

WINDBREAK/SHELTERBELT ESTABLISHMENT or RENOVATION

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service—Practice Codes 380 and 650



WINDBREAK/SHELTERBELT ESTABLISHMENT or RENOVATION

Windbreaks or shelterbelts are single to multiple rows of trees and possibly shrubs planted in a linear fashion. They are established upwind of the areas to be protected. Renovating a windbreak may involve removing, releasing, or replacing selected trees and shrubs or rows of trees or shrubs. Tree/Shrub Pruning (660) may also be called for when renovating a windbreak.

PRACTICE INFORMATION

Windbreaks and shelterbelts are primarily used to reduce soil erosion from wind; protect crops, livestock areas, and farmsteads from wind and related microclimate effects; help control snow deposition; and help improve air quality by reducing and intercepting drifting chemicals and odors.

Windbreak/shelterbelt establishment involves the planting of vegetation to serve the purposes noted above. The effectiveness of a windbreak or shelterbelt is dependent on the height of the mature plants. Therefore, it may take 20 years or more for the practice to become fully functional.

Windbreak/shelterbelt renovation involves widening, partial replanting, removing, and replacing selected trees and shrubs to improve an existing windbreak or shelterbelt. A period of years may also be needed for proper renovation.

These practices can be applied in any area where there is sufficient linear length to establish the windbreak on the lee side of the area to be protected. It is important during planning to consider the dominant wind direction during weather events that cause damage.

COMMON ASSOCIATED PRACTICES

Windbreak/Shelterbelt Establishment or Renovation is commonly used in a Conservation Management System with practices such as Conservation Crop Rotation (328), Cover Crop (340), Residue Management (344), Tree/Shrub Site Preparation (490), Tree/Shrub Establishment (612), Tree/Shrub Pruning (660), and Upland Wildlife Habitat Management (645).

For further information, refer to the practice standard in the local Field Office Technical Guide and associated specifications and job sheets.

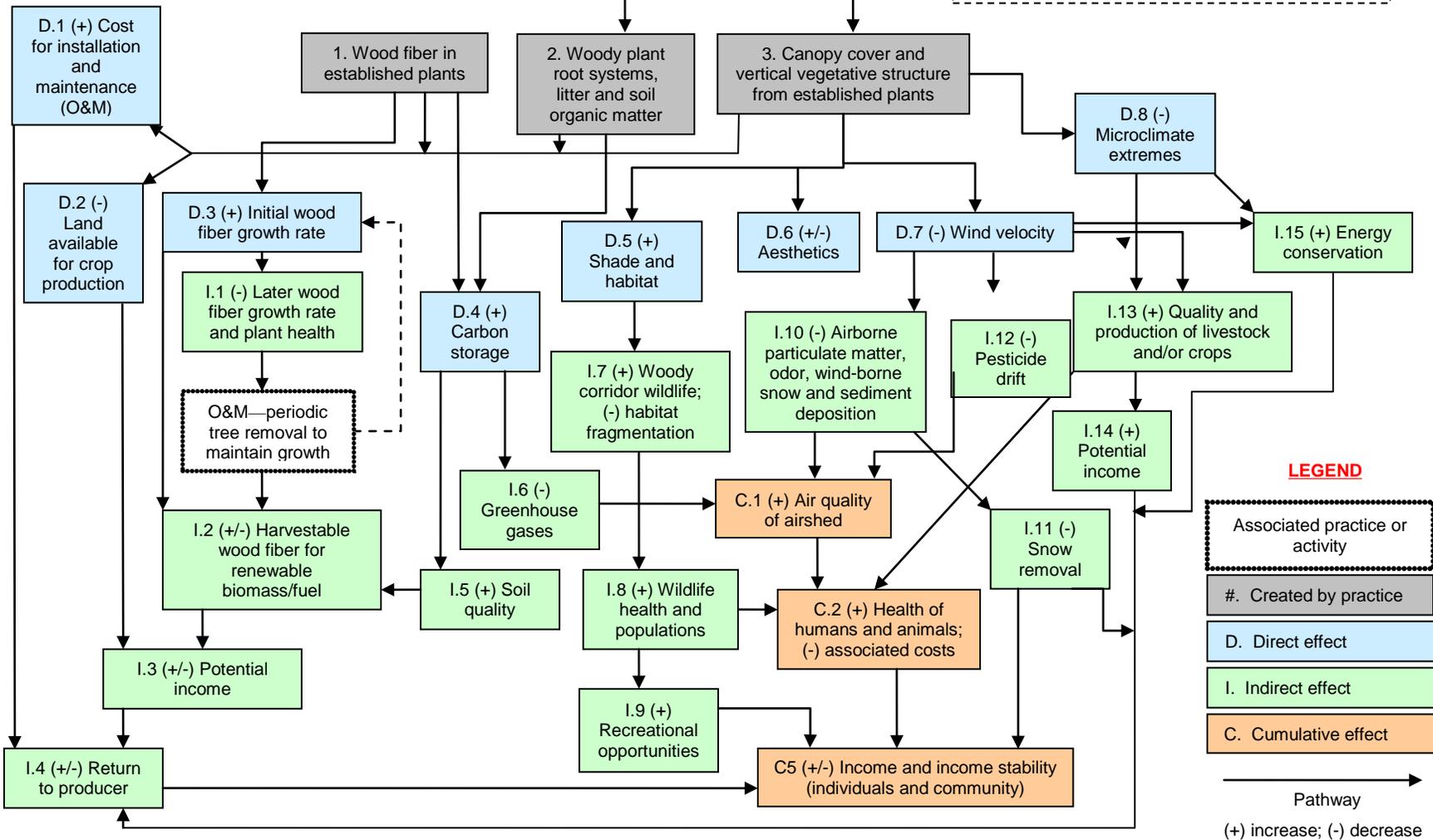
The following page identifies the effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowner and are presumed to have been obtained. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

Windbreak/Shelterbelt Establishment or Renovation

November 2011

Windbreak/Shelterbelt Establishment (380), Windbreak/Shelterbelt Renovation (650)

Initial setting: (1) Cropland; forage land; animal feeding operations; or urban area where wind erosion, snow drift, plant, animal, and human stress related to wind or temperature; energy consumption; or odor are concerns; (2) existing decadent windbreaks/shelterbelts that have reduced functionality for intended purposes



Note: Effects are qualified with a plus (+) or minus (-). These symbols indicate only an increase (+) or a decrease (-) in the effect upon the resource, not whether the effect is beneficial or adverse.

The diagram above identifies the effects expected to occur when this practice is applied according to NRCS practice standards and specifications. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowners and are presumed to have been obtained. All income changes are partially dependent upon market fluctuations which are independent of the conservation practices. Users are cautioned that these effects are estimates that may or may not apply to a specific site.