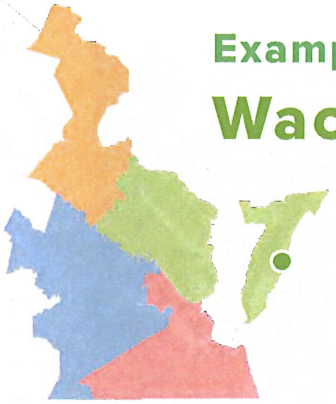

Example Nature-Based Project:

Wachapreague Reef Restoration

Through support from a National Fish and Wildlife Foundation National Coastal Resilience Grant, The Nature Conservancy (TNC) is constructing an oyster reef using new restoration techniques to reduce erosion of a marsh adjacent to Wachapreague Harbor, on the main channel of Bradford's Bay.

Location

Town of Wachapreague, Accomack-Northampton PDC

Owner

TNC, in partnership with the University of Virginia, Accomack-Northampton PDC, and the Town of Wachapreague

Cost

$1,400,000

Status

Construction and Implementation

Resilience Strategies Employed

Habitat Restoration (Oyster Reef Restoration)

Coastal Hazards Addressed

The constructed oyster reef aims to protect the marsh system adjacent to Wachapreague Harbor, which is one of the last barriers between the Town of Wachapreague and the open ocean. Over the past decade, Wachapreague Inlet has widened, exposing the town to the open ocean through this inlet, as well as marsh systems that were once protected by the south end of Cedar Island. This marsh system has been actively eroding due to the increased exposure. If it disappears, the town and its docks and waterways will become more vulnerable to storms and wave action. Additionally, the loss of this ecosystem would also mean the loss of habitat for wildlife that depend on exposed marsh systems for survival.

Anticipated Project Benefits

Oyster reefs lessen wave action, reducing shoreline erosion while also capturing sediment and building up the shoreline. The proposed reefs will reduce the impacts of waves, which cause erosion of marshes that buffer the mainland, while creating new suitable habitat for fish and wildlife.

Notable Characteristics

The Commonwealth recognizes the importance of protecting and enhancing natural infrastructure like oyster reefs. The Wachapreague Reef Restoration exemplifies a project that involves robust pre- and post-construction monitoring that will advance our understanding of which types of oyster reef techniques provide the greatest shoreline stabilization benefits. The project team is applying different types of oyster reef techniques depending on the shoreline properties at the site. Stacked oyster castles are being installed along the sandy, relatively hard, and flat shorelines. For steep and unstable (muddy) shorelines where oyster castles would sink and not be effective, an innovative oyster structure is being installed. After construction, the project will be monitored to evaluate the effectiveness of the different approaches. Effective practices will be shared with local, regional, and state stakeholders.


Installation of constructed oyster reefs by volunteers


Castles growth


Table logs growth


Progression of oyster growth on Oystercatcher substrates

Photos courtesy of The Nature Conservancy.