



# POLLINATOR HABITAT PLANTING

## Michigan CRP - SAFE CP-38E Pollinator

Natural Resources Conservation Service (NRCS)

June 2014



Photo courtesy of USDA NRCS

### WHAT IS A POLLINATOR HABITAT PLANTING?

A pollinator habitat planting consists of native shrubs, grasses and/or wildflowers which provide cover, nectar and pollen for native pollinators. Native pollinators include a wide range of insects including bees, beetles, butterflies, and moths, as well as birds.

To encourage and support a diverse group of pollinators this practice will establish a diverse stand of grasses and wildflowers. Grass seeding rates have been reduced to a maximum of two pounds per acre and wildflower seeding rates have been increased to a minimum of two pounds per acre to establish a heavy stand of flowers with an abundant and diverse source of pollen and nectar. Wildflowers should be selected to provide not only a large diversity of species, but also to provide a diversity of flower color and structure, and to ensure flowering throughout the growing season.

Pollinators provide a very important ecological service. Approximately three quarters of all flowering plants rely upon animals or insects to pollinate their flowers. In addition to agricultural crops such as fruits and many vegetables, these plants include seed producing wildflowers, fruit producing shrubs and nut producing trees which provide a source of food for many wildlife species.

Native grasses were present in Michigan when Europeans arrived. Many of these grasses are associated with native prairies, barrens and savannas. Some of the more common native grasses that grow well in Michigan include warm-season grasses such as big bluestem, little bluestem, and Indian grass as well as native cool season grasses such as Canada wild rye and Virginia wild rye. Common wildflowers include black-eyed Susan, purple coneflower, coreopsis, and others.

Native grasses and wildflowers will live a long time after establishment. However, like most long-lived plant species, they generally establish slowly. Therefore, it is important to establish these grasses properly and to have patience when evaluating the results.

### ELIGIBILITY

To be eligible for this practice, the land must be located in the CRP SAFE project target area which is a band two counties wide along Lake Michigan in the Lower Peninsula. (See map). The land must have a cropping history (4 out of 6 years from 2008 - 2013), and/or be part of a working orchard or vineyard. These plantings may consist of a block or border planting, whole field planting or a field border planting. The installed practice must be a minimum of 2 acres in size with a minimum width of 100 feet. **Exception:** *If part of a working FSA tract that contains an orchard, vineyard or other perennial fruit producing crop, the 2.0 acre minimum can be realized through multiple plantings of not less than 0.25 acres with a minimum width of 20 feet.*

### PLANTING

It is very important to plant grasses, wildflowers and shrubs into a weed-free, firm seedbed. If the field is currently in cropland, weed control efforts should begin prior to planting. Use herbicide or tillage to eliminate competing vegetation. If necessary for erosion control, seed a temporary cover. Eliminate the temporary vegetation at planting time with tillage or herbicides.

For optimum pollinator habitat, plant a diversity of grasses and wildflowers. The mixture will consist of 2.0 LBS PLS/Acre of native grasses and a minimum of 2.0 LBS/Acre of wildflowers. Wildflower mixtures will include at least 12 native species and include the following six species: coreopsis, yellow coneflower, purple coneflower, wild bergamot, New England aster and a goldenrod species. No one species may exceed 15%, (by weight or 6 seeds per sq. ft.), of the total wildflower mix. Wildflowers should be selected to provide not only a large diversity of species, but also to provide a diversity of flower color and structure, and to ensure flowering throughout the growing season. Shrub species may also be included. Shrub species to plant include: serviceberry, grey, silky or red-osier dogwood, highbush cranberry, nannyberry, ninebark, common elderberry or meadowsweet. If shrub planting is desired, plant shrubs in 2 rows with shrubs spaced 8 feet apart and 8 feet between the rows.

**If the field is currently in sod**, begin weed control efforts using broad-spectrum herbicides in the fall. Apply herbicides again after the spring green-up prior to planting (if possible, a prescribed burn prior to spring green up to remove the dead litter from the fall treatment will provide best results).

Contact your local Michigan State University (MSU) Extension Agent for specific herbicides to use. **Apply all herbicides according to the label.**

Plant the vegetation according to the attached plan/design sheet. Apply lime and fertilizer according to needs determined by a soil test and MSU recommendations.

Use a drill designed for the seed to be planted, or the seed may be broadcast or aerial seeded. For aerial or broadcast seeding, the seedbed must be worked up and firmed with a cultipacker or similar equipment. A carrier such as potash may also be needed to spread the seed evenly. **After aerial or broadcast seeding, the site must be rolled or cultipacked to ensure proper seed to soil contact.** Regardless of the method, plant the seeds **no deeper than** 1/8" - 1/4".

Weed control during the year of establishment is critical. Weed control may consist of: mowing to maintain vegetation between 10 and 15 inches tall; a post-planting herbicide treatment; or a system of planting the grass in the spring, applying appropriate weed control and then seeding the wildflowers in the fall. For additional information on establishment and maintenance of grasses, see the following NRCS – Michigan Conservation Sheets (available at <http://www.nrcs.usda.gov/technical/efotg/> in Section IV): “Establishing Prairie Grass Buffer Strips”, “Prescribed Burning”. For additional information on establishment and maintenance of shrubs see the Michigan Conservation Sheet “Tree and Shrub Planting for Reforestation, Windbreaks and Wildlife” and “Weed Control for Tree and Shrub Establishment”.

## OPERATION AND MAINTENANCE

Noxious weeds and other undesirable plants, insects, and pests shall be controlled, including such maintenance as necessary to avoid detrimental effects to the surrounding land. Some of the most common pests that need to be controlled on CRP acreage include autumn olive, multi-flora rose, spotted knapweed, or quackgrass.

**After** the Final Status Review or three years after planting, maintain the planting according to your conservation plan. Maintenance activities are allowed only on a spot basis and only if necessary to maintain stand health, maintain stand diversity, or control pests that will damage the cover or adjacent lands. Burning must be in accordance with a prescribed burn plan. See the Conservation Information Sheet "Prescribed Burning" for further information. Spring disking is allowed if completed before May 1<sup>st</sup>. **MOWING** is only authorized between Aug 1<sup>st</sup> and Aug 20<sup>th</sup> to protect ground-nesting wildlife and to allow re-growth for winter cover. Other maintenance activities are only allowed between August 1 –May 1st (i.e. - outside of the primary nesting and brood-rearing season). If maintenance activities are needed at times other than these, the FSA County Committee **must** approve the maintenance activity **prior to** the activity occurring. **Mowing for generic weed control or for cosmetic purposes is prohibited.**

**Livestock must be excluded from the planting.**

## REQUIRED MANAGEMENT

All pollinator SAFE contracts must have mid-term contract management activities scheduled that are site specific and will ensure plant diversity, wildlife habitat, and protection of soil and water resources.

**Management practices such as prescribed burning or disking and interseeding will be conducted every 4 years to promote wildflower plantings. Management practices will be done in fall after October 1<sup>st</sup> to protect pollinators and promote wildflowers.** See the Mid-Contract Management Sheet for your contract.

## OTHER MANAGEMENT CONSIDERATIONS

In addition to benefiting pollinators, these mixtures will provide winter and nesting cover and food for a variety of wildlife, including grassland birds. Abundant insects in addition to pollinators will provide a food source for broods.

Native grass type (tall native grass or short native grass) will be taken into consideration when selecting the wildflowers to be planted. Refer to **Michigan CRP SAFE Eligible Wildflower List, Table 1: Tall Grass Prairie and Table 2: Short Grass Prairie.**

# POLLINATOR HABITAT PLANTING DESIGN WORKSHEET SAFE-CP38E

**Landowner:**

**County:**

Farm:

Tract:

Field(s):

Acres:

Date:

## RECOMMENDED SPECIES and SEEDING RATE (PLS #/ac = Pure Live Seed Pounds per Acre)

NATIVE GRASSES <small>(Not switchgrass)</small>	RATE PLS#/ac	TOTAL = <small>(RATE X Acres)</small>		NATIVE GRASSES <small>(Not switchgrass)</small>	RATE PLS#/ac	TOTAL = <small>(RATE X Acres)</small>	
		0.0	Lb.			0.0	Lb.
		0.0	Lb.			0.0	Lb.
WILDFLOWERS <small>(Required)</small>	RATE PLS oz/ac	TOTAL = <small>(RATE X Acres)</small>		WILDFLOWERS <small>(From Appropriate Safe Eligible Wildflower List)</small>	RATE PLS#/ac	TOTAL = <small>(RATE X Acres)</small>	
		0.0	Oz.			0.0	Oz.
		0.0	Oz.			0.0	Oz.
yellow coneflower		0.0	Oz.			0.0	Oz.
purple coneflower		0.0	Oz.			0.0	Oz.
wild bergamot		0.0	Oz.			0.0	Oz.
New England aster		0.0	Oz.			0.0	Oz.

**NOTES:** 2.0 LBS PLS/Acre of native grasses and a minimum of 2.0 LBS/AC of wildflowers is required. Total grass mix above is 0.0 lbs/acre and wildflower mix is 0.0 lbs/acre.

### SITE PREPARATION - BEFORE PLANTING in Year:

- Herbicide<sub>1</sub> (per label): \_\_\_\_\_ Dates = \_\_\_\_\_
- Herbicide<sub>2</sub> (per label): \_\_\_\_\_ Dates = \_\_\_\_\_
- Tillage: \_\_\_\_\_ Dates = \_\_\_\_\_
- Temporary Seeding: \_\_\_\_\_
- Apply fertilizer and lime according to an approved soil test and MSU recommendations for "ESTABLISHING" Native or Introduced grasses.
- Other: \_\_\_\_\_

### PLANTING METHOD in Year:

**Planting Method:**

Planting Dates | Natives = \_\_\_\_\_

(If unforeseen circumstances prohibit the planting of the grass or wildflowers by this date, please contact our office as soon as possible)

### POST-PLANTING MAINTENANCE for Pest Control

**Mowing: BEFORE FINAL STATUS REVIEW** = mow 10" high when the weeds are 12" taller than the planted grasses

Native Grass = **AFTER FINAL STATUS REVIEW\*** = 10" MINIMUM Mowing Height\*

Herbicide\* (per label): \_\_\_\_\_

Prescribed Burning\*: According to an approved plan

Other:\*

# POLLINATOR HABITAT PLANTING DESIGN WORKSHEET SAFE-CP38E

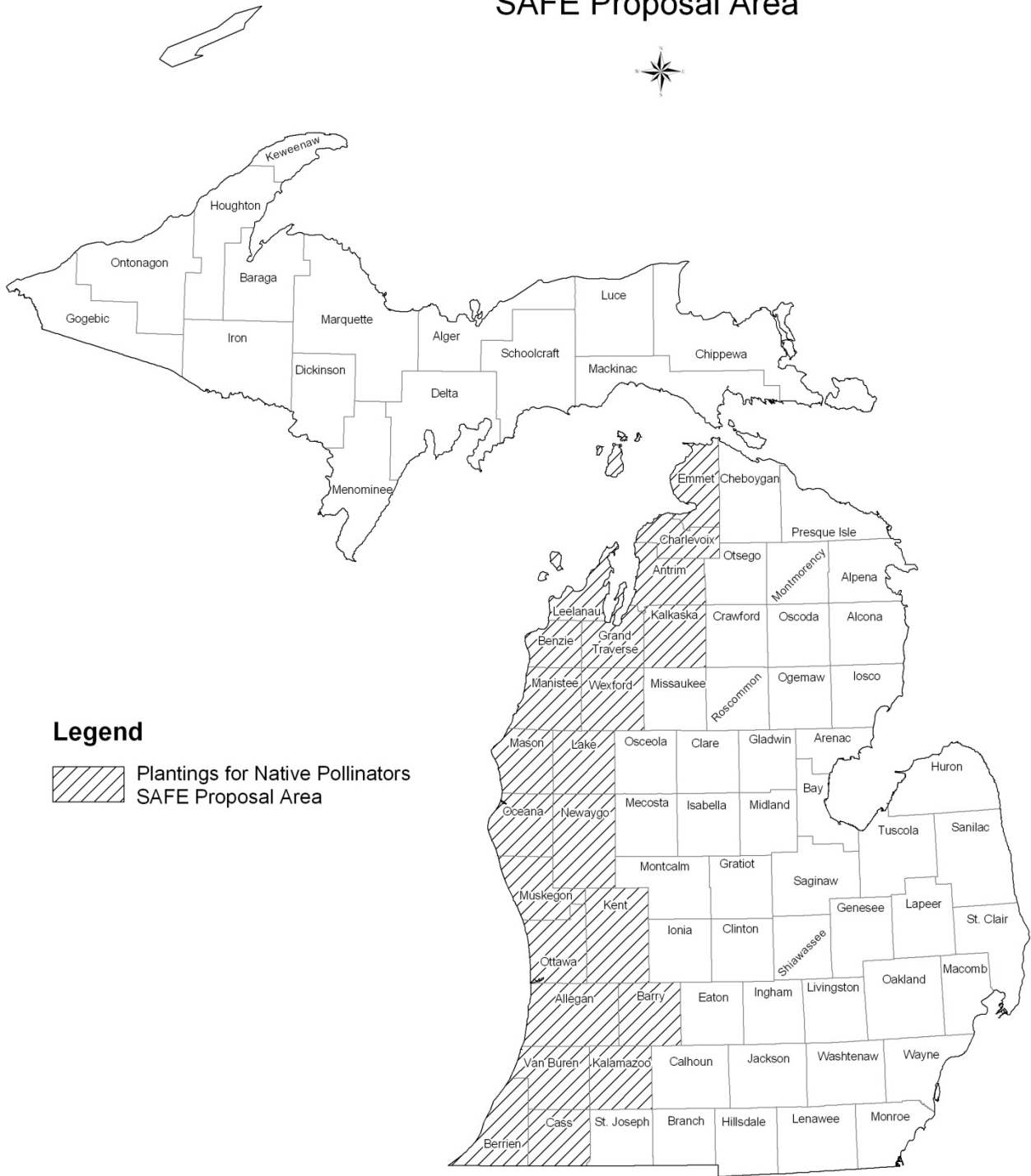
**\*NOTE:** After the Final Status Review has been issued or 3 years after planting, weeds will be treated on a “spot” basis only, unless prior approval is granted by the County Committee. Spot treatment options include mowing between August 1 & 20 and other activities between August 1 & May 1st

<b>SHRUB PLANTING REQUIREMENTS</b>	
<b>REQUIRED SPACING (Minimum 2 rows)</b>	
SPACING WITHIN THE ROWS = 8 FEET BETWEEN TREES SPACING BETWEEN THE ROWS = 8 FEET BETWEEN ROWS	
RECOMMENDED SHRUBS	# NEEDED
<b>BEFORE PLANTING in Year</b> :	
<input type="checkbox"/> Herbicide <sub>1</sub> (per label): <span style="float: right;">Dates =</span>	
<input type="checkbox"/> Herbicide <sub>2</sub> (per label): <span style="float: right;">Dates =</span>	
<input type="checkbox"/> Tillage: <span style="float: right;">Dates =</span>	
<input type="checkbox"/> Temporary Seeding:	
<input type="checkbox"/> Other:	
<b>PLANTING METHOD in Year</b>	
<input type="checkbox"/> <b>Shrub Planting Method:</b> :	
(If unforeseen circumstances prohibit the planting of the trees/shrubs by this date, please contact our office as soon as possible)	
<input type="checkbox"/> Other:	
<b>SHRUB POST-PLANTING MAINTENANCE</b> for Pest Control	
<input type="checkbox"/> <b>Maintain a 9 ft<sup>2</sup> weed &amp; grass-free area around each shrub for up to 3 years for optimal growth**</b>	
<input type="checkbox"/> Tree Herbicide** (per label): <span style="float: right;">Dates** =</span>	
<input type="checkbox"/> Other:**	
<b>**NOTE: after the Final Status Review has been issued, other maintenance activities will be conducted between August 1 &amp; May 1, and weeds will be treated on a "spot" basis only, unless prior approval is granted by the County Committee.</b>	


**Reset Form**



### Plantings for Native Pollinators SAFE Proposal Area



**Legend**

 Plantings for Native Pollinators  
SAFE Proposal Area

6/26/08  
Map produced at the Michigan State Office  
/mi/misc\_projects/FY08/thomas/SAFE\_pollinators.mxd

**LOCATION AND LAYOUT SKETCH & ADDITIONAL INFORMATION**

**ADDITIONAL INFORMATION:**

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