NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

PRESCRIBED BURNING
(Acre)
CODE 338

DEFINITION

Controlled fire applied to 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 have the necessary plans and permits from the CalFire (California Department of Forestry and Fire Protection) or the agency responsible for fire suppression and the local Air Quality Management District (AQMD).

Comply with applicable laws and regulations, the smoke management plan, notify adjoining landowners, local fire departments and public safety officials within the airshed prior to burning.

All FIREBREAKS are to be installed prior to starting the prescribed burn (see Standards and Specifications for FIREBREAK).

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 should be monitored during the burn.

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

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 must be considered before the burn and should be monitored during the burn.

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

CONSIDERATIONS

Burning should be managed with consideration for wildlife 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.

This is one of several alternatives used for vegetation management. Alternatives should be discussed thoroughly with the cooperator. PRESCRIBED BURNING should never be applied for a short-term gain at the expense of long-term site deterioration or at the expense of personal safety or property.

If the percentage composition by weight of desirable species expected to survive the prescribed burn is less than 25 percent seeding of adapted desirable species will be required.

Erosion and sedimentation rates may increase the first year after burning. Downstream effects should be

considered in planning prescribed burns and provisions will be made to reduce anticipated adverse effects.

Utilization of material to be burned should be considered when feasible either for fuel or forage or piled for wildlife cover as an alternative to burning.

Unburned bufferstrips should be planned for and retained in all prescribed burns adjacent to all stream courses. As a general guide, the minimum width will be 50 feet.

When considering replanting after a burn refer to the Field Office Technical Guide, Section II eVeg Guide for approved plant species.

Deferred grazing may be required on all PRESCRIBED BURNs for a minimum of one growing season immediately preceding the burn to maximize vegetative material. This will also improve vigor of desirable forage plants for better recovery following burning.

Active landslides, slips, gullies, unproductive sites, or areas with dry raveling should not be burned.

Access roads to burns and firebreaks should be carefully located and designed including erosion control measures.

Planning Objectives

a. The objectives of PRESCRIBED BURNS will be documented. The planning objectives for using PRESCRIBED BURNING can vary significantly from single to multiple purpose. Some of the common objectives are:

    1. Fire hazard reduction.
    2. Increased water yield.
    3. Improved fish and wildlife habitat.
    4. Forest improvement.
    5. Range improvement.
    6. Improved access.

b. There are generally three types of burns:

    (1) rotational burns

    (2) type conversion burns and

    (3) silvicultural burns.

    1. Rotational burns are those in which portions of an area are burned in a set sequence and then reburned at planned time intervals. Rotational burns are used to break up large, even aged stands of brush, provide shrub regeneration with greater palatability and nutritive values, increase diversity, improve accessibility and increase forage production.

    2. Type conversion burns are a combination of PRESCRIBED BURNING and follow-up practices, which are usually intended to convert brushland to some other vegetation type, such as, grass and forbs or timber. The purpose of type conversion is usually to provide fuel breaks, accessibility, additional forage for livestock and wildlife, increase habitat diversity with "edge", create cropland, such as pasture, vineyards, avocados, or establish timber stands.

        Soils subject to mass movement should not be type converted.

    3. Silvicultural Burns are usually conducted for one of the following reasons:

        (a) Fuel Hazard Reduction burns are generally conducted after harvest to reduce the fire hazard. Silvicultural systems normally associated with prescribed burning are either shelterwood or clearcutting. Seedbed preparation for natural regeneration or direct seeding is a major benefit of hazard reduction by prescribed fire.

        (b) Under burning removes or reduces competing vegetation to allow for natural regeneration or under planting, to reduce fire hazards by the reduction of forest floor fuel loadings, and weeding or thinning especially in young timber stands.

Wildlife Objectives:

Escape cover (brush waist-high, usually more than 7 years old) should be in useable proximity to fresh burns (1-3 years old). Small burns scattered through a brush field are better habitat than the mosaic formed by repeated burning adjacent to last year’s projects. A mosaic created through elevation is more acceptable than one created laterally. Burns should connect or create open ridges, swales, and saddles adjacent to timber and brush stands.

Unless it is a resource management objective, avoid burning trees. Trees and larger vegetation provide needed thermal cover, roosting cover and food for wildlife.

PRESCRIBED BURNING of wetlands is a good management tool. It seldom kills the wetland vegetation if the soil is saturated. Dry peat burns readily and a peat fire is difficult to control except by total submergence.

Water Quantity

Application of this practice may cause more surface runoff if a high intensity storm event should occur before natural revegetation occurs. Generally, this practice will have only a minor effect on the quantity of surface and ground water.

Water Quality

When the area is burned in accordance with the specifications of this practice the nitrates with burned vegetation will be released to the atmosphere. The ash, will contain phosphorous and potassium, which will be in a relatively highly soluble form. If a runoff event occurs soon after the burn there is a probability that these two materials may be transported into the ground water or into the surface water. When in a soluble state the phosphorous and potassium will be more difficult to trap and hold in place.

Endangered Species Considerations

If during the Environmental Assessment, NRCS determines that installation of this practice, along with any others proposed, will have an effect on any federal or state listed Rare, Threatened or Endangered species or their habitat, NRCS will advise the client of the requirements of the Endangered Species Act and recommend alternative conservation treatments that avoid the adverse effects. Further assistance will be provided only if the client selects one of the alternative conservation treatments for installation; or with concurrence of the client, NRCS initiates consultations concerning the listed species with the U.S. Fish and Wildlife Service, National Marine Fisheries Service and/or California Department of Fish and Game.

Cultural Resources Considerations

NRCS policy is to avoid any effect to cultural resources and protect them in their original location. Determine if installation of this practice or associated practices in the plan could have an effect on cultural resources. The National Historic Preservation Act may require consultation with the California State Historic Preservation Officer.

http://www.nrcs.usda.gov/technical/cultural.html is the primary website for cultural resources information. The California Environmental Handbook and the California Environmental Assessment Worksheet also provide guidance on how the NRCS must account for cultural resources. The e-Field Office Technical Guide, Section II contains general information, with Web sites for additional information.

Document any specific considerations for cultural resources in the design docket and the Practice Requirements worksheet.

PLANS AND SPECIFICATIONS

A written burn plan will be prepared by State of California or USFS certified individuals. 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. All necessary permits must be obtained before implementation of the practice.

OPERATION AND MAINTENANCE

A maintenance plan will be prepared which shall list various items that are to be inspected and follow-up work to be conducted.

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.

Burned areas will be inspected for areas which need additional work. Areas will also be compared with the objectives of the prescribed burn to determine if the objectives were met.

Firebreaks which are no longer needed will be stabilized and/or revegetated.

Inspect firebreaks annually and rework as necessary. Mow, spray, browse or graze vegetative firebreaks to avoid a build-up of excess litter and to control unwanted vegetation.

Repair erosion control measures as necessary to ensure proper function.

Monitor vegetative regrowth to aid in the retreatment scheduling.

On soils that support oak-grass vegetation and have a moderate or severe erosion hazard, livestock will be withheld until an adequate grass stand is established. See Access Control Standard and Specification.

On burned areas where livestock use is anticipated PRESCRIBED GRAZING will be a follow-up management practice on all PRESCRIBED BURNS for a minimum period of one growing season, or until ground cover and forage production are adequate.

Seeding may be required to reduce the erosion. Refer to Technical Guide RANGE PLANTING and CRITICAL AREA PLANTING Practice Standards and Specifications.