



Natural Resources Conservation Service

CONSERVATION PRACTICE STANDARD

FIREBREAK

CODE 394

(ft)

DEFINITION

A permanent or temporary strip of ground cleared to bare soil or planted with fire-resistant vegetation meant to stop the spread of fire.

PURPOSE

Use this practice to accomplish one or more of the following purposes:

- Stop or significantly reduce the spread of wildfire from excessive biomass accumulations.
- Facilitate the management of plant productivity and health with prescribed fire.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on all land uses where protection from wildfire or facilitation of prescribed fire is needed.

CRITERIA

General Criteria Applicable to All Purposes

Design firebreaks to consist of fire-resistant, non-invasive vegetation, nonflammable materials, bare ground, or a combination of these. Design firebreaks to be of sufficient width and length to contain the expected fire.

Locate firebreaks to minimize risk or unwanted damage to resources and infrastructure from fire and heat. Use natural features or anchor points such as streams, lakes, ponds, rock cliffs, roads, field borders, skid trails, landings, drainage canals, railroads, utility right-of-way, cultivated land, or other areas to augment firebreaks for greater efficacy.

Install erosion control measures to prevent sediment from leaving the site.

CONSIDERATIONS

Reduce air quality impacts by limiting emissions of particulate matter, greenhouse gases, and ozone precursors.

Use plants with poor fuel characteristics that inhibit or prevent fire growth and progression in vegetative firebreaks. Use native species when possible or practical.

Use decision support tools such as unmanned aerial vehicles (UAVs), geographic information systems (GIS), and light detection and ranging (Lidar) mapping to guide the planning and layout of firebreaks.

Plan fuel breaks in conjunction with firebreaks to increase overall efficacy in stopping the spread of fire.

Locate firebreaks near ridge crests and valley bottoms, where fuels and topography provide the most effective reduction in fire intensity and/or infrastructure or egress protection. Locate firebreaks on the contour, where practicable, to minimize risk of soil erosion. Install firebreaks in a manner that supports vehicle and equipment access, including fire suppression equipment.

Determine the expected wind direction(s) and install firebreaks to the windward (direction from which the wind is blowing) side of the area or feature to be protected. Avoid locating firebreaks in midslope positions when possible. Use caution when incorporating overhead electric line rights-of-way into the firebreak design or layout. Electric lines can be hazardous in heavy smoke because carbon in the smoke may conduct electricity, causing a discharge similar to lightning.

Use grazing livestock to manage fuels in areas not conducive to using mechanical treatments. Locate fencing, water, and minerals in areas to facilitate fuels management with livestock grazing.

Locate firebreaks to protect and benefit cultural resources, threatened and endangered species, natural areas, wildlife habitat, riparian areas and wetlands. Use diverse vegetation species combinations which best meet native wildlife and pollinator needs.

PLANS AND SPECIFICATIONS

Prepare specifications for applying this practice for each site including length, width, vegetative species selection, erosion calculations, and erosion control measures. Record using approved:

- specification sheets,
- burn plan, if necessary
- plan map
- implementation requirements, and
- narrative statements in the conservation plan, or other acceptable documentation.

OPERATION AND MAINTENANCE

Monitor and manage vegetative fuels to avoid a buildup of excess litter and to control weeds. Monitor and manage surface and canopy fuels to maintain desired fire behavior. Inspect all firebreaks for woody materials, such as dead limbs or blown down trees, and remove them from the firebreak.

Inspect firebreaks at least annually and rework bare ground firebreaks as necessary to keep them clear of flammable vegetation. Stabilize bare ground firebreaks that are no longer needed.

Repair erosion control measures as necessary to ensure proper function. Control access by vehicles or people to prevent damage.

REFERENCES

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