

## NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD

### TREE/SHRUB PRUNING

(Ac.)

CODE 660

#### DEFINITION

Removing all or parts of selected branches or leaders from trees and shrubs.

#### PURPOSE

- Improve the appearance of trees or shrubs
- Improve the quality of wood products.
- Reduce fire and/or ladder fuels, or safety hazards.
- Improve the growth and vigor of understory plants.
- Adjust the foliage and branching density for other specific intents, such as wind and snow control, noise abatement, access control, and visual screens.

#### CONDITIONS WHERE PRACTICE APPLIES

On any area with trees or shrubs, or to provide an area for fire control and to remove hazardous or diseased portions of trees.

#### CRITERIA

##### General Criteria Applicable to All Purposes

The pruning and shearing method and timing will match the limitations of the site and soils, achieve purposes for the specific tree or shrub species, and be conducted in a safe and efficient manner.

Pruning or shearing will not adversely reduce the growth and vigor of the tree or shrub for the intended purpose.

Debris and vegetative material left on the site after treatment will not present an unacceptable fire or pest hazard or interfere with the intended

purpose and other management activities.

Burning of removed vegetation shall follow the criteria in Forest Slash Treatment (384).

Comply with applicable federal, state and local laws and regulations during the installation, operation and maintenance of this practice.

##### Criteria Applicable to Quality of Wood Products

Pruning will only be done in Douglas-fir, Jeffrey and Ponderosa Pine stands when the site index exceeds 70 (McArdle) (Meyer).

No pruning of true firs (White, Red, and Shasta), hemlock and spruce will be planned. These species are more prone to invasion by decay causing fungi.

Pruning will be in lifts (stages).

##### Pruning in Urban Areas for Recreation, Visual Aesthetics and Other Uses

Pruning techniques will follow established guidelines contained in the Standards of Pruning for Certified Arborists published by the Western Chapter of the International Society of Arborists

#### CONSIDERATIONS

Pruning and shearing should be timed to minimize disturbance to seasonal wildlife activities. It should also consider the nesting and breeding requirements of arboreal species.

Pruning and shearing tools should be disinfected to prevent the spread of pathogens.

Review the estimated cost and projected economic benefits of the project before starting a pruning or shearing project.

To maintain plant growth and sustain vigor, pruning and shearing may be done in two or more timed intervals.

Time pruning and shearing to minimize potential damage to the tree bole and stems.

Debris and other vegetation (biomass) removed may be used to produce energy. Management alternatives should consider the amount of energy required to produce and convert the biomass into energy with the amount produced by the biomass.

Sufficient herbaceous vegetation must be left in the stand following pruning to prevent wind erosion and other natural resource concerns.

In urban areas special considerations need to be given for safety hazards.

Removing the lower limbs provides protection from fire. For some shrubs it may increase browse by resprouting in the lower bole.

Pruning any pine limb releases host volatiles (odors) which may attract bark beetles, *Ips*, on small diameter trees (less than 9 inch d.b.h.) and *Dendroctonus*, spp., such as mountain pine beetle, on large diameter trees (greater than 9 inch d.b.h.). When the threat of beetles is a consideration:

- 1) Timing of the pruning operation will coincide with the periods of lowest beetle activity, normally when temperatures are not conducive to beetle flights (November to March).
- 2) Slash treatment will follow guidance in Forest Stand Improvement Specification (666) to reduce the threat of population increases of beetles.

Pruning may create basal sprouts. These may need to be periodically controlled by any number of methods including cutting, mowing or chemical application.<sup>1</sup>

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<sup>1/</sup> Chemical application recommendations and application rates will be made by a licensed applicator, farm advisor, or others licensed to do so in California.

Pruning should be planned in conjunction with the application of other Conservation Practices and activities including Forest Stand Improvement (Standard 666), Fuel Break (383) etc.

### **Pruning for Christmas Trees**

Pruning can increase the value of plantation trees and reduce the number of unmerchantable culls.

Once pruning occurs it may be required one or more times each year until harvest.

Basal pruning: Delay until no more than one-third of the total foliage on the tree will be cut off to prevent excessive shock.

### **Pruning for Quality Saw Logs**

Under ideal conditions natural pruning removes the limbs providing clean boles. However, because spacing and other considerations are seldom perfect, artificial pruning is required to produce high quality clean bole trees. The greatest need for pruning is in open-grown or poorly stocked stands where lower limbs will persist indefinitely.

Stands should be healthy and vigorous.

Avoid pruning stands on exposed areas prone to windthrow, sites with a high water table or a high incidence of root rot.

Pruning in the spring or periods of active shoot elongation will be avoided. Pruning in pines should be accomplished after the new growth has elongated and hardened.

### **Fuel Hazard Reduction**

Prune to break up the fuel ladder.

Along roads consider the removal of limbs to allow the passage of emergency vehicles.

Consider properly cutting portions of the limbs to provide at least 10 feet of ground clearance.

### **Shrub Pruning**

Prune to direct or control growth.

Prune to encourage flower and fruit production.

Prune to promote plant health. Cutting at the 2 to 3-foot level will promote new growth and better quality forage for some wildlife browse species.

Prune to repair damage.

Prune to achieve a special effect or an artificial form.

Prune to alter, restore, or rejuvenate an established or neglected plant to make it more attractive. On taller shrubs lower limbs can be removed, transforming it in to a multi-stemmed shrub, resembling a small tree, and breaking up the fuel ladder.

Prune to compensate for transplanting. The balance between roots and top is upset when the plant is transplanted. Pruning can restore this balance.

### **Endangered Species Considerations**

If during the Environmental Assessment NRCS determines that 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 will advise the client 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 client selects one of the alternative conservation treatments for installation; or with concurrence of the client, NRCS initiates consultations concerning the listed species with the U.S. Fish and Wildlife Service, National Marine Fisheries Service and/or California Department of Fish and Game.

### **PLANS AND SPECIFICATIONS**

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, technical notes and narrative statements in the conservation plan, or other acceptable documentation.

Species, site limitations, methods, equipment, season of year, and guides to pruning for the applicable purpose shall be considered.

### **OPERATION AND MAINTENANCE**

Periodically inspect plant condition and take additional actions as necessary, e.g., additional pruning, pest management, nutrient management and forest stand improvement.

### **REFERENCES**

9624-2815-MTDC. *Pruning in Timbered Stands*. USDA-Forest Service, Technology & Development Program. Missoula, MO. 1996.

Ortho Books. *All About Pruning*. The Solaris Group. San Ramon, CA. 1989.

Shigo, A. and Marx, H. G. *Compartmentalization of Decay (Part A, B, C)*. INF-NE-405. USDA-Forest Service, Northeast Experiment Station. PA. 1977.

