



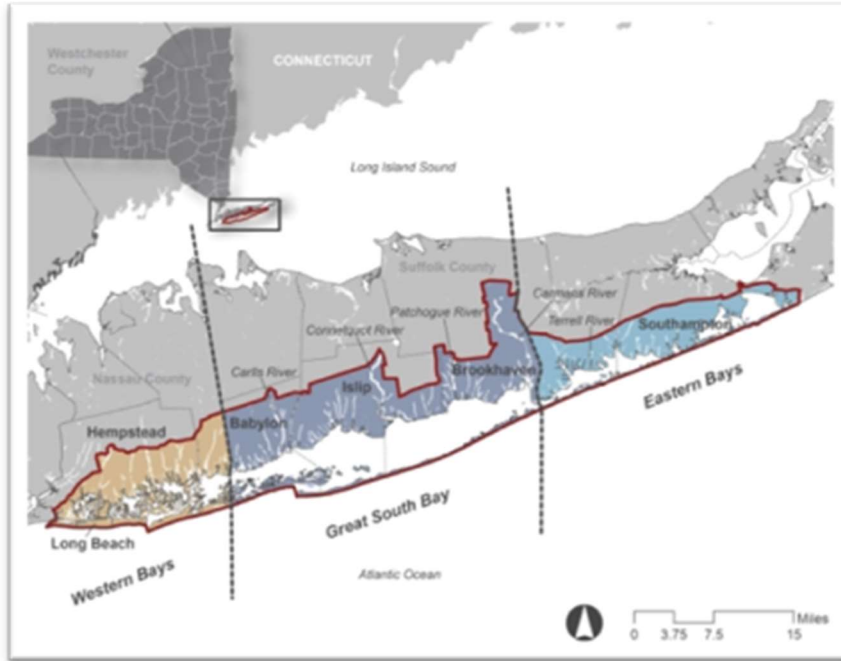
## **Long Island Nitrogen Action Plan (LINAP) Newsletter**

### **South Shore Estuary Reserve (SSER) Appoints New Director**

The South Shore Estuary Reserve has been at the forefront of environmental efforts on Long Island for over 30 year and has been a key partner of the Long Island Nitrogen Action Plan. In this edition of the LINAP newsletter, we explore the evolution of the South Shore Estuary Reserve and take a look ahead to its promising future with newly appointed Director, Chris Clapp.

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The South Shore Estuary Reserve (Reserve) guides the preservation, protection, and enhancement of the natural, recreational, economic, and educational resources of the estuary through partnerships with a diverse group of stakeholders including state, federal, and local organizations. The program was created in 1993 through the Long Island South Shore Estuary Reserve Act and is administered by the New York State Department of State. The primary goals set up in the legislation were the protection and management of the maritime region as a whole and the establishment of a Council that would oversee implementation of the restoration. The Council is made up of state and local governments, non-profit and academic organizations, and local stakeholders.



### *South Shore Estuary Reserve Watershed.*

Now three decades after its inception, the Reserve is entering a new phase of growth with a historic \$2 million budget allocation and the recent appointment of Chris Clapp as Director. A Long Island native with a bachelor’s and master’s degree from Stony Brook University, Chris began his career at The Nature Conservancy, where he focused on hard clam and eelgrass restoration in the Great South Bay. His work on water quality later led to contributions to the Suffolk County’s Reclaim Our Water Initiative, a comprehensive program aimed at improving water quality by addressing nitrogen pollution from outdated and failing septic systems. Chris’s efforts earned international recognition, prompting him to lead the Ocean Sewage Alliance, a nonprofit dedicated to global water quality. “I helped to get that program up and running, and then decided it was best to return home where I really wanted to get work done,” he states.

Under his leadership, the Reserve continues to focus on implementing actions identified in the [Comprehensive Management Plan \(CMP\)](#) —the guiding document used by stakeholders for the protection, management and restoration of the valuable resources of the Reserve. Updated in 2022, the CMP includes new priorities regarding the reduction of nitrogen and a new chapter focused on resiliency. To prioritize recommendations contained in the update, the Reserve, in partnership with the United States Geological Survey, is working to develop a five-year action plan to identify and prioritize specific short and long-term activities identified in the CMP. This plan will enable the reserve to sort and execute projects efficiently, ensuring that efforts are focused on those with the most significant impacts. “The goal of the Action Plan is to prioritize the CMP by evaluating projects based on cost, timeline, and impact. This allows for sorting projects according to what matters most—whether it’s finding quick wins,

low-cost options, or high-impact, long-term projects. The prioritization will help justify funding and identify key priorities,” said Chris. The Action Plan is due to be released next year.

