

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

LAND CLEARING

(Ac.)
CODE 460

DEFINITION

Removing trees, stumps, and other vegetation to achieve a conservation objective.

PURPOSE

Allow needed land use adjustments and improvements in the interest of conservation.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to wooded areas where the removal of trees, stumps, brush, and other vegetation is needed in carrying out a conservation plan.

CRITERIA

Clearing and disposal methods shall be according to all applicable federal, state, and local laws and with due regard to the safety of persons and property.

Clearing shall be done when the soil moisture content is such that soil structural damage or compaction is minimized.

A minimum 50-foot wide undisturbed area will be left between the area being cleared and all wetlands, water bodies and perennial streams.

Temporary cover will be established as necessary to control sheet and rill and/or wind erosion on the cleared area until the planned land use is in place.

The cleared area shall be left in a condition that will facilitate the planned use and treatment of the land.

Any cleared debris shall not be pushed or stacked in standing or green timber.

Specify the method of disposal for all material not salvaged.

Any harvest cutting will comply with the requirements of Conservation Practice Standard 666 Forest Stand Improvement. If a salvage harvest is made before clearing, leaving taller stumps will facilitate final clearing and grubbing activities.

Land clearing shall be performed to minimize soil erosion, compaction, rutting, damage to remaining vegetation and hydrologic conditions.

Slash, debris and vegetative material left on the site after treatment will not present an unacceptable fire or pest hazard, should not be closer than 100 feet (ft) from adjacent woodland, buildings, or roads or be located or interfere with the intended purpose. A pile should not be closer than 100 feet (ft) from adjacent woodland, buildings, or roads.

CONSIDERATIONS

Consider timing of the land clearing to minimize disturbance and movement of topsoil.

Consider treatments to maintain or improve air quality.

Land clearing is usually more efficient if the tree is less than 4 inches (in) in diameter. For larger trees, the root wad or crown should be removed during drier soil conditions. Rough pushing under wet conditions can create deep rutting and can bury debris complicating final cleanup.

Special attention should be given to maintaining habitat for fish and wildlife. Strip clearing, windrowing debris, and maintaining den and food trees can minimize impacts on wildlife.

The orientation and layout of debris piles should be considered. Consider chaining or pushing trees down parallel to each other, and to follow topographical contours. The pile should be high, narrow, and compact and free of topsoil and snow. Piles with excess debris do not cure properly. A break of 30 ft between berms is recommended for every 200 ft of berm length to act as a firebreak, allow natural drainage or runoff, and facilitate equipment.

Land clearing can increase the volume and rate of runoff. This is more pronounced on steeper land.

Consider the steepness of slope when selecting the size and type of equipment needed to clear land.

Consider practices to minimize the spread or introduction of weeds into a newly cleared field.

Consider the disposal of vegetation with regards to carbon sequestration. Burying, composting, or mulching the debris would limit the release of carbon.

Cultural Resources Considerations

NRCS's objective is to avoid any effect to cultural resources and protect them in their original location. Determine if installation of this practice will have any effect on any cultural resources.

Document any specific considerations for cultural resources in the design docket and the Practice Requirements worksheet.

GM 420, Part 401, the California Environmental Handbook and the California Environmental Assessment Worksheet provide guidance on how the NRCS must account for cultural resources. The Field Office Technical Guide, Section II contains general information, with Web sites for additional information.

Endangered Species Considerations

Determine if installation of this practice, along with any others proposed, will have an 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 that 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 U.S. 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.

Water Quantity

1. Effects on the water budget, especially on volumes and rates of runoff, evaporation, and transpiration.
2. The impact of soil settling on the variation in rates of runoff immediately after clearing.

Water Quality

1. Effects on erosion and the movement of sediment, pathogens, and soluble and sediment-attached substances carried by runoff.

PLANS AND SPECIFICATIONS

The Practice Requirements Sheet shall specify the kinds of timber to be salvaged, lengths of logs, and the method of disposal for all material not salvaged. The construction drawings shall include the location of any

The plan shall provide for the measures necessary to protect the cleared area from erosion.

Plans and specifications for land clearing shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

OPERATION AND MAINTENANCE

The following actions shall be carried out to insure that this practice functions as intended throughout its expected life.

A maintenance program shall be established which includes, where appropriate:

- Periodical inspection of erosion control features and repairs if necessary.
- Protection of the vegetative cover while controlling undesired and exotic vegetation.
- Protection of water courses and water quality after removal of trees and vegetation.
- Protection of the treated area from soil erosion, compaction, rutting and damage to remaining vegetation and hydrologic conditions as well as noxious weeds.

- Use of mechanical treatments, prescribed burning, pesticides or other chemicals that do not compromise the intended purpose.

REFERENCES

Water Quality and BMP's For Loggers,
<http://www.usabmp.net/launch.html?state=ca>