Natural Resources Conservation Service

CONSERVATION PRACTICE STANDARD

FIREBREAK

CODE 394

(ft)

DEFINITION

A permanent or temporary strip of bare or vegetation land planned to retards fire.

PURPOSE

This practice is used to accomplish one or more of the following purposes–

- Reduce the spread of wildfire
- Contain prescribed burns

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on all land uses where protection from wildfire is needed or prescribed burning is applied.

CRITERIA

General Criteria Applicable to All Purposes

Firebreaks may be temporary or permanent and shall consist of fire-resistant vegetation, non-flammable materials, bare ground, or a combination of these.

Firebreaks will be of sufficient width and length to contain the expected fire.

Firebreaks shall be located to minimize risk to the resources being protected,

Erosion control measures shall be installed to prevent sediment from leaving the site.

Plant species selected for vegetated firebreaks will be noninvasive and capable of retarding fire.

Comply with applicable federal, state, and local laws and regulations, during the installation, operation and maintenance of this practice.

Constructed firebreaks should tie into existing natural barriers where possible. Natural barriers include lakes, streams, ponds, public roads, cultivated fields, pastures, railroads, and utility right-of-ways. Firebreaks should be located on ridge tops, on the contour, and through the forest at intervals of about 1/8 to 1/2 mile. Closer intervals may be used in areas of high risk or for prescribed burning purposes.

Four types of firebreaks can be used in Alabama. They are 1) access roads, 2) vegetated firebreaks, 3) either plowed or disked firebreaks, and 4) grazed firebreaks. Plowed or disked firebreaks should be limited to soils with slight erosion hazard. Access roads, vegetated firebreaks, and pasture firebreaks may be used on any soils provided erosion control measures such as water breaks or broad-based drainage dips are used when erosion hazard is moderate to severe. Access roads used for firebreaks should be vegetated on soils that have a moderate to severe erosion hazard.

Access roads, vegetated firebreaks, and either plowed or disked firebreaks can be used in all forest types. Pasture firebreaks are restricted to pine forest types. Erosion must be controlled on firebreaks.

Vegetated and plowed or disked firebreaks should be located:

1. Parallel to public roads and railroads that are adjacent to forest land boundaries.
2. Parallel to forest land property boundaries.
3. Within forests where necessary.

CRITERIA FOR ACCESS ROADS

Existing access roads can serve as effective firebreaks if properly maintained. All burnable material should be removed from the roads in early spring and fall just before the critical fire seasons.

New roads should be constructed to provide protection from fire and to provide access for harvesting forest products. Aerial photographs, contour maps, and soil maps should be used in locating new roads. Roads should not be located along streams and in natural depressions. See Alabama Conservation Practice Standard, Access Road, Code 560.

A. Construction:
The traveling surface of access roads should be at least 10 feet wide or wide enough to accommodate one-way truck traffic. A wider width may be desired on vegetated woods roads. Turnouts for passing should be visible; they should be constructed where they will be least expensive.

The maximum grade should not exceed 10 percent and should be broken every 300 to 500 feet on long, climbing grades. Proper drainage is essential for maintenance of roads. Surface drains should be installed at the time of construction. Earthen water bars can be used to supplement breaks-in-grade. They should be installed as often as necessary and should always drain water to the downhill side. Upper side ditches should be avoided. On flat terrain, ditches are needed on both sides and should be diverted at every opportunity.

Roads used for firebreaks may be vegetated to reduce erosion and enhance wildlife habitat. A seedbed should be prepared by disking, and lime and fertilizer should be applied according to a soil test. Plant recommended plant species as listed in Alabama NRCS Woodland Reference 16-7, “Erosion Control and Wildlife Plantings for Forestry Operations.” Firebreaks may be overseeded each fall with either legumes, small grains, or ryegrass.

B. Maintenance:
Burnable materials should be removed from the roadway before the fall or spring fire seasons. All surface drains should be cleaned and repaired at that time. Vegetated access roads should be limed and fertilized periodically and reseeded when necessary.

CRITERIA FOR VEGETATED FIREBREAKS

A. Construction:
Firebreaks can be constructed by bulldozing, plowing or disking and then vegetated to either perennial grasses or perennial grasses and legumes. Plant recommended plant species as listed in NRCS Woodland Reference 16-7, “Erosion Control and Wildlife Plantings for Forestry Operations.” Vegetated firebreaks may be overseeded each fall with either legumes, small grains, or ryegrass. Vegetated firebreaks should be at least 10 feet wide and may be used for access.

B. Maintenance:
Vegetated firebreaks should be limed and fertilized periodically and reseeded when necessary.

CRITERIA FOR PLOWED OR DISKED FIREBREAKS

A. Construction:
Either plowed or disked firebreaks can be constructed with a variety of equipment. The desired result is a bare area at least 8 feet wide, free of burnable material, and located so that erosion is kept to a minimum. Plowed or disked firebreaks should be limited to areas with slight erosion hazard.

B. Maintenance:
Firebreaks should be either plowed or disked to remove all burnable material before the fire season.

CRITERIA FOR GRAZED FIREBREAKS

Grazed firebreaks can be used in areas where livestock are present in sufficient numbers to keep the firebreak closely grazed. This type of firebreak protects the forest and provides additional grazing for livestock. Grazed firebreaks can be located:

1. Parallel to public roads and railroads that are adjacent to forest land boundaries.
2. Parallel to forest land property boundaries.
3. Within forests where necessary.
4. Utility right-of-ways through forest land.

A. Construction:
Grazed firebreaks should be constructed in the following manner:

1. A seedbed should be prepared by removing all vegetation and disking. The preferred width of grazed firebreaks is 65 feet or more with a minimum width of 16 feet.
2. Apply fertilizer and lime as recommended by a soil test.
3. Plant fescue, bermuda, or bahiagrass. Plant in combination with legumes. Seed at rates recommended for establishing pasture. Grazed firebreaks may be overseeded each fall with either legumes, small grains, or ryegrass.

B. Maintenance:
Grazed firebreaks should be maintained in the following manner:

1. Firebreaks should be grazed properly and mowed when necessary.
2. Breaks should be limed and fertilized periodically and reseeded when necessary.

CONSIDERATIONS

Use barriers such as streams, lakes, ponds, rock cliffs, roads, field borders, skid trails, landings, drainage canals, railroads, utility right- of-ways, cultivated land, or other areas as existing firebreaks.

Attempt to locate firebreaks near ridge crests and valley bottoms. If winds are predictable, firebreaks should be located perpendicular to the wind and on the windward side of the area to be protected.

Locate fire breaks on the contour where possible to minimize risk of soil erosion.

Consider the selection of plant species that will enhance the needs of wildlife in the area.

Native warm-season grasses should be considered for both wildlife and livestock.

Design and layout should include multiple uses.

Consider cultural resources and environmental concerns such as threatened and endangered species of plants and animals, natural areas, and wetlands.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, narrative statements in the conservation plan and the burn plan, or other acceptable documentation.

OPERATION AND MAINTENANCE

Mow or graze vegetative firebreaks to avoid a build-up of excess litter and to control weeds.

Inspect all firebreaks for woody materials such as dead limbs or blown down trees and remove them from the firebreak.

Inspect annually and rework erosion control measures as necessary to ensure proper function.

Repair erosion control measures as necessary to ensure proper function.

Access by vehicles or people will be controlled to prevent damage to the firebreak.

Bare ground firebreaks, which are no longer needed, will be stabilized.

REFERENCES

Alabama Forestry Commission. 1986. Developing Farm Woodlands in Alabama.

Alabama Forestry Commission. 1993. Alabama's Best Management Practices forForestry.

United States Department of Agriculture - Forest Service. 1993. Managing the Family Forest inthe South. Management Bulletin R8-MB1.

United States Department of Agriculture - Forest Service. June 1984. Management of SouthernPine Forests For Cattle Production. General Report R8-GR4.

Alabama Cooperative Extension System. Auburn University School of Forestry and Wildlife Sciences. 1997. Erosion Control andWildlife Plantings for Forestry Operations.