Natural Resources Conservation Service

CONSERVATION PRACTICE STANDARD

PRESCRIBED BURNING

CODE 338

(ac)

DEFINITION

Planned fire applied to a predetermined area.

PURPOSE

Use this practice to accomplish one or more of the following purposes:

- Manage undesirable vegetation to improve plant community structure and composition
- Manage pests, pathogens, and diseases to reduce plant pressure
- Reduce wildfire hazards from biomass accumulation
- Improve terrestrial habitat for wildlife and invertebrates
- Improve plant and seed production, quantity, and/or quality
- Facilitate distribution of grazing and browsing animals to improve forage-animal balance
- Improve and maintain habitat for soil organisms and enhance soil health

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on all lands as appropriate.

CRITERIA

General Criteria Applicable to All Purposes

All prescribed burn plans and applications shall address the following items:

- Location and description of the burn area
- Preburn vegetation cover
- Resource management objectives
- Required weather conditions for prescribed burn
- Notification checklist
- Preburn preparation
- Equipment checklist, personnel assignments, and needs/safety requirements
- Firing sequence
- Ignition method
- Basic smoke management practices to minimize smoke impacts
- Approval signatures
- Postburn evaluation criteria

NRCS reviews and periodically updates conservation practice standards. To obtain the current version of this standard, contact your Natural Resources Conservation Service State office or visit the Field Office Technical Guide online by going to the NRCS website at https://www.nrcs.usda.gov/ and type FOTG in the search field.

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Additional Criteria for Prescribed Burn Planning

- The procedure, equipment, weather conditions, and the number of trained personnel shall be adequate to accomplish the intended purposes.
- Inventory the location of utilities, such as electric power lines and natural gas pipelines, to prevent damage to the utility and to avoid personal injury and human and vehicular traffic that may be impeded by heat or smoke.
- Monitor weather parameters, smoke dispersion, and other conditions that will affect fire behavior during the burn.
- Use information in “Basic Smoke Management Practices” (O’Neill et al., 2011) for planning and mitigating smoke impacts. Be aware of your state’s smoke management program and utilize the specific tools your state has implemented to address smoke. Be mindful of the potential air quality impacts that burning might have on downwind communities.
- Timing of burning will correspond with desired soil and site conditions to maintain site productivity and minimize effects on soil health.
- Control points; existing barriers such as lakes, streams, wetlands, roads, and constructed firebreaks; and areas devoid of fuel are important to the design and layout of this practice.
- Notify adjoining landowners, local fire departments, and public health and safety officials as appropriate within the airshed prior to burning.

CONSIDERATIONS

Consider integration of NRCS Conservation Practice Standards (CPSs) Firebreak (Code 394) or Fuel Break (Code 383) into land preparation prior to the prescribed burn. Utilize NRCS CPS Prescribed Grazing (Code 528) to manage fuel loads prior to the burn and grazing use of vegetation postburn.

Consider using prescribed burning as a pathway for restoring ecological sites to reference or other states referred to in the ecological site description(s) and state and transition models for the area. Consider wildlife and pollinator needs such as nesting, brood rearing, feeding, and cover when applying prescribed burns.

Consider cultural resources and inventory any sites found within the burn unit and design the burn to avoid any possible damage.

Consider minimizing carbon release by the timing and intensity of the burn.

Consider utilizing prescribed burning to prepare sites for planting or enhancing seed and seedling production.

Consider using prescribed burning to remove slash and debris.

Integrate safety and health precautions into the timing, location, and expected intensity of the burn.

PLANS AND SPECIFICATIONS

Qualified individuals will complete a written prescribed burn plan with specifications for each site using approved burn plan templates, specification sheets, implementation requirements, and technical notes, in support of the conservation plan. Ensure landowner or operating manager has obtained all necessary State, local, and Tribal permits prior to implementation of the burn plan.

OPERATION AND MAINTENANCE

Operation

During the implementation of this practice, the variability of inherent site factors (e.g., topography, fuels, and weather conditions) on fire behavior, as well as heat and smoke impacts on people, vehicles, and property, must be accounted for and monitored, as appropriate.

Prescribed burning activities shall follow the direction of the burn boss (ultimate decision-maker) and designated personnel in accordance with the approved burn plan and NRCS policy. The prescribed burn plan, and the actions contained in the burn plan as carried out at the direction of the burn boss and designated personnel, will reduce risk to life and public safety and provide protection of values at risk for prescribed fire participants as well as adjacent and local values at risk.

Appropriate levels of trained and equipped personnel are essential for the successful and safe implementation of prescribed fires in all scenarios and land uses.

Requirements for burn weather, necessary resource staffing, and equipment availability correspond to expected fire behavior. The burn boss can override these requirements—in writing at the time of burn—if conditions warrant such action.

A test fire should be ignited prior to all burns to monitor fire behavior, fire effects, consumption, and smoke dispersal.

To effectively minimize postfire escapes, suppression and mop-up must be completed that ensures no fire, embers, or other ignition sources will escape beyond the designated burn area.

Maintenance

All fires will be monitored and evaluated postfire to determine that predetermined burn objectives and metrics were met based on the identified resource concern. This may include but is not limited to targeted—

- Density, structure, and composition of native plant communities.
- Plant productivity and health.
- Reduction of plant pest populations and nonnative plants.
- Reduction in hazardous fuels.
- Improvements in wildlife habitat elements.

All postfire monitoring will be used to inform prescriptions for future burn plans to ensure safe, efficient, and effective application of prescribed fire to achieve resource concern objectives across all scenarios and land uses. Employ NRCS CPS Prescribed Grazing (Code 528) to maintain overall objectives of the burn and manage vegetation for livestock. Consider maintaining firebreaks using NRCS CPS Firebreak (Code 394) for followup burns and wildfire protection.

REFERENCES

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