

**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 rangeland, forestland, native pasture, pastureland, wildlifeland, hayland, and other land as appropriate.

CRITERIA

General Criteria 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). Timing of the burn will also be based on, as a minimum: desired growth state of vegetation, relative humidity, wind conditions, air temperature, and fuel conditions.

Comply with applicable federal, state, and local laws, including all elements required in a prescribed burn plan according Nebraska State Statute 81-520. A burn permit from the local fire district must also be obtained.

CONSIDERATIONS

Burn Plans

Burning should not be used on sandy sites or other lands that will be subject to severe wind erosion, unless adequate erosion control measures are put in place.

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

Adjoining landowners within the airshed should be notified prior to burning.

Liability and safety precautions are to be planned before the burn and monitored during the burn.

Cooperators must fully understand that they are responsible for confining prescribed burns to their own lands.

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

Identify and provide for protection of headquarters, windbreaks, wildlife areas, etc.

Fire behavior is strongly influence by the interaction of relative humidity, temperature, wind speed and slope.

Smoke management is a great concern, especially if burning close to roads, dwellings, or villages. Be prepared for a lot of smoke when burning in late spring when there is a lot of green growth present. If smoke will blow across a road, burn plans need to include plans for stationing crewmembers to direct traffic. Smoke particulates can also conduct electricity so care should be taken next to electric power lines.

Burning will be done only when there is adequate subsoil moisture, in at least the top 6 inches.

Do not burn when there is high air temperature (greater than 80 degrees), high wind speeds (greater than 15 mph) and low relative humidity (less than 25%). Burn when wind velocity is steady or nearly steady and between 8 to 15 mph, and do not burn when a cold front is forecast.

Normally the optimum time for burning is between 10 a.m. and 2 p.m.

Make sure all hot spots are extinguished before leaving the area.

Use backfire lines and head fires with the wind.

Burn as soon after a rain as possible and when the material to be burned is dry enough to carry a fire. Generally this is 3 to 5 days after a rain on grassland.

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

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

Management

Improper timing of burns can adversely affect plant productivity. If burned too early, cool-season grasses may dominate by depleting soil

water and nutrients before warm-season grasses begin growth.

Generally, burning does not benefit short grass plant communities such as Blue grama or Buffalograss because of low rainfall.

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

Deferment from grazing may be necessary on over grazed areas or in areas dominated by mid-grasses in order to provide an adequate amount of fine fuel (grass) to carry a fire and meet management objectives.

On severely overgrazed areas dominated by bluegrass or smooth brome a single prescribed burn can not guarantee an outstanding yield of native grasses. In order to reach this objective grazing management, herbicide treatments, interseeding, and/or repeat burns may be needed.

Burning for brush management is more effective on young, thin-barked saplings that are not as resistant to heat damage as are older plants with thick bark.

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:

- Objectives.
- Description of the burn area including present vegetation cover.
- Preparation of the area for burning.
- Equipment and crew requirements
- Special precaution areas.
- Location – field numbers and map or sketch.
- Proposed dates of burn, or vegetative growth, or vegetative condition prior to burn.

- The Prescription: Range of weather conditions (temperature, humidity, wind direction and velocity, etc), fuel type/condition, and soil moisture conditions.
- Firebreak requirement (refer to Firebreak 394 standard).
- Firing sequence and ignition techniques.
- Notifications of neighbors and fire district.
- Post fire evaluation.
- Clothing and safety precautions.
- Smoke management plan
- Wildfire escape plan

Additional specifications for improving native warm-season grass communities:

- Burn in late spring when dominant warm-season grasses are just beginning new growth. This is generally on or about May 1.
- Burn only when there is an excess of plant residue but generally not more often than once every 3 years. When burning to control undesirable sprouting woody plants, it may be necessary to burn 2 or more consecutive years.
- Burn rangeland only in fair, good, or excellent range condition.
- After burning, delay grazing until leaves of mid and tall warm-season grasses have at least 3 to 6 inches of new growth.
- When primary purpose of burning is for brush control, grazing will be excluded after burning and until after the end of the current growing season.
- For selected areas managed particularly for prairie grouse habitat, burning should be done by April 15.

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. This practice will most likely need to be repeated in subsequent years to achieve long-term objectives.