



CONSERVATION ENHANCEMENT ACTIVITY

E612A

CONSERVATION STEWARDSHIP PROGRAM

Cropland conversion to trees or shrubs for long term improvement of water quality

Conservation Practice 612: TREE/SHRUB ESTABLISHMENT

APPLICABLE LAND USE: Crop (Annual & Mixed); Crop (Perennial)

RESOURCE CONCERN: Water

ENHANCEMENT LIFE SPAN: 15 years

Enhancement Description

Cropland conversion to trees and shrubs for long term erosion control and improvement of water quality. Trees and shrubs are established on cropland where annually-seeded cash crops have been grown. Tree and/or shrub species are selected for their efficacy in holding soil, and the planting design is configured to control runoff and trap sediment.

Criteria

- Current land use must be cropland. Soil must have been cultivated for crop production at least once within the last three years. **Trees and shrubs must be part of the ecological site in order to qualify for this enhancement.**
- A precondition for tree/shrub establishment is appropriately prepared sites. Refer to NRCS Conservation Practice Standard (CPS) Tree/Shrub Site Preparation (Code 490).
- A combination of tree and shrub species will be used. Species will be adapted to site conditions and selected for their extensive, spreading root systems, rapid establishment, and tolerance for pollutants, nutrients, or contaminants contained in runoff or soils at the site.
- No plants on the Federal or state noxious weeds list shall be planted.



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- Selection of planting technique and timing will be appropriate for the site and soil conditions.
- Tree or shrub arrangement and spacing will be designed specifically to intercept runoff and trap sediment. The establishment phase will include other forms of erosion control as needed (e.g., mulch, filter fabric) until plantings have achieved the desired purpose of controlling erosion and improving water quality.
- Planting dates, and care in handling and planting of the seed, cuttings or seedlings will ensure that planted materials have an acceptable rate of survival.
- The seeding and/or planting will be protected from plant and animal pests (i.e. feral pigs, wild deer, wildlife or livestock). Refer to NRCS Conservation Practice Standard Integrated Pest Management (Code 595) to assist with site-specific strategies for pest prevention, pest avoidance, pest monitoring, and pest suppression.
- The seeding and/or planting will be protected from fire. Refer to NRCS CPS Fuel Break (Code 383) to assist with site-specific strategies for fire pre-suppression, protection and monitoring.
- Each site will be evaluated to determine if mulching, supplemental water or other cultural treatments (e.g., tree protection devices, shade cards, brush mats) will be needed to assure adequate survival and growth.
- Evaluate residual chemical carryover prior to planting. Alter species selection and/or timing of planting/seeding to achieve adequate seed germination and/or seedling establishment.



**Documentation and Implementation Requirements**

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**Participant will:**

- Prior to implementation, prepare the planned acres for tree or shrub establishment. Refer to NRCS Conservation Practice Standard Tree/Shrub Site Preparation (Code 490). (NRCS will provide technical assistance, as needed.)
- Prior to implementation, select a combination of tree and shrub species selected for their extensive, spreading root systems, rapid establishment, and tolerance for pollutants, nutrients, or contaminants contained in runoff or soils at the site. (NRCS will provide technical assistance, as needed.)

Species	Note specific species characteristic(s)

- Prior to implementation, select planting technique, arrangement and spacing design, and timing appropriate for the site and soil conditions. (NRCS will provide technical assistance, as needed.)

Planting Date	
Planting Technique	
Arrangement and Spacing	

- During implementation, use forms of erosion control as needed for the site. (NRCS will provide technical assistance, as needed.)
- During implementation, notify NRCS of any planned changes to verify changes meet NRCS enhancement criteria.
- During implementation, protect the planting from plant and animal pests and fire.
- During implementation, maintain all erosion control needed for the site.



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**NRCS will:**

- Prior to implementation, verify the enhancement is planned for cropland.
- 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.
- Prior to implementation, provide and explain NRCS Conservation Practice Standard Integrated Pest Management (Code 595) as it relates to implementing this enhancement.
- Prior to implementation, verify no plants on the Federal or state noxious weeds list are included.
- As needed, prior to implementation, NRCS will provide technical assistance:
  - Planning site preparation meeting NRCS Conservation Practice Standard Tree/Shrub Site Preparation (Code 490).
  - Selecting a combination of tree and shrub species.
  - Selecting planting techniques, arrangement and spacing design, and timing appropriate for the site and soil conditions.
  - Planning the use of additional erosion control, as needed for the site.
  - Preparing specifications for applying this enhancement for each site using approved specification sheets, job sheets, 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.
- After implementation, verify the planned trees and shrub species were established to specifications developed for the site.
- After implementation, verify the planting is protected from pests and fire.

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- After implementation, verify all erosion control needed for the site is functioning and is maintained to specifications developed for the site.

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### **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