

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD
WINDBREAK/SHELTERBELT RENOVATION

(Ft.)

CODE 650

DEFINITION

Replacing, releasing and/or removing selected trees and shrubs or rows within an existing windbreak or shelterbelt, adding rows to the windbreak or shelterbelt or removing selected tree and shrub branches.

PURPOSE

Restoring or enhancing the original planned function of existing windbreaks or shelterbelts.

CONDITIONS WHERE PRACTICE APPLIES

In any windbreak or shelterbelt that is no longer functioning properly for the intended purpose. Extending the length of an existing windbreak is handled under Windbreak/Shelterbelt Establishment, 380. For normal and periodic pruning, refer to Tree/Shrub Pruning, 660.

CRITERIA

Thin trees or shrubs to reduce plant competition or alter the density of the planting.

Prune or shear the trees or shrubs to remove diseased branches or alter the density of the planting.

Remove entire or partial rows of trees or shrubs to release adjacent rows.

Trees or shrubs with coppicing capability shall be cut close to the ground to improve density and/or vigor of trees or shrubs in decline

Competing herbaceous vegetation will be mechanically or chemically controlled to improve the growth and vigor of trees and shrubs.

Add rows of trees or shrubs adjacent to or within an existing windbreak or shelterbelt to improve windbreak or shelterbelt density.

Existing growing space, shade level and root competition will be evaluated and determined to be at acceptable levels to permit unimpeded growth to new plantings.

Residual plants will be protected during the renovation.

CONSIDERATIONS

Renovation may be accomplished over a period of years.

Debris should be removed from the site and disposed properly if the debris will cause insect, disease, fire or operability problems.

Vegetation removed during renovation can be burned as specified by Prescribed Burning practice (338).

Debris and other vegetation removed during renovation may be used to produce energy. Consider the energy balance of this action.

Erosion control may be needed during the renovation process.

Wildlife and pollinator needs should be considered when selecting tree or shrub species to add or remove.

Species diversity, including use of native species, should be considered.

Increasing species diversity could reduce impacts from existing and new diseases and pests.

Refer to Tree & Shrub Establishment (612) for further guidance on planting trees and shrubs.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, technical notes, and narrative statements in the conservation plan, or other acceptable documentation.

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):

Additional thinning, pruning or coppice management may be needed in the future to maintain function.

Periodic applications of nutrients may be needed to maintain plant vigor.

REFERENCES

Bentrup, G. 2008. Conservation buffers: design guidelines for buffers, corridors, and greenways. Gen. Tech. Rep. SRS-109. Asheville, NC: Department of Agriculture, Forest Service, Southern Research Station.

Brandle, J.R. et al. 1988. Windbreak Technology. Agric. Ecosyst. Environ. Vol. 22-23. Elsevier Pub..

Stange, C., et al. 1998. Windbreak Renovation. University of Nebraska Cooperative Extension EC 98-1777-X.