

## Definition

The manipulation of species composition, stand structure and stocking by cutting or killing selected trees and understory vegetation.

## Purpose

Forest stand improvement can be implemented to improve wildlife habitat.

## Condition Where Practice Applies

All forest land where improvement of forest resources is needed.

This practice applies to lands that are managed for wildlife. Early successional habitat development/management is normally established concurrently with other practices as part of a wildlife resource management system.

## Cutback Borders



Frequently the edges of forest stands/fields become invaded by undesirable trees that grow to a size of no value to edge species and shade out plants of benefit. Also, roots and branches of large trees that extend into a crop field sharply reduce production along its edges. In these situations, cutting, or otherwise removing most trees will provide several benefits.

Cutback borders can be developed to create valuable cover and food resources for wildlife that depend on brushy habitats, such as bobwhite quail, fox, rabbits, cardinals and small mammals. Well-managed borders may also provide foraging opportunities for typical forest wildlife, such as ruffed grouse, bobwhite quail

and wild turkey. These areas may increase the availability of foods and provide critical winter, escape and nesting cover for a variety of wildlife.

## Criteria

Manage for a variety of native tree species and stocking rates that meet desired wildlife and pollinator species food and cover requirements.

Create, recruit and maintain sufficient snags and down woody material to meet requirements of desired species and secondary cavity nesting species in balance with conditions needed to achieve other intended purposes.

Minimize improvement actions that disturb seasonal wildlife activities.

Refer to Early Successional Habitat Development/Management (647), Rare and Declining Habitats (643), Upland Wildlife Habitat Management (645), and Wetland Wildlife Habitat Management (644) to further develop and manage wildlife-related activities.

This job sheet will help you design cutback borders that provide early successional wildlife habitat.

As the term implies, cutback borders are usually created by felling trees with a chainsaw. Other methods include, killing selected trees with an application of herbicide or using a bulldozer or other means to push the trees away from the field edge.

When sawed, some hardwoods will quickly sprout at the stump and form a brush border in one or two growing seasons.

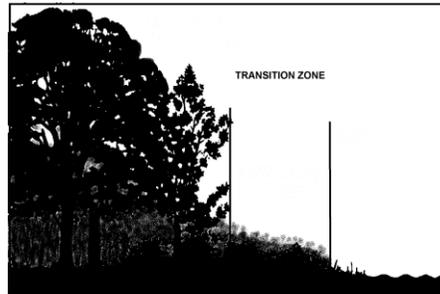
This practice may be particularly useful when “daylighting” or enhancing the habitat surrounding narrow forest trails or harvest roads and existing log landings.

Some general criteria apply to establishment of cutback borders:

- Where existing herbaceous field borders occur along woodland edges, they may be widened and enhanced by cutting woodland edges back to encourage growth of shrubs and other wildlife food-bearing plants. This creates a “softer” edge and better transition zone from woodland to open areas. This

method may be effective within forested areas adjacent to permanent food plots, logging roads and landings or similar woodland type settings.

- Leaving cut slash and woody material on the ground along woodland border edge cuts provides additional wildlife cover and may deter browsing of new sprouts.
- Cutback borders will be at least 30 feet wide and extend along as much of the field edge as possible
- Cut back borders may be established at different times throughout the property; or a portion of a field's edge may be established each year to provide various stages of regrowth.
- When cutting borders, leave trees or shrubs of special benefit. Species such as dogwoods, viburnums and serviceberry are examples of species that should be retained.
- The width of the border may vary throughout its length and not be uniform. The width may be increased depending on management goals and objectives. Generally, the wider the area the better the habitat it provides. Narrow borders are susceptible to heavy predation on animals that inhabit these transition areas.
- Shrubby vegetation may also be planted within and along cut-back borders which may serve to supplement existing species to provide a specialized food or cover type (e.g. conifer planting for winter cover).
- Some important considerations on how these areas will re-establish once cut are: the amount of sunlight received each day, the seed source available, climate, aspect and the existing vegetation.



Cut-back borders provide a smoother transition from woodland to grassland. This is achieved by cutting woodland edges back to encourage growth of shrubs and other wildlife food-bearing plants.



Cutback borders create a “softer” edge and better transition zone from woodland to open areas. This method may be effective within forested areas adjacent to permanent food plots, logging roads and landings or other settings where wildlife is a primary concern.

### Installation Methods

Cutback borders may be established several different ways. Three different ways are described below.

**A. Single Tier Method** - The simplest method is to cut all woody stems within the designated width and length and allow natural revegetation to establish the desired community. A few trees or shrubs that provide special sources of food or cover may be left standing within the border. Species such as dogwoods, conifers, certain oaks, viburnums and serviceberry are a few examples.

**B. Triple Tier Method** - To maximize wildlife values in cutback borders the following guide produces a tiered or layered result:

1. Cut all plants in the first 10 feet (minimum) of the border that are greater than 1 inch d.b.h. For wildlife benefits, the slash may be piled but could be left where cut. If windrowed brush piles are desired, refer to the WV Job Sheet (647)

Early Successional Habitat Management/ Development – *Brush Piles for Wildlife*.

2. Within the next 10 feet (minimum) cut (and pile if desired) trees over 2 inches d.b.h.
3. The next 10 feet (minimum) cut and remove all trees and shrubs over 4 inches d.b.h., unless the tree or shrub is producing a desired kind of food.

**C. Selective Tier Method** - Another method of obtaining a high quality "tiered" cutback border is to cut all trees in a selected strip that are of a height that if felled in the direction of the field would extend beyond the edge. This method results in cutting progressively larger trees as you move from the field into the woodland.

