



**Table 1a: Seeding Dates\***

Seeding Dates for Conservation Cover		
Location in MI	Cool Season Introduced Species	Warm Season Native Species
All – Dormant Seeding	After November 1 or when soil temperature at a 2” depth is below 50 degrees Fahrenheit.	
Upper Peninsula	May 1 – June 15 or July 15 – August 1	May 15 – June 30
Northern Lower MI (North of US-10)	April 20 – June 1 or July 15 – August 1	May 10 – June 30
Southern Lower MI (South of US-10)	April 10 – May 20 or July 20 – August 15	May 5 – June 30

\* Seeding dates may be adjusted by a planner with appropriate JAA up to two weeks earlier or later than the date range listed, based on an evaluation of the site and the local weather conditions at the time of the planting. Consider the weather outlook for the two weeks after the seeding as well, using a reputable weather prediction, like MSUE forecasts. If the recommended seeding dates are being adjusted, the adjustment will be thoroughly documented in the conservation assistance notes including the site-specific conditions at the time of the extension by a planner with appropriate ESJAA.

**The seeding tables include suggestions for mixtures that would be appropriate for 327 – Conservation Cover. A planner with appropriate ESJAA can create a site-specific seeding mixture using the appropriate 327 Seeding Calculator as an alternative.**



**Table 1b: Seeding Recommendations for Erosion Control based on Drainage Characteristics of Soil**

The mixtures are outlined in table 2, mixture number is in the first row.

Deep, Well Drained Soils	Moderately Well Drained Soils	Somewhat Poorly Drained Soils	Organic Soils, Poorly Drained
3, 9, 10, 11, 12, 13, 16, 17	1, 3, 5, 9, 10, 11, 12, 13, 16, 17	3, 5, 6, 16	6

**Table 2a: Grass and Legume Mixtures for Erosion Control**

Mixture #	1	3	5	6	9	10	11	12	13	16	17
<b>Legumes</b>											
Alfalfa	6				6	6	6	3	6		
Birdsfoot Trefoil <sup>1</sup>				3							
Ladino Clover			2					3			
Red Clover		5									
<b>Cool Season Grasses</b>											
Kentucky Bluegrass				5				2.5	2		
Orchardgrass						3					
Red Top	6										
Smooth Bromegrass	2	8	8		6						
Timothy							4	2.5			
<b>Warm Season Grasses</b>											
Big Bluestem											3
Indiangrass											3
Little Bluestem											2
Switchgrass										5	2
<b>Total lbs PLS / Ac.</b>	<b>14</b>	<b>13</b>	<b>10</b>	<b>8</b>	<b>12</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>14</b>	<b>5</b>	<b>10</b>

**Table 3: Tree Planting Conservation Cover Mixtures**

Mixture #	19	20	21	22	23	24
Kentucky Bluegrass	5		10			
Orchardgrass				8		
Red Fescue						12
Redtop	2	4				
Timothy					5	
<b>Total lbs. PLS / Ac.</b>	<b>7</b>	<b>4</b>	<b>10</b>	<b>8</b>	<b>5</b>	<b>12</b>



**Table 4: General Mixtures for Wildlife Habitat**

Mixture	Recommended Species	PLS # / Ac	Total PLS # / AC
<b>Short grass Prairie Planting</b> (mesic through dry sites)	Little bluestem	3	6.0
	Canada wildrye	1.75	
	Junegrass	0.25	
	Forbs (7-10 species)	≥ 1.0	
<b>Moderate-height Prairie Planting</b> (wet mesic through dry sites)	Little bluestem	2.0	6.0
	Indiangrass	1.5	
	Big Bluestem	0.5	
	Canada wildrye	0.5	
	Switchgrass	0.5	
	Forbs (7-10 species)	≥ 1.0	
<b>Tall grass Prairie Planting</b> (wet mesic through dry site with mineral soils)	Big Bluestem	2.0	6.0
	Indiangrass	2.0	
	Switchgrass	0.5	
	Canada wildrye	0.5	
	Forbs (7-20 species)	≥ 1.0	
<b>Tall grass Prairie Planting (wet mixture for mineral soils)</b>	Prairie cord grass	0.5	6.0
	Big Bluestem	2.0	
	Switchgrass	2.5	
	Forbs (7-20 species)	1.0	
<b>Winter Cover</b> (NTE 10% of the grassland cover)	Switchgrass	5.0	5.0
<b>Cool Season Grass Mixture</b> (3 grasses, 2 legumes)	Orchardgrass	2.5	10.5 or 11.5
	Timothy	3.0	
	Red Top or Meadow Bromegrass	0.5 or 1.5	
	Red Clover or Alfalfa	3.0	
	Ladino Clover	1.5	
<b>Pollinating Insect Mixture</b>	Native Grasses	3.0	5.0
	Forbs (15-30 species which will provide pollen and nectar throughout the growing season)	2.0	
<b>Wildlife Biologist Mix*</b> (*designed on case-by-case basis by wildlife biologist or similarly trained individual for conservation programs using the 327 seed calc.)	Forbs (7-20 species, 15-25 seeds per square foot) Grasses (2-8 species, 10-20 seed per square foot)		



The following tables expand upon the information in Table 4 by including a representative list of specific forbs for each mix. Lists were prepared taking into consideration seed cost and availability as well as flowering time and forb height, and are meant to serve as an example, and not a recommendation.

**Table 5a: Example of Short Grass Prairie for Wildlife Habitat**

Common Name	Genus Species Name	Oz / Acre	Approx. Seeds / Oz
<b>Grasses</b>			
Little bluestem	<i>Andropogon scoparius</i>	48.0 (3.0 lbs PLS)	
Canada wild rye	<i>Elymus canadensis</i>	28.0 (1.75 lbs PLS)	
June grass	<i>Koeleria cristata</i>	4.0 (0.25 lbs PLS)	
<b>Grass Subtotal</b>		<b>80.0 (5.0 lbs PLS)</b>	
<b>Forbs</b>			
Black-eyed Susan	<i>Rudbeckia hirta</i>	2.0	276,000
Rough Blazing Star	<i>Liatrus aspera</i>	0.25	4,000
Sand Tickseed	<i>Coreopsis lanceolata</i>	3.0	60,000
Sweet Black-eyed Susan	<i>Rudbeckia bt</i>	0.25	10,750
Stiff Goldenrod	<i>Solidago rigida</i>	1.0	41,600
Showy Goldenrod	<i>Solidago speciosa</i>	0.25	10,750
New England Aster	<i>Aster novae-anglia</i>	0.25	16,500
Butterfly Milkweed	<i>Asclepias tuberosa</i>	1.0	1,075
Smooth Aster	<i>Aster laevis</i>	0.25	13,750
Purple Coneflower	<i>Echinacia purpurea</i>	3.0	19,800
Horsemint	<i>Monarda punctata</i>	0.25	22,500
Hoary Vervain	<i>Verbena stricta</i>	3.0	84,000
Round Headed Bush Clover	<i>Lespedeza capitata</i>	0.50	2,500
<b>Forb Subtotal</b>		<b>16.0 oz</b>	
<b>Mixture Total</b>		<b>96.0 oz (6.0 lbs PLS)</b>	



