles for fish, restored 811 acres of wildlife habitat, reduced 206 million gallons of stormwater pollution, and engaged more than 5 million people in the protection and restoration of the Sound.

If you missed submitting an application in 2023, prepare now for the next round in 2024. Visit the National Fish and Wildlife Foundation's [Sound Futures Fund Grant web page](#) to find out what projects are eligible, and details on how to apply for the 2024 cycle, which will be announced in spring 2024.

For a list of grants awarded in 2022 click [here](#).

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## **Grant Opportunity - NOAA Transformational Habitat Restoration and Coastal Resilience Grants**

The National Oceanic and Atmospheric Administration (NOAA) has announced that \$240 million is available for habitat restoration and coastal resilience projects under the [Bipartisan Infrastructure Law and Inflation Reduction Act](#). The grants will support efforts such as reconnecting rivers to their historic floodplains, outplanting corals to rebuild reefs, and building living shorelines that protect coasts from erosion and sea level rise. Submit applications by **November 17, 2023**.

Find [more information, including how to apply and scheduled webinars](#) on NOAA's website.

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To sign up for the LINAP newsletter, visit our [webpage](#) or click [here](#).