NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

PRESCRIBED BURNING

(Ac.)

CODE 338

DEFINITION

Controlled fire applied to a predetermined area.

PURPOSE

- Control undesirable vegetation.
- Prepare sites for harvesting, planting or seeding.
- Control plant disease.
- Reduce wildfire hazards.
- Improve wildlife habitat.
- Improve plant production quantity and/or quality.
- Remove slash and debris.
- Enhance seed and seedling production.
- Facilitate distribution of grazing and browsing animals.
- Restore and maintain ecological sites.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on all lands as appropriate.

CRITERIA

General Criteria Applicable to All Purposes

All prescribed burns shall address the following items:

- Location and description of the burn area.
- Pre-burn vegetation cover.
- Resource management objectives.
- Required weather conditions for prescribed burn.
- Notification check list.
- Pre-burn preparation.
- Equipment checklist/personnel assignments and needs/safety requirements.
- Post burn evaluation criteria.
- Firing sequence.
- Ignition method.
- Approval signatures

Clients shall be informed that burning will occur in accordance with all federal, state, and local laws and regulations and according to an approved prescribed burn plan. In addition, they may also be liable for damages caused by fire escaping from their land or for damage caused to others from inadequate smoke management. Clients may also be responsible for fire suppression cost, should the fire escape the designated area.

All necessary permits must be obtained before implementation of the practice.

The procedure, equipment, and the number of trained personnel shall be adequate to accomplish the intended purposes.

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).

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.

The relative humidity should be no less than 25%. High relative humidity and low temperatures will often reduce fire intensity and effectiveness. Topography effects shall be addressed when needed.

The timing of the burn will be based on, as a minimum: relative humidity, wind conditions, air temperature, fuel conditions, and burn objectives. Acceptable levels will be detailed in the burn plan.

Weather parameters and other data that affect fire behavior should be monitored during the burn. Carbon release should be minimized by the timing and burn intensity.

Burn when air temperatures are between 20-70 degrees F. Extra caution, for fire control, will be necessary when the humidity is low and temperatures high.

Burns shall occur when there are sufficient steady surface winds (1-15mph) to carry the fire. Do not burn when surface wind velocities are greater than 15 mph or when winds are gusty or shifting more than 45 degrees in direction.

Burns shall occur only when sufficient transport wind will carry smoke away from roads and residences unless adequate safeguards have been taken (traffic control, removal of residents, notification, etc.). People who have known respiratory problems should be removed from the area where smoke intrusion could occur.

Burns should be accomplished when the mulch layer and soil surface are slightly moist but dry enough to carry a fire. Generally 1-3 days after a rain on grassland.

Identify, locate, and address in the plan any potential hazard areas; (roads, headquarters, residences, windbreaks, woodlands, electrical power poles and transmission lines, fences, flammable conduits, etc.).

Burning shall not occur within a one mile radius of an airport, unless prior written permission is obtained from airport authorities.

Verify that clients have notified all appropriate units of government and adjoining landowners of intent to burn and the burn date. These must be specified in the burn plan.

Firebreaks will be established that separate the area to be burned from those needing protection. A firebreak will be constructed according to specifications as stated in the burn plan and as indicated on a detailed burn plan map. Refer to conservation practice (394) Firebreak for more detailed information.

Firebreaks will be inspected on the day of the burn prior to ignition and any obstructions or hazards removed. Snags and brush piles near the firebreak will be addressed to prevent fires from escaping or spotting over.

Public roads and public rights of way shall not be used as primary firebreaks.

Smoke impacts shall be monitored during the burn.

Additional Criteria to Improve Wildlife Habitat

Burning will be managed with consideration for wildlife needs so as to maintain or improve; nesting, brooding, winter and escape cover.

If pollinators are a primary concern for established forb stands, the maintenance burn frequency shall be determined by rapidity of woody encroachment but limited to a 5-10 yr. rotation. More frequent burns may be conducted occasionally.

Refer to the KY Department of Fish and Wildlife Resources (KDFWR) publication “Prescribed Burning Habitat How-To” for additional information on prescribed burning to improve wildlife habitat.

Additional Criteria to Restore and Maintain Rare and Declining Ecosystems

These criteria apply to remnant glades, barrens, oak woodlands and other rare woodland ecosystems for the purpose of improving forest health, oak regeneration, native grass and forb communities and invasive species control.

Burn prescription including timing, intensity, and frequency shall be developed according to the needs of the target plant community requirements.

Refer to conservation practice (643) Restoration and Management of Rare and Declining Habitats for more information.

CONSIDERATIONS

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

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

Existing barriers such as lakes, streams, wetlands, roads and constructed firebreaks are important to the design and layout of this practice.

Notify adjoining landowners, local fire departments and public safety officials as appropriate within the airshed prior to burning.

Generally, it is not necessary to burn more often than once every 3-5 years. When burning to control undesirable sprouting woody vegetation or persistent and pernicious weeds, it may be necessary to burn two or more consecutive years.

Weather conditions are generally most stable and favorable for burning following the passage of a weather front. Satisfactory burning conditions are often present 1-3 days following a rain.

Fire weather forecasts will be obtain prior to and on the day of the burn. Additional current weather information can be accessed at:

http://www.weather.com

http://www.intellicast.com

http://www.spc.noaa.gov/products/fire_wx/

Reducing the fuel height to about one (1) foot next to the firebreak greatly reduces the intensity of the fire at the fire line.

When attempting to avoid fire scarring of susceptible timber species, burn prescriptions should specify fires with very low heat intensities.

Consider fire intensities for native pollinators by utilizing one or more of the following strategies:

- Burn only a portion of the areas in a single season
- Leave unburned patches
- Avoid burning an aea too frequently
- Burn low intensity fires (temperature)
- Perform burns in non-growing season and when pollinators are inactive

PLANS AND SPECIFICATIONS

Specifications will be prepared by certified individuals and 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. All necessary permits must be obtained and a burning plan developed before implementation of the practice.

NRCS employees in Kentucky with appropriate job approval authority may plan (338) Prescribed Burning in a conservation plan.

KY NRCS utilizes KDFWR, The Nature Conservancy (TNC) and/or qualified technical service providers provide site specific prescribed burn plans (specifications) and implement prescribed burning.

Refer to the Kentucky Supplement to GM-190, Part 413 – Prescribed Burning, Subpart B – Policy for additional information on planning prescribed burning for NRCS conservation plans.

Prescribed burn plan will be filed with and referred to in the conservation plan. At a minimum the burn plan will address the following:

- location and description of the burn area
- pre-burn vegetation cover
- resource management objectives
- required weather conditions for prescribed burn
- notification check list
- pre-burn preparation
- equipment checklist/personnel assignments and needs/safety requirements
- post burn evaluation criteria
- firing sequence
- ignition method
- approval signature(s)

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 ash, debris and other consumed material is at pre-burn temperatures