

Natural Resources Conservation Service (NRCS)
Des Moines, Iowa

Iowa Conservation Practice 394
February 2011

Definition

A firebreak is a permanent or temporary strip of bare or vegetated land planned to retard and prevent fire from moving out of a burn area.

Purpose

The purpose of a firebreak is to reduce the spread of wildfire and to contain prescribed burns.

General Specifications

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 grasslands, woodland and wildlife resources. Firebreaks may be temporary or permanent and consist of fire-resistant vegetation, nonflammable materials, or bare ground. Firebreak construction must comply with applicable federal, state, and local laws and regulations. Firebreaks should be located on the contour where practical to minimize the risk of soil erosion. All firebreaks should be checked by the burn boss prior to each burn. Firebreaks must be at least 15 feet in width or 4 times the fuel height, whichever is greater.

Four types of firebreaks are adaptable to the various needs and conditions existing in Iowa:

- » **Natural firebreaks:** Primarily lakes, rivers and larger streams that are usually interconnected with other types of firebreaks. If using water bodies as firebreaks, care should be taken to minimize the impact to the water body's fisheries and wildlife resources. Natural firebreaks are the most secure of all firebreaks.
- » **Permanent roads:** Roads create a fuel free width of 15 to 20 feet. Permanent road firebreaks require minimal care on burn day. Be aware of culverts under the road, gas lines, telephone boxes, power lines, signage poles, or any other roadside elements that may need special attention. Fuels should be cleared from around these structures. Permanent roads allow for safe, rapid ignition with routine ignition and holding forces.



- » **Bare soil firebreaks:** These are plowed, disked, or bladed firebreaks. The ground cover is turned or worked to bury almost all vegetation within a week of the burn date. Bare soil firebreaks should be reseeded quickly after the fire with legume species and some grasses to prevent excessive erosion risk. These types of firebreaks should be used with care on steep, erosive slopes or on prairie remnants or sites established to native prairie vegetation. Forest roads and plowed or disked firebreaks may be used in any forest type and on nearly all terrain conditions. Erosion control and revegetation of these types of firebreaks after the burn is recommended.
- » **Vegetated or Mow-wetline firebreaks:** Prepared by mowing as close to the ground as possible with rotary or sickle mowers beginning one year in advance to reduce the amount of litter buildup and to encourage enough green growth and to stop the fire. The use of vegetated breaks is generally restricted to sites with gentle slopes.

Operation and Maintenance

Operation and Maintenance will consist of maintaining the firebreak in a condition that ensures that the firebreak is capable of slowing or restricting ground fires. Apply fertilizer to maintain plant vigor, and protect the firebreak from unwanted grazing. Perform renovation activities, such as pest control, mowing, disking, debris removal and rejuve-

nation of the desired vegetation and timeliness of maintenance activities to minimize wildlife impacts. Prior to any prescribed fire remove dead trees and brush piles that are within 20 feet of firebreaks and examine the firebreak to ensure the firebreak integrity.

Plans and specifications

Practice specifications will be developed individually for each site with the landowner. Specifications will comply with all applicable local state and federal laws. All decisions concerning location, plant materials and other specific technical decisions will be documented on this job sheet or the prescribed burn plan.

Firebreak Job Specification Sheet

Name _____ Farm # _____ Tract # _____

Assisted by _____ Field Office _____ Contract # _____

Firebreak Information

Type of Firebreak(s) ☐ Natural Firebreak ☐ Bare Soil Firebreak
☐ Permanent Road ☐ Vegetated or Mow-wetline Firebreak

Fuel Height _____ Width _____ (greater of: min. 4 x fuel height or 15)

Length _____

Vegetation specification in a wetline firebreak:

Species 1. _____ 2. _____ 3. _____

Rate (lbs./acre) _____

Soil amendments: Use soil test or _____ lbs. lime/acre _____ lbs. 5-10-10/acre

Bare soil firebreaks. The mineral soil must be exposed and plant residue buried below the soil surface. Disking should take place no more than one week before the planned burn. Bare soil firebreaks are to be reseeded quickly after the completion of the burn.

Locations of all firebreaks are to be shown on the sketch below, conservation plan map, or on the burn plan map.