

Coastal Resiliency Effort Will Protect Tottenville's Shoreline from Deadly Wave Action and Improve Water Quality in the Raritan Bay

ANDREW J. LANZA September 14, 2021



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Governor Kathy Hochul today announced the start of in-water construction of the Living Breakwaters, a \$107 million effort that will provide physical, social, and ecological resiliency for the South Shore of Staten Island. The 2,400 linear feet of breakwaters, consisting of eight partially submerged enhanced stone and eco-concrete structures, will reduce the risks of storm waves and combat the long-term erosion of the beach along Conference House Park.

"The Living Breakwaters are a shining example of the state's commitment to build back better after Superstorm Sandy," Governor Hochul said. "This innovative approach to resiliency demonstrates New York is leading the way on combatting the effects of climate change and protecting Staten Islanders, their homes and communities, and the island's natural resources. As we saw with Superstorm Sandy and most recently with Ida, storms wreak unimaginable havoc and devastate communities quickly. We must invest in projects like this that make New York more resilient and better protect us from the wrath of Mother Nature."

Using extensive hydrodynamic wave modeling, the breakwaters were designed to reduce waves reaching onshore buildings and roads to below three feet in height, protecting the low-lying coastal community that experienced tragic loss of life when powerful waves knocked homes off their foundation during Superstorm Sandy. The project was designed to reverse the impacts of decades of erosion of the beach by capturing sediments along the shoreline, allowing the beach to widen over time.

In addition to protecting homes and businesses on the South Shore, the Breakwaters will be constructed with "reef ridges"—rocky protrusions on the ocean-facing sides of the

breakwaters—and "reef streets"—the narrow spaces between the reef ridges. These features modify wave behavior and provide habitat opportunities for a diversity of marine life, with live oyster installation expected to follow completion of construction in 2024.

The construction start marks a major milestone for SCAPE Landscape Architecture's winning proposal from the Rebuild by Design competition, a response to Superstorm Sandy launched by the U.S. Department of Housing and Urban Development in 2013.

New York State Homes and Community Renewal Commissioner RuthAnne Visnauskas said , "Adapting to our changing climate means we must think creatively about how to protect New Yorkers from future storms. The Living Breakwaters integrate our State's long-term recovery efforts with innovative technologies that will make both our environment and communities more resilient. We are proud to bring this landmark project to fruition."

New York State Department of Environmental Conservation Commissioner Basil Seggos said, "Our changing climate, accompanied by rising sea levels and more extreme weather events, is eating away at our shorelines, overwhelming infrastructure, and threatening communities. Building back better to protect New Yorkers and safeguard our natural resources requires innovative solutions that prioritize resilience and minimize environmental impacts. Today's announcement is further evidence of New York State's sustained commitment to helping Staten Island and the region better prepare for severe storms and the costly and destructive consequences of climate change."

GOSR General Counsel and Chief External Affairs Officer Emily Thompson said, "GOSR is proud to begin construction on the Living Breakwaters, which embraces Tottenville's history as the 'Town the Oyster Built,' while protecting and preserving its future in the face of climate change and rising sea levels."

Representative Nicole Malliotakis said, "I'm pleased to see the state begin construction of the Living Breakwaters Project on Staten Island's South Shore. Whether it was SuperstormSandy or more recently the remnants of Tropical Storm Ida, it's clear we need more investment in infrastructure, flood mitigation and resiliency projects. This project will go a long way in providing the surrounding community with protection from future storm waters and long-term beach erosion. I look forward to working with the Governor's office until the completion of this project and ensuring that other projects such as the East Shore Sea Wall and Mid-Island Bluebelt are completed on schedule."

Senator Andrew Lanza said, "It's been 7 years of working jointly with Senator Schumer and the Governor's Office of Storm Recovery so that we are able to announce the construction of this project as a way to mitigate the type of flooding witnessed during Superstorm Sandy. These types of projects are the only real way to deal with flooding which have occurred on Staten Island for generations as a result of recurring storms. I am grateful, on behalf of Staten Island residents, for Governor Hochul and Commissioner Visnauskas for keeping this important project moving forward."

Assemblymember Michael Reilly said, "The focus of much of last week has been storm resiliency, which is why I am so thrilled to see that this vital project to strengthen our shoreline and protect our community is moving forward. Thank you to Governor Hochul, and, of course, to the Governor's Office of Storm Recovery, which has led this effort from the very beginning."

Staten Island Borough President James Oddo said, "The extreme storms Staten Island has faced, from SuperstormSandy to Tropical Storm Ida, have reinforced the importance of innovative infrastructure projects to protect life and property. I commend Governor Kathy Hochul and the Governor's Office of Storm Recovery for the important milestone today, the start of construction on the long-awaited Living Breakwaters project. This project will help protect

the Tottenville shoreline from future storm surges and create a marine habitat along the beachfront, enriching the off-shore ecosystem for wildlife and for public recreational use."

City Councilmember Joe Borelli said, "This long needed project will finally address flooding that has occurred in this portion of Staten Island for generations."

Founding Principal of SCAPE Kate Orff said, "Living Breakwaters represents years of teamwork—research, shore walks, oyster pilots, hydrodynamic modeling and community planning meetings. So many people over so many years have provided valuable input. It's inspiring to see this model of coastal blue-green infrastructure and community protection now being realized in Raritan Bay."

Established in June 2013, the Governor's Office of Storm Recovery coordinates statewide recovery efforts for Superstorm Sandy, Hurricane Irene and Tropical Storm Lee. Through its NY Rising Housing Recovery, Small Business, Community Reconstruction, Infrastructure and Rebuild ByDesign programs — GOSR invests \$4.5 billion in federal Community Development Block Grant - Disaster Recovery funding to better prepare New York for extreme weather events. More information about GOSR and its programs is available online here.