

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

RIPARIAN HERBACEOUS COVER

(Acre)

CODE 390

DEFINITION

Grasses, sedges, rushes, ferns, forbs, and legumes that are tolerant of intermittent flooding or saturated soils and are established or managed as the dominant vegetation in the transitional zone between upland and aquatic habitats.

PURPOSE

This practice may be applied as part of a conservation management system to accomplish one or more of the following purposes.

- Provide or improve food and cover for fish, wildlife, or livestock.
- Improve and maintain water quality.
- Establish and maintain habitat corridors.
- Increase water storage on floodplains.
- Reduce erosion and improve streambank and shoreline stability.
- Enhance pollen and nectar production and provide nesting sites for pollinators.
- Increase net carbon storage in the biomass and soil.

CONDITIONS WHERE PRACTICE APPLIES

- Areas adjacent to perennial and intermittent watercourses or water bodies where the natural plant community is dominated by herbaceous vegetation that is tolerant of periodic flooding or saturated soil conditions. For seasonal or ephemeral watercourses and waterbodies, this zone

extends to the center of the channel or basin.

- Where the riparian area has been altered and the potential natural plant community has changed or converted to cropland, pastureland, rangeland or other commercial/agricultural uses.
- Where channel and stream bank stability is adequate to support this practice.

CRITERIA

General Criteria Applicable to All Purposes

Native perennial plants will be used in all situations where planting is necessary except selected introduced species may be used where stream and shoreline stabilization is a stated purpose.

Select plants that are adapted to the ecological site and provide maximum fish and wildlife benefits.

Site hydrology must also be considered. Select species that are adapted to withstand frequent periods of saturation and inundation.

A diverse native grass mixture with forbs and legumes will be planted on all riparian herbaceous buffers except where introduced species are used to meet the specific criteria for streambank and shoreline protection. Refer to the Oklahoma NRCS Range Planting (550) standard for guidance on seeding mixtures, seeding rates, and establishment procedures.

Where a technical determination is made that native seed sources or existing native vegetation are adequate to meet the intended purpose, natural revegetation will be allowed.

All new plantings and/or buffers undergoing natural regeneration will be protected from livestock and other disturbances until the desired plant community is well established. Refer to the Oklahoma NRCS Access Control (472) standard for information on protecting buffers during establishment.

After establishment, management systems will be designed to maintain or improve the vigor and reproduction of the desired plant community. If the buffer is used for haying or grazing, avoid excessively wet periods when streambanks are vulnerable to livestock or mechanical damage. Also, retain adequate residual cover for ground nesting wildlife. Refer to the Oklahoma NRCS Prescribed Grazing (528) standard for specific information on developing a grazing plan for herbaceous buffers.

Harmful pests, invasive species and noxious plants will be controlled to achieve and maintain the intended purpose.

The herbaceous buffer width on each side of the stream shall be at least 1.5 times as wide as the stream width (based on the horizontal distance between bankfull elevations) or a minimum width of 30 feet, whichever is greater.

Minimum width around the perimeter of water bodies other than streams, including depressional wetlands, playa lakes, natural and manmade ponds, etc. will be 20 feet.

Existing underground functional drains shall be replaced with rigid, non perforated pipe through the buffer or equipped with a management regulating structure to allow control of overflow.

Additional Criteria to Protect or Improve Water Quality

The herbaceous buffer width on each side of the stream shall be increased to at least 2.5 times the stream width (based on the horizontal distance between bankfull elevations) or a minimum width of 30 feet, whichever is greater.

Minimum width around the perimeter of water bodies other than streams, including depressional wetlands, playa lakes, natural and manmade ponds, etc. will be 30 feet.

Concentrated flow erosion or mass soil movement shall be controlled in the up

gradient area prior to establishment of the riparian herbaceous cover.

Species selected shall have stiff stems and high stem density near the ground surface.

Additional Criteria to Stabilize Streambanks and Shorelines

Select species that provide a deep, binding root mass to strengthen streambanks and improve soil health.

Native species will be used to the extent practical, but introduced species may be used for this purpose where needed to control erosion and stabilize streambanks and shorelines.

Where streambank and shoreline stabilization is needed, refer to the Oklahoma NRCS Streambank and Shoreline Protection (580) and Channel Bank Vegetation (322) standards.

