Windbreak/Shelterbelt Establishment (FEET)
Code 380

Montana Conservation Practice Job Sheet

DEFINITION:

Windbreaks or shelterbelts are plantings of single or multiple rows of trees or shrubs that are established for environmental purposes. Living snow fences are an important variation of windbreaks and shelterbelts in some parts of the country. The height of the tallest row and overall density of foliage and branches of an individual windbreak/shelterbelt planting greatly influence the size of the nearby area that is protected or sheltered.

PURPOSE:

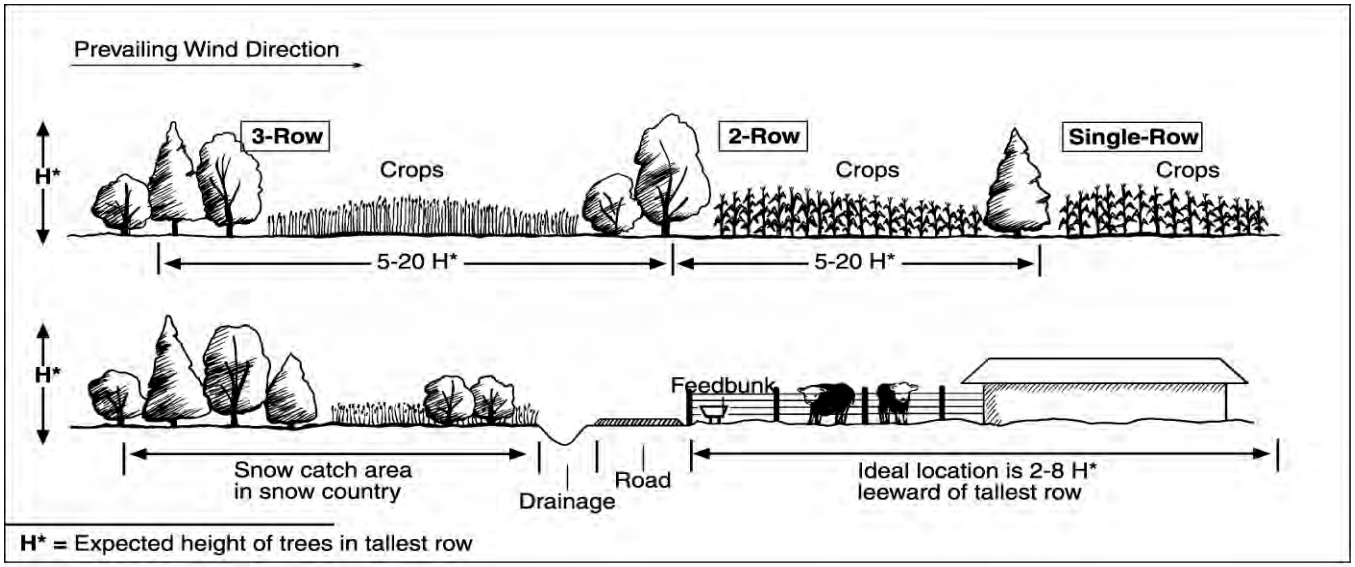
Windbreaks or shelterbelts are generally established to protect or shelter nearby, leeward areas from troublesome winds. Such plantings are used to reduce wind erosion, protect growing plants (crops and forage), alter micro-environment to enhance plant growth, manage snow, improve irrigation efficiency, and delineate field boundaries. Windbreaks also protect structures and livestock, reduce energy use, 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, and rangeland (sometimes referred to as “living barns”); along roads, farmsteads, feedlots; 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.



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.

WILDLIFE:

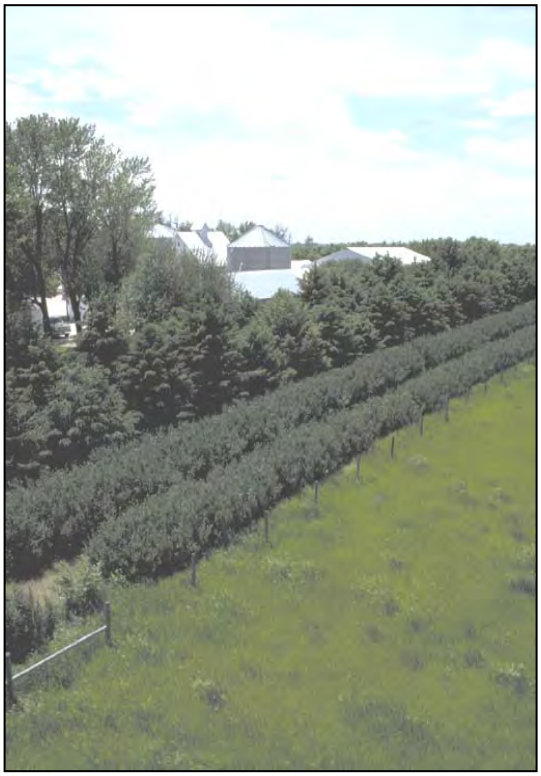
For plantings to function properly, access by livestock and certain wildlife must be managed year-round (use exclusion and fencing). Connecting shelterbelts with existing or planned perennial vegetation, such as woodlots and woody draws (tree/shrub establishment) or riparian areas (riparian forest buffer),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