**Table 5b: Example of Moderate Height Grass Prairie for Wildlife Habitat**

Common Name	Genus Species Name	Oz / Acre	Approx. Seeds / Oz
<b>Grasses</b>			
Little bluestem	<i>Andropogon scoparius</i>	32.0 (2.0 lbs PLS)	
Indian grass	<i>Sorghastrum nutans</i>	24.0 (1.5 lbs PLS)	
Big bluestem	<i>Andropogon gerardii</i>	8.0 (0.5 lbs PLS)	
Canada wild rye	<i>Elymus canadensis</i>	8.0 (0.5 lbs PLS)	
Switchgrass (Southlow, Shelter, Forestburg)	<i>Panicum virgatum</i>	8.0 (0.5 lbs PLS)	
<b>Grass Subtotal</b>		<b>80.0 (5.0 lbs PLS)</b>	
<b>Forbs</b>			
Common Milkweed	<i>Asclepias syriaca</i>	1.0	4,000
Pale Purple Coneflower	<i>Echinacea pallida</i>	1.0	5,200
Purple Coneflower	<i>Echinacea purpurea</i>	1.75	18,150
Gray Headed Coneflower	<i>Ratibida pinnata</i>	2.0	60,000
Tall Coreopsis	<i>Coreopsis tripteras</i>	.25	3,500
Partridge Pea	<i>Cassia fasciculata</i>	3.0	8,100
Round Headed Bush Clover	<i>Lespedeza capitata</i>	1.0	8,000
Butterfly Weed	<i>Asclepias tuberosa</i>	0.5	2,150
Marsh Blazing star	<i>Liatris spicata</i>	0.5	5,500
New England Aster	<i>Aster novae-anglia</i>	0.5	33,000
Showy Tick Trefoil	<i>Desmodium canadense</i>	1.5	7,250
Iron Weed	<i>Veronia fasciculata</i>	0.5	12,000
Stiff Goldenrod	<i>Solidago rigida</i>	1.0	41,000
Showy Goldenrod	<i>Solidago speciosa</i>	.25	23,750
Early Sunflower	<i>Heliopsis helianthoides</i>	1.0	6,300
<b>Forb Subtotal</b>		<b>16.0 oz</b>	
<b>Mixture Total</b>		<b>96.0 oz (6.0 lbs PLS)</b>	



Table 5c: Example of Tall Grass Prairie for Wildlife Habitat

Common Name	Genus Species Name	Oz / Acre	Approx. Seeds / Oz
<b>Grasses</b>			
Big bluestem	<i>Andropogon gerardii</i>	32.0 (2.0 lbs PLS)	
Indian grass	<i>Sorghastrum nutans</i>	32.0 (2.0 lbs PLS)	
Switchgrass	<i>Panicum virgatum</i>	8.0 (0.5 lbs PLS)	
Canada wild rye	<i>Elymus canadensis</i>	8.0 (0.5 lbs PLS)	
<b>Grass Subtotal</b>		<b>80.0 (5.0 lbs PLS)</b>	
<b>Forbs</b>			
Common Milkweed	<i>Asclepias syriaca</i>	1.0	4,000
Evening Primrose	<i>Oenothera biennis</i>	1.5	135,000
Foxglove Beardstongue	<i>Penstemon digitalis</i>	0.5	65,000
Gray Headed Coneflower	<i>Ratibida pinnata</i>	2.0	90,000
Showy Tick Trefoil	<i>Desmodium canadense</i>	1.0	5,000
Ironweed	<i>Vernonia fasciculata</i>	0.25	6,000
New England Aster	<i>Aster novae angliae</i>	0.25	16,500
Tall Sunflower	<i>Helianthus giganteus</i>	0.25	2,500
Stiff Goldenrod	<i>Solidago rigida</i>	0.25	10,250
Round Headed Bush Clover	<i>Lespedeza capitata</i>	0.5	4,000
Brown-Eyed Susan	<i>Rudbeckia triloba</i>	3.0	102,000
Sweet Black-Eyed Susan	<i>Rudbeckia submentosa</i>	1.0	43,000
Tall Coreopsis	<i>Coreopsis tripteris</i>	.25	3,500
Bergamot	<i>Monarda fistulosa</i>	.25	17,500
Purple Coneflower	<i>Echinacia purpurea</i>	3.0	19,800
Culver's Root	<i>Veronicastrum virginicum</i>	0.25	200,000
Rosinweed	<i>Silphium integrifolium</i>	0.25	300
Compass Plant	<i>Silphium laciniatum</i>	0.25	165
<b>Forb Subtotal</b>		<b>16.0 oz</b>	
<b>Mixture Total</b>		<b>96.0 oz (6.0 lbs PLS)</b>	



