

NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD

WINDBREAK/SHELTERBELT RENOVATION

(Feet)
CODE 650

DEFINITION

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

PURPOSES

- Restoring or enhancing the 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.

CRITERIA

The following criteria will be used individually or in combination to restore or enhance the performance of a partially functioning or non-functioning windbreak or shelterbelt.

- To reduce plant competition or alter the density of the planting, individual trees or shrubs will be identified for thinning.
- To remove diseased branches or alter the density of the planting, the trees will be pruned or sheared. See Tree and Shrub Pruning standard and specification.
- To release adjacent rows of trees or shrubs, entire or partial rows of trees or shrubs will be identified and removed.
- To improve density or vigor of identified rows of trees or shrubs in decline; trees or shrubs will be cut to the ground to allow sprouting (coppice).

- To improve the growth and vigor of trees and shrubs, competing herbaceous vegetation will be mechanically or chemically managed.
- To improve windbreak or shelterbelt density, additional rows of trees or shrubs will be added adjacent to or within an existing windbreak or shelterbelt. 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. (Note: Extending the length of an existing windbreak is handled under Practice 380)
- Residual plants will be protected during the renovation.
- Comply with applicable laws and regulations, including New Mexico Best Management Practices (BMPs).

GENERAL CONSIDERATIONS

Renovation may be accomplished over a period of years.

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

Wildlife habitat needs should be considered when selecting tree or shrub species. Species diversity, including use of native species should be considered.

Damaging pests will be monitored and managed.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resource Conservation Service.

PLANNING CONSIDERATIONS

General field examination should be done prior to designing a renovation system for an existing windbreak.

Consider the following to determine if a windbreak needs renovation:

- a. Does the existing windbreak meet the needs of the current and proposed land use?
- b. Are the wind velocities reduced necessary to meet current land user objectives?
- c. Is the windbreak structure endangered due to either tree or shrub species decline in health or vigor because of overcrowding, past maturity, and presence of insects or disease?
- d. Are there openings that allow damaging or unwanted winds to penetrate the windbreak?
- e. Has the windbreak grown so large or became trashy or does it allow so much shade that it needs to be renovated to meet land use objectives?

Field investigations should be under-taken to determine if normal maintenance may not be sufficient to maintain healthy plant vigor. Removal of competition from grass, insect and disease control and maintaining adequate supplemental water may eliminate the need for renovation.

The renovation planning process is an excellent time to evaluate wind erosion control needs for present and future land uses. Are more wind barriers needed for desired protection?

Plan for temporary wind control until the renovated wind barrier has grown to provide the necessary degree of protection. Wind erosion control barriers to consider are:

- a. Artificial barriers;
- b. Increasing residues, if needed;
- c. Herbaceous barriers, either annual crop or perennials;
- d. Strip cropping, include trap strip (less than 2' high).

Shearing of existing windbreaks to maintain or improve form or limit height growth is considered to be maintenance.

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:

Contact the local NRCS conservationist immediately when unexpected problems and/or questions arise during practice installation.

Replacement of dead trees or shrubs in new plantings or rows will be continued until the barrier's function is restored.

Vegetative competition will be managed when it inhibits the renewed growth and vigor of the windbreak or shelterbelt.

Supplemental water will be provided as needed.

The trees and shrubs will be inspected and protected from adverse impacts including insects, diseases or competing vegetation. The trees or shrubs will also be protected from fire and damage from livestock or wildlife.

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

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

The windbreak/shelterbelt will be monitored for potential damaging pests. Pests will be managed when populations reach potentially damaging levels.