

**Wildlife and Pollinator Plantings Job Sheet****JS-MO420**

Landowner/Producer:		Farm #:
Field/Stand(s):	Acres:	Tract #:
Planned By: <i>I certify the information in this job sheets meets the criteria for the planned purpose(s) and the NRCS conservation practice standard and specifications.</i> Signature:		County: Date:

DEFINITION: Native species of grasses and forbs are a natural part of the Missouri landscape. They welcomed European settlers to the state, painting the prairie and savanna landscapes with vibrant colors that changed throughout the season while supporting an incredible diversity of native wildlife. More than 800 plant species, most of them forbs, have been identified on Missouri's prairies. Restoration or conversion of non-native species, such as tall fescue, to native species is beneficial to both wildlife and landowners. Native grasses and forbs provide habitat for wildlife such as bobwhite quail, grassland birds, bees, butterflies and other important insects while providing connectivity within the landscape. Native species also provide important forage during the summer when most non-native species have gone dormant.

PURPOSE: The conversion or restoration of native species to treat upland wildlife habitat concerns identified during the conservation planning process that enables movement or provides shelter, cover, and food in proper amounts, locations and times to sustain wild animals that inhabit uplands during a portion of their life cycle.

Follow the requirements of the selected seed mix type:

- ☐ Pollinator/Brood Rearing/Native Forb Browse
- ☐ Monarch
- ☐ High Diversity
- ☐ Nesting
- ☐ Bedding/Winter
- ☐ Prairie or Savanna Natural Community Restoration
- ☐ Glade or Woodland Natural Community Restoration
- ☐ CRP Wildlife & Pollinator

SPECIFICATIONS: Any vegetation that would hinder planting or provide excessive competition to the seeding should be removed with the appropriate treatment. See the Brush Management Job Sheet (JS-MO314), Herbaceous Weed Control Job Sheet (JS-MO315), and/or Prescribed Burn Plan Job Sheet (JS-Agron-18).

Site preparation is planned as follows (check all that applies):

- ☐ Removal of existing woody vegetation
- ☐ Chemical control of herbaceous vegetation
- ☐ Mechanical means such as plowing, disking or roto-tilling
- ☐ Prescribed burning based on a current approved prescribed burn plan
- ☐ Other:



In some cases existing woody vegetation will need to be removed to restore the desired plant community. A combination of practices may be used to reach your objectives. Cut stumps, other than cedar or pine, shall be treated with an approved herbicide to prevent resprouting.

Field	Acres	Planned Treatment	Species Removed	Percent Canopy Remaining	Time of Treatment

Prescribed burning, disking, haying, mowing or grazing shall be used to remove old, dead herbaceous vegetation to prepare the site for an herbicide application or for overseeding into remnant plant communities. Prescribed burning can also be used to remove cut woody vegetation after it has had time to dry.

Field	Acres	Planned Treatment	Time of Treatment

If a chemical application is needed, use the following products at label rates. One to 3 herbicide applications may be necessary to remove undesirable herbaceous vegetation from an existing remnant community or future planting site. Crop fields being converted to prairie or savanna should still receive at least 1 chemical application to eradicate winter annuals and persistent perennial weeds. Crop fields being converted should be sprayed in September - October - November or late February to early March before seeded species begin to germinate. Old fields with perennial weeds such as tall fescue, smooth brome, or tall goldenrod may require 2 entire growing seasons and multiple herbicide applications to correctly prepare the site (see IS-MO645Preparing Non-Native Cool-Season Grasses for Conversion to Wildlife-Friendly Vegetation for more information). Avoid tilling the ground prior to planting as this will only increase weed competition and potential soil erosion.

Field	Acres	Herbicide	Time of First Treatment	Time of Second Treatment	Time of Third Treatment

REMNANT NATIVE VEGETATION

Existing desirable trees, shrubs, and herbaceous vegetation should be maintained based on the planned community. The amount of desirable vegetation may limit site preparation activities. If desirable native forbs, grasses and sedges are intermixed with undesirable herbaceous vegetation consider the following techniques to control unwanted vegetation: 1) use selective herbicides to reduce the chance of killing native vegetation; 2) apply herbicides when native vegetation is dormant; 3) use other control methods such as prescribed burning; or 4) use a combination of different techniques. Tillage should be avoided if remnant vegetation is present on the site.



The following fields contain existing desirable native vegetation that should be maintained. Refer to other planned treatments for management recommendations for these fields.

Field	Acres	Woody Species	Herbaceous Species

SEEDING DATES:

Once the site has been prepared for seeding, whether for overseeding a remnant or establishing a new plant community, dormant seeding is strongly recommended for the establishