

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**EARLY SUCCESSIONAL HABITAT DEVELOPMENT/MANAGEMENT  
(Ac.)**

**CODE 647**

**DEFINITION**

Manage plant succession to develop and maintain early successional habitat to benefit desired wildlife and/or natural communities.

**PURPOSE**

To provide habitat for species requiring early successional habitat for all or part of their life cycle.

**CONDITIONS WHERE PRACTICE APPLIES**

On all lands that are suitable for the kinds of desired wildlife and plant species.

**CRITERIA**

Management will be designed to achieve the desired plant community structure (e.g., density, vertical and horizontal cover) and plant species diversity.

Where planting is needed, regionally adapted plant materials will be used.

Site preparation, planting dates, and planting methods shall optimize survival.

Planting of noxious weeds and invasive species is prohibited.

Measures must be provided to control noxious weeds and invasive species.

If using chemical methods of control, Pesticide Screening Tool (WinPST) shall be used to assess risks, and appropriate mitigation to reduce known risks shall be employed.

To benefit insect food sources for grassland nesting birds, spraying or other control of noxious weeds will be in a targeted manner through the use of spot spraying, mechanical or hand wick applicators, or other approved methods to protect grasses, forbs and legumes that benefit native pollinators and other wildlife.

Minimize soil disturbance in natural communities where soil integrity is essential, on steep slopes, on highly erodible soil, and where establishment of invasive species is likely.

When grazing is used as a management tool, a prescribed grazing plan developed to specifically meet the intent and objective(s) of the practice standard is required.

Management will be timed to minimize negative impacts to wildlife. Management practices and activities shall not disturb cover during the primary nesting period for grassland species (April 15 – August 1). Exceptions can be allowed for periodic burning, strip disking, selected herbicide techniques, selected mechanical removal or mowing when necessary to maintain the health of the plant community. Mowing may be needed during the plant establishment period to control undesirable weeds and growth of woody vegetation.

Vegetative manipulation to maximize plant and animal diversity can be accomplished by disturbance practices including: strip disking, selected herbicide techniques, mowing, prescribed burning, prescribed grazing, woodland edge feathering or a combination of these. Additional criteria for specific disturbance practices applied for the purpose of Early Successional Habitat Development /Management are:

Strip Disking - Light disking strips of existing grass stands, typically greater than 4 years old, may be required to increase the amount of open ground and encourage annuals (foxtails and ragweeds). The result will be a diverse plant community of both annuals and perennials.

- Disk strips 2-4 inches deep to expose approximately 50% bare ground after disking.

- Disk between October 1 and April 15.
- Alternate disked strips of 75 feet or less in width, with undisturbed strips a minimum of 2 times the disked width, across the field on the contour or across slope.
- Rotate disked and undisked strips on a 3 year or longer rotation.
- Disked strips shall not exceed the tolerable soil loss.
- See Strip Disking Job Sheet 647A for additional information and specifications.

Herbicide Techniques - Selected herbicides can be used to effectively manipulate plant succession, control brush, reduce plant competition, control exotic weeds, and improve habitat diversity.

- Careful planning and care in application are required in the use of herbicides to improve existing habitat. Selection of a product shall be based on several factors, including: (a) product effectiveness, (b) non-target species impacts, (c) toxicological risks, and d) off-site movements of chemicals.
- Herbicides are to be applied only for the uses listed on the container label. Follow all directions and precautions. See conservation practice standard Pest Management (595) for recommendations and precautions.
- See Herbicide Application for Plant Succession Management Job Sheet 647B for additional information and specifications.

Mowing – Mowing will only be used where other management techniques are not feasible.

- Mowing shall be applied in the spring prior to the nesting season (April 15) or during the month of August.
- After the stand is established mow no more than 50% of the stand in any given year. Mowing the whole stand may be necessary during the first two years of establishment for weed control.
- Mow in strips to maintain cover. Rotate mowed strips across the field from year to year.

- Minimum standing strip width shall be 30 feet. Strips 100 feet wide or wider are preferred for wildlife escape cover.
- To control woody vegetation, mow cool season grasses no shorter than 6 inches. Native warm season grasses should be mowed no shorter than 8 inches or no shorter than 10 inches if mowed near the end of the growing season.
- Residues from mowing shall be thoroughly shredded and evenly distributed to prevent excess litter accumulation.

Prescribed Burning – Burning may be required to remove excess litter, stimulate germination of seed bearing annuals, increase plant species diversity, control unwanted woody and herbaceous vegetation, and open up the stand for movement of small animals and birds.

- Prescribed Burning can only be planned by qualified personnel according to criteria in the Prescribed Burning (338) standard.
- Frequency of burning will not exceed once every third year.
- Burn no more than one third of the area in any one year. However, exceptions can be made to burn up to 50 percent of an area in cases of small fields, and when weather conditions have prevented burning in previous years.
- See Prescribed Burning Fact Sheet 647FS for more information and specifications.

Prescribed Grazing - Domestic livestock may be used to manipulate plant succession. Grazing requires very careful management to assure the site is not over grazed.

- A grazing plan (meeting criteria in conservation practice standard Prescribed Grazing (528)) will be developed for the intended purpose of the practice.

Woodland Edge Feathering - Woodland edges can be managed for early successional habitat through vegetation manipulation.

- Thin overstory trees in the first 60 to 90 feet of the woodland edge. The regrowth and sprouting that result will provide benefits for 5 to 10 years. Invasive species must be controlled before the overstory is thinned.

- To develop early successional habitat adjacent to woodland, allow natural revegetation of native shrubs, brambles, grasses and forbs along a woodland edge to develop an area of early successional habitat at least 30 feet in width. Invasive species in the area must be controlled before allowing natural revegetation. Protect the area from disturbance until established.
- Early successional habitat along woodland edges can also be created by planting shrubs and grasses in the open field along a woodland. Plant at least 2 rows of shrubs along the woodland and a field border of grasses and forbs along the cropland edge to make up an area with a total width of at least 30 feet.
- When more than 50% of the trees in the woodland edge become taller than 15 feet high, reapply the practice.
- See Woodland Edge Feathering Job Sheet 645D for more information and specifications.

### CONSIDERATIONS

The practice should be applied periodically to maintain the desired early successional plant community and rotated throughout the managed area.

Design and install the treatment layout to facilitate:

- operation of machinery
- use of natural firebreaks or development and maintenance of firebreaks when prescribed burning.

When selecting plants and designing management for the practice, consider the needs of pollinators and incorporate to the maximum extent practicable.

Managing for early successional plant communities is beneficial if not essential for less mobile animal species. The less mobile the species must have all of the required habitat elements within the small area where they live.

Consider operation of machinery used on the site in the layout and design of firebreaks.

Whenever possible, lay out strips to have some multiple or full width passes by all farm implements.

### PLANS AND SPECIFICATIONS

Written specifications, application schedules and maps shall be prepared for each site. Specifications shall identify the amounts and kinds of habitat elements, locations and management actions necessary to achieve management objectives.

Specifications shall be transmitted to clients using approved specification sheets, job sheets, and customized practice narratives or by other written documentation approved by NRCS.

### OPERATION AND MAINTENANCE

The following actions shall be carried out to insure that the practice functions as intended throughout its expected life. These actions include normal repetitive activities in the application and use of the practice.

Occasional disturbance may be incorporated into the management plan to ensure the intended purpose of the practice.

Any use of fertilizers, pesticides and other chemicals shall not compromise the intended purpose.

### REFERENCES

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