

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

PRESCRIBED BURNING

(Acre)

CODE 338

DEFINITION

Applying controlled fire to a predetermined area.

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.

CONDITIONS WHERE PRACTICE APPLIES

On all landuses except annually tilled cropland.

CRITERIA

General Criteria Applicable To All Purposes

This practice will be applied in accordance with all state and local laws and ordinances. (Refer to TNRCC regulations, Attachment III).

The Texas Forest Service has sole approval authority for burning in the forestland areas of the state.

A 24-hour weather forecast is required prior to doing a prescribed burn. This weather forecast should be obtained from the NOAA's National Weather Service located in Fort Worth, Corpus Christi, Lubbock, or San Antonio. (See attached forecasting map, Attachment II).

The burned area must be incorporated into a system of management allowing for response of the desired plant community. (Refer to Prescribed Grazing Standard). When all of a pasture is not burned, grazing management will be based on the needs of the burned area.

Plan precautionary measures to protect sensitive wildlife habitat, headquarters, oil and gas sites, power line poles, highly erodible areas, or other areas that would be unsafe to burn.

Prescribed Burn Plans shall be developed using TX-ECS-1.

Dimensions and types of fireguards will be designed for each burn and recorded in the fire plan. When burning volatile fuels with potential for down-range spotting, a 500-foot minimum width blackline shall be established on the downwind side(s) of the area to be burned.

Fireguards (bladed, dozed, disc, etc.) will be a minimum of 10 feet wide; 15 feet wide is more desirable. Blacklines on the downwind side(s) shall be 100 feet or more wide for non-volatile fuels and will be at least 500 feet wide for high volatile fuels such as dead juniper.

Do not burn when: *

- 1) air temperature exceeds 80 degrees F,
- 2) Wind velocities exceed 20 mph, or
- 3) Relative humidity is less than 20 percent.

* Except when burning within MLRA 150, 83D, 83E.

When burning non-volatile fuels in the Texas Gulf Coast Region (MLRA 150,83D,83E) prescriptions for burning may be adjusted if personnel with Class III approval authority or equivalent are present. Prescription limits can be adjusted to 92 degrees faranhiet if the relative humidity is greater than 40 percent, one hour fuel moisture is greater than 10 percent, 20 feet wide firegurads (preferrably bladed) are installed, and density of volitile fuels is low.

I.

When burning in slash-strewn areas, ideal 10-hour time-lag fuel moisture content is 7-12%. When the 10 hour time-lag moisture is <6%, areas should not be burned due to volatility; under these conditions spot fires are almost certain to occur. At >12% moisture woody material will burn but not spread. Ten-hour time-lag fuel moisture should be measured with 100 gram wooded dowel rods especially designed for that purpose or with an electronic fuel moisture meter.

When burning juniper species, the green juniper moisture should be < 80% for a desirable suppression or kill.

Fine fuel (grass) moisture in dormant fuels should be in the 7-9% range for effective fires. When fine fuel moisture is 5% (RH 20% or below), spot fires are certain. 7-8% fine fuel moisture corresponds to a relative humidity of 40%, and 11% fine fuel moisture corresponds to a relative humidity of 65%.

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

Do not burn areas of highly erodible sands and erodible slopes over 30%.

The fire boss is the sole leader and coordinator of all prescribed burning activities.

Do not burn until all precautions have been taken and all personnel on site are informed of the burn plan and their responsibilities during the burn. Have on hand sufficient equipment and manpower needed to control the fire at all times.

Do not burn within 12 hours of a predicted wind shift. Do not burn if winds are light and variable.

“Mop-up” the burn before leaving. Maintain close observation of the burned area until the fire is extinguished. 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.

For specific purposes and conditions for burning, see Attachment I.

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.

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

Preburn or protect with fireguards any brush piles that are near downwind fireguards.

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

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

PLANS AND SPECIFICATIONS

Certified individuals will prepare a written burn plan. 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.

As a minimum, a burning plan will include:

NRCS, TEXAS

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- Description of the burn area including present vegetation cover.
- Objective and timing of burn.
- Acceptable conditions for prescribed burn.
- Preparation of the area for burning.
- Equipment/personnel needs/safety requirements.
- Special precaution areas.
- Firing technique.

OPERATION AND MAINTENANCE

All prescribed burning will be done in accordance with an approved prescribed burn plan (TX-ECS-1).

All employees who conduct or participate in prescribed burning must have the proper certification and training. For new employees this will include the initial three-day burning course conducted by NRCS or its equivalent offered by selected universities. Each employee must receive a two-day refresher course at least once every two years to maintain approval authority. Job approval authority is provided by NRCS employees with Class IV approval/trainer authority.

