

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

TREE/SHRUB ESTABLISHMENT

(Acre)

CODE 612

DEFINITION

To establish woody plants by planting or seeding.

PURPOSE

- To establish woody plants for forest products.
- Provide erosion control for landscaping and energy conservation.
- To reduce air pollution for uptake of soil and water borne chemicals and nutrients.
- Beautify an area and provide shade.
- Protect a watershed.
- Provide wildlife habitat.
- To maintain or restore natural genetic diversity.

CONDITIONS WHERE PRACTICE APPLIES

On any area where woody plants are suited and desirable.

CRITERIA

General Criteria Applicable To All Purposes

- Species will be adapted to soil-site conditions. Select species from the FOTG or other technical references.
- Species will be suitable for the planned purpose.

- Planting or seeding rates will be adequate to accomplish the planned purpose.
- Planting dates, and care in handling and planting of the seed or seedlings will ensure that planted materials have an acceptable rate of survival. Plants will be established prior to May 30th unless containerized seedlings are used or plants will be watered.
- Only viable, high quality, and adapted planting stock or seed will be used. Plant roots will be kept moist at all times and not allowed to dry out prior to planting.
- Site preparation shall be sufficient for establishment and growth of selected species. Competing vegetation will be controlled through appropriate site preparation.
- Adequate seed or advanced reproduction needs to be present or provided for when using natural regeneration to establish a stand.
- Timing and use of equipment will be appropriate for the site and soil conditions. Methods of planting must accomplish the following:
 - * Trees and shrubs will be planted at the same approximate depth as they grew in the nursery, i.e., with the root collar at ground level.
 - * Trees and shrubs will be planted approximately vertical without doubling the roots.
 - * Soil will be firmly packed around the roots.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service. NH supplement is underlined.

NRCS, NHFOTG
April, 2000

- The acceptability and timing of coppice regeneration shall be based on species, age, and diameter.
- The planting will be protected from adverse impacts such as livestock damage, fire pests, or wildlife. Where feasible and necessary, seedlings will be mulched. Mulch shall cover an area 2 feet in diameter around each stem, except for within 6 inches of the stem.

Additional Criteria For Restoring Natural Genetic Diversity

Species selected will be indigenous to the site and will reflect species components of the desired stands. Plant species currently listed as invasive in New Hampshire will not be used. Recommended plant species are available in the FOTG reference files or the Plants Database.

Additional Criteria For the Purposes of Landscape and Beautification, to Provide Shade and to Provide Wildlife Habitat

Each site will be evaluated to determine if mulching, supplemental water, or other cultural treatments will be needed to assure adequate survival and growth.

CONSIDERATIONS

When underplanting, trees should be planted sufficiently in advance of overstory removal to ensure full establishment.

Prescribed burning may be required for natural regeneration of serotinous cone species and for site preparation for other species.

All planting stock and seed should be purchased from nurseries that are known to be using locally adapted seed, seedlings or cuttings. Priority will be given to plant materials that have been selected and tested in tree improvement programs. All plant materials should comply with the minimum standards established by the American Nurseryman Standards Institute.

Plans for landscape and beautification plantings should consider foliage color, color and season of flowering, and mature plant height and width.

Where multiple species are available to accomplish the establishment objective, consideration should be given to selecting the species which best meets wildlife needs.

Tree arrangement and spacing should allow for access lanes.

Residual chemical carryover should be considered prior to planting.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, narrative statements in the conservation plan, or other acceptable documentation. NRCS VEGSPEC computer program may be used to identify species and develop a job sheet.

Adapted tree species for the purposes outlined, spacing, planting methods, cultural practices and maintenance requirements that are applicable; and variations in methods and species between interplanting, underplanting, and planting in open areas. Separate specifications can be prepared for each of these planting methods using information provided in Attachment 1.

OPERATION AND MAINTENANCE

Competing vegetation will be controlled until the woody plants are established.

Replanting will be required when survival is inadequate.

Trees and shrubs will be protected from fire, insects, disease, and animals until established.

Supplemental watering may be desirable to ensure adequate survival.

Damaging pests will be monitored and controlled.

Periodic applications of nutrients may be needed to maintain plant vigor.

ATTACHMENT 1

New Hampshire Supplemental Specifications

INTERPLANTING

Adapted species

- Use species that grow well in full sunlight to partial shade. Refer to appropriate Cooperative Extension publications, FOTG Reference files or Plants Database.

Spacing

- Plant between other species, but no closer than 2 feet from any existing plants.

Planting Methods

- Plant by hand.

Cultural Practices

- Weed control is necessary, either by hand cutting, herbiciding or mulching for at least 2 years.

Maintenance Requirements

- Inspect plantings every year and replace dead or diseased and injured plants.

UNDERPLANTING

Adapted species

- Use species that grow well in partial to full shade conditions. Refer to appropriate Cooperative Extension publications.

Spacing

- No less than 100 well-spaced trees per acre will be planted to insure adequate stocking of crop trees (21' X 21').
- Trees will not be planted closer than four feet by four feet (4' X 4').

Planting Methods

- Plant by hand.

Maintenance Requirements

- Inspect plantings every year and replace dead or diseased and injured plants.

PLANTING IN OPEN AREAS (Previous Agricultural Fields)

Adapted species

- Use species that grow well in full sunlight. Refer to appropriate Cooperative Extension publications.

Spacing

- Not less than 450 Larch or Red Pine, 700 white spruce, black spruce or Norway Spruce, and 1200 White Pine per acre will be planted in single species plantations.
- For hardwood tree species plantings, 10' X 10' spacing is recommended.
- In mixed tree species plantings, at least 700 trees per acre will be planted.
- No less than 100 well spaced tree species per acre will be planted to insure adequate stocking of crop trees (21' X 21').
- Trees will not be planted closer than four feet by four feet (4' X 4'). Shrubs will not be planted closer than two feet by two feet (2' X 2").

Site Preparation

- Remove weeds and grass prior to planting and keep out for at least two years. See Forest Site Preparation (490) for standards and specifications.

Planting Methods

- Arrange trees and/or shrubs in the rows so that they are staggered with relation to the plants in adjacent rows.

Cultural Practices

- Weed control is necessary, either by mowing, herbiciding or using mulch.

Maintenance Requirements

- Inspect plantings every year and replace dead or diseased and injured plants.