

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE SPECIFICATION GUIDE SHEET
TREE/SHRUB ESTABLISHMENT**

(ACRE)
CODE 612

Definition

Establishing woody plants by planting seedlings or cuttings, direct seeding, or natural regeneration

Purpose

Establish woody plants for:

- forest products such as timber, pulpwood, etc.
- wildlife habitat
- long-term erosion control and improvement of water quality
- treating waste
- storing carbon in biomass
- energy conservation
- improving or restoring natural diversity
- enhancing aesthetics

Documentation

All categories require the following design information (Refer to elements of [design/project](#) plan):

1. Landowner and Design Preparer name and address.
2. Property Location, including town and county, and NRCS Field Office.
3. Practice name, code, justification, extent, estimated cost, and time schedule.
4. Description of specific work to be performed and its location and size, as well as written instructions for contractor and /or owner.

5. Description of layout and planting method to be use.
6. Maps of property and practice locations, including a lat/long for boundary corners and practices. (GIS data preferred).
7. Specifications for the protection of other natural resources including but not limited to water, soil, and wildlife and non-target plants.
8. The design shall also identify where and if recommended treatments also necessitate application for permits or variances from local, state or federal regulations.
9. Detailed specifications, modifications and as-builts including type of erosion control and/ or drainage work, stream crossings and maintenance requirements.

Inter-plantingAdapted species

- Use species that grow well in full sunlight to partial shade. Refer to the UMCE Bulletin #2500, *Gardening to Conserve Maine's Native Landscape*: [Plants to Use and Plants to Avoid](#), in the FOTG reference file, or the Conservation Tree and Shrub Attributes Database in eFOTG.

Spacing

- Plant between other species, but no closer than 4 feet from any existing plants.

Planting Methods

- Plant by hand.

Cultural Practices

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

Maintenance Requirements

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

Under plantingAdapted species

- Use species that grow well in partial to full shade conditions. Refer to the UMCE Bulletin #2500, *Gardening to Conserve Maine's Native Landscape*: [Plants to Use and Plants to Avoid](#), in the FOTG reference file, or the Conservation Tree and Shrub Attributes Database in eFOTG.

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 trees or shrubs and control undesirable vegetative competition until the planting is, or will progress to, a fully functional condition or 3 years, whichever is longer and replace dead or diseased and injured plants.

Planting in Open Areas (Previous Agricultural Fields or recently harvested forestland)Adapted species

- Use species that grow well in full sunlight. Refer to the UMCE Bulletin #2500, *Gardening to Conserve*

Maine's Native Landscape: [Plants to Use and Plants to Avoid](#), in the FOTG reference file or the Conservation Tree and Shrub Attributes Database in eFOTG.

Spacing

- Not less than 450 larch or red pine, 700 white spruce, black spruce or Norway spruce, or 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.
- 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 control for at least two years. See Tree/Shrub Site Preparation, Practice Code 490, for standards and specifications.

Planting Methods

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

Cultural Practices

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

Maintenance Requirements

- Inspect trees or shrubs and control undesirable vegetative competition until the planting is, or will progress to, a fully functional condition or 3 years, whichever is longer and replace dead or diseased and injured plants.

Inter planting or Enrichment Planting for Wildlife

Plant additional trees and shrubs to supplement natural regeneration that provides wildlife benefits

Species selection must be appropriate to the site (soil, aspect, etc.). Native species of an appropriate provenance will be used. Species selection should also account for present and expected insect and disease problems in the immediate area.

Planting stock must be of good quality and properly handled to help ensure survival.

Existing or expected competition from natural vegetation must be assessed in the Practice Design. If competition is determined to be too heavy for acceptable seedling survival, appropriate site preparation measures must be taken (see Tree/Shrub Site Preparation, Practice Code 490 for specifications).

Soils throughout the treated area must be identified. Areas that are too wet, where ledge outcrops occur, or where soils are too shallow for tree survival should be marked off in the field and their acreage determined.

Measures to prevent browsing of trees/shrubs must be identified in the Practice Design and implemented.

Installation of planted seedlings must be done to maximize survival, e.g. with proper vertical placement of roots and soil contact with the roots.

Planting will occur after the ground thaws, and before bud break.

Practice Design must include recommendations for maintaining or supplementing competition control measures post planting.

Inter planting is not recommended in areas of more than 70% canopy cover, or in areas where harvesting is likely within 15 years.

A minimum of 10 trees/shrubs per acre will be planted, at least 4 feet from natural regeneration, and without direct plant competition.

Some recommended species that provide food or cover for wildlife include:

Downy serviceberry (*Amelanchier arborea*)

Shadblow serviceberry (*A. canadensis*)

Allegheny serviceberry (*A. laevis*)

Black chokeberry (*Aronia melanocarpa*)

Buttonbush (*Cephalanthus occidentalis*)

Gray dogwood (*Cornus racemosa*)

Red-osier dogwood (*C. sericea*)

American filbert (*Corylus americana*)

Beaked hazelnut (*C. cornuta*)

Winterberry (*Ilex verticillata*)

Common juniper (*Juniperus virginiana*)

Northern bayberry (*Myrica pensylvanica*)

Chokecherry (*Prunus virginiana*)

Wild plum (*P. americana*)

Highbush blueberry (*Vaccinium corymbosum*)

Nannyberry (*Viburnum lentago*)

Highbush cranberry (*V. opulus* var. *trilobum*)

American elderberry (*Sambucus canadensis*)

Scarlet elder (*S. pubens*)

American mountain ash (*Sorbus americana*)

Crabapple (*Malus* spp.)

Hawthorn (*Crataegus* spp.)

(Review the Conservation Tree/Shrub Attributes Database for more information on requirements for soil, drainage, light and nutrients.)