One of the Reserve’s priority projects is salt marsh restoration. Recent federal funding was allocated to support restoration projects in key areas in the Reserve – Scully Marsh and the East Islip Preserve in the Town of Islip and Cupsogue Beach in the Village of Westhampton Beach. "Our salt marshes are vital to the health of the estuary," Chris says. "We’re using every tool at our disposal to ensure they can thrive in the face of climate change." He explains that salt marshes around Long Island are not keeping pace with sea level rise and elevation enhancements need to be made. The Reserve is addressing this problem head on. “We're in the process of finalizing an application to NOAA ([National Oceanic and Atmospheric Administration](#)) for funding to update a 2010 report on beneficial dredge use. The aim is to assess sediment suitability from various dredging projects and match it with marshes that need material to keep pace with sea level rise. By aligning town, county, and local dredging plans with the needs of salt marshes, we can enhance marsh health, water circulation, and navigation. Our goal is to create a tool that identifies where dredged material can be used effectively. We hope to secure additional federal funds to scale up salt marsh restoration and maintenance.”

Chris is also eager to pursue a comprehensive shoreline inventory throughout the Reserve to identify where alternative shoreline stabilization techniques could be effective and develop a model to determine where the best interventions could be utilized. “(The project) would be looking at new nature-based solutions to shoreline stabilization and to run a model throughout the entire Reserve so that when projects are proposed we can evaluate the likelihood of success in that area,” Chris explains. “The project would enable us to see where there are places you might have a bulkhead that you don’t need, and you could have a living shoreline or a natural shoreline instead. But also look at places where a bulkhead is probably your only option and so you don't bother proposing putting a living shoreline or removing it.”

The Reserve is also exploring the possibility of using new monitoring techniques, such as environmental DNA (eDNA) sampling, to monitor the recovery of ecosystems as pollution sources are mitigated. eDNA refers to genetic material obtained directly from environmental samples—such as water, soil, or air—rather than from an individual organism. This DNA is shed by organisms through various means, such as skin cells, waste, or other biological materials. By analyzing eDNA, scientists can detect and identify species present in an environment without needing to physically capture or observe the organisms. This approach would enable the Reserve to track the return of key species and assess the long-term impacts of restoration efforts. "eDNA is a cutting-edge tool that will give us a clearer picture of how our ecosystems are responding to our work. We are setting up a working group via the Technical Advisory Committee to come up with recommendations on how to proceed with this type of work,” Chris explains.

Another initiative Chris would like to explore is improving the Reserve’s seagrass surveys. With new imagery technologies like drones and digital satellites available, data can be gathered more efficiently. Programs in Chesapeake and Massachusetts Bay have started using these methods instead of traditional airplane surveys. "Adopting this approach in the

Reserve could help us collect more frequent and accurate data, as we currently have only two surveys from 2002 and 2018, making resource management challenging.”



*Seagrass. Photo Credit: Cornell Cooperative Extension of Suffolk County Marine Program.*

The Blue Carbon Seagrass Restoration Project, launched in 2022, is a partnership between the Reserve and Cornell Cooperative Extension of Suffolk County. The goal of the project is to restore eelgrass in key areas of the estuary and create a model for eelgrass management and restoration within the South Shore Estuary. Eelgrass meadows provide a wide range of benefits to humans and the environment. These benefits support the local economy and commercial fisheries by providing habitat to marine species. Additionally, eelgrass beds absorb nutrients, stabilize shorelines, reduce wave energy, and sequester carbon. Two eelgrass restoration plantings were completed in the Reserve in Shinnecock Bay and in Moriches Bay. Data is being collected from sites throughout the Reserve and this information will be used to further identify potential successful restoration sites. To learn more about eelgrass, explore the [Eelgrass in the South Shore Estuary Reserve](#) story map.

The future is bright for the South Shore Estuary Reserve. With a combination of increased funding, innovative strategies, and a commitment to community engagement, the Reserve will undoubtedly achieve significant advancements in water quality and habitat restoration, ensuring a healthier and more resilient Reserve for future generations.