OPERATION AND MAINTENANCE:

Trees and shrubs in a windbreak or shelterbelt need periodic maintenance and, later on, possible renovation (tree/shrub pruning and windbreak/ shelterbelt renovation). In arid areas windbreaks may need supplemental water or the use of water-harvesting techniques for successful establishment.

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 NRCS Field Office Technical Guide (FOTG). See FOTG, Section IV, Practice Standards and Specifications, Windbreak/Shelterbelt Establishment (Code 380).



This multiple-row windbreak protects the adjacent farmstead and provides important wildlife habitat.

WINDBREAK/SHELTERBELT ESTABLISHMENT – JOB SHEET

LANDOWNER	FIELD / MANAGEMENT UNIT		DATE
LEGAL DESCRIPTION	CONTRACT ITEM NUMBER	**LENGTH (FEET)**	**JOB CLASS**

Purpose (check all that apply):

☐ Reduce soil erosion from wind	☐ Provide noise and visual screens
☐ Protect plants from wind-related damage	☐ Reduce energy use
☐ Alter microenvironment for enhancing plant growth	☐ Improve air quality by reducing and intercepting air borne particulate matter, chemicals and odors
☐ Manage snow deposition	☐ Delineate property and field boundaries
☐ Provide shelter for structures, animals, and people	☐ Improve irrigation efficiency
☐ Enhance wildlife habitat	☐ Increase carbon storage in biomass and soils

Location and Layout:

Precipitation Zone (INCHES):	Number of Rows:
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 (FEET)	Total number of plants for row	Distance from this row to next row (FEET)[2]
1					
2					
3					
4					
5					
6					
7					---

[1] BAreroot, COntainer; include size, caliper, height, and age as applicable.

[2] Adjusted for width of maintenance equipment.

Soil Map Units:

Conservation Tree/Shrub Suitability Group (CTSG):

Site Preparation:

Care, Handling, and Storage for Woody Planting Stock:

WINDBREAK/SHELTERBELT ESTABLISHMENT – JOB SHEET (cont.)

Planting and Protection:
Operation and Maintenance:
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.

Scale 1" = _____ FEET (NA indicates sketch not to scale: grid size = 1/2" by 1/2") Attached Plan Map: ☐ Yes ☐ No

Approvals:

NRCS Conservationist _____ Job Approval Authority _____ Date _____

Producer _____ Date _____

WINDBREAK/SHELTERBELT ESTABLISHMENT – JOB SHEET (cont.)

Installation Certification:

Conservation Management Unit or Field Number: _____

Acreage of Treated Area: _____ Adequate: _____

Length of Windbreak/Shelterbelt: _____ Adequate: _____

Conservation Tree/Shrub Suitability Group (CTSG): _____

Species Selected and Number of Plants Installed:

Species: _____ Number Installed: _____ Adequate: _____

Species: _____ Number Installed: _____ Adequate: _____

Species: _____ Number Installed: _____ Adequate: _____

Species: _____ Number Installed: _____ Adequate: _____

Species: _____ Number Installed: _____ Adequate: _____

Species: _____ Number Installed: _____ Adequate: _____

Species: _____ Number Installed: _____ Adequate: _____

Spacing of Trees/Shrubs:

Distance Between Plants within Row: Trees _____FEET Adequate: _____

Shrubs _____FEET Adequate: _____

Distance Between Rows: _____FEET Adequate: _____

Distance Between Sets: _____FEET Adequate: _____

Width of Cultivated Strip Around Planting: _____FEET Adequate: _____

Protected Area Width: _____FEET Adequate: _____

Method of Site Preparation: _____ Adequate: _____

Method of Vegetative Competition Control: _____ Adequate: _____

Percent Survival Rate (2nd Year): _____ % Adequate: _____

Certification Statement:

Reset Job Sheet Print Job Sheet

I hereby certify that this practice has been installed in accordance with NRCS standards and specifications.

_____ _____ _____
NRCS Conservationist Job Approval Authority Date

_____ _____
Date