

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

FIREBREAK

(Feet)

CODE 394

DEFINITION

A strip of bare land or vegetation that retards fire.

PURPOSES

To protect soil, water, air, plant, animal and human resources by preventing spread of wildfire or to control prescribed burns.

CONDITIONS WHERE PRACTICE APPLIES

All land uses where protection from wildfire is needed or prescribed burning is applied.

CRITERIA

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

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

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

Species selection will be based on their attributes in retarding fire and ease of maintenance.

Erosion control measures shall prevent sediment from leaving the site.

Comply with applicable laws and regulations, including the state's Management Measures.

CONSIDERATIONS

Use existing barriers such as streams, lakes, ponds, rock cliffs, roads, drainage canals, railroads, utility right-of-way, and cultivated land as natural firebreaks.

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

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.

Select plant species that provide wildlife habitat if compatible with purpose.

Planning considerations

The basic function of a fire or fuel-break is to impose some obstacle to the spread and a means of access to the fire.

Breaks are constructed for a number of purposes:

- a. To act as a barrier to prevent the spread of a fire to a particular area or property.
- b. To contain the spread of a fire from a fire source.
- c. To breakup large fuel areas. Where fire may spread rapidly or be difficult to control, a system of firebreaks is some-times established to aid in confining the fire to a relatively small area.

Existing barriers must be considered. These include natural barriers such as rock outcrop, streams, water bodies, swamps, and cover with naturally low flammability, and artificial barriers such as roads and railroads, power, gas, oil and telephone right-of-way.

While applicable to most land uses, fire and fuel-break planning should be combined with all woodland management activities. Woodland improvement, tree planting, woodland improve harvesting, access road, and forestland erosion control system, provide opportunities to utilize fire and fuel-breaks while accomplishing other woodland objectives.

The installation of fire and fuel-breaks is based on the value of the resource, which is susceptible to fire. The costs of installation must be weighed against the benefits received through the reduced fire damage. Fire and fuel-breaks should be planned using the

adequate control method. This method seeks a reasonable level of control based on a determination of what is sufficient to the need. It is not economically feasible to develop a system of fire or fuel-breaks for low site stands, less than site index 70, for species such as ponderosa pine and Douglas-fir, etc. Areas with high economic, social, wildlife or watershed values should be protected. These include the higher site index stands, home sites, plantations, significant cultural resources, areas which contain rare and endangered plants and animals, municipal water supply sources and Christmas tree farms.

Firebreaks

A firebreak consists of two parts; a lane or strip cleared of most trees, shrubs and other large flammable material within which a narrower strip is cleared down to mineral soil. They are best suited for use in range, crop, and urban lands.

Breaks are usually located with reference to probable sources of fires. These may be along roads or fences. They are also located to the usual direction a fire may spread.

Because mineral soil is required, erosion from firebreaks can become a serious problem. Therefore, erosion control measures are necessary.

Fuel-breaks

A fuel-break is a wide strip with a lower amount of fuel in a brush or wooded area to serve as a line of fire defense. It normally has a grass understory to provide soil cover. These are intended to divide large areas of woody fuels into blocks, which allows control of the fire.

Normally, they are constructed in the following sequence. The first fuel-breaks are on the ridges separating the major drainages. The next series are on the ridges within the major subdrainages to break the area into smaller units.

Locate fuel-breaks on the contour where possible to minimize risk of soil erosion. Attempt to locate fuel-breaks near ridge crest and valley bottoms and along property lines. If winds are predictable, fuelbreaks should be located perpendicular to the wind and on the windward (upwind) side of the area to be protected.

In general, the wider the fuel-break, the easier and safer the job of holding the fire. However, budget and terrain constraints limit the width of most fuel-breaks.

Water Quantity

This practice will have a minor effect on the quantity of surface and ground water.

Water Quality

Bare land within the firebreak may leave the soil exposed to raindrop, sheet, and rill erosion. This may increase erosion and increase transport of sediment and substances to surface waters. The fire and fuel-break may increase pesticide delivery to surface and ground water and increase transport of sediment and substances to surface waters. The firebreak may increase pesticide delivery to surface and ground water.

Endangered Species Considerations

Determine if installation of this practice with any others proposed will have any effect on any federal or state listed Rare, Threatened or Endangered species or their habitat. NRCS's objective is to benefit these species and others of concern or at least not have any adverse effect on a listed species.

If the Environmental Evaluation indicates the action may adversely affect a listed species or result in adverse modification of habitat of listed species which has been determined to be critical habitat, NRCS will advise the land user of the requirements of the Endangered Species Act and recommend alternative conservation treatments that avoid the adverse effects. Further assistance will be provided only if the landowner selects one of the alternative conservation treatments for installation; or at the request of the landowners, NRCS may initiate consultation with the Fish and Wildlife Service, National Marine Fisheries Service and/or California Department of Fish and Game. If the Environmental Evaluation indicates the action will not affect a listed species or result in adverse modification of critical habitat, consultation generally will not apply and usually would not be initiated. Document any special considerations for endangered species in the Practice Requirements Worksheet.

Some species are year-round residents in some streams, such as, freshwater shrimp. Other species, such as steelhead and salmon, utilize streams during various seasons. Be aware that critical periods, such as spawning, eggs in gravels, and rearing of young may preclude activities in the stream that may directly affect the stream habitat during those periods. For example there should be no disturbance of stream gravel beds that may have eggs in them. That could include any equipment in the stream or even walking in the stream

or work upstream that may result in sediment depositing in the gravel beds. Document any special considerations for endangered species in the Practice Requirements Worksheet.

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, or other acceptable documentation.

OPERATION AND MAINTENANCE

A maintenance plan will be prepared which shall list various items that are to be inspected and follow-up work to be conducted.