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SAGE "In Action' – Protecting Great Bay Boulevard with Green Infrastructure

Barnegat Bay Federal Highway Administration (FHWA) Grant Project

ALEXANDRIA, VIRGINIA. In 2016, the SAGE Community of Practice in Barnegat Bay, New Jersey was awarded a grant from the Federal Highway Administration (FHWA) to study green infrastructure options for protecting Great Bay Boulevard from sea-level rise. SAGE stands for Systems Approach to Geomorphic Engineering, and it promotes the use of both green (natural and nature-based) and gray (hard, structural engineering) approaches to make our coasts more resilient.

Aerial map of Great Bay Boulevard

Great Bay Boulevard is located on a marsh peninsula in Ocean County, and provides access to an important Wildlife Management Area, several popular marinas, and research stations for Rutgers University and the Jacques Cousteau National Estuarine Research Reserve. This road was heavily impacted by Hurricane Sandy and experiences routine flooding during coastal storms and extreme high tides.

The grant project will provide recommendations for the use of green infrastructure solutions to lessen the frequency and severity of flooding along Great Bay Boulevard. Project partners will investigate the physical parameters that cause flooding, and determine the role of the natural wetland system in protecting the road from high water

Great Bay Boulevard on a nice day…

… and not such a nice day (photo taken on 9/30/16).

events. Results from the field analysis will be used to create several natural and nature-based protection concepts for Great Bay Boulevard.

A workshop of the project partners and other local stakeholders will evaluate these options and rank them in order of preference. Based on the workshop results, project partners will further analyze the feasibility of recommended options and publish a report on their findings. The project is expected to be completed in August 2017.

Conducting the field analysis and installing wave and water sensors (above) and marsh transects (below right).

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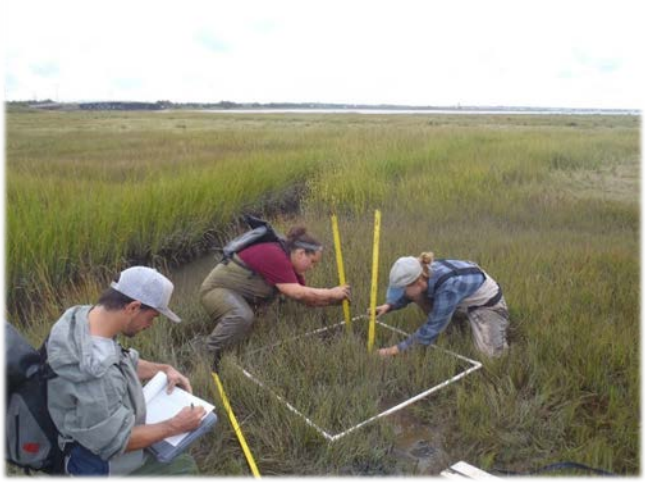

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