United States Department of Agriculture

CONSERVATION ENHANCEMENT ACTIVITY

CONSERVATION STEWARDSHIP PROGRAM

E391A

Increase riparian forest buffer width for sediment and nutrient reduction

Conservation Practice 391: Riparian Forest Buffer

APPLICABLE LAND USE: Crop (Annual & Mixed); Crop (Perennial) and Associated Ag Land

RESOURCE CONCERN: Water

PRACTICE LIFE SPAN: 15 Years

Enhancement Description

Where an existing forested riparian area is located along a river, stream, pond, lake, or other waterbody, increase the width of the buffer in order to allow a greater percentage of sediment and nutrient removal from surface and subsurface flows.

Criteria

- Existing buffer width shall be at least 35 feet or (if applicable) the minimum State buffer-width requirement, whichever is greater. Maximum enhancement buffer width may be increased up to the greater of 180 feet or the State-allowed maximum width.

- To the extent possible, the buffer area and extended buffer will be shaped and vegetated to increase overland flow interception.

- Excessive sheet-rill and concentrated-flow erosion will be controlled in the areas immediately adjacent and up-gradient of the buffer site. Overland flow through the riparian area will be maintained as sheet flow.

- Existing functional underground drains through the riparian area will be plugged, removed or replaced with perforated pipe/end plugs or water control structures.

- Dominant vegetation will consist of existing, naturally regenerated, or seeded/planted trees and shrubs suited to the soil and hydrology of the site and the intended purpose of nutrient reduction.

- Use tree and shrub species that are native and non-invasive. Substitution with improved and locally accepted cultivars or purpose-specific species is allowed. For plantings and seeding, only viable, high-quality and adapted plant materials will be used.

- Favor tree and shrub species that have multiple values such as those suited for timber, nuts, fruit, florals, browse, nesting, and aesthetics.

- Periodic removal of some forest products such as high value trees, medicinal herbs, nuts, and fruits is permitted provided the buffer area is not compromised by the loss of vegetation or harvesting disturbance.

- Necessary site preparation and planting shall be done at a time and manner to insure survival and growth of selected species.

- Harmful plant and animal pests present on the site will be controlled or eliminated as necessary to achieve and maintain the intended purpose. Pest management will be conducted in a manner that mitigates impacts to pollinators.

- Livestock shall be controlled or excluded as necessary to achieve the buffer's water quality improvement purpose. If livestock is present, follow a Prescribed Grazing Plan (CPS 528) and defer grazing for a minimum of two years.

- Design the expanded buffer enhancement for an expected life of at least 15 years.

- The enhancement will comply with all applicable federal, state, and local laws and regulations, and with States' Forestry Best Management Practices for Water Quality.

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Documentation and Implementation Requirements

Participant will:

☐ Prior to implementation, prepare the planned buffer area according to the planting plan NRCS has developed with you. Refer to NRCS Conservation Practice Standard Riparian Forest Buffer (Code 391). (NRCS will provide technical assistance)

☐ Prior to implementation, select planting date, method, and density/spacing appropriate for the site and soil conditions. (NRCS will provide technical assistance.)

Planting Date	
Planting Method	
Density and spacing	

☐ Prior to implementation, work closely with NRCS to select plant species that are adapted to your specific site and meet the goals of this enhancement.

Species	Vegetative or Rootstock	Size	Protection (tubes, mats, nets)

☐ During implementation and before planting, grade the site, as needed, to eliminate concentrated flow through the buffer including water coming from uphill of the buffer.

☐ During implementation and before planting, replace underground tile drains that pass through the buffer with rigid, non-perforated pipe or install a water control device that allows for overflow management.

☐ During implementation, install and maintain erosion control measures as needed, such as silt fencing and mulching.

☐ During implementation, conduct planting of selected species according to dates, methods, spacing and other requirements listed in the planting plan.

☐ During implementation, notify NRCS of any planned changes to allow NRCS to verify that the changes meet NRCS enhancement criteria.

- ☐ After Implementation, control harmful pests and vegetation and in a manner that limits effects to pollinators. Inspect and maintain tubes and protection measures regularly.
- ☐ After implementation, livestock and wildlife may need be controlled or excluded to achieve the buffer’s water quality improvement purpose. If livestock are present, follow a Prescribed Grazing Plan (Code 528) and defer grazing for a minimum of two years. Wildlife may 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.

NRCS will:

- ☐ Prior to implementation, verify the enhancement is planned for cropland.
- ☐ Prior to implementation, provide and explain NRCS Conservation Practice Standard Riparian Forest Buffer (Code 391) to show how it relates to this enhancement.
- ☐ Prior to implementation, verify no plants on the Federal or state noxious weeds list are included in the planting list.
- ☐ Prior to implementation, NRCS will provide technical assistance on:
    - ○ Preparing a site preparation and planting plan that meets NRCS Conservation Practice Standard Riparian Forest Buffer (Code 391) and lists the species, vegetation type, density, protection measures, and planting dates.
    - ○ Selecting planting techniques and timing appropriate for the site and soil conditions.
    - ○ Assessing impacts of drainage removal/plugging on adjacent land units and uses.
    - ○ 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, review any planned changes to ensure they meet the enhancement criteria.

- ☐ During implementation, verify all erosion control needed for the site is functioning and is maintained to specifications provided to the participant.
- ☐ After implementation, verify that any underground drains through the riparian area, if they exist, were plugged, removed or replaced with perforated pipe/end plugs or structures for flow control.
- ☐ After implementation, verify the vegetation was established and any protections required are being maintained according to the specifications provided to the participant.
- ☐ After implementation verify livestock are controlled or excluded as necessary to achieve the buffer's water quality improvement purpose. If livestock are present, verify a Prescribed Grazing Plan (Code 528) is being followed and that grazing is being deferred for a minimum of two years.

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 ____________

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NRCS Technical Adequacy Signature Date