Additional Criteria for Increasing Net Carbon Storage in Biomass and Soils

Maximize width and length of the herbaceous riparian buffer to fit the site.

Vegetation with the highest possible rates of biomass production that can be supported by the soils and site conditions will be planted for this purpose. Furthermore, the plantings will be consistent with meeting fish and wildlife habitat requirements for the site.

Additional Criteria for Terrestrial Wildlife

Select a diverse mixture of native grasses forbs, and legumes adapted to the site. Density, height, and composition of the plant community established for this purpose will be based on the habitat requirements of targeted wildlife species.

Increase the herbaceous buffer width to a minimum of 100 feet or to the width of the geomorphic floodplain, whichever is less.

Where possible, connect riparian buffers to other native wildlife habitats in order to provide linkage increase habitat use.

When mowing is necessary to maintain herbaceous cover, it will occur outside the nesting season dates of April 1 to June 30. Mowing or grazing will also be accomplished under a plan that allows for adequate residual

cover or re-growth in order to provide winter cover and nesting cover the following spring.

Additional Criteria for Pollinator Habitat

Include flowering plants that provide pollen, and nectar for pollinator insects. Utilize a diverse mix of plant species that bloom at different times throughout the year.

Additional Criteria for Restoring Native Plant Community

Use the Ecological Site Description to determine if the proposed plantings and actions are sound and consistent with the historic site conditions.

CONSIDERATIONS

In addition to the conservation practice standards described above, other Oklahoma NRCS practice standards that may facilitate the establishment or maintenance of Riparian Herbaceous Cover include:

- Streambank and Shoreline Protection (580)
- Stream Channel Stabilization (584)
- Fence (382)
- Riparian Forest Buffer (391))
- Filter Strip (393)
- Brush Management (314)
- Upland Wildlife Habitat Management (645)
- Steam Crossing (578)

Considerations should be given to how this practice will complement the functions of adjacent terrestrial and aquatic habitats.

Control of trees and shrubs may be required to prevent dominance of the riparian zone by woody plants and maintain openness in riparian system.

The management plan shall consider habitat and wildlife objectives such as habitat diversity, habitat linkages, daily and seasonal habitat ranges, limiting factors and native plant communities.

Consider establishing alternative water sources or controlled access stream crossings to manage livestock access to the stream and riparian area.

Consider selecting plant species with multiple benefits such as those suited for biomass, wintering and nesting cover, aesthetics, forage value for aquatic invertebrates, and tolerance to locally used herbicides.

Avoid plant species which may be alternate hosts to undesirable pests. Species diversity should be considered to avoid loss of function due to species-specific pests.

The location, layout and vegetative structure and composition of the buffer should complement natural features.

Corridor configuration, establishment, and management should enhance habitats for threatened, endangered and other plant or animal species of concern, where applicable.

Use plant species that provide full ground coverage to reduce particulate matter generation during establishment and maintenance operations.

PLANS AND SPECIFICATIONS

Specifications for this practice shall be prepared for each site. Specification shall be recorded using approved specifications sheets, job sheets, narrative statements in the conservation plan, or other acceptable documentation.

OPERATION AND MAINTENANCE

The purpose of operation, maintenance and management is to insure that the practice functions as intended over time.

The riparian area will be inspected periodically and protected to maintain the intended purpose from adverse impacts such as excessive vehicular and pedestrian traffic, pest infestations, pesticide use on adjacent lands, livestock damage and fire.

Control of concentrated flow erosion or mass soil movement shall be continued in the up-gradient area to maintain riparian function.

Any use of fertilizers, pesticides and other chemicals to assure riparian area function shall not compromise the intended purpose.

REFERENCES

Schultz, R.C., J.P. Colletti, T.M. Isenhardt, W.W. Simpkins, C.W. Mize, and M. L. Thompson. 1995. Design and placement of a multi-species riparian buffer strip. *Agroforestry Systems* 29:201-225.ts.

Oklahoma State University Extension Service Publication E - 952 Riparian Area Management Handbook". Stillwater, Ok

USDA. NRCS Biology Technical Note OK – 24. Establishing Wildlife Food and Cover Plants. Stillwater, OK.