

## CUSTOMER CASE STUDY

# NATRX LATTICE EXOFORMS™ PROTECT CARROT ISLAND'S ERODING SHORELINE

BEAUFORT, NORTH CAROLINA



## PROJECT OVERVIEW

### PROJECT / CUSTOMER:

Customer:  
Carteret County, NC

Engineer:  
Moffat & Nichol

Contractor:  
Carteret Marine Services

LOCATION:  
Beaufort, North Carolina

PRODUCT / SOLUTIONS:  
NatrX Lattice ExoForms™

### CHALLENGE:

The easternmost shores of Carrot Island, which help protect historic Beaufort, NC, endured substantial erosion damage. In a collaborative effort, a 2,000-foot living shoreline was installed.

### SOLUTION:

To accomplish the county's objectives, Moffat & Nichol designed the project with Lattice ExoForms. Lattice Exoforms mitigate high wave energy, promote sediment accumulation and enhance habitat.

### PRODUCT ADVANTAGES:

- Protects shorelines from high wave energy
- Fast and efficient installation (installed at a rate of 90 seconds per unit)
- Modular and high-performance, ExoForms accomplish design objectives with significantly less material than rock solutions while adding net habitat value
- Installed cost of ExoForms is often substantially less than a comparable rock breakwater

## PROJECT OVERVIEW:

Carrot Island is part of the Rachel Carson Estuarine Reserve in Beaufort, North Carolina. High wave energy regularly impacts the island's easternmost shoreline, causing damaging erosion and impacting the fragile ecosystem.

## CHALLENGE:

First and foremost, the client's goal was to protect the shoreline from the impacts of high wave energy. In addition, they hoped to enhance sedimentation to replenish the island's sandy beaches in order to foster a thriving coastal ecosystem. Lastly, the shoreline protection solution needed to maintain and protect native marine life habitats as well as provide new oyster habitat.

## SOLUTION:

NatrX Lattice ExoForms were deployed to dissipate wave energy, promote sedimentation, and enhance habitat value. Lightweight, low-profile "Oyster Catchers" and tidal marsh plants were added in the calm areas landward of the ExoForms.

## WHY WERE NATRX LATTICE EXOFORMS CHOSEN TO PROTECT THE ERODING SHORELINE?

NatrX Lattice ExoForms offer high performance, cost effectiveness, and quick and efficient installation. This was important because the shoreline required fast-acting protection against the relentless high wave energy. Furthermore, Natrx Exoforms are engineered to mimic natural marine structures. As a result, they provide shelter for fish, oysters, and vegetation, fostering a thriving ecosystem.

## THE SOLUTION: FERGUSON WATERWORKS

At Ferguson Waterworks, we seek innovation and manufacturers that invest in sustainable and impactful solutions. Whether looking for shoreline protection or green stormwater infrastructure products, contact your local expert or send us a message for start-to-finish support.

