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New Jersey Bay Islands Initiative Marks Five Years

Group Unveils Boat Wake Campaign Meant to Protect Marsh Edge Integrity

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By Juliet Kaszas-hoch

Marsh islands in the bay are critical pieces of land; not only do they provide habitat for migratory birds, shellfish and terrapins, they mitigate storm impact on developed areas such as Long Beach Island by slowing wave action across open water and reducing erosion. With this understanding, and after witnessing the destruction caused by flooding during Superstorm Sandy, a group came together in 2020 with the dedicated aim to protect these bay islands.

Angela C. Andersen, sustainability director and marine field station manager for Long Beach Township, said the municipality definitely “set its sights on the bay islands after Sandy, knowing much of the threats stemmed from back-bay flooding, and so that is where many of the solutions lie.”

“The bay islands are essential to coastal ecosystems as they are ‘wet’ lands; they are tidewater sponges and speed bumps for coastal storms,” she remarked “They are also habitat and spawning sites for juvenile species of finfish and shellfish. As the land masses of the estuary, these islands are part of the dynamic and interconnected estuarine ecosystem. Without them we could not sustain the coastal ecosystem.”

As Virginia Rettig, now-retired manager for the Edwin B. Forsythe National Wildlife Refuge, explained, “After Sandy many organizations and community members built great relationships as we recovered. While much work was focused on inland marshes and shorelines, little attention had been paid to the bay islands.”

The Long Beach Island community, and Long Beach Township in particular, was “looking for a way to ensure islands that increase resilience were restored and protected,” Rettig pointed out. “They reached out to the U.S. Fish and Wildlife Service, which owns many of the bay islands, and after a few field trips and the inclusion of Mordecai Land Trust and others, the New Jersey Bay Islands Initiative was born.”

According to Andersen, “The bay islands team became more formalized when we got together with USFW, as they are the largest bay island landowner in New Jersey. In order to look closer at the islands we needed a database of them, and to have a tactical approach to identify high-potential islands for stabilization and/or restoration we needed to develop relationships with the regulatory agencies.

“Holding monthly meetings was the logical way to systematically address data collection and the broad range of groups working on marsh restoration, dredging, mapping and nature-based solutions; we all came together with a holistic vision for the coastal bay islands work.”

The first meeting was at the township complex in March 2020 – just before the pandemic began – and the group has been meeting monthly ever since. Membership has since grown to more than 65 partners, including the Stockton Coastal Research Center, The Nature Conservancy, the Monmouth University Urban Coast Institute and many others in addition to the township and the Forsythe Refuge.

“NJBII first mapped and counted the islands (in the Barnegat Bay-Little Egg Harbor Bay Estuary) to find that there were over 160,” Rettig noted. “This had never been done before. As sea level rises, coastal storms occur and long-term impacts from wind-driven waves and boat wakes occur, the islands are deteriorating. The islands are a part of the New Jersey coastal ecosystem: Some provide nesting habitat for birds; others provide waterfowl hunting opportunities; and others are key barriers to wave action that negatively impacts the built communities we live in.”

Rettig said one of the group’s greatest successes over the past five years is the creation of the N.J. Bay Islands Restoration Planner – NJBIRP – “which takes many layers of data provided by the partners to assess the health and potential restoration opportunities for our bay islands.”

“You can click on each to see how it has been behaving over the last 40 or so years,” said Andersen, “which gives us indications on the potential for restoration or simply stabilization efforts. Is it still there? Did it sink? Did it erode away? How much acreage or shoreline footage has been lost? The islands are subject to wave and wake conditions that threaten the edges and health of the marsh.”

The boat wake issue, Andersen added, is tied to NJBII’s new effort: “The Big Wake, Big Mistake!” campaign. Amanda Archer from the Jacques Cousteau Estuarine Research Reserve, who serves as press team lead for NJBII and the boat wake subcommittee, said this initiative “aims to educate boaters on the importance of reducing wake in sensitive coastal areas. It emphasizes the dangers that large wakes pose to kayakers, paddleboarders and smaller vessels, as well as the disruption to fishing, erosion of fragile shorelines and damage to wildlife habitats.

“By promoting mindful navigation, adherence to speed regulations and awareness of environmental impacts, the campaign encourages responsible boating and wake awareness to protect New Jersey’s bay islands and coastal ecosystems.”

Other NJBII successes, as both Rettig and Andersen noted, are the federal grant awards the group has received to develop restoration plans for several islands. This includes the Clam Cove Reserve, in Holgate, purchased as a cost-share involving the LBT Land Trust and the Ocean County Land Trust, and West Marshelder Island, off Spray Beach, which is jointly owned by the township and U.S. Fish and Wildlife, with the municipality again using open space funding to purchase the part of the island that had been privately owned.

Andersen said, “Clam Cove is getting a boost of corporate funding as well from New Jersey Resources to the Monmouth Urban Coast Institute for the hybrid oyster breakwater. We have secured permits for and will launch installation in September.”

Grant funding also allowed the installation of a tide gauge, in 2023, at the LBT Marine Field Station, located along the bay in Holgate. As Andersen stated, “This is filling in data gaps on tides in the region, and completes our trifecta of technology at the field station – a livestream camera, a weather station and the tide gauge – to provide real-time visual and numerical information on how wave and wake energy is behaving in the system.”

Rettig served as chair for the NJBII for the past five years. With her retirement, Andersen, Archer and Stockton Coastal Research Center Interim Executive Director Kim McKenna will take the lead.

“We are looking to be project-focused and maintain our monthly meetings and annual field trips,” said Andersen. “This year we will be at the JCNERR in August, focusing on soil and sediment transfer through Little Egg Harbor Inlet, sand migration from ocean into bay, and how the direct beneficial reuse of dredge material is key to bay island work.

“The long-term goal is fulfilling the grants we are all working on, making the case that the bay islands need the same holistic approach as the dunes/beachfront; we need the same love affair with the marsh as with the dunes. They are literally what is holding us all together; those bookends create and protect the Island.”

— Juliet Kaszas-Hoch

juliet@thesandpaper.net