



# Cape May Plant Materials Center

United States Department of Agriculture  
Natural Resources Conservation Service

Plant Materials Program  
Technology Report

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## Investigations into American beachgrass (*Ammophila breviligulata*) Die-Out at National Park Service Unit Sandy Hook NJ.

### In The Field:

Early Spring of 1999, Cape May PMC Manager Bill Skaradek inspected stands of 'Cape' American beachgrass that died at the NPS park unit Sandy Hook NJ. NPS Manager Bruce Lane noted that the beachgrass was installed to vegetatively stabilize a protective berm along the park entrance road. According to Mr. Lane the beachgrass did well for about 2 years and then died out.



### Diagnostic Features Described

During the site inspection several features were noted. First the installed plants did not exhibit the development of rhizomes. Secondly there was significant amount of thatch that was present around each planting unit. Third the sand or snow fencing that was installed to trap wind blown sand particles were exhibiting low volumes of sand present.

### Interpretation of Features

The lack of sand within the fencing system was an indication that there was negligible amount of new sand coming in. Additionally the perching of plants or the erosion of sand from around the base of some plants further indicated that sand was actually leaving or shifting within the site. The presence of thatch indicated that for the preceding 2 growing seasons that no burial of the plant was taking place. This lack of burial allowed for the build up of thatch that then served to harbor a complex of different pathogens.



NRCS Bill Skaradek and  
NPS Bruce Lane  
inspecting beachgrass

## **Results and Recommendations**

It was determined that the USDA NRCS cultivar ‘Cape’ American beachgrass was being either improperly applied or that the follow-up management of ‘Cape’ was insufficient to safeguard the stabilization of the berm.

Specifically, American beachgrass and particularly the geno-type ‘Cape’ physiologically evolved in the areas of the dune system that experience accretion or sand accumulation. At undetermined thresholds, American beachgrass exhibits its best vigor or health when sand is being deposited. Moderate burial processes stimulate new growth, and also bury the old leaves and vegetative materials thus eliminating thatch build-up and pathogen harbor.

When planted in areas that receive little to no sand accumulation, ‘Cape’ will survive (not thrive) for a couple of growing seasons before succumbing.

This site is representative of about 100 sites inspected by PMC Manager Bill Skaradek. Typically what happens is a beach or a section of beach experiences erosion. Land managers (federal, state and local municipalities’ etc) are required to protect infrastructure (roads, sewer lines, utilities, and buildings). Through either dredging or trucking, materials are brought in and formed into a dune type structure and then planted to ‘Cape’ American beachgrass for stabilization.

Though there is a new artificial deposit of sand, the system is still located in a section of beach that is not receiving new sand inputs from natural sources. Depending on the materials used to form the berm or artificial berm, the beachgrass can live up to about the third growing season before dying. In several instances engineering firms trucked in I-5 road gravel and expected the beachgrass to thrive. This did not occur.

## **Management Recommendations**

Since you know that the beachgrass will survive and stabilize the site temporarily, some other materials need to be incorporated. When seed of dune plant species are available, incorporate into the planting medium before the installation of beachgrass. ‘Atlantic’ coastal panicgrass, ‘Brooklyn’ switchgrass, Monarch seaside goldenrod, coastal little bluestem, Pioneer sea oats, ‘Wildwood’ bayberry, ‘Oceanview’ beachplum are to name a few of the diversity of materials that have been developed by the USDA NRCS Cape May Plant Materials Center.

If you have already planted the site to beachgrass some of these same species can be planted using a hand pushed planter. Depending on funding considerations one wish to consider additional vegetative components such as saltmeadow cordgrass and some of the same species named above.

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To learn more about the Plant Materials Program, visit our website at: [http:// Plant-Materials.nrcs.usda.gov](http://Plant-Materials.nrcs.usda.gov)



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