

# CRITICAL AREA PLANTING

## CONSERVATION JOB SHEET - Agronomy Series Dune Stabilization With Trees

342.3



Natural Resources Conservation Service

Michigan



In the 1930s, Red Pine was planted by the CCC to stabilize wind blown sand dunes along Lake Michigan.

### Critical Area Planting – Sand Stabilization with Trees

Establishment of permanent vegetation (trees) on sites that have or expect to have high wind erosion rates that prevent establishing vegetation with normal practices.

#### Specifications

American beach grass is the best grass for initial stabilization of wind blown sand. Plantings are established by sprigging. (live sprouted plants). For specifications on sand dune stabilization with American beach grass, see the Michigan Critical Area Planting job sheet – Dune Stabilization With Grass, 342.2. Another method to stabilize bare blowing sand is to use brush mulch. Both methods are acceptable for dune stabilization in Michigan.

Two years after planting beach grass or where surface sand movement has ceased, plant adapted trees if the beach grass is not too competitive.

Plant the following tree species according to soil type:

1. LOAMY SAND (MSU SOIL MANAGEMENT GROUP 4a) Red pine, White pine, and Jack pine.
2. SAND (MSU SOIL MANAGEMENT GROUP 5a) Jack pine, Red pine, and Carolina poplar.

Plant the following trees and shrubs on wet spots:

1. Cottonwood
2. Shrub willow
3. Dogwood species
4. American Cranberrybush
5. Nannyberry Viburnum

Plant the following native species on dry sites:

1. Canada Buffaloberry

The following tree species are adapted to sand dune plantings adjacent to large lakes: White pine, Imperial Carolina Poplar, Red pine, and Jack pine.

Control blowing areas by planting two or more row of trees each year, beginning on the windward side and progressing across the area as it is stabilized. Space trees at 4 feet x 6 feet, staggered in rows.

Hand plant trees in the beach grass after it has controlled sand movement but before the grass becomes too dense.

When planting trees in open blowing areas without beach grass, apply brush mulch. Lay the brush with the butts to the wind and the tops over the butts. Space trees 6 to 8 feet x 6 to 8 feet.

### **Operation, Management, and Maintenance**

Use of the area shall be managed as long as necessary to stabilize the site and achieve the intended purpose.

Do a periodic inspection and evaluation of vegetation to determine maintenance needs.

Replanting due to drought, insects, or other events which prevented adequate stand establishment should be addressed within 1 to 3 years of planting. Recommendations may vary from complete re-establishment to overseeing or spot-planting.

Protect the area from grazing by livestock or human traffic until the vegetative cover is established. Maintain all necessary fencing (see Fence Standard, 382) or consider recycling Christmas tree branches laid flat along the area perimeter to deter barefoot human traffic. Or plant a low growing juniper species as a perimeter fence to deter human use.

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Client name:	County:	Design Date:
	Township:	
	Section(s):	

Attach Site map(s)

<b>Specifications:</b>					
<b>Purpose:</b> __Stabilize Dunes <b>Planned by:</b> _____					
<b>Fertilizer Recommendation:</b>			<b>Site Preparation &amp; Design (partial or solid planting):</b>		
<b>Site No.</b>	<b>Acres</b>	<b>Tree Species</b>	<b>Recommended rate or spacing</b>	<b>Total trees needed</b>	<b>Recommended Planting Date</b>
<b>Planting Method Specify:</b>					
<b>Perimeter protection:</b> (fencing, Christmas tree branches, etc.)					

The above was installed on \_\_\_\_\_ and completed according to plan design. This practice as installed meets the specifications of the NRCS MI Critical Area Planting Standard 342.

Notes: