

Windbreak/Shelterbelt Establishment

Conservation Practice Job Sheet

NJ-380



Definition

Windbreaks or shelterbelts are plantings of single or multiple rows of trees or shrubs that are established for environmental purposes.

Purpose

Windbreaks or shelterbelts are generally established to protect or shelter nearby, leeward areas from troublesome winds. Such plantings are used to reduce wind erosion, protect growing plants (crops and forage), alter the microenvironment to enhance plant growth, manage snow, improve irrigation efficiency, and delineate field boundaries. Windbreaks also protect structures and livestock, provide wildlife habitat and travel corridors, enhance aesthetics, and increase carbon storage. Also, when used as a living screen, windbreaks control views, reduce noise, and intercept chemical drift.

Where used

Windbreaks are “environmental buffers” that are planted in a variety of settings, such as on cropland, pasture, along roads, adjacent to farmsteads, feedlots, or waste storage facilities, and in urban areas.

Resource management system

Windbreaks and shelterbelts are normally established concurrently with other practices as part of a resource management system for a conservation management

unit. For example, conservation crop rotation, residue management, and windbreaks can act together to control wind erosion year-round.

Operation and maintenance

The following actions shall be carried out to insure that this practice functions as intended throughout its expected life. These actions include normal repetitive activities in the application and use of the practice (operation), and repair and upkeep of the practice (maintenance):

- Replacement of dead trees or shrubs will be continued until the barrier is functional.
- Supplemental water will be provided as needed.
- Thin or prune the barrier to maintain its function.
- Inspect trees and shrubs periodically and protect from adverse impacts including insects, diseases or competing vegetation. The trees or shrubs will also be protected from fire and damage from livestock and wildlife.
- Periodic applications of nutrients may be needed to maintain plant vigor.

Wildlife

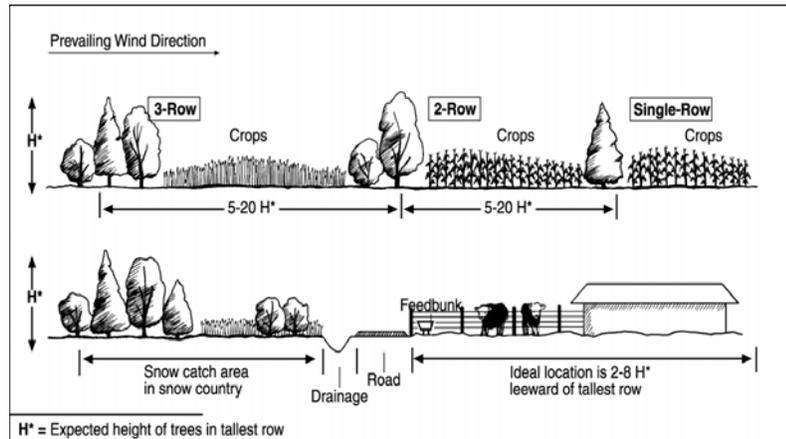
For plantings to function properly, access by livestock and certain wildlife must be managed year-round (use exclusion and fencing). Connecting shelterbelts with existing or planned perennial vegetation, such as woodlots and woody draws (tree/shrub establishment) or riparian areas (riparian forest buffer), provides additional benefits for wildlife and aesthetics. Select native or adapted species that provide wildlife food or cover.

Specifications

Site-specific requirements are listed on the specifications sheet. Additional provisions are entered on the job sketch sheet. Specifications are prepared in accordance with the NJ NRCS Field Office Technical Guide. See practice standard Windbreak/Shelterbelt Establishment - code 380.

Windbreak/Shelterbelt Establishment – Job Sheet

For:	Farm #:	Tract #:
Field(s):	Assisted By:	
Contract Item number (if applicable):	Program:	
Scheduled Date:	Completed Date:	



A windbreak or shelterbelt usually consists of multiple rows, with shrubs in the outer rows and taller trees in the interior. Complementary practices work with these environmental buffers to further control wind erosion and snow deposition and modify site characteristics for habitat and screening purposes. For comprehensive protection of a field, windbreaks are placed in a series across the area (typically spaced at intervals of 5 to 20 times the height of each windbreak), with individual windbreaks running parallel to one another, but perpendicular to prevailing winds.

Purpose for Planned Windbreak/Shelterbelt (check all that apply):	
Reduce soil erosion from wind	Provide living noise screens
Protect plants from wind-related damage	Provide living visual screens
Alter microenvironment for enhancing plant growth	Provide living barriers against airborne chemical drift
Manage snow deposition	Delineate property and field boundaries
Provide shelter for structures, livestock, and recreational areas	Improve irrigation efficiency
Enhance wildlife habitat by providing travel corridors	Enhance aesthetics
	Increase carbon storage

Location and Layout Specifications: (Include a sketch, or aerial photo on page 4.)	
Width (feet; include widths of maintenance areas next to outer rows):	
Length (feet):	Area (acres):
Total area of zone protected/sheltered (acres; based on expected height and density of the windbreak/shelterbelt):	
Additional requirements:	

Woody Plant Materials Information:					
Species/cultivar by row number:	Kind of stock ¹ :	Planting Dates	Distance between plants within row (ft):	Total number of plants for row:	Distance (ft) from this row to next row ² :
1					
2					
3					
4					
5					
6					
7					--

¹Bareroot, Container, Cutting; include size, caliper, height, and age as applicable. ²Adjusted for width of maintenance equipment.

Note: Sources of Plant Materials can be found in the New Jersey Field Office Technical Guide Section I-A. Refer to Reference Lists – Ecological Science – References 1 and 2. Contact your local USDA-NRCS office for more information regarding these references.

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Temporary Storage Instructions
<p><i>Planting stock that is dormant may be stored temporarily in a cooler or cool, moist, darkened area up to 3 days. For more than 3 days or for stock that is expected to begin growth before planting, dig a V-shaped trench (healing-in-bed) sufficiently deep and bury seedlings so that all roots are covered by soil. Pack the soil firmly and water thoroughly. Additional requirements:</i></p>
Site Preparation
<p><i>Remove debris and control competing vegetation to allow enough spots or sites for planting and planting equipment. The following method of site preparation is planned: ___Mechanical means such as plowing, disking or rototilling, ___Chemical control of vegetation, ___Hand scalping the area where trees are to be planted, ___Other: _____</i></p> <p><i>Additional requirements:</i></p>
Planting Methods
<p><i>For container and bareroot stock, plant stock to a depth even with the root collar in holes deep and wide enough to fully extend the roots. Pack the soil firmly around each plant. Cuttings are inserted in moist soil with at least 2 to 3 buds showing above ground. Pest Management including weed control is required.</i></p> <p>Vegetation Mat-Size _____ # _____ Tree Shelter-Size _____ # _____ Other _____</p> <p><i>Additional requirements:</i></p>
Operation and Maintenance
<p><i>Replacement of dead trees or shrubs will be continued until the barrier is functional.</i></p> <p><i>Supplemental water will be provided as needed.</i></p> <p><i>Thin or prune the barrier to maintain its function.</i></p> <p><i>Inspect trees and shrubs periodically and protect from adverse impacts including insects, diseases or competing vegetation. The trees or shrubs will also be protected from fire and damage from livestock and wildlife.</i></p> <p><i>Periodic applications of nutrients may be needed to maintain plant vigor.</i></p> <p><i>Other:</i></p>

