Introduction

New Jersey Sea Grant Consortium and its partners – Stevens Institute of Technology, U. S. Department of Agriculture - National Resources Conservation Service (USDA NRCS), Cape May Plant Materials Center, Georgian Court University, and William Paterson University – have developed this dune manual with the intended audience of New Jersey's coastal mayors, town planners, public works departments, OEM managers, environmental commissions, and other coastal stakeholders.

The purpose of the manual is to educate communities about dunes in the wake of natural disasters, sea level rise, and storm surge, by providing background information on the coastal ecosystems, their processes, and how they can mitigate the impacts of coastal storms. The information in the manual is intended to enable users to make informed decisions on coastal resilience by incorporating beach and dune dynamics with suitable plantings. The manual will first discuss basic information on the physical characteristics of dune establishment, growth, and erosion and highlight some of the important considerations related to dune management. It will then discuss the ecology of dune systems and introduce some of the management challenges of these unique ecosystems from a biological perspective. The next section will discuss the variety of plant species that are best suited for restoration plantings in New Jersey dune ecosystems, best practices in planting the species, and the science behind the plant species that are available. Lastly, the manual will discuss information about why a mix of species is important in dune stabilization and ecosystem function.

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