

Indiana – November 2010

## Filter Strip Program Job Sheet



### WHAT IS A CREP FILTER STRIP?

A narrow band of grasses, legumes, and forbs used to limit sediment, nutrients, pesticides, and other contaminants from entering water bodies. In addition, filter strips can provide valuable winter cover, nest sites, nectar and pollen for pollinating insects, and food for wildlife.

Filter strips are typically located on cropland immediately adjacent and parallel to streams, lakes, ponds, ditches, sinkholes, wetlands, or groundwater recharge areas.

### Where Practice Applies

On fields that meet eligibility requirements for the Conservation Reserve Enhancement program (CREP) as determined by the Farm Service Agency (FSA).

### CREP POLICY

CREP Filter Strips will be installed according to the Filter Strip Standard (393) in the local Field Office Technical Guide (FOTG).

CREP Filter Strips are only eligible on **Cropland** that is adjacent and parallel to streams, sinkholes and karst areas, wetlands, and permanent bodies of water such as lakes/ponds.

The minimum width of the filter strip depends upon the slope of the field, the soil type, and the pollutants contained in the runoff. **For the Conservation Reserve Enhancement Program, Filter Strips will be determined by the FOTG 393 standard, or a**

**minimum of 35 feet from the edge of the eligible body of water, whichever is widest; and a maximum of 120 feet from the edge of the eligible water body.** NOTE: An average maximum width of 300 feet is allowed when the area to be enrolled involves a predominance of alluvial soils. If the site already contains existing vegetation, these acres will be included in the calculation of maximum width and included in the CREP Plan, but will not be eligible for payments.

Vegetation for filter strips will generally have stiff, upright growth characteristics, and will be adapted to the site conditions and meet the standards in the local FOTG. Only viable, high quality seed will be used.

For CREP in Indiana, **Native Grasses** (Big Bluestem, Switchgrass, Virginia Wild Rye, etc.) **&/or Non-Native grasses & legumes considered wildlife friendly** (timothy, redtop, orchard grass, clover, alfalfa, etc.) **will be encouraged.**

### SEEDING RATES AND SPECIES

Seeding rates and species selection for this practice will be determined by using the Indiana (IN) Natural Resources Conservation Service (NRCS) Seeding Tool (Use 393 – Filter Strip). Any pre-packaged mixes must be approved before seeding. Site-specific requirements are listed on the attached Specifications Sheet.

### PLANTINGS

#### A) Companion/Nurse Crops

A companion/nurse crop will be used when erosion control and weed suppression are needed. Companion/nurse crops include Oats, Winter Wheat (after the Hessian Fly-free dates in Table 2), Barley, Cereal Rye or Annual Ryegrass; native Wildryes (i.e. – *Elymus sp.* such as Canada, Riverbank, and Virginia Wildrye) are also effective, especially for native seedings.

Companion crops will be clipped after jointing, but before seed head pollination unless otherwise directed (control of Wildrye species is not necessary so that they persist as part of native seedings). A second and subsequent clipping is necessary if re-growth provides competition. Clipping height should be above developing seedlings. Where excessive

growth has accumulated, the vegetation will be chopped rather than swathed.

#### B) Lime and fertilizer

Lime and fertilizer should be based on a current soil test (less than four years old). Use Purdue University recommendations from the *Crop Fertilizer Recommendation Calculator* <http://www.agry.purdue.edu/mmp/webcalc/fertRec.asp>, or the Indiana NRCS Seeding Tool – *Indiana Fertilizer Calculator*.

If the pH is 6.0 or less, apply enough lime per acre to bring pH to meet the tolerance range of the planned plant species. Soil amendments will be incorporated during seedbed preparation, or applied before planting if a no-till drill is used. Apply lime according to *Tri-State Fertilizer Recommendations* - PU AY-9-32, Extension Bulletin E-2567, or the Indiana NRCS Seeding Tool – *Indiana Fertilizer Calculator*.

#### C) Site Preparation

It is very important to plant the vegetation into a weed-free seedbed. Use herbicides and/or tillage to eliminate competing vegetation. Weed control efforts should begin as early as 12 months prior to planting, and may require multiple applications or operations in both the fall and spring prior to planting.

Pay particular attention to sites where noxious and potentially invasive species are likely. Many of these species are perennials that spread through seed and roots, and many have rhizomatous root systems that will persist and negatively impact the planting.

Cool season weeds (i.e. - Canada thistle, quack grass) are best controlled in the fall (mid September – Early November) with a translocation herbicide. Plants should be actively growing at the time of application. Avoid herbicide application after 3:00 pm if overnight temperatures are expected to drop below 50 degrees (F).

Warm season weeds (i.e. - Johnsongrass) are best controlled just prior to flower with a follow-up application prior to first frost. Plants should be actively growing at the time of application.

Contact your local Purdue University Cooperative Extension Service for specific herbicides to use.

**Apply all herbicides according to the label.**

Use a nurse/companion crop to further control potential weed issues and/or a temporary cover for erosion control.

If prescribed burning is used for site preparation, it must be conducted according to IN NRCS FOTG Standard 338 - *Prescribed Burning*

#### D) Seeding Dates

Selected species will be planted within the dates specified in Table 1.

**Table 1 - Planting Dates**

Species/Mix	IN Seeding Dates	Dormant Seeding Dates*
Cool Season Grasses/Forbs	3/1-5/15 8/1-9/15	12/1-3/1
Legumes	3/1-5/15 8/1-9/15	12/1-3/1
Warm Season Grasses/Forbs	4/1-6/15	12/1-3/1

\* Increase seeding rates by 25% if dormant seeding.

