PRESCRIBED BURNING

(Acre)

Code 338

Natural Resources Conservation Service
Conservation Practice Standard

I. Definition

Applying controlled fire to a predetermined area.

II. Purposes

This practice may be applied as part of a conservation management system to support one or more of the following purposes:

- To control undesirable vegetation.
- To prepare sites for harvesting, planting, or seeding.
- To control plant disease.
- To reduce wildfire hazards.
- To improve wildlife habitat.
- To improve plant production quantity and/or quality.
- To remove slash and debris.
- To enhance seed and seedling production.
- To facilitate distribution of grazing and browsing animals.
- To restore and maintain ecological sites.

III. Conditions Where Practice Applies

This practice applies on forestland, native pasture, pastureland, wildlife land, hayland, and other lands as appropriate.

IV. Federal, State, and Local Laws

Users of this standard shall comply with applicable federal, state and local laws, rules, regulations, or permit requirements governing prescribed burning. This standard does not contain the text of federal, state, or local laws.

V. Criteria

The following criteria are applicable to all purposes.

The procedure, equipment, and the number of trained personnel shall be adequate to accomplish the intended purposes as stated in the burn plan.

The expected weather conditions, human and vehicular traffic that may be impeded by heat or smoke, liability (e.g., utility lines), and safety and health precautions shall be integrated into the timing, location, and expected intensity of the burn.

Timing of burning will be commensurate with soil and site conditions to maintain site productivity and minimize effects on soil erosion and soil properties (structure, soil moisture).

Weather parameters and other data that affect fire behavior shall be monitored and documented in the case file immediately before igniting the prescribed burn. Defer burning anytime prolonged drought, approaching weather fronts, and/or high winds create unpredictable fire conditions.

VI. Considerations

To benefit warm season grasses and late forbs in warm season stands AND forbs and legumes in cool season stands, burn in mid-April to late May and late August to late September or when desired species break dormancy. Late spring burns hurt sedges, perennial forbs, cool season grasses, and brush. A good rule in the spring is to burn when the desired species has no more than one inch of new growth.

To benefit cool season grasses, sedges, and early forbs in warm season stands, burn before April 15; between July 15 and August 15; and after November 15 when cool season grasses are dormant.

In general, fall burns benefit forbs and hurt warm season grasses and winter burns benefit sedges and perennial forbs. Frequent (annual) burns benefit warm season grasses and infrequent burns benefit forbs and cool season grasses.

Burn only when a specific management objective is to be met.

Generally, it is not necessary to burn more often than once every 4 to 5 years. When burning to control undesirable sprouting woody plants, it may be necessary to burn more than once. Burning will

generally reduce nesting potential for the year burned. Burning frequency will be a weighed decision between the need to improve the grass condition and wildlife production loss for that year.

Cooperators without experience in burning should be advised to seek assistance from persons who have had training or experience in applying the practice.

Cooperators will be cautioned to burn in accordance with state and local laws and regulations. All necessary burning permits must be obtained.

Cooperators must be fully aware that they are liable for any damages caused by fire escaping from their land or caused by smoke blowing into residences, across roads, or airport runways. They may also be liable for fire suppression costs if the fire escapes control.

Incorporate existing barriers to fire such as lakes, streams, wetlands, croplands, and roads into the burn plan.

Have on site the necessary tools, equipment, and personnel to contain the fire to the area planned for the prescribed burn.

When burning near an airport, secure the necessary permission from airport authorities.

Burn when the smoke impact to roads and occupied residences is minimized.

Burning should be managed with consideration for wildlife needs such as nesting, feeding, and cover.

Notify adjoining landowners, local fire departments, and public safety officials within the airshed prior to burning. This includes providing adequate signage to affected roads.

Consider cultural resources and threatened and endangered plants and animals when planning this practice.

Carbon release should be minimized by managing the timing and intensity of the burn.

Consider the location of utilities, such as electric power lines and natural gas pipelines, to prevent damage to the utility and avoid personal injury.

Smoke impacts should be considered before the burn and monitored during the burn.

VII. Plans and Specifications

A. A written burn plan will be prepared to meet NRCS standards 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. Obtain all necessary permits before implementation of the practice.

As a minimum, a burn plan will include the following.

