# NATURAL RESOURCES CONSERVATION SERVICE
# CONSERVATION PRACTICE GENERAL SPECIFICATIONS

## PRESCRIBED BURNING
## (Acre)
## CODE 338

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### GENERAL CRITERIA APPLICABLE TO ALL PURPOSES

A current fire weather forecast is required prior to doing a prescribed burn. This weather forecast will be obtained from the NOAA's National Weather Service or a similar forecasting agency.

Do not burn within 12 hours of a predicted wind shift or if winds are light and variable (<6 mph).

Do not burn until all precautions have been taken and all personnel on site are briefed on the burn plan and their responsibilities during the burn. Have on hand sufficient equipment and manpower needed to control the fire at all times. Ensure that all personnel are able to operate their assigned equipment.

### FIREBREAKS AND BLACKLINES

All land uses where prescribed burning is applied will have a natural firebreak, an appropriate constructed firebreak, or combination installed. A firebreak is a strip of bare land or non-flammable material, water, or vegetation that retards fire. Dimensions and types of firebreaks will be designed for each burn and recorded in the Prescribed Burn Management Plan. The minimum effective firebreak width will be 10 feet. Refer to Firebreak Standard and Specification (394).

When backfiring off a firebreak the blackline area shall be a minimum of:

100 feet wide for low-volatile fuels when temperatures are forecasted to be less than 80°F.
200 feet wide for low-volatile fuels when temperatures are forecasted to exceed 80°F.
500 feet wide for all highly volatile fuels.

See Table 1 "***Installation of black-lines"*** for burning prescription

### PRESCRIBED BURNING PRESCRIPTIONS

A burning prescription will be developed as part of all burn plans and will include acceptable ranges for the following parameters:

The desired effects
Timing
Fire weather
Fuel load or quantity

See Table 1 - General Prescribed Burning Prescriptions

Variations from the prescriptions in Table 1 will be approved by an appropriate, qualified zone or state specialist or by an employee holding a higher level of prescribed burning approval.

**ADDITIONAL CRITERIA**

When the 10-hour time-lag fuel moisture is less than 6%, slash juniper areas will be highly volatile and will not be burned - as spot fires are almost certain to occur. Ten-hour time-lag fuel moisture will be measured with appropriate moisture monitoring devices.

Do not burn log-littered areas if the weather forecast is for strong winds within 3 days following a burn.

Pre-burn or protect with firebreaks any brush piles that are near downwind firebreak boundary

Avoid burning practices that encourage fire-whirl production. If potential exists for fire-whirls, provide necessary safeguards such as spotters in vulnerable locations and sufficient blacklines. Fire-whirls can be caused by burning under low-wind conditions, burning head-fires into back-fires, and in canyons or hilly terrain.

"Mop-up" the burn before leaving. Maintain close observation of the burned area until the fire is extinguished. Be aware that stumps and manure may smolder for several days after the burn. Be especially careful with burning material near the perimeter of the burned area and move burning or smoldering logs 50-100 feet inside the fireguard.

# TABLE 1 - GENERAL PRESCRIBED BURNING PRESCRIPTIONS

***These prescriptions are general and cover a wide geographic area. Any prescribed burn plan shall be developed on site-specific conditions and goals and objectives. Consult NRCS employees that have required job approval authority for on-site assistance.***

