



**CONSERVATION ENHANCEMENT ACTIVITY**

**E580105Z - Colorado**

**CONSERVATION STEWARDSHIP PROGRAM**

Stream corridor bank stability improvement

**Conservation Practice 580: Streambank and shoreline protection**

**APPLICABLE LAND USE: Crop (Annual & Mixed); Crop (Perennial); Pasture; Range; Forest; Farmstead; Associated Ag Land**

**RESOURCE CONCERN ADDRESSED: Soil Erosion**

**ENHANCEMENT LIFE SPAN: 20 years**

**Enhancement Description:**

Stream corridor bank vegetation components are established to provide additional stream corridor bank stability.

**Criteria:**

- This enhancement can be applied to streambanks and adjacent floodplain/riparian area of natural channels where the channel is susceptible to erosion and migration.
- Stream corridor vegetative components must be established as necessary for ecosystem functioning and stability. The appropriate composition of vegetative components is a key element in preventing excess long-term channel migration in re-established stream corridors.
- Dominant vegetation will consist of existing, naturally-regenerated, or seeded/planted trees and shrubs suited to the soil and hydrology of the site. Vegetation established on channel banks and adjoining areas must be in accordance with NRCS Conservation Practice Standard Critical Area Planting (Code 342).
- Vegetation cover that promotes sediment deposition should be used to help floodplain development and growth. Overland flow should be maintained as sheet flow through the adjacent floodplain/riparian area to prevent erosion and promote sediment deposition.



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- Utilize vegetative species that are native and/or compatible with local ecosystems. Avoid introduced, invasive, noxious or exotic species that could become nuisances. Where possible, select plant materials that also provide habitat requirements for desirable wildlife and pollinators.
  - Utilize the site assessment to ensure the species selected meet the enhancement requirement of provided a dominance of “existing, naturally-regenerated, or seeded/planted trees and shrubs suited to the soil and hydrology of the site”.
  - To learn more about the species that should occur on-site, visit the Field Guide to the Wetland/Riparian Plant Associations of Colorado (CNHP, 2003) at [http://www.cnhp.colostate.edu/download/documents/2003/wetland\\_field\\_guide\\_2003.pdf](http://www.cnhp.colostate.edu/download/documents/2003/wetland_field_guide_2003.pdf).
  - If obtaining plant materials (transplants, cuttings) from a donor site (i.e., not purchased) then the harvest location and methods must be pre-approved by NRCS to ensure that the donor site will not be adversely impacted by the harvest. Trees or shrubs will only be harvested away from the streambank, unless in their currently location they are causing adverse effects.
- Treatments should meet aesthetic and recreational objectives as determined by a site-specific assessment or management plan. Aesthetic objectives should be based on human needs, including visual quality, noise control, and microclimate control. Treatments should be designed to achieve recreation objectives as determined by a site-specific assessment or management plan. Safety requirements shall be based on type of human use and recreation objectives.
- Construction materials, grading practices, and other site development elements must be selected and designed to be compatible with adjacent land uses.
- Livestock exclusion must be considered during establishment of vegetative treatments and appropriate grazing practices applied after establishment to maintain plant community integrity. Wildlife may also need to be controlled during establishment of vegetative treatments. Temporary and local population control methods should be used with caution and within state and local regulations.
- Design the stream corridor and bank vegetation enhancement for an expected life of at least 20 years. Protective treatments must be self-sustaining or require minimum maintenance.
- Selecting species which are existing or should exist on the site; which have the ability for regeneration and are adapted to the hydrology are critical to meet this requirement.



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## Documentation and Implementation Requirements

### Participant will:

- Prior to implementation, prepare the planned acres for tree or shrub establishment. Refer to NRCS Conservation Practice Standards Streambank and Shoreline Protection (Code 580) and Critical Area Planting (Code 342). (NRCS will provide technical assistance, as needed.)
- Prior to implementation, select a combination of deep-rooted trees and shrubs appropriate for preventing bank erosion, promoting sedimentation, and limiting long-term channel migration. If possible, select plant materials that also provide habitat for desirable wildlife and pollinators (NRCS will provide technical assistance, as needed.)

Species / Type	Number	Wildlife habitat characteristic(s), if any

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

TASKS	Species/Type	Species/Type	Species/Type	Species/Type	Species/Type
Planting Date					
Planting Technique					
Arrangement/Spacing					

- During implementation, use erosion control methods based upon specifications developed for the site.
- After implementation, protect the area from livestock until vegetation is well-established, and, if necessary, control wildlife access within state and local regulations.
- After implementation, conduct inspections after high flows and undertake prompt actions if there is excessive streambank or streambed instability or erosion.



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### NRCS will:

- As needed, provide technical assistance to meet the criteria of the enhancement.
- Prior to implementation, verify the enhancement is planned for acres that have been appropriately graded and prepared for tree and shrub establishment. Refer to NRCS Conservation Practice Standards Streambank and Shoreline Protection (Code 580) and Critical Area Planting (Code 342).
- 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 for:
  - Selecting a combination of appropriate, deep-rooted tree and shrub species for preventing bank erosion, promoting sedimentation, and limiting long-term channel migration.
  - Selecting appropriate arrangement and spacing design to maximize erosion control and planting techniques 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 using approved specification sheets, job sheets, technical notes, and narrative statements in the conservation plan, or other acceptable documentation.
- During implementation, verify all erosion control needed for the site is functioning and is maintained to specifications developed for the site.
- 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 livestock and, as necessary, from wildlife.
- After implementation, verify planned erosion control provided by 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.

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

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

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



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