

MAPPING OUR WAY TO COASTAL ZONE MANAGEMENT: NEW JERSEY COASTAL MANAGEMENT PROGRAM'S USE OF MAPPED PRODUCTS TO MAKE LAND USE AND REGULATORY DECISIONS

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The earliest pioneers relied on maps and charts depicting natural features in order to guide them to landscapes suitable for settlement. Although not every settlement was successful, the leaders of those that thrived had an enhanced understanding of the surrounding environment and its natural constraints. This relationship led to a reliance on more refined maps containing greater detail of natural features. These maps then provided the foundation for the development of policies and regulations guiding land and natural resource ownership, conservation and protection, and more informed decision-making.

Improvements in data, mapping precision and technology provide a critical element for managers, planners and the regulated community to make informed decisions that address the complexity and diversity of New Jersey's landscape. Mapping has been used as a tool to protect aquatic, biological, and topographic features having ecological and conservation values and functions; preserve land with exceptional recreational and/or cultural value; guide development to protect, enhance or maintain natural features; promote the character and stability of various land use development types; inform environmental policy and regulation; guide state financial infrastructure investments; and protect public health, safety and general welfare.

New Jersey's first topographic survey displaying landscape and cultural features was completed by Topographic Engineer C.C. Vermeule at a detailed scale of 3 inches to 1 mile, between the years of 1870 and 1887. Building on this legacy, New Jersey has continued to develop comprehensive mapping tools to inform environmental decision making and management. Notable examples include riparian lands mapping that identify lands now or formerly flowed by the mean high tide, coastal wetlands mapping, statewide freshwater wetlands mapping, critical habitat suitability for imperiled species (through the State's Landscape Project), ecosystem service functioning of the State's natural capital and statewide LiDAR mapping. Consistent with the regulatory framework of New Jersey's approved Coastal Zone Management Program, these efforts are the foundation for effective land-use decision-making and coastal resource conservation.

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