NATURAL RESOURCES CONSERVATION SERVICE

NEW JERSEY CONSERVATION PRACTICE STANDARD

TREE/SHRUB PRUNING

(Ac.)

CODE 660

DEFINITION

The removal of all or parts of selected branches, leaders, or roots from trees and shrubs.

PURPOSE

This practice is applied to support one or more of the following purposes:

- Maintain or improve plant productivity, health and vigor, and/or reduce excessive plant pest pressure.
- Develop desired plant structure, foliage or branching density, or rooting length.
- Improve the composition and vigor of understory plants.
- Maintain or improve soil quality and organic matter content.
- Reduce wildfire and/or safety hazards.
- Reduce energy use during field operations.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on any area with trees or shrubs.

CRITERIA

General Criteria Applicable to All Purposes

Maintain the health and vigor of trees and shrubs by removing the minimum amount of living biomass required to achieve the pruning objective. Maintain recommended crown ratios for the treated species.

Use proper pruning methods, techniques and timing for each species to achieve the pruning objective.

Use proper pruning procedure(s) and tools to minimize stress and damage to the residual tree or shrub.

Time all pruning and shearing activities to minimize negative impacts on the site, soils, and vegetation.

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.

Do not create conditions (e.g., sap flow from fresh cuts) that will attract detrimental insects or increase the potential for disease.

Ground vegetation and/or conditions must be left in a manner to address erosion and other natural resource concerns to acceptable levels.

Schedule the timing of pruning and shearing operations to minimize disturbance to seasonal wildlife activities.

Do not paint or treat pruning cuts, or “top” (pollard) trees or shrubs unless specifically recommended for the intended purpose as described by the International Society of Arboriculture.

Sanitize all equipment after pruning a forest unit, even if there is no apparent disease.

All laws such as the New Jersey Freshwater Wetland Rules and the Migratory Bird Treaty Act must be followed.

If this practice is being implemented as part of a Forest Management Plan, the Forestry BMP Manual must be followed.

Additional Criteria for Maintaining Health and Vigor

When pruning diseased wood, disinfect pruning and shearing tools as needed to minimize the spread of pathogens.

When root pruning for maintenance or renovation of existing trees, prune outside the tree drip-line (unless root competition with adjacent crop or forage areas becomes too great) and to a depth appropriate for the species and site.

For affected species and sites, limit the spread of root-graft transmitted diseases by pruning roots at distances recommended for the species, site, and size of the tree.

Additional Criteria to Maintain or Improve Soil Quality

Do not burn vegetative residues except where wildfire hazard or threats from diseases and insects are of concern, or other management objectives are best achieved through burning.

Distribute residue throughout the site; however, moving residues away from stems of trees or shrubs is acceptable. Residues may be chipped or mulched to speed incorporation into the soil.

Additional Criteria for Reducing Wildfire and/or Safety Hazards

When pruning is used to reduce wildfire hazard, or is conducted for other purposes in areas that are susceptible to wildfire, treat woody residue to reduce wildfire risk. Use NRCS Conservation Practice Standard (CPS) *Woody Residue Treatment (Code 384)*.

When pruning for wildfire hazard reduction, the final pruned branch height (at the bole) may need to be higher with trees whose branches droop, to achieve the desired separation between the tree crown and ground vegetation.

Additional Criteria to Reduce Energy Use

Where alternative pruning methods are available, reduce the total energy consumption associated with pruning by using energy-efficient and cost-effective methods.

CONSIDERATIONS

Removing live branches and foliage decreases tree and shrub energy reserves and ability to photosynthesize. Improper pruning methods that remove too much material, or lead to structural defects and breakage, can impact the health and vigor of trees and shrubs.

Consider the potential impacts of planned vegetative residue treatment methods on soil, water, animal, plant, energy, and air resources (e.g., retaining residues on site vs. removal or burning). Soil quality is improved through inputs of vegetative residue that supply nutrients and organic matter.

If needed, treat vegetative residue to limit threats from diseases or insects, maintain operational capacity, or to speed residue incorporation into soils. Use NRCS CPS *Woody Residue Treatment (Code 384)*.

Consider estimated costs and projected economic benefits of pruning for production of knot-free wood or other specialized forest products.

When pruning for disease or pest control (e.g.,mistletoe, blister rust), consider existing tree-to-tree spacing, vertical tree structure, degree of infection, stand age, and site quality. If it is necessary to cut or kill entire trees to limit disease or pest damage, use NRCS CPS *Forest Stand Improvement (Code 666).*

For species susceptible to sun scald, consider possible damage that may occur to a newly-exposed tree bole or shrub, especially on south-facing slopes.

Consider how to use branches and other plant parts removed during pruning as special forest products, or for other purposes.

PLANS AND SPECIFICATIONS

Prepare plans and specifications for applying this practice, including design and installation requirements for achieving the intended purpose. Locate the area to be pruned on the conservation plan map, and document the purpose(s) for pruning in the conservation plan.

At a minimum, specifications shall include:

- Location,
- Objective(s) for pruning,
- Treatment method by species or vegetation type,

- Number of trees/shrubs per acre to be treated,
- Minimum and maximum amount of live branch and foliage to be cut or removed,
- Timing relative to considerations for disease, insects, and wildlife impacts,
- Mitigation measures, if needed, to reduce wildfire hazard or the potential for disease and insect pests.

OPERATION AND MAINTENANCE

Periodically inspect plant condition and conduct additional treatment or mitigation if needed.

Control locally invasive and noxious plants that may establish due to increased light penetration.

REFERENCES

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