- Location and description of the burn area.
- Objective of the burn including a description of vegetation to be burned and the desired results (i.e., change in vegetative type, density, age class, amount of ground litter, etc.).
- Preparation requirements for the burn area including a map locating planned constructed and/or natural firebreaks, location of the test burn, and identification of areas needing special protection.
- The type and size of firebreaks.
- Notification requirements prior to igniting the burn.
- Equipment, manpower needs, and safety requirements. These shall be adequate to safely accomplish the intended purposes.
- Permits needed.
- A statement of acceptable conditions for prescribed burn including constraints of temperature, relative humidity, wind direction and speed, time of day, and time of the year.
- The firing plan (the type of procedure that will be used to accomplish the burn).
- Documentation that the landowner or operator has acknowledged all liabilities or been informed in writing (send letter to the landowner by certified mail, return receipt requested) of possible liability for damages if the fire escapes, smoke damage occurs, accidents caused by poor visibility occur, or

other damages occur as a result of the prescribed fire.

- Mop-up/post burn evaluation criteria (see WI NRCS FOTG Standard 394, Firebreak).

B. Firebreaks

1. Use existing secondary fire barriers such as roads, streams, wetlands, and croplands.

2. Bare mineral soil or a blackline of burned vegetation is the best primary firebreak; however, mowed green grass in conjunction with a wetline may also be used.

3. At a minimum, firebreaks should be non-combustible, and at least two times as wide as the height of the adjacent vegetation to be burned.

4. Where appropriate, burned firebreaks that the headfire will move towards, placed during or prior to the burn, should be of adequate width to prevent spillovers or spotting.

5. Remove all snags or brush piles near firebreaks to prevent hot spots and spot fires over firebreaks.

   Note: Firebreaks are used to protect areas from wildfires or as a base line to initiate the fire. All firebreaks should be adequate to contain the fire within the burn area.

C. Burn Initiation Conditions

1. Complete a test burn on the downwind side of the burn area to insure that the fire will achieve the planned objectives before the main fire is started.

2. The wind direction must be consistent and the wind velocity is steady and between 3-18 mph.

3. The air temperature must be between 40-80 degrees F.

4. The relative humidity must be between 25-60%. (Caution: relative humidity will drop 50% with a 20 degree rise in temperature).

5. All attempts will be made to complete the burn before dusk.

   Note: Keep abreast of current weather conditions. If the planned burn will not meet the above prescription constraints do not burn that day.

D. Firing Technique

1. Whether to use a head fire, flank fire, or backing fire is determined by the objective to be accomplished. A head fire will produce a fast moving fire which carries rapidly over the surface. A flank fire burns parallel to the wind. A backing fire is a slow moving, hot fire burning into the wind consuming all combustible materials, except when the mulch layer is wet.

2. Establish primary firebreaks on all sides of the area to be burned as identified in VII.C. To establish backing fires, set fire on upwind side of primary firebreak, trails, roads, rock ledges, and streams. If no physical barriers exist, wetting the vegetation to create a wetline and setting the fire on the upwind edge of the firebreak will accomplish the same purpose. Fire retardant chemicals will make the wetlines more effective.

3. No head fire will be set until all firebreaks (backing fires, etc.) are in place and sufficient to control the head fire.

4. Patrol fire lines to watch for and extinguish any spotover fires resulting from flying embers.

5. Make sure all fire is out before leaving the area. Stumps, logs, dead trees, cow chips, grass clumps, etc., can smolder for hours or even days before they are completely consumed. Smoke produced by these types of fuels tends to gather in low areas when wind conditions calm at dusk. This residual smoke, combined with fog and darkness, can lead to poor visibility on roads near the fire location. Periodic checks of these areas may be necessary for several days. If possible, remove these obstacles prior to ignition to avoid safety concerns and extensive mop up.

VIII. Operation and Maintenance

The kinds and expected variability of site factors (e.g., fuel condition and moisture content, weather conditions, human and vehicular traffic that may be impeded by heat or smoke, liability, and safety and

health precautions) shall be monitored during the operation of this practice. Sufficient fire suppression equipment and personnel shall be available commensurate with the expected behavior of these factors during the time of burning to prevent a wildfire or other safety, health, or liability incident.

Maintenance shall include monitoring of the burned site and adjacent areas until such time as ash, debris, and other consumed material is at pre-burn temperatures.

Complete a post burn evaluation to determine if the objective was accomplished.

IX. References

USDA, NRCS Wisconsin Field Office Technical Guide (FOTG), Section IV, Practice Standards and Specifications.

USDA, NRCS, National Range and Pasture Handbook, Policy on Prescribed Burning, and Wisconsin Supplement to Appendix A.

USDA, NRCS, Wisconsin Job Sheet 133, Firebreak.

USDA, NRCS, Wisconsin Job Sheet 338, Prescribed Burn Plan.

USDA, NRCS, Wisconsin Job Sheet 388, CRP Required Management Practice – Burning and Interseeding.

USDA, NRCS, Wisconsin Job Sheet 389, CRP Required Management Practice – Prescribed Burning.