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New York State Office of Parks, Recreation and Historic Preservation  
**Jones Beach Nature Center**

Wantagh, New York



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*The habitat surrounding an educational nature center in New York's iconic Jones Beach State Park gets a boost from constructed sand dune mounds that are built to last.*

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**SERVICES**

Ecological Restoration  
Nature Based Solutions

**L**ocated on the West End of Long Island's Jones Beach State Park, the Jones Beach Energy & Nature Center explores the interplay between human action, energy use, and environmental conservation. The New York State Office of Parks, Recreation, and Historic Preservation sought to redesign the nature center while preserving and enhancing the system of sand dunes around the parking lot. The Center's landscaping, which provides visitors with an immersive experience in the ecology of a barrier island, required the transformation of a nearly 10-acre concrete parking lot into a native beachscape, complete with native coastal grasslands and scrubland.

As ecological experts on a design team led by Starr Whitehouse, Biohabitats assisted with the nature-based components of the landscape design.

Biohabitats investigated existing topographic and geologic conditions to inform the design of the constructed dunes. This included an assessment of the open areas surrounding the Nature Center to determine the size of the sand grain used to construct the dunes, as well as any impacts the wind may have on dune stability. To calculate the minimum grain size required to prevent sand from being blown high into the air during wind events, Biohabitats conducted an Aeolian Transport Analysis - a process that observes the transport of sand that forms coastal dunes. This included an analysis of prevailing wind conditions (direction and speed) and determination of target design parameters for grain size and revegetation. With the sustainability and longevity of the dunes in mind, Biohabitats then supported a design that uses material salvaged from hardscape demolition to create the foundation for the dune mounds.

Once constructed, the diverse maritime landscape surrounding the Jones Beach Energy & Nature Center will provide ecological services for people and wildlife for years to come.