

## **Establishing a Framework for Increased Habitat and Community Resiliency in the Pocomoke Sound Corridor - Rebecca Winer-Skonovd**

The Pocomoke Sound and surrounding lands are a confluence of culturally and ecologically significant land and waterscapes, spanning both Maryland and Virginia. The Sound holds one of the Chesapeake Bay's healthiest and most productive oyster habitats, supporting historic watermen communities on both sides of the Sound.

The Pocomoke Sound faces an uncertain future as the land subsides, waters rise, and flooding and erosion degrade and reshape the region's socio-ecological landscapes. Coastal habitats are projected to be lost at an alarming rate and climate justice communities such as Crisfield (MD) and Saxis (VA) are vulnerable to the impacts of sea level rise due to limited adaptive capacity and access to adaptation resources.

The Nature Conservancy (TNC), along with support from Biohabitats and OLIN Studio, is leading the effort to create a landscape-scale, unified strategy for climate adaptation in the Pocomoke Sound Corridor. In this initial effort, the project team created a resiliency framework that established a baseline understanding of social and ecological factors that could be negatively impacted by current and future flooding; inventoried existing, relevant restoration and management efforts; conducted a social and cultural assessment of existing communities; identified potential restoration activities; and developed a plan for future community engagement.

One of the main goals of this effort is to serve as a model of resiliency for communities across the Chesapeake Bay watershed. This presentation will focus on lessons learned and successful aspects of Pocomoke Sound Corridor Resiliency Framework that may be useful for other communities where increased habitat and community resilience is warranted.

## **Gentilly Resilience District Dillard Wetland Project – Combining Wetland Ecology with Urban Stormwater and Recreation Needs - Nina Reins**

The City of New Orleans (CNO) received \$140 million in National Disaster Resilience (NDR) program funds through the U.S Department of Housing and Urban Development (HUD). CNO used these funds to establish and implement projects within the Gentilly Resiliency District (GRD). These GRD projects will reduce flood risk and long-term costs associated with flooding, slow land subsidence, increase property values, spur economic activity, as well as encourage neighborhood revitalization, and adapt the city to a changing environment. The Dillard Wetland Project is one of the resilience projects being implemented.

The Dillard Wetland encompasses 27 acres of low-lying forest and is one of the last remaining parcels of wetland within city limits. This project is designed to provide a retreat from urban life, increase stormwater retention and re-establish healthy wetland vegetation. The preparation of a vegetation management and control plan to remove invasive species trees and plant native vegetation, was a critical element to assure restoration of native plants, manage vector species in the wetlands, and improve the health of the ecosystem. In addition,

boardwalks were designed to meander through the forest to provide access to an outdoor classroom and recreational spaces. Community engagement is an important component of the project, and the design adaptation was significantly influenced by community input. The final design elements leverage the triple-bottom-line benefit cost analysis by providing the traditional benefits of reducing flood damage, but also by improving property value, educational benefits, and water quality.

## **From Open Water to Marsh, Rookery, and Oysters – One of the Largest Coastal Habitat Restoration Projects to Benefit the Texas Economy**

“PawPaw, why are the islands gone? It makes the boat rough.” I asked my grandpa that in the 2000s when we were fishing in Texas’s East Matagorda Bay (EMB).

Remnants of the original Gulf Intracoastal Waterway (GIWW) construction, the islands that once fringed the bay adjacent to the Big Boggy National Wildlife Refuge (BBNWR) have been lost to erosion from passing vessels, an unimpeded 4-mile fetch, and oyster reef harvesting. Consequently, this section of the GIWW has rougher waters and sediment shoals, necessitating frequent maintenance dredging. These conditions interrupt maritime commerce and contribute to erosion at the BBNWR.

With funding from a Texas General Land Office Coastal Erosion Planning and Response Act grant and matching funds from the Port of Bay City Authority (POBCA), the Matagorda Bay Foundation (MBF) is leading a large-scale, multifaceted habitat restoration project in EMB. The project will connect degrading oyster reefs with living shoreline sections (totaling 4 miles) and beneficially use material dredged from the GIWW to create over 100 acres of wetlands with elevated mounds where birds can roost.

This presentation will discuss the approaches used by MBF and the POBCA, with the support of Anchor QEA, to conceptualize the project, negotiate local cost sharing, define the project scope to fall within the purview of each entity’s mission, and complete the Phase 1 planning, engineering, and permitting.

It’s amazing how those conversations with my grandpa over 15 years ago have come full circle and blossomed into a much-needed habitat restoration and navigation protection project.

## **Breaking Down Barriers: Lessons from Innovative Resilience Planning and Grant Support Initiatives in the Long Island Sound Region - Deborah Abibou**

Since 2022, the Sustainable & Resilient Communities (SRC) team of the Long Island Sound Study (LISS) has spearheaded a Resilience Grant Writing Assistance Program tailored to municipalities and community organizations. Administered jointly by New York Sea Grant (NYSG) and Connecticut Sea Grant (CTSG), this initiative funds consultants to bolster grant preparation and writing capacities for communities pursuing funding for sustainability and resilience-focused projects. The program has facilitated numerous communities in securing the technical

assistance needed to craft competitive proposals, while also enhancing their proficiency in navigating funding avenues.

Building on feedback, the program evolved in 2023 to include a Planning Support initiative. Under this expansion, NYSG and CTSG engage consultants to aid communities in identifying and developing the sustainability and resilience projects that they wish to pursue. By assisting in local climate risk assessments, project conceptualization, and preliminary planning, this initiative equips communities with the groundwork necessary to access funding for successful project design and implementation.

This presentation details the strategies, challenges, outcomes, and evolving dynamics of these innovative programs, showcasing their efficacy in fostering community resilience and sustainability in the Long Island Sound region. Insights from our experiences with these programs offer valuable lessons for similar coastal communities grappling with the challenges of how to best mobilize resources in support of resilience goals.

### **Achieving More Benefits and Equity from Integrated Solutions. Go Nature-Positive! - Luce Bassetti**

We need developments and communities to be more inclusive, nature-positive, and yet still able to thrive economically. In the coastal environment, a new understanding is emerging that can guide more synergistic and regenerative relationships between efforts to protect coastal community assets and their supporting natural processes. These solutions can achieve significant environmental and social benefits that can enhance communities beyond simple dollar terms.

How do we achieve a balance between designs for traditional hard engineered structures/armoring, and conserving or restoring ecological systems and their myriad benefits? Flood, stormwater management and Coastal risk reduction typically can be achieved through multiple approaches which can be made with a combination of nonstructural, structural and natural or nature-based measures. The type of reduction measures depend upon many factors including the project objectives, reliability, space, cost. A hybrid solution can also evolve to a natural solution with the use of natural material. These solutions can even be “nature positive”, restoring ecosystems and contributing to biodiversity improvements.

To better adapt and evolve to our changing world, natural systems can serve as a driver for innovation in flood and coastal protection in two ways:

- Bio-utilization – the use of living systems as protective/stabilizing structure
- Biomimicry – natural structure/processes that can be mimicked in engineering and architectural design

This presentation will define these solutions for coastal protection and flood management contexts, identify their benefits, provide examples of how these have been applied to projects in the US and UK, and finally outline research trends with implications for the future.