Table 5d: Example of Pollinating Insect Mixture #1

Common Name	Genus Species Name	Oz / Acre	Approx. Seeds / Oz
<b>Grasses</b>			
Little bluestem	<i>Andropogon scoparius</i>	32.0 (2.0 lbs PLS)	
<b>Grass Subtotal</b>		<b>32.0 (2.0 lbs PLS)</b>	
<b>Forbs</b>			
Whorled Milkweed	<i>Asclepias verticillata</i>	1.0	11,000
Thimbleweed	<i>Anemone cylindrica</i>	105	13,000
Sneezeweed	<i>Helenium autumnale</i>	1.0	130,000
Spiderwort	<i>Tradescantia ohiensis</i>	2.0	8,000
Smooth Blue Aster	<i>Aster laevis</i>	0.5	25,000
Showy Goldenrod	<i>Solidago speciosa</i>	0.5	42,500
Stiff Goldenrod	<i>Solidago rigida</i>	.5	20,500
Rough Blazing Star	<i>Liatrus aspera</i>	2.0	16,000
Round Leaf Ragwort	<i>Senecio obovatus</i>	0.5	35,000
Early Goldenrod	<i>Solidago juncea</i>	0.25	72,500
New England Aster	<i>Aster novae angliae</i>	0.5	33,000
Mountain Mint	<i>Pycnanthemum iii</i>	1.0	220,000
Sand Tickseed	<i>Coreopsis lanceolata</i>	3.0	40,000
Hoary Vervain	<i>Verbena stricta</i>	0.0	14,000
Gray Headed Coneflower	<i>Ratibida pinnata</i>	2.0	60,000
Butterfly weed	<i>Asclepias tuberosa</i>	2.0	8,750
Purple Coneflower	<i>Echinacia purpurea</i>	2.0	13,200
Black-Eyed Susan	<i>Rudbeckia hirta</i>	2.0	184,000
Sky Blue Aster	<i>Aster azureus</i>	1.5	55,000
Alum Root	<i>Heuchera americana</i>	0.25	175,000
Germander	<i>Teucrium canadense</i>	0.5	10,000
Golden Alexander	<i>Zizia aurea</i>	1.5	11,000
Sweet Black-eyed Susan	<i>Rudbeckia submentosa</i>	1.5	5,000
Foxglove Beardstongue	<i>Penstemon digitalis</i>	1.0	130,000
Round Headed Bush Clover	<i>Lespedeza capitata</i>	1.5	8,000
Heath Aster	<i>Aster ericoides</i>	0.5	100,000
<b>Forb Subtotal</b>		<b>32.0 oz</b>	
<b>Mixture Total</b>		<b>64.0 oz (4.0 lbs PLS)</b>	



Table 5e: Example of Pollinating Insect Mixture for Moderate Moisture Sites

(See Michigan Biology Technical Note #20 for more information)

Common Name	Scientific Name	Oz / Acre	Bloom Period
<b>Grasses</b>			
Little bluestem	<i>Schizachyrium scoparium</i>	54.4 (3.4 lbs PLS)	
<b>Grass Subtotal</b>		<b>54.4 (3.4 lbs PLS)</b>	
<b>Forbs</b>			
Butterfly Milkweed	<i>Asclepias tuberosa</i>	6	July – August
White Wild Indigo	<i>Baptisia alba</i>	8	<b>May – September</b>
Canada Tick Trefoil	<i>Desmodium canadense</i>	6	July – August
Purple Coneflower	<i>Echinacea purpurea</i>	5	July – August
Rattlesnake Master	<i>Eryngium yuccifolium</i>	5	July – September
Sawtooth Sunflower	<i>Helianthus grosseserratus</i>	2	July – October
Prairie Blazingstar	<i>Liatris pycnostachya</i>	3	July – October
Wild Lupine	<i>Lupinus perennis</i>	8	June – July
Wild Bergamot	<i>Monarda fistulosa</i>	2	June – July
Stiff Goldenrod	<i>Oligoneuron rigidum</i>	3	July – September
Foxglove Beardtongue	<i>Penstemon digitalis</i>	3	May – June
New England Aster	<i>Symphotrichum novae-angliae</i>	3	September – October
Spiderwort	<i>Tradescantia ohioensis</i>	6	April – June
Culver's Root	<i>Veronicastrum virginicum</i>	0.2	June – September
<b>Forb Subtotal</b>		<b>60.2 oz (3.7 lbs PLS)</b>	
<b>Mixture Total</b>		<b>114.6 oz (7.1 lbs PLS)</b>	