Early Successional Habitat Development/Management

Prescribed Burning

Illinois Conservation Practices Fact Sheet 647FS ***Draft March 2006***

DEFINITION

Applying controlled fire to a predetermined area.

PURPOSE

Fire, if properly applied, can improve grassland habitats by:

- Creating open ground for wildlife movement by reducing excess plant litter,
- Allowing sunlight to reach the soil surface, encouraging the germination and growth of forbs and legumes,
- Suppressing woody plants, and
- Retarding the growth of nonnative plants.

In addition, Prescribed Burning removes naturally occurring wildfire hazards, enhances the aesthetic appearance of natural landscapes, and keeps maintenance costs low.

The structural diversity that results from this type of management is especially helpful for maintaining brood-rearing habitat for bobwhite quail, wild turkey, ring-necked pheasant and other early successional grassland wildlife species. Prescribed Burning also improves habitat for a variety of grassland songbirds, including dickcissels, bobolinks and savannah sparrows. Many of these grassland songbird species have experienced population declines over the last several decades. The habitat quality is enhanced because fire inhibits woody growth, promotes favored seed producing plants, reduces plant residue, increases bare ground, and increases insect abundance. The insects associated with annual weed communities provide critical nutrients, including protein, and essential amino acids for growing nestlings and chicks.

SPECIFICATIONS

- The landowner is responsible for adhering to an approved burn plan, as well as all applicable local, state and federal laws. Landowners are responsible for confining prescribed burns to their lands and are liable for damages and costs to others should the fire escape from the designated area.
- Only NRCS employees with appropriate training may discuss prescribed fire, write a conservation plan containing prescribed fire as a management alternative, or develop a burn plan. NRCS employees in Illinois are not authorized to assist private landowners conduct a burn.
- A written prescribed burn plan must be completed before any fires are started. The burn plan will identify suitable weather conditions, needed personnel and equipment, adjacent and in-field hazards, and the safest firing method, in addition to the time of year to conduct the burn for the best management results. NRCS developed burn plans will utilize Prescribed Burning Plan Job Sheet 338-JS.
- Grassland fields must be established for a minimum of three years before initiating burning.
- A maximum of 1/3 of the field will be burned during any year. Divide field into three or more burn units and burn one unit per year. Exceptions can be made for small fields and fields that have not been burned for more than four years.
- Frequency of burning should not be more than once every three years on any one burn unit in upland habitats and once every two to three years in wetland habitats.
- Avoid burning from April 15 through August 1, the nesting period for grassland bird species. Exceptions can be made when burning in late Spring is necessary for the health of the desired plant community.
- Erosion will not exceed tolerable limits.
- Firebreaks will be constructed according to the specifications stated in the burn plan. See NRCS FOTG Standard 394 *Firebreak* for additional guidance.

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- Areas planted to trees or shrubs will not be burned while they are seedlings unless special precautions are taken to protect the trees or shrubs from fire.

CONSIDERATIONS

- Time of burning should be just prior to or soon after dormancy break of wildlife preferred species in the spring. Burn when the wildlife preferred species have no more than one inch of new growth.
- Evaluate the proposed site to determine what the intended objective of the burn is, and what conditions are needed to meet the intended objective. See Table 1.
- Select trained and qualified persons to write the burn plan and conduct the prescribed burn.
- Fall and late winter burns favor forbs and legumes over Big Bluestem, Indiangrass, and Switchgrass.
- Use discretion if soil conditions are dry or drought conditions are predicted as burning under these conditions may damage or destroy prairie plant crowns and plants.

Table 1. Burn Objective and Relationship to Burning Time Frame

Burn Objective	Time of Burn	Comments
Increase established native grasses	March/April	Burn prior to green-up
Decrease cool season grasses invading established native grasses.	April	After cool season grasses are growing and prior to native grasses green-up
Increase forb component in established native grasses.	Sept./Oct. (best) Jan/Feb. (good)	Do not burn in late fall if erosion is a potential problem. Leave 2/3 of field unburned for winter wildlife habitat.
Prepare tall fescue or other cool season grasses for fall herbicide application	September	Time burn to allow fescue to re-grow 6" prior to herbicide application

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