Herbicides may also be used to create cutback borders. Contact the West Virginia Division of Forestry for herbicide recommendations suitable for this purpose.

### Other Concerns

The method, felling direction and timing of tree cutting for should provide a safe work environment and protect sensitive areas such as vernal pools, riparian zones, cultural resources and structures.

Slash and debris left on the site after treatment will not present an unacceptable fire, safety, environmental, or pest hazard. Such remaining material will not interfere with the intended purpose or other management activities.

Potential landowner and operator liability should be assessed before forest stand improvement activities begin.

Forest stand improvement provides excellent opportunities to improve wildlife habitat for some species by favoring tree species that provide food and/or cover for desired wildlife.

Consider wildlife food and cover needs when making modifications to forest composition and tree spacing.

Consider retention of selected dead and dying trees, including down material, to enhance wildlife habitat values.

Consider environmental concerns such as threatened and endangered species and natural areas.

### Operation and Maintenance

Periodic inspections during treatment activities are necessary to ensure that objectives are achieved and resource damage is minimized. Follow-up and ongoing management activities will be needed to obtain desired results. Protect trees and shrubs from destructive grazing.

Inspect cutback borders to ensure that the desired community is establishing, control invasive plants and take other measures to ensure the effectiveness of the border.

Cutback borders consist of adapted species of small trees, shrubs and some herbaceous plants. They are more effective and provide more environmental benefits when established around the entire field. Plants that attract insects can serve as food sources for wildlife and create a "softer" edge and better transition zone from woodland to open areas

Observe proper safety when felling trees and using equipment. Herbicides used for establishment purposes and for control of noxious or invasive species must be used in accordance with all labels and precautions.

The ideal cutback border will appear unkempt and be composed of a variety of shrubby and some herbaceous plant species. After a long period, cut back borders may mature to the point of losing the effectiveness. Periodic pruning or thinning may be required. Although re-establishment may eventually become necessary, not more than 50% of all border habitats should be disturbed in any one year. In addition, never disturb the entire border habitat around a single field in the same year.

Cutback borders should never be disturbed during the nesting season (March 15 – July 15) to protect nesting wildlife.

**SPECIFICATIONS**

Site-specific requirements are listed on the following pages of this job sheet. Specifications are prepared in accordance with the WV NRCS Field Office Technical Guide.

<b>Client:</b>	<b>Farm #:</b>
<b>Field(s):</b>	<b>Tract #:</b>
<b>Designed By:</b>	<b>Date:</b>

<b>Purpose (check all that apply)</b>	
<input type="checkbox"/> Provide early successional food and cover for wildlife	<input type="checkbox"/> Enhancement of an existing herbaceous field border
<input type="checkbox"/> Planned in association with the construction of brush piles or forest openings (Refer to 647 - Brush Piles for Wildlife or 666 - Forest Openings Job Sheet(s))	<input type="checkbox"/> A component practice associated with a wildlife management plan (Refer to 645 Upland Wildlife Habitat Management)
<input type="checkbox"/> Other (specify)	

<b>Planned Area (check all that apply)</b>	
<input type="checkbox"/> Adjacent to woodland, roads timber trails or log landings	<input type="checkbox"/> Adjacent to pasture, hay fields or other grasslands (i.e. permanent food plots)
<input type="checkbox"/> Adjacent to annually cropped fields	<input type="checkbox"/> Other (specify) _____

Layout	Cutback Border 1	Cutback Border 2	Cutback Border 3	Cutback Border 4
Field Number				
Date Planned				
Width (ft)				
Length Along Edge of Field (ft)				
Total Area (acres)				
Slope (%)				
Method of Establishment <sup>1</sup>				
Installation Method <sup>2</sup>				
Supplemental Planting (If Planned)				
Target or Planted Species <sup>3</sup>				
Target or Planted Species				
Target or Planted Species				
Retained Species <sup>4</sup>				
Retained Species				
Retained Species				

<sup>1</sup> Identify how the border will be established: **Mechanical** (chainsaw, heavy equipment, etc.) or **Chemical** (herbicide application). Contact the WV Division of Forestry for herbicide recommendations appropriate for this purpose.

<sup>2</sup> List the method used to install the cutback border. Methods are listed as **Single Tier Method**, **Triple Tier Method**, or **Selective Tier Method**; and are found under the section of this document entitled Installation Methods.

<sup>3</sup> List the target (desired) species that will likely re-establish within the border. If supplemental planting is planned, list the species that are to be planted within the cutback border. Refer to the West Virginia Conservation Practice standard (612) Tree/Shrub Establishment and associated job sheets for species, quantities and methods.

<sup>4</sup> List any existing desirable species to retain during establishment of the border. If none, list as **N/A**.

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.

**Operation and Maintenance and Additional Specifications:**

Maintain original width and length of field border(s). Inspect periodically for invasion of noxious plant species and control as required by mechanical removal or herbicide application. Once the cutback border is fully mature or the transition zone becomes abrupt, it may be necessary to maintain or re-establish the border. As a general rule, when the trees and shrubs in at least 50 percent of the border exceed 15 feet in height, the cutting and removal process should be repeated. Do not disturb more than 50% of all border habitats in any one year. Do not disturb the entire field border habitat around a single field in the same year. Field borders should not be disturbed during the nesting season (March 15 – July 15) to protect ground-nesting wildlife. Appropriate precautions should be taken to ensure the safety of construction and maintenance crews.

**Additional requirements:**

**For information concerning the establishment or maintenance of this practice contact:**

\_\_\_\_\_ at \_\_\_\_\_

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