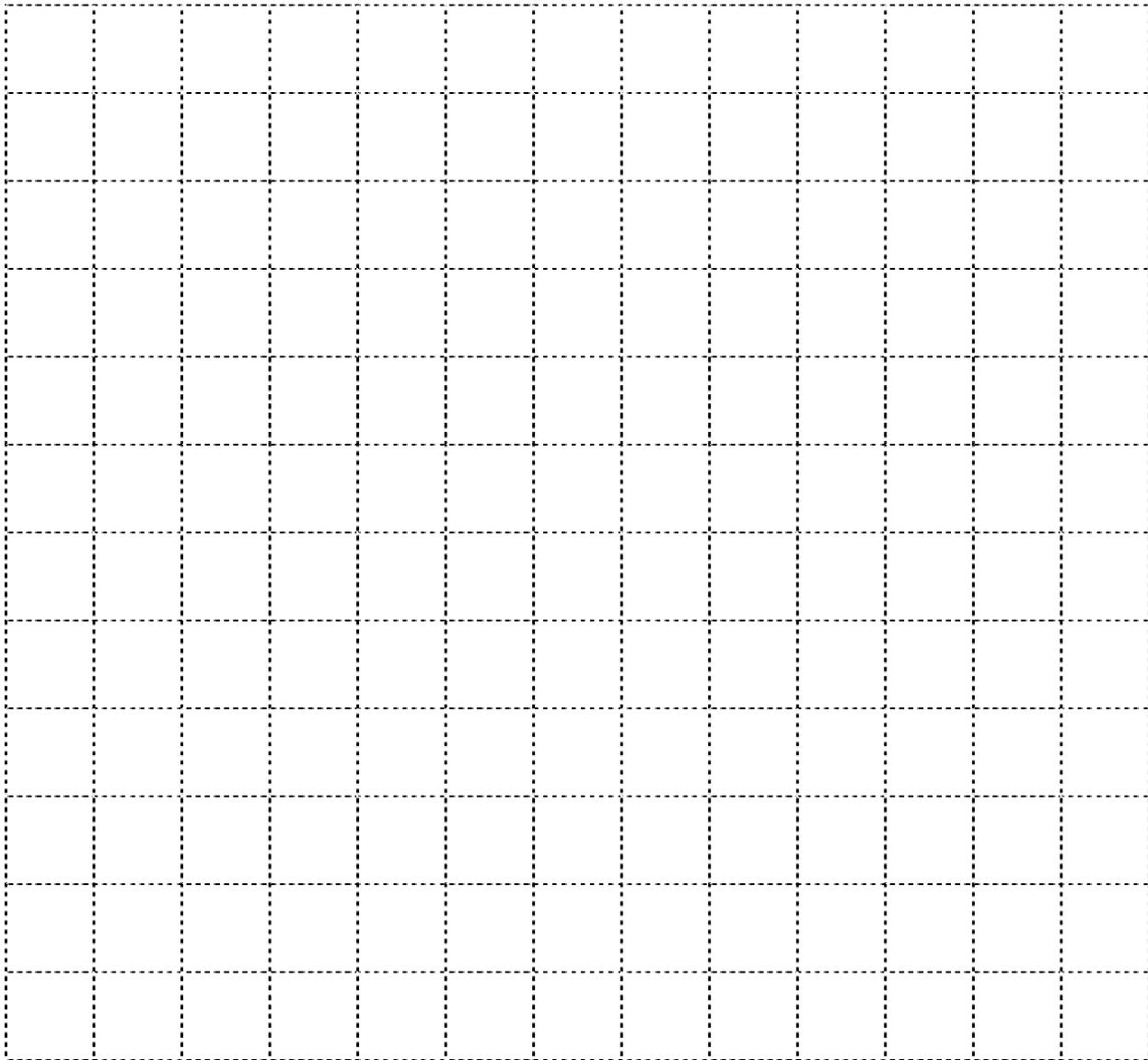
Questions regarding the planting or maintenance of the buffer planting should be directed to [your technical service provider](#).

Additional Specifications and Notes:

If needed, an aerial view or a side view of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Recommendation: Import digital photographs to indicate practice before and after effects.

Scale 1"= _____ ft. (NA indicates sketch not to scale: grid size=1/2" by 1/2")



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Practice Checkout:

Amount completed: _____ units

Mark as-built location on plan map and attach photos.

Remarks _____

This practice meets NRCS standards and specifications

Yes

No

Check out completed by: _____ Date: _____

Certified by: _____ Date: _____