

Animal Enhancement Activity – ANM04- Extend existing filter strips for water quality protection and wildlife habitat



Enhancement Description

Where existing filter strips are utilized, extend them to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides and agro-chemicals.

Land Use Applicability

Cropland and pastureland.

Benefits

Widening existing conservation filter strips that currently meet NRCS conservation practice standard water quality criteria can provide food and cover for native and game species as well as enhancing aquatic habitat. Extended filter strips offer more surface area to filter out sediments and agro-chemicals. Filter strips can also offer buffers to mitigate pesticide drift during

pesticide applications and pollen drift where the mixing of plant varieties is not desired.

Riparian habitats are important transition zones between terrestrial landscapes and aquatic zones. Wildlife species utilize these transition zones because they provide a unique combination of cover, access to water and often provide important travel corridors. Often times filter strips are adjacent to these riparian areas or are important for contributing clean water, and habitat areas nearby. Extending existing filter strips not only enhances wildlife habitat but it increases the effectiveness of water quality protection they provide to the streams.

Criteria

Existing filter strips must meet minimum state water quality requirements for width. Extend the existing filter strip for a total of 60 feet or more to enhance habitat and water quality functions.

The extended filter strip must be composed of at least 5 species of non-noxious, wildlife friendly grasses and/or perennial forbs best suited to site conditions. Include species that provide pollinator food and habitat where possible.

1. All site preparation and plant establishment shall be accomplished according to the appropriate NRCS conservation practice standard criteria and specifications.
2. Any use of the filter strip must not compromise its intended purpose. Vegetation from filter strips can be harvested for bio-energy as long as the harvesting is done in accordance with a plan that does not compromise the water quality and wildlife benefits of the extended filter strip.
3. To the extent possible the filter strip areas and extended filter strip areas will be vegetated to increase overland flow interception and increase water quality values of the stream or water body.



4. The extension of filter strips can incorporate other buffer types (riparian herbaceous and riparian forest) where applicable to meet specific operator management goals.

Operation and Maintenance

1. Once established, filter strips must not be mowed, disked, grazed, or otherwise disturbed, until after the primary wildlife ground nesting period has ended.
2. Filter strips will be regularly maintained for its intended purpose through the life of the contract. This includes any removal of vegetation, including grazing.
3. Grazing is allowed if a grazing management plan is used that will maintain the integrity and diversity of vegetation and the filtering function of the vegetation.
4. Filter strips will have a wildlife management plan to maintain established plant communities through the life of the contract. The wildlife plan will maintain the plant community and its structural diversity and provide habitat for intended species.

Documentation Requirements

1. A map showing the location and size of enhanced filter strips.
2. Documentation of the type and rates of vegetation planted in the new filter strip areas.

ALABAMA SUPPLEMENT FOR - ANM04 – EXTEND EXISTING FILTER STRIPS FOR WATER QUALITY PROTECTIONS AND WILDLIFE HABITAT

Filter Strip Enhancements Overview

Habitat for wildlife can be encouraged by extending existing filter strips utilizing wildlife friendly vegetation. Various wildlife friendly plants can provide this kind of habitat and improve water quality. Some of these plants are listed below. Others are provided through the provided references.

Planting and Maintenance

If the area to be planted has introduced grasses, such as bahiagrass, bermudagrass, centipede, or other grasses that form thick sods, then it must be sprayed with an appropriate herbicide to kill these grasses before planting. Seedbed should be prepared by disking. Broadcast seed on the surface of very finely-disked and firmly rolled (fully settled) conventional seedbed, then roll seed into the top 1/4 to 1/2 inch of topsoil. Do not disk or rake in seed, as this would cover the small seeds too deeply preventing germination. Do not apply fertilizer at planting, as this increases unwanted competition.

Once established, management or maintenance activities such as burning or grazing should be conducted to maintain the habitat but outside the nesting dates of April 1 – July 15 and they must be done outside of the growing season or period of bloom. For example, incidental grazing will only be allowed during winter as part of gleaning of crop stubble in adjoining fields. Burning is the preferred method of maintaining habitat.

Native Warm Season Grasses:

For more information, refer to the University of Tennessee reference, A Landowners Guide to Native Warm-Season Grasses in the Mid-south.

ALABAMA SUPPLEMENT FOR - ANM04 – EXTEND EXISTING FILTER STRIPS FOR WATER QUALITY PROTECTIONS AND WILDLIFE HABITAT

Most economical and available forbs

Early Flowering Species

Illinois Bundleflower (<i>Desmanthus illinoensis</i>)	1 pound per acre
Smooth Beardtongue (<i>Penstemon laevigatus</i>)	1/8 pound per acre
Butterfly Weed (<i>Asclepias tuberosa</i>)	1/8 pound per acre
Lanceleaf Tickseed (<i>Coreopsis lanceolata</i>)	2 pounds per acre
Purple Coneflower (<i>Echinacea purpurea</i>)	2 pounds per acre

