



CONSERVATION ENHANCEMENT ACTIVITY

E390A

CONSERVATION STEWARDSHIP PROGRAM

Increase riparian herbaceous cover width for sediment and nutrient reduction

Conservation Practice 390: Riparian Herbaceous Cover

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

RESOURCE CONCERN: Water

ENHANCEMENT LIFE SPAN: 5 Years

Enhancement Description

Where an existing herbaceous riparian buffer 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 100 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.
- Concentrated flow erosion or mass soil movement shall be controlled in the up-gradient area prior to establishment of the riparian herbaceous cover.
- Existing underground functional drains that pass through these areas shall be replaced with rigid, non-perforated pipe through the buffer or equipped with a management regulating structure to allow control of overflow.

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- Species selected shall have stiff stems and high stem density near the ground surface to reduce water velocities and facilitate infiltration into the floodplain. Only viable, high quality and site-adapted planting stock will be used. Selection of native plants is recommended.
- In areas where native seeds and propagules are present, natural regeneration can be used in lieu of planting. Planting is required if no native seed bank is present.
- Selected plant species must be adapted to the projected duration of saturation and inundation of the site.
- Where available, use Ecological Site Description to guide restoration to appropriate vegetative community phase and include appropriate vegetative functional groups.
- Necessary site preparation and planting shall be done at a time and manner to insure survival and growth of selected species.
- Management systems applied will be designed to maintain or improve the vigor and reproduction of the desired plant community.
- Harmful 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.
- Protect riparian vegetation by reducing or excluding haying and grazing until the desired plant community is well established, with grazing deferred for a minimum of two years.
- Design the expanded buffer enhancement for an expected life of at least 5 years.



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Documentation and Implementation Requirements

Participant will:

- Prior to implementation, prepare the planned buffer area for vegetation establishment. Refer to NRCS Conservation Practice Standard Riparian Herbaceous Cover (Code 390). (NRCS will provide technical assistance, as needed.)
- Prior to implementation, in areas that are highly disturbed and are unlikely to have existing native seed in the soil work closely with NRCS to select plant species that are adapted to your specific site. (NRCS will provide technical assistance, as needed.)

Species	Species type (grass, legume, forb)	Rate (Lbs/Ac) PLS

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

Planting Date	
Planting Technique	
Seeding Depth	

- During implementation, grade the site, as needed, to eliminate concentrated flow through the buffer including that from uphill from the buffer.
- During implementation, replace any underground functional tile drains that pass through the buffer with rigid, non-perforated pipe or install a management regulating structure to allow overflow control.
- During implementation, conduct planting of selected species according to dates, techniques, depth, and other requirements listed in the plan.
- During implementation, install and maintain erosion control measures as needed, such as silt fencing and mulching.
- During implementation, notify NRCS of any planned changes to allow NRCS to verify that the changes meet NRCS enhancement criteria.



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- After implementation, control harmful pests at the site, as necessary, and in a manner that mitigates impacts to pollinators.
- After implementation, protect the area by reducing haying and excluding grazing until the plant community is established, deferring grazing for a minimum of two years.

NRCS will:

- Prior to implementation, provide and explain NRCS Conservation Practice Standard Riparian Herbaceous Cover (Code 390) to show how it relates to this enhancement.
- Prior to implementation, verify the enhancement is planned for cropland.
- Prior to implementation, verify the enhancement is planned for acres that have been appropriately prepared for riparian herbaceous cover.
- 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:
 - Preparing a site plan that meets NRCS Conservation Practice Standard Riparian Herbaceous Cover (CPS 390).
 - Selecting the stiff-stemmed species of grasses and/or perennial forbs best suited to site saturation and inundation conditions.
 - Selecting 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 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.

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- During implementation, verify all erosion control needed for the site is functioning and is maintained to specifications developed for the site.
- After implementation, verify the vegetation was established to specifications developed for the site.
- After implementation, verify the planting is protected from pests, has had limited haying, and that grazing is being excluded, if established less than 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 _____

NRCS Technical Adequacy Signature

Date



**IOWA SUPPLEMENT TO
CONSERVATION ENHANCEMENT ACTIVITY**

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Additional Criteria for Iowa

List of plant species with stiff stems and high stem density that are adapted to the duration of saturation and inundation of the site.

Grasses/Sedges	
<i>Andropogon gerardii</i>	Big Bluestem
<i>Elymus virginicus</i>	Virginia Wildrye
<i>Carex vulpinoidea</i>	Fox Sedge
<i>Carex scoparia</i>	Broom Sedge
<i>Carex bicknellii</i>	Bicknell's Sedge
<i>Carex bebbii</i>	Bebb's Sedge
<i>Glyceria striata</i>	Fowl Mannagrass
<i>Elymus hystrix</i>	Eastern Bottlebrush Grass
<i>Sorghastrum nutans</i>	Indiangrass
<i>Bouteloua curtipendula</i>	Sideoats Grama
<i>Panicum virgatum</i>	Switchgrass
<i>Elymus canadensis</i>	Canada Wildrye
<i>Bouteloua gracilis</i>	Blue Grama
<i>Sporobolus compositus</i>	Composite Dropseed
<i>Sporobolus heterolepis</i>	Prairie Dropseed
<i>Koeleria macrantha</i>	Prairie Junegrass
<u>Leersia oryzoides</u>	Rice Cutgrass
<i>Schizachyrium scoparium</i>	Little Bluestem



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Forbs	
<i>Lobelia siphilitica</i>	Great Lobelia
<i>Eupatorium perfoliatum</i>	Boneset
<i>Symphotrichum novae-angliae</i>	New England Aster
<i>Verbena hastata</i>	Blue Vervain
<i>Vernonia fasciculata</i>	Ironweed
<i>Ludwigia alternifolia</i>	Seedbox
<i>Eupatoriadelphus maculatus</i>	Spotted Trumpetweed
<i>Mimulus ringens</i>	Monkey Flower
<i>Anemone canadensis</i>	Canadian Anemone
<i>Silphium terebinthinaceum</i>	Prairie Rosinweed
<i>Solidago speciosa</i>	Showy Goldenrod
<i>Zizia aurea</i>	Golden Alexander's
<i>Oligoneuron riddellii</i>	Riddell's Goldenrod
<i>Silphium perfoliatum</i>	Cup Plant
<i>Rudbeckia triloba</i>	Brown-eyed Susan
<i>Baptisia bracteata</i>	Longbract Wild Indigo
<i>Iris shrevei</i>	Blue Flag
<i>Gentiana andrewsii</i>	Closed Gentian
<i>Rudbeckia hirta</i>	Black-eyed Susan
<i>Chamaecrista fasciculata</i>	Partridge Pea