#### E) Seed preparation

Inoculate legume seed before seeding with the proper rhizobia bacteria specific for the species. Re-inoculate seed if it was pre-inoculated more than 60 days prior to seeding or beyond dates specified on the seed / inoculant tag. Inoculant left in the sun, even for a short period of time can significantly reduce the viability and effectiveness. Pre-inoculated seed will have a coating that changes the pure live seed per pound and thus the bulk seeding rate per acre.

Be aware that blending seed of varying size, shape and weight can make calibration of equipment and seeding uniformity difficult.

Some seeding mixtures contain seed that is extremely small and thus have very low seeding rates. This may make it difficult to set seeding equipment to uniformly seed these low rates of very small seed. Under these circumstances, a **carrier** or using coated seed may be desirable to add enough volume to the mix for proper metering. The carrier should be no larger than the largest seed species and have similar shape, density and texture to the majority of the seeds in the mix. The carrier can be an inert material that does not have abrasive properties that may cause damage to the equipment or the seed.

#### Planting Methods

**No-Till seeding:** Use a no-till drill with seven (7) inch or less row spacing. Ensure the drill is designed to handle the type of seed being planted (especially important for native grasses). Set the no-till drill to provide good seed-to-soil contact and a planting depth preferred for the desired species to be planted. Generally this does not exceed one-fourth (¼) inch.

Seeding native grasses deeper than one-fourth (¼) inch will lead to potential failure. Soils that are too

wet or too dry can also cause improper seed placement.

**Conventional Seeding:** Prepare a fine firm seedbed to a depth of three (3) to four (4) inches. Incorporate lime and fertilizer during seedbed preparation. Use a drill with seven (7) inch or less row spacing or a culti-packer seeder designed for the seed to be planted. Grass seed should be drilled uniformly at a proper seeding depth of one-eighth ( $\frac{1}{8}$ ) to one-half ( $\frac{1}{2}$ ) inch.

**Broadcast Seeding:** Seed may be broadcast if completed in a uniform manner. Pre-mix the seed with 200 pounds per acre of pelletized lime if using an airflow applicator. Seedbeds should be worked to a minimum depth of three (3) inches and firmed before seeding. The seedbed should be culti-packed before and after seeding. It is acceptable to see up to one-third ( $\frac{1}{3}$ ) of the seed on the soil surface. Wind speed should be 15 miles per hour or less when broadcasting.

F) Weed Control during Establishment  
Control competing vegetation as needed until Final Status Review. Mow, burn, or apply herbicides as needed to control unwanted vegetation for up to 3 years after planting. Mow when competing weeds are taller than the planted vegetation, and at a height above the planted vegetation. Use selective herbicides and/or spot spraying to protect the desired species. Refer to Purdue Extension – *Weed Control Guide WS-16* for herbicide timing and treatment.

### G) Operation and Maintenance

**After** the Final Status Review or three (3) years (whichever comes first), maintain the planting according to your CRP conservation plan. Maintenance activities are allowed only if necessary to maintain stand health, or to control pests, noxious weeds or any plant species whose presence or overpopulation may jeopardize the CRP cover, or have detrimental effects to the surrounding land.

The presence of annual weeds (such as foxtail, common ragweed, and perennial forbs) is not a concern, as these plants are important sources of food for wildlife, especially bobwhite quail. Maintenance may be needed to control excessive density of these annuals, especially during the establishment years, but is not intended to eliminate this group of plants.

Maintenance activities will not occur from **April 1 through August 1** to protect ground-nesting wildlife. If maintenance activities are needed during the April 1 – August 1 time frame, the FSA County Committee **must** approve the maintenance activity **prior to** the activity occurring, and it may **only be on a spot basis**.

**Mowing for generic weed control or for cosmetic purposes is prohibited.**

Introduced grasses will not be mowed lower than four (4) inches; native grasses no lower than eight (8) to 12 inches.

Inspect the vegetation annually and after storm events, and repair any gullies that have formed; remove unevenly deposited sediment and/or crop residues that will disrupt the function or kill desired vegetation; and reseed high mortality and disturbed areas.

The contract area cannot be used for field roads or other uses that will damage or destroy the cover.

Apply supplemental nutrients as needed to maintain the desired species composition and stand density.

## MID-CONTRACT MANAGEMENT

Although not required for CP-21, CREP contracts may have mid-term contract management activities scheduled that will ensure plant diversity, wildlife habitat, and protection of soil and water resources. All management activities must be performed according to NRCS Standards and Specifications as found in the FOTG, and CREP policy.

**Mid-management job sheets can be found at:**

<http://www.in.nrcs.usda.gov/programs/CRP/crphomepage.html>

## OTHER MANAGEMENT CONSIDERATIONS

For optimum wildlife habitat, plant a diversity of grasses, legumes, and wildflowers. These mixtures will provide winter and nesting cover and food for a variety of wildlife. When mowing is necessary, restrict mowing to Aug 1 - Aug 20 to allow re-growth for winter cover.

## DESIGN and MAINTENANCE CONSIDERATIONS

The filter strip will be designed to encourage water to flow in a thin sheet. When water is concentrated, it will be spread across the width of the filter strip.

Filter strips are designed to fill with sediment! To maintain the function and value of filter strips:

1. Any channels or rills must be immediately repaired.
2. Terraces, dikes, berms, trenches, or vegetative barriers can be used to treat concentrated flow areas.

Sediment within the filter should be removed before it accumulates to a height higher than 6 inches. Level and re-establish sheet flow. Re-seed if necessary.

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