

# Riparian Herbaceous Cover

North Carolina Practice Job Sheet 390

Prepared for: \_\_\_\_\_

Prepared by: \_\_\_\_\_

Farm: \_\_\_\_\_ Tract: \_\_\_\_\_ Date: \_\_\_\_\_



Riparian herbaceous cover can help conserve water quality, stabilize and build soil; and improve habitat for wildlife and fish.

## DEFINITION

Grasses, grass-like plants and forbs that are tolerant of intermittent flooding or saturated soils and that are established or managed in the transitional zone between terrestrial and aquatic habitats.

## PURPOSE

(CHECK APPLICABLE PURPOSES)

- Provide habitat for aquatic and terrestrial organisms.
- Create shade to help maintain or restore suitable water temperatures for fish and other aquatic organisms.
- Improve and protect water quality.
- Provide food for aquatic organisms.
- Help stabilize streambanks and shorelines.
- Increase carbon storage.

## 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 soils.

- 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.

## CRITERIA

### General Criteria Applicable to All Purposes

Select perennial plants that are adapted to site and hydrologic conditions and provide the structural and functional diversity preferred by fish and wildlife.

Protect riparian vegetation and water quality by reducing or excluding the use of that vegetation for haying and grazing until the desired plant community is well established.

Site hydrology must be considered. Plant species selected must be adapted to the projected duration of saturation and inundation of the site.

Harmful pests present on the site will be controlled or eliminated as necessary to achieve and maintain the intended purpose.

Management systems applied will be designed to maintain or improve the vigor and reproduction of the desired plant community. Timing of haying or grazing periods will avoid periods when streambanks are vulnerable to livestock or mechanical damage.

Necessary site preparation and planting shall be done at a time and manner to insure survival and growth of selected species. Only viable, high quality and site-adapted planting stock will be used. Site preparation will be sufficient for establishment and growth of selected species and be done in a manner that does not compromise the intended purpose.

Riparian widths will vary depending on the

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requirements of wildlife species and associated environmental concerns. Minimum width per side will include the first bench of the floodplain or be at least 1.5 –times the stream width (based on the horizontal distance between bankfull elevations or 15 feet for water bodies).

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

For additional criteria, refer to Riparian Herbaceous Cover (390) North Carolina Standard.

## **CONSIDERATIONS**

Control 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.

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

Selection of native plant species is recommended.

All selected species should have multiple values 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.

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

## **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 will be continued in the upgradient area to maintain riparian function.

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

**SPECIFICATIONS**

This is for fields: \_\_\_\_\_

The total acreage (estimated) of the area needing the practice is: \_\_\_\_\_

Calculate Bulk Seed Needed for PLS Specs. (To be completed by participant.)							
(1) Plant from Seed (Selected from Appendix 1)	(2) Cultivar or Variety	(3) Per Acre Planting Rate ✓ Use Appendix 1 ✓ Indicate if rate is Bulk or PLS	(6) % Purity ✓ From seed tag ✓ Express as decimal	(7) % Germination ✓ From seed tag, or "Ragdoll Test" ✓ Express as decimal	(8) Bulk lbs./ac. needed = (3)/(6x7)	(9) Acres to be seeded	(10) Total Bulk lbs. needed = (8)x(9)
<i>Example 1: Switchgrass</i>	<i>'Blackwell'</i>	<i>6 lbs. PLS / ac.</i>	<i>0.95</i>	<i>0.52</i>	<i>9 BULK lbs./ac.</i>	<i>12 ac.</i>	<i>108 BULK lbs.</i>
<i>Example 2: Wheat</i>	<i>variety not stated</i>	<i>90 lbs. BULK / ac.</i>	<i>-</i>	<i>-</i>	<i>90 BULK</i>	<i>12 ac.</i>	<i>1,080 BULK</i>

\* The "Ragdoll Test" is a way to verify seed germination rates at home. Consider running this test if the seed tag's date is more than 9 months old, or if you have performed an artificial stratification process on the seed. Contact NRCS for a copy of the "Ragdoll Test" instructions.

