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United States Navy

# Naval Weapons Station Earle: Nature-Based Coastal Community Protection

Colts Neck, New Jersey



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*A living shoreline protects important military and community assets while enhancing local ecology and coastal resilience.*

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## **SERVICES**

Climate Adaptation & Resilience  
Ecological Restoration

**N**Y/NJ Baykeeper is playing an active role in protecting and enhancing the ecology of the shoreline along the U.S. Naval Weapons Station Earle (NWSE), which is located at the mouth of Ware Creek in Sandy Hook Bay. In 2016, they partnered with the U.S. Navy and the Rutgers University Center for Urban Environmental Sustainability to construct a first-of-its kind, 0.91-acre nearshore oyster reef at the site. Biohabitats assisted with that project by monitoring saltmarsh vegetation and other ecological features.

Using results from the oyster reef project and Biohabitats' monitoring data, Baykeeper applied for and received funding from the NFWF National Coastal Resilience Fund to perform a coastal engineering study to inform a nature-based protection and habitat enhancement design. With that funding, Biohabitats performed site assessment activities, conducted coastal hydrodynamic modeling, coordinated with stakeholders and regulators, and developed preliminary designs for a nature-based shoreline protection solution. These designs helped secure funding for final design and permitting of a living shoreline, which Biohabitats is now leading.

The innovative design includes 3,200 LF of near-shore and shoreline coastal protection features and the restoration of open water and tidal marsh. Nature-based strategies include oyster castles, marsh fringe restoration, and planting of native salt marsh and beach grass. The overall goal is to stabilize the shoreline along NWSE and protect surrounding community assets while enhancing coastal habitat. Once complete the project will serve as a model for other nature-based coastal resilience projects in Sandy Hook Bay and at coastal military bases.