



TEXAS A&M FOREST SERVICE

Fire Information: Permanent Firebreaks

A permanent firebreak is a strip of fire-resistant vegetation, bare ground or a combination that slows the spread of fire. Properly designed firebreaks may also provide wildlife habitat and access to the property. Firebreaks are also referred to as firelines and firelanes.

Equipment:

Usually a crawler tractor is used for clearing a firebreak in forested areas. A mechanical spreader capable of spreading lime, fertilizer and seed may also be required for establishing cover.

Location:

Locate firebreaks on ridge tops, on the contour, and through the forest at intervals of 1/8 to 1/2 mile. Closer intervals are recommended in areas of high risk or for prescribed burning.

Where possible, tie firebreaks into existing barriers such as roads, cultivated fields, pastures and utility rights-of-way. Avoid tying lines directly into a lake, stream, pond or swamp, which may result in siltation of the water body; thereby degrading the water quality.

Typical firebreaks include access roads, vegetated firebreaks, plowed or disked firebreaks, and grazed firebreaks.

Access Roads:

Access roads may provide protection from wildfire and entry for forest management if properly designed and maintained.

- Roads should not be in the Streamside Management Zone (SMZ) along streams and natural depressions.

- Do not incorporate stumps, logs, slash and other organic debris into roadbeds.
- They should be approximately 10 feet wide, or wider and the grade should not exceed 10%. On long, climbing grades, the road should be broken into shorter segments of 300 to 500 feet when possible.
- Use water diversion devices or broad-based drainage dips when erosion hazard is moderate to severe.
- Consider vegetation to reduce erosion and enhance wildlife habitat.
- Remove all burnable materials in early spring and fall before the fire seasons.

Vegetated Firebreaks:

Vegetated firebreaks are constructed by bulldozing, plowing or disking and then seeding with a green cover crop. When installing vegetated firebreaks:

- Select plants that retard fire, enhance wildlife habitat and offer ease of maintenance.
- Consider overseeding each fall with legumes, small grains, or ryegrass.
- Lime and fertilize periodically, and reseed when necessary.
- Vegetated firebreaks should be at least 10 feet wide.
- Mow or allow grazing to avoid build up of dead litter and help control weeds and woody vegetation.

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Plowed or Disked Firebreaks:

Many different types of equipment are used to construct plowed or disked firebreaks. The objective is a bare area at least 10 feet wide that contains no burnable materials.

- Limit these firebreaks to areas with slight erosion hazard.
- Plow or disk to remove burnable material before the spring and fall fire seasons.

Grazed Firebreaks:

Grazed firebreaks are used in areas where livestock can keep them closely grazed. This type protects the forest and provides additional grazing for livestock.

- The preferred width of grazed firebreaks is 16 feet or more.
- Plant with bahia grass, small grains, rye grass, legumes, or allow native species to re-establish on the firelanes.
- Fertilize and lime periodically and reseed when necessary.
- Graze properly and mow whenever needed.

Water Diversion:

Develop water diversion devices on slopes to minimize erosion. Percent of slope will determine spacing and dimensions of the devices. Typically, they are 12 - 18 inches high and at a 30- 45 degree angle down slope across the road or firebreak so water is diverted into forested areas. Fertilizing and seeding with species with dense deep root systems can stabilize firebreaks. Spacing should be based on the following criteria:

Percent Slope	Spacing in Feet
3	200
5	135
10	80
15	60
20	45
30	35
40	30