

Protecting Jersey Shore Residential and Ecological Communities by Changing the Culture of Beach Management

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Rapid succession of dune vegetation and development in Sea Girt, New Jersey from 2001 to 2005.

New Jersey has seen more resources spent on beach replenishment than any other state. While much of the resources used in beach replenishment has been focused on the protection of reconstructed dune systems, the beach or “berm” is equally important for shoreline protection and the health of the associated beach-dune system. Beach vegetation stabilizes and accumulates sediments on the beach surface and accelerates the development of incipient dunes on the upper beach. This portion of the beach is also critical habitat for rare plant and animal species. Beach management practices and recreational uses have been detrimental to the establishment of vegetation on this critical foredune area of the beach. Approximately 70% of the New Jersey ocean shoreline is currently impacted by beach raking or recreational uses that limit or prevent the beaches’ ability to retain sediments and develop dunes.

This project aims to address the negative impacts of certain beach management practices and recreational uses to the foredune and upper beach area. By partnering with the U.S. Fish and Wildlife Service and the New Jersey Department of Environmental

Protection Office of Natural Lands Management the researchers will seek to revise municipal beach management plans, revise state park policies and conduct research to gauge the effectiveness of these measures in enhancing ecosystem integrity and services. The results of this project will be used to conduct education and outreach activities to coastal communities, land managers, and public officials all while allowing recreational use of the beach.

Using string-and-post fencing on the upper portion of the beach will protect beach vegetation and important habitat without impinging on human use of the beach which is typically concentrated on the seaward portion of the beach. Monitoring will record revegetation rates, sediment accretion, and the use of beach habitat by shore birds while comparing sites with no beach protection, complete beach protection, and sites with 10% of the beach area protected from management and recreation.

Student interns are a vital part of this project and will be involved in site monitoring, presentations, and the development of informational material.