



## CONSERVATION ENHANCEMENT ACTIVITY

E612F

# CONSERVATION STEWARDSHIP PROGRAM

### Sugarbush management

#### CONSERVATION PRACTICE: 612 - Tree/Shrub Establishment

APPLICABLE LAND USE: Forest

RESOURCE CONCERN: Animals, Plants

ENHANCEMENT LIFE SPAN: 15 years

#### Enhancement Description

Establish or maintain tree/shrub species diversity in a sugar maple (*Acer saccharum*) stand to enhance pollinator and wildlife needs.

#### Criteria

- States will apply criteria from the NRCS National Conservation Practice Standard Tree/Shrub Establishment (Code 612), and any additional criteria as required by the NRCS State Office.
- Maintain the sugarbush in a fully stocked condition based on an appropriate stocking guide. Maintain at least 20% of basal area in species other than sugar maple (or other species used in syrup production (e.g., red maple or paper birch)) to promote species diversity. Half of that 20 percent of basal area should be in mast producing species (hard or soft mast).
- Thin the sugarbush stand to achieve correct stocking levels (e.g. 80 percent sugar maple/20 percent other species), and/or allow space for planting new trees/shrubs. Use NRCS Conservation Practice Standard Forest Stand Improvement (Code 666) to identify characteristics of trees to remove and to remove trees.
- When the existing sugarbush does not have 20% of basal area in other species not used for syrup production, selection of species to be planted should be chosen according to the site's natural disturbance regime. Species should be selected based on traits, successional status, structure, and composition.



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- Use tree tapping guidelines that minimize tree damage. Tap trees should be tapped sustainably, minimizing impact to the trees and the forest, using appropriate equipment and methods for the geographic area.
- Build forest resilience by favoring existing species that are better adapted to projected future climate conditions, and by enhancing relative compositional and structural diversity.
- Do not plant species on the Federal or State invasive species or noxious weed lists.
- Only viable, high-quality and site-adapted planting stock or seed will be used.
- A precondition for tree/shrub establishment is appropriately prepared sites. Refer to criteria in NRCS CPS Tree/Shrub Site Preparation (Code 490).
- Implementation and timing of planting will be appropriate for the site and ensure successful establishment.
- Plantings must be protected from unacceptable adverse impacts from insects, disease, wildlife, and/or fire. Apply supporting practices and treatments as necessary to protect establishing trees and shrubs.
- The enhancement will comply with all applicable federal, state, and local laws and regulations, and with States' Forestry Best Management Practices for Water Quality.

### **Documentation and Implementation Requirements**

#### **Participant will:**

- Prior to implementation:
  - provide an updated Forest Management Plan that documents intended objectives for sugarbush management.
  - prepare the planned acres for trees and/or shrub establishment. Refer to NRCS Conservation Practice Standard Tree-Shrub Site Preparation (490).
  - select tree species to plant based on adaptation to climatic region, soil properties and capabilities, and light requirements for establishment, if existing sugarbush does not have 20% of basal area in species that are not sugar maple. Remove the necessary number of trees to achieve the correct stocking level and/or allow space for new tree planting, as needed.
  - select planting technique, arrangement and spacing design, and timing appropriate for the site conditions.



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Species	Note selected species characteristic(s)

During implementation:

- install and maintain erosion control measures for the site, as needed.
- protect the planting(s) from plant and animal pests and fire.
- notify NRCS in writing of any planned changes to verify changes meet NRCS enhancement criteria.

TASK	Species	Species	Species
Planting Date			
Planting Technique			
Arrangement/Spacing			

**NRCS will:**

Prior to implementation:

- provide and explain NRCS Conservation Practice Standard Tree/Shrub Site Preparation (CPS 490) as it relates to implementing this enhancement. Verify the enhancement is planned for acres that have been appropriately prepared for tree/shrub establishment.
- provide and explain NRCS Conservation Practice Standard Tree/Shrub Establishment (Code 612) as it relates to implementing this enhancement.
- verify the enhancement is planned for the appropriate land use.
- verify no plants on the Federal or state noxious weeds list are included in the planning combination.
- NRCS will provide Technical Assistance, as needed, in the following:
  - Selecting a combination of species to meet enhancement criteria.
  - Selecting planting techniques, arrangement and spacing design, and timing appropriate for the site and soil conditions.
  - Planning the use of additional erosion control for the site, as needed.



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- Preparing specifications for applying this enhancement for each site using approved state implementation requirements, national technical notes, appropriate state technical notes, and narrative statements in the conservation plan, or other acceptable documentation.
- During implementation:
  - evaluate any planned changes to verify they meet the enhancement criteria and were established to specifications developed for the site.
- After implementation:
  - verify the plantings were protected from plant and animal pests and fire.
  - verify all erosion control needed for the site is functioning and is maintained to specifications developed for the site.

**NRCS Documentation Review:**

I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name \_\_\_\_\_ Contract Number \_\_\_\_\_

Total Amount Applied \_\_\_\_\_ Fiscal Year Completed \_\_\_\_\_

\_\_\_\_\_  
NRCS Technical Adequacy Signature

\_\_\_\_\_  
Date



WASHINGTON SUPPLEMENT TO  
CONSERVATION ENHANCEMENT ACTIVITY

CONSERVATION  
STEWARDSHIP  
PROGRAM

E612F

Additional Criteria for Washington

- In addition to the criteria specified in the National job sheet E612F the following additional criteria apply in Washington:
  - Big leaf Maples may be used in place of Sugar maple.
  - Washington State list of suitable woody plant species for producing mast for wildlife. Choose species appropriate for the local area.

Blackberry (native & introduced)	Huckleberry/blueberry/ whortleberry
Black Hawthorn	
Buffalo Berry	Mountain Ash
Cascara	Oak (Oregon White )
Cherries (Choke and Bitter)	Oregon Grape
Crab apple (native)	Ponderosa pine
Cranberries (native varieties)	Raspberry (native & introduced)
Current and gooseberry	Roses (native)
Douglas Fir	Salal
Elderberry (Red & Blue)	Salmonberry/ Thimbleberry/
Hackberry	Serviceberry (Saskatoon & Utah)
Hazelnut (California & Beaked)	

The above list of plants have native and introduced species found in Washington State. This list is not all inclusive and there may be many more woody species and varieties that produce mast for wildlife here in Washington. Please notify NRCS if species selection is not found on the above list. For species targeting pollinators see WA Biological TN 24.



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- The Web Soil Survey provides reports on site suitability for trees and shrubs such as: Ecological Site Descriptions (ESD), Forest Productivity and Rangeland and Forest Vegetation Classification. Natural Heritage Program ecological sites or USFS plant associations may be substituted for ESDs, if ESDs are unavailable.
- For seedling stock types, planting methods, care, handling, temporary storage and protection options see 612 Specification Guide and Implementation Requirements standard instructions.
- Use USDA Plants for minimum and maximum planting rates.

### **Additional Documentation Requirements for Washington**

- In addition to the documentation requirements specified in the National job sheet E612F the following additional documentation requirements apply in Washington:
  - Document species composition and abundance (stocking and/or cover) before and after treatment.
  - As Needed Implementation Requirements for supporting practices such as:
    - 384 Woody Residue Treatment when there is an unusual amount of woody slash inhibiting planting.
    - 315 Herbaceous Weed Treatment or 314 Brush Management if there is a need for post-planting vegetation control due to pervasive competing vegetation.
    - 484 Mulch or 441 Irrigation system micro-irrigation when moisture management issues are inhibiting establishment of new plantings.
  - For long term success of planting, stocking (Survival) surveys should be done and documented for the first 3 years or until the planted and seeded stock are determined to be established and free to grow. If there is enough mortality to compromise the functionality of the planting, then it is recommended that the dead trees or shrubs are replaced. Volunteer trees and shrubs are acceptable replacements if their location maintains the functionality of the planting.