| Vegetative Type and Specific Purpose | Season | Wind Velocity (MPH) | Relative Humidity (%) | Air Temp (°F) | Lbs. Fuel [1/] | Frequency of Burning [2/] |
|---|---|---|---|---|---|---|
| **Installation of Blacklines** | | | | | | |
| All purposes and vegetative types | Anytime | 6 - 10 | ≥ 40 | 30 - 100 | | |
| **Improve: Forage Quality/Quantity for Wildlife, Livestock Grazing Distribution, and Stimulate Seed Production** | | | | | | |
| Warm Season Grasses | Late winter to green-up or summer dormancy | 6 - 20 [7/] | 20 – 65 | 30 -100 | 2000+ | As needed |
| Improve Browse or Cover Structure | Appropriate for species needs and site/fuel characteristics | 6 - 20 [7/] | 20 – 65 | 30 -100 | 2000+ | As needed |
| Increase Cool Season Production [3/] | Fall to early winter | 6 - 20 [7/] | 20 – 65 | 30 -100 | 2000+ | As needed |
| Spartina spp. | August 15 to March 1 | 6 - 15 | 20 – 65 | 40 - 100 | 2000+ | As needed |
| Kleingrass, Bermudagrass, Introduced bluestems, and Lovegrasses | January 1 to April 1 | 6 - 15 | 20 – 65 | 30-100 | 2000+ | As needed |
| Reduction of Grass Rough or Fine Fuel – Range, Pasture | Fall/Spring | 6 - 20 [7/] | 20 – 65 | 30 -100 | 2500+ | |
| **Disease and Competition Control – Longleaf Pine** | | | | | | |
| Reduction of herbaceous weeds and control of Brown Spot | Winter to green-up | 6 - 20 | >20 | <70 | Longleaf is very susceptible to damage between leaving grass stage and reaching 6' | |
| **Control (>50% Efficacy) of Undesirable Vegetation** | | | | | | |
| Eastern Red Cedar [6/] less than 6 ft. of height | Winter to green-up or summer dormancy | 6 - 20 [7/] | 20 - 65 | 30 -100 | 2000+ | Every 3-5 years |
| Eastern Red Cedar [6/] greater than 6 ft. of height | Winter to green-up or summer dormancy | 6 - 20 [7/] | 20 - 65 | 30 -100 | 3000+ | Every 3-5 years |
| Ashe Juniper [6/] | Winter to green-up or summer dormancy | 6 - 20 [7/] | 20 - 65 | 30 -100 | 2000+ | Before growth reaches 4 ft. |
| Prickly Pear Cactus | Summer dormancy | 6 - 20 [7/] | 20 - 65 | 30 -100 | 1000+ | As needed |
| **Suppression (<50% Efficacy) of Undesirable Vegetation** | | | | | | |
| Redberry Juniper (<70% green juniper leaf moisture) [6/] | Winter to green-up summer dormancy | 6 - 20 [7/] | 20 - 65 | 30 - 100 | 2000+ | Before growth reaches 6 ft. or seedlings reach 7 yrs. of age [4/] |
| Post Oak, Blackjack, and associated hardwoods [5/] | Anytime | 6 - 20 | 20 - 65 | 30 - 100 | 300 - 500 | As needed |
| McCartney Rose | Anytime | 6 - 15 | 20 - 65 | 60 -100 | 1500+ | As needed |
| Mixed Brush Communities | Anytime | 6 - 15 | 20 - 65 | 60 -100 | 750 + | As needed |
| Prickly Pear Cactus | Winter to green-up | 6 - 20 [7/] | 20 - 65 | 30 -100 | 1000+ | As needed |
| Pine Forest Maintenance Burns [8/] | Winter | In stand: 2 – 10<br>20' Open: 6 - 20 | 30 - 55 | <70 | | Every 3 – 5 years |

**FOOTNOTES FOR TABLE 1**

1/ Fuel loads listed are the minimum level required to achieve satisfactory results.

2/ Frequency of burning will depend on objectives to be accomplished and what was accomplished with prior burns. If forage quality improvement is the primary objective, grazing management should be such that additional burns will not be needed frequently.

3/ Prior to green-up of desired species.

4/ Research indicates that following mechanical control, redberry seedlings can be effectively controlled with fire until they reach approximately 7 years of age or 3 feet tall, when the bud zone becomes covered by soil. This may happen more quickly on deeper soil sites and less quickly on shallow, rocky sites. Burning redberry juniper when they are greater than 6 feet tall or greater than 7 years old can be effective in reducing canopy but bud zone kill should not be expected.

5/ Dry, low relative humidity, weather conditions should exist 7-14 days prior to burn so that leaf litter has an opportunity to dry out adequately. Two foot wide fireguards are adequate when burning in the woods where leaf litter is the fine fuel load, provided that backfires are set on the downwind side prior to head-fire ignition. If dead trees are adjacent to the fireguard, they must be cut down or properly protected prior to the fire. Cut, dead trees with leaves on them can be a major flaring and firebrand problem. If the objective of the burn includes the maintenance of the oak timber, select the lower air temperatures.

6/ A crown canopy fire may develop when juniper canopy exceeds 30%. Other brush management alternatives must be planned when juniper canopies greater than 30 percent exist.

7/ When burning at air temperatures above 80˚F the maximum wind speed will be 15 mph and 10 hour time lag fuel moisture shall be 6% or higher.

8/ Fine fuel moisture: 7% to 20%, Soil moisture: Damp. Consideration of fuel type, burning techniques that may be required, presence of ladders fuels must be taken during planning. Best burning conditions usually exist about 24 to 48 hours after the passage of a cold front that produces ½ to 1" rain.