United States Department of Agriculture

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 resulting 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 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.

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

Use natural features or anchor points such as streams, lakes, ponds, rock cliffs, roads, field borders, skid trails, landings, drainage canals, railroads, utility rights-of-way, cultivated land, or other areas to augment firebreaks for greater efficacy.

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 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.

Plan fuel breaks in conjunction with firebreaks to increase overall efficacy in stopping the spread of fire. See NRCS Conservation Practice Standard (CPS) Fuel Break (Code 383).

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. Avoid locating firebreaks in midslope positions when possible.

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

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.

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.

Use grazing livestock to manage fuels in areas not conducive to using mechanical treatments. See NRCS CPS Prescribed Grazing (Code 528). Locate fencing, water, and minerals in areas to facilitate fuels management with livestock grazing.

Install firebreaks in a manner that supports vehicle and equipment access, including fire suppression equipment.

PLANS AND SPECIFICATIONS

Specifications derived from this conservation practice standard will be prepared for each site and recorded using State-approved implementation requirements in the conservation plan, burn plan, or other acceptable documentation. Document specific deliverables from the statement of work for each phase under design, installation, and checkout.

OPERATION AND MAINTENANCE

Monitor and manage vegetative fuels to avoid a buildup of excess litter and to control weeds.

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.

Monitor and manage surface and canopy fuels to maintain desired fire behavior.

Repair erosion control measures as necessary to ensure proper function.

Control access by vehicles or people to prevent damage.

Stabilize bare ground firebreaks that are no longer needed.

REFERENCES

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