Mid-Season Flowering Species

Partridge Pea (<i>Chamaecrista fasciculata</i> / <i>Chamaecrista nictitans</i>)	2 pounds per acre
Golden Tickseed (<i>Coreopsis tinctoria</i>)	1 pound per acre
Tall Tickseed (<i>Coreopsis tripteris</i>)	1/8 pound per acre
Swamp Milkweed (<i>Asclepias incarnate</i>)	1/8 pound per acre
Black-Eyed Susan (<i>Rudbeckia hirta</i>)	1 pound per acre
Joe-Pye Weed (<i>Eupatorium fistulosum</i>)	1/8 pound per acre
Milkweed (<i>Asclepias syriaca</i>)	1/8 pound per acre
Maypop Vine (<i>Passiflora incarnate</i>)	1/8 pound per acre

Late Flowering Species

Swamp Sunflower (<i>Helianthus angustifolius</i>)	1/2 pound per acre
Cardinal Flower (<i>Lobelia cardinalis</i>)	1/8 pound per acre
Heath Aster (<i>Aster pillosus</i> / <i>Symphotrichum pilosum</i>)	1/8 pound per acre
Blue Verbena (<i>Verbena hastata</i>)	1/2 pound per acre
Pine Barren Goldenrod (<i>Solidago fistulosa</i>)	1/8 pound per acre

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APROVED NATIVE GRASSES			
NATIVE GRASSES ¹	SEEDING RATES ^{2/3}	REMARKS	SEEDING DATES
Big Bluestem	7 lb. PLS ⁴	A vigorous, warm season bunchgrass grows well on most soil types. Does best on moist, well-drained soils. Is more drought tolerant than other warm season grasses except for little bluestem.	North Alabama April 1–July 1
Coastal Panicgrass	10 lb. PLS	Drought tolerant and well adapted to very sandy sites. Does well on back dune areas along coast.	Central Alabama March 15–July 15
Eastern Gamagrass	2 lb. PLS	Well adapted to deep bottomland soils with good water holding capacity. Will tolerate flooding and somewhat poorly drained soils, but is not adapted to highly alkaline soils.	South Alabama March 1–July 15
Indiangrass	5 lb. PLS	A warm season, short, bunchgrass which has good drought tolerance. It is well adapted to medium-heavy to light, sandy textured soils. The seed stalk may be up to 3 feet tall.	North Alabama April 1–July 1
Little Bluestem	4 lb. PLS	Warm season bunchgrass grows to a height of 3 feet. Has good drought tolerance, grows well on deep, shallow, sandy, fine textured, rocky soils.	Central Alabama March 15–July 15
Side-Oats Grama	5 lb. PLS	Side-Oats Grama - does well on well-drained uplands, shallow ridges, and rocky areas; however, performs poorly on dense clays and very loose sands. It does best on calcareous and moderately alkaline soils, is well adapted to the eroded soils of Black Belt.	South Alabama March 1–July 15
Switchgrass	2.5 lb. PLS	Tall warm season grass well adapted to deep soils with good water holding capacity, including well drained to poorly drained soils. Tolerates flooding for extended periods and will grow on sandy soils. Low-land types may grow to a height of 6 feet on moist, fertility sites.	

¹ Adapted Varieties of Native Grasses are: Big Bluestem – Kaw & Roundtree, Coastal Panicgrass – Atlantic, Indiangrass – Lometa & Rumsey, Little Bluestem – Aldous, Cimarron, & Pastura, Side-Oats Grama – Haskell, Switchgrass- Alamo & Cave-In-Rock

² Seed should be covered no more than ¼ inch deep at planting

³ When two grasses are used in a mixture, reduce the seeding rate of each by 1/3. When more than two grasses are used in a mixture, reduce the seeding rate of each by ½.

⁴ PLS – Pure Live Seed

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Producer Name:			Date:		
Tract Number:			County:		
Field Number	Extended Filterstrip (Planned acreage)	Planned Mixture/Rate	Established Filter strip acreage	Cropland Insecticide Setback Required to protect pollinators? (Y or blank)	Grazing Plan Required? (Y or blank)

The submitted information accurately represents the implementation of this enhancement.

SIGNATURE: _____ **Date:** _____

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References:

The following references provide additional guidance for plant selection for implementing this enhancement:

Pollinator Partnership. Selecting Plants for Pollinators, A Regional Guide for Farmers, Land Managers and Gardeners in the Southeastern Mixed Forest Province.

<http://www.pollinator.org/PDFs/SoutheastMixedForest.rx4.pdf>

Pollination: Plants for Year-round Bee Forage

<http://www.ent.uga.edu/Bees/pollination/plants-year-round-forage.html>

Fruit Culture in Alabama, Fruitfulness and Pollination, ACES Publication ANR-0053-E

<http://www.aces.edu/pubs/docs/A/ANR-0053-E/>

Georgia Coastal Plain Native Plants For Butterflies and Moths (Lepidopteron Pollinators)

<http://www.coastscapes.org/Library/Georgia%20Coastal%20Plain%20Native%20PlantsButterfliesandMothsNoReference.pdf>

Beyond Butterflies: Gardening for Native Pollinators

http://pubsadmin.caes.uga.edu/files/pdf/B%201349_1.PDF

DRAFT: Native Understory Forbs and Grasses for Pollinator and Insect Utilization in Southeastern Longleaf Pine Ecosystems (USDA NRCS publication, Jimmy Carter Plant Materials Center and East National Technology Support Center). This document also contains information on seed costs and suppliers.

A Landowners Guide to Native Warm-Season Grasses in the Mid-south:

<http://www.utextension.utk.edu/publications/pbfiles/PB1746.pdf>