Temporary Cover Crop Seeding Date \_\_\_\_\_ Permanent Cover Seeding Date \_\_\_\_\_  
 Seedbed Preparation Method(s) \_\_\_\_\_

**Additional Specifications:** For bulk weight seeding specs., set the planter to drop seed at the rate indicated in column 3. For PLS seeding specs., set planter to drop seed at the rate indicated in column 8. \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_



This is not an all-inclusive list. Other species may be used upon review.

Species	Planting Rate (lbs./ac)		Depth to Plant (inches)	Recommended Planting Dates <sup>1</sup> (by Major Land Resource Area) <sup>2</sup>		
	Broadcast	Drill	Depth to Plant (inches.)	130 (Mountains)	136 (Piedmont)	137, 133A, 153A, 153B * (Coastal Plain)
<b>PERENNIAL, WARM SEASON</b>						
Bluestem, Big	10-12 PLS <sup>5</sup>	8-10 PLS <sup>5</sup>	1/4-3/4	03/15-06/15	02/15-06/1	02/10-05/31
Eastern gamagrass <sup>3</sup>	---	8-10 PLS <sup>5</sup>	3/4-1	03/15-06/15	02/15-06/1	02/10-05/31
Indiangrass <sup>3</sup>	10-12 PLS <sup>5</sup>	8-10 PLS <sup>5</sup>	1/4-3/4	03/15-06/15	02/15-06/1	02/10-05/31
Switchgrass <sup>3</sup>	10-12 PLS <sup>5</sup>	6-10 PLS <sup>5</sup>	1/4-3/4	03/15-06/15	02/15-06/1	02/10-05/31
<b>ANNUALS, WINTER</b>						
Barley	140	100	1-2	08/01-08/20	08/25-09/15	09/05-09/30
Oats	130	100	1-2	Not Adapted.	08/25-09/15	09/05-09/30
Rye	120	100	1-2	08/01-08/20	08/25-09/15	09/05-09/30
Ryegrass, Annual (Italian)	30-40	20-30	1/4-1/2	07/25-08/10	08/25-09/15	09/01-09/30
Wheat	120	100	1-2	08/01-08/20	08/25-09/15	10/1-10/30
<b>ANNUALS, SUMMER</b>						
Crabgrass	3-5 PLS	3-5 PLS	1/4-1/2	05/15-05/31	05/01-05/31	05/01-05/31
Millet, Browntop	15-20	10-15	1/2-1	05/15-05/31	05/01-05/31	05/01-05/15
Millet, Foxtail	15-20	10-15	1/2-1	05/15-05/31	05/01-05/31	05/01-05/15
Millet, German	15-20	10-15	1/2-1	05/15-05/31	05/01-05/31	05/01-05/15
Millet, Japanese	15-20	10-15	1/2-1	05/15-05/31	05/01-05/31	05/01-05/15
Millet, Pearl (Dwarf)	20-25	15-20	1/2-1	05/15-05/31	05/01-05/31	05/01-05/15
Millet, Pearl (Tall)	25-30	15-30	1/2-1	05/15-05/31	05/01-05/31	05/01-05/15
Sorghum-Sudan Hybrids <sup>4</sup>	35-40	20-30	1/2-1	05/15-05/31	05/01-05/31	05/01-05/15
Sudangrass <sup>4</sup>	30-40	20-25	1/2-1	05/15-05/31	05/01-05/31	05/01-05/15

**Notes:**

<sup>1</sup> Actual dates may vary depending upon establishment method (e.g., conventional vs. sod seeding), soil moisture and soil temperature.

<sup>2</sup> For the black, heavy-textured soils in the Tidewater Region (MLRA #153B), use dates for the Piedmont (MLRA #136).

<sup>3</sup> Species recommended for grassland wildlife management.

<sup>4</sup> Not recommended for grazing by horses.

<sup>5</sup> PLS – Pure Live Seed; %PLS = %purity X %germination.