All burn crewmembers will wear flame resistant clothing (cotton or wool), leather gloves, and leather boots. Polyester clothing will not be worn. Protective eyewear is desirable. For crewmembers in smoky areas, an aspirator or breathing apparatus is desirable. Adequate fluids should be consumed during fire to avoid dehydration.

Prescribed burning can be physically strenuous. All crewmembers should be in good physical condition to enable them to perform all necessary assigned tasks.

For purposes of fighting spot fire, each participant should carry wire cutters, which can be used to cut fences when spot fires are out of reach of sprayer hoses.

All fire fighting equipment should be tested prior to starting a fire.

ATTACHMENT I – CRITERIA FOR BURNING 1/I. Improve quality of Forage for Wildlife, Livestock Grazing Distribution and Stimulate Seed Production.

Vegetative Type and Specific Purpose	Season	Wind Velocity	Relative Humidity	Air Temp	LBS of Fuel	Frequency of Burning
A. Increase Cool Season Production	8/1 – 9/30 <u>3/</u>	6-15 mph	20-50%	60-80 F	1500 #	As Needed
B. Increase Warm Season Production	12/1 – 4/1 <u>3/</u>	6-20 mph	20-60%	50-80 F	1000 #	As Needed
C. Improve Availability and Quality of Browse	12/1 – 4/1 <u>3/</u>	6-20 mph	20-50%	60-80 F	1500 #	As Needed
D. Reduction of Grass Rough	12/1 – 4/1	6-20 mph	20-65%	40-80 F	>2500 #	As Needed
E. Non Volatile Gulf Coast (150 MLRA,83D,83E)	08/1 – 4/1	6-20 mph	40-65%	40-92 F	>2500 #	As Needed <u>7/</u>
F. Spartina Spp.	8/15 – 3/1	6-15 mph	30-65%	40-70 F		As Needed
G. Kleingrass, Bermudagrass, Introduced bluestems	1/15 – 4/1	6-20 mph	20-65%	30-70 F		As Needed

II. Control, Suppression, or Maintenance of Undesirable Vegetation

A. Redberry Juniper	12/1 – 4/1	8-15 mph	20-40%	60-80 F	2000 #	Before regrowth reaches 6 ft or seedlings reach 7 yrs of age <u>4/</u>
C. Prickly Pear	12/1 – 4/1	6-15 mph	20-50%	50-80 F	1500 #	As Needed
D. Post Oak, Blackjack <u>5/</u> and associated hardwoods	12/31 – 5/31	10-20 mph	20-50%	50-80 F	300-500 #	As Needed
E. Eastern Red Cedar	12/1 – 4/30	8-12 mph	20-50%	50-70 F	1200-2000#	Every 3-5 years

III.

Blacklines <u>6/</u>	Prior to main fire ignition	6-12 mph	40-85%	25-58 F	Good Continuity	As Needed
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FOOTNOTES

- 1/ Conditions for burning: Exceptions to these conditions must be planned on a case by case basis prior to burn. The appropriate Range Management Specialist who has Class IV Trainer approval status must approve them.
- 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, when the bud zone becomes covered by soil. This may happen more quickly on deeper soil sites and less quickly on shallow, rocky sites.
- 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 headfire ignition. If dead trees are adjacent to the fireguard, they must be cut down prior to the fire. Cut, dead trees with leaves on them can be a major flaring and firebrand problem.
- 6/ Use accompanying blackline graphs to assist in determining the proper ratios of relative humidity to air temperature at given wind speed conditions. Blackline charts were developed

under the following scenario: No frontal passage within 12 hours; heavy dead brush with green shrub leaf moisture of 79%; 10-hour fuel moisture 7-11%; steep topography; and daytime burning with hand crew. With less volatile fuels (grass), blackline, burning conditions would be less stringent than that shown on charts.

- 7/ Only employees with a Class III prescribed burn certification can plan and assist with burns within this prescription in MLRAs 150, 83D, and 83E.

APPROVAL AND CERTIFICATION

PRESCRIBED BURNING

(ACRE)

CODE 338

PRACTICE STANDARD

PRACTICE STANDARD APPROVED

_____/s Homer Sanchez_____

____September 28, 2001_____

State Range Management Specialist

Date

This practice standard is needed in _____Field Office.

District Conservationist

Date

CERTIFICATION:

Reviewed and determined adequate without need of revision.

Zone Range Management Specialist

Date

Zone Range Management Specialist

Date