

Firebreak

Virginia Conservation Practice Job Sheet

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Firebreaks are a useful tool for forest management, wildlife habitat manipulation, access and recreation. This photo shows a forest road being used as a firebreak for a prescribed burn.

A firebreak is a strip of bare land or vegetation established or created to retard fire.

Purpose. Firebreaks are used to prevent the spread of wildfire and control prescribed burns.

Criteria. Firebreaks may be temporary or permanent and consist of fire-resistant vegetation, non-flammable materials, or bare ground. Firebreaks should be located on the contour where practical to minimize the risk of soil erosion. Firebreak construction must comply with applicable federal, state, and local

laws and regulations, including the state's Forest Practices Guidelines. Constructed firebreaks should tie into existing physical barriers (without direct drainage into receiving waters) to prevent sedimentation.

Where Used. This practice is applicable on forest land and all land where fire is being used as a vegetation management tool or wherever there is a threat of an uncontrolled wildfire.

Conservation Management System. Firebreaks may be a component on most conservation management systems that address prescribed burning or wildfire prevention as part of the conservation system to manage woodland and wildlife resources.

Four types of firebreaks are adaptable to the various needs and conditions existing in Virginia. They are:

1. Forest roads,
2. Plowed, disked, or bladed firebreaks,
3. Burned firebreaks, and
4. Vegetated firebreaks.

Forest roads and plowed or disked firebreaks may be used in any forest type and on nearly all terrain conditions. Use of burned and vegetated breaks is generally restricted to pine forests in the Coastal Plain and on gentle slopes in the Piedmont.

Forest Roads. Existing or newly constructed forest roads or trails can be effective firebreaks if properly maintained. The travel surface of roads should be at least 10 feet wide. The maximum permissible sustained grade should be 10 percent. Short, steep

slopes should be avoided. Proper drainage is essential to the stability of the road. Culverts and/or surface drains may be used. Water bars can be used to supplement breaks in grade if needed (see Table 1).

Road Grade %	Approx. distance needed between water breaks (feet)
1	400
2	245
5	125
10	78

Table 1

On flat terrain, drainage must be to both sides and diverted from the roadbed. Seed constructed roadway with a cool-season grass or legume following specifications attached.

Plowed, Disked or Bladed Firebreaks should be located parallel to railroads and other high risk areas, adjacent or parallel to forest property boundaries, and within the forest where necessary. In the Piedmont and Mountains, they should be located on adapted main ridges and side ridges. They should follow the approximate contour of the land wherever feasible to minimize erosion. The breaks should be the width of the disk, Mathis plow (3 to 5 feet), or blade (6 to 12 feet). These widths are usually sufficient to contain most creeping or slowly moving ground fires, but will not stop crown fires. Temporary firebreaks must be plowed immediately before burning.

Burned Firebreaks consist of two parallel plowed or disked strips, each 5 feet wide, and a minimum of 20 feet apart. Logs, limbs, and other flammable materials which are likely to burn for several hours should be removed from the area between the strips. The area between the strips is then burned creating the break

Vegetated Firebreaks protect the forest as well as provide convenient access to the enterprise. Vegetated Firebreaks consist of cool season grass or grass legume strips at least 30 feet wide adjoining forest land and 50 feet wide within forests. The strips should be cleared by removing trees and scrubby growth. Breaks must be 50 feet wide within the forest to allow sufficient sun light for grass and legume plants to grow successfully and form a sod. The land should be prepared and seeded according to the specifications attached.

Specifications. Practice specifications will be developed individually for each site with the landowner. Specifications will comply with *Virginia Conservation Practice Standard 394* and the *Virginia Plant Establishment Guide*. All decisions concerning location, plant materials and other specific technical decisions will be documented on this job sheet.

Operation and Maintenance. O&M will consist of maintaining the break in a condition that insures that the firebreak is capable of retarding ground fires. Apply fertilizer to maintain plant vigor, and protect break from unwanted grazing. Perform renovation activities, such as pest control, mowing, disking, debris removal and rejuvenation of the desired vegetation and timeliness of maintenance activities to minimize wildlife impacts.

Firebreak Job Sheet

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Landowner:	Farm #:
Field(s):	Tract #:
Assisted By:	Date:

Type of firebreak planned Road Disked/ Plowed Burned* Vegetated
 Temporary Permanent

Width:	Erosion Control required:		
Length:			
Number and distance between water breaks (if required):			
Vegetation Specifications:			
Seedbed preparation:			
Species	1.	2.	3.
Rate			
Lime:			
Fertilizer:			
For Disked/ Plowed firebreaks: Expose mineral soil with fire line plows.			

* The burned firebreak must be established by a written burn plan by a Virginia Department of Forestry certified burner. A burning permit must be obtained from the local Forest Ranger or Fire Warden, representing the Virginia Department of Forestry

Installation shall be in accordance with the specified drawings, specifications, and special requirements. **No changes are to be made in the drawings or specifications without prior approval from the technical specialist developing the plan.**

Sketch of Layout

Has landowner received a copy of the 394 –VA-O&M Plan YES NO

Operations and Maintenance Plan

394 Firebreak –VA-O&M Plan

1) Temporary Disked/Plowed Fire breaks

- A. Create the firebreak by disking or plowing. Expose mineral soil with fire line plows, heavy bush and bog disks, or farm plows and disks or blades depending upon the terrain and character of vegetation to be removed immediately prior to the burn. The break should be wide enough to retard a ground fire
- B. Place on the contour as much as possible to control erosion.
- C. Immediately after the burn, vegetate the disturbed soil as to the specifications provided.

2) Permanent Firebreaks

- A. Forest Roads -- Existing or newly constructed forest roads or trails can be effective firebreaks if properly maintained.
 - i. Maintain the forest road to a minimum width of ten feet.
 - ii. Occasional disk the road to expose mineral soil.
 - iii. Remove woody debris from road surface.
 - iv. Maintain erosion control measures, ditches, water breaks, and culverts in proper working order.
 - v. Mow roadway prior to the critical fire season.
- B. Burned Firebreaks
 - i. Burn as necessary to eliminate flammable material and insure proper functioning condition.
 - ii. Schedule mowing, and other renovation activities to avoid the nesting season (April 15 through Aug 15).
- C. Vegetative Firebreaks
 - i. Establish vegetation according to the specifications provided.
 - ii. Fertilize and manage to maintain ground cover and proper mixture of grasses and legumes.
 - iii. Mow vegetative breaks to avoid a build up of excess litter, weeds and woody vegetation.
 - iv. Protect from grazing.
 - v. Schedule mowing, and other renovation activities to avoid the nesting season (April 15 through Aug 15).
 - vi. Breaks will need periodic applications of lime, fertilizer and seed to maintain vigor.
 - vii. Annually inspect the break and remove wood debris, perform maintenance on drainage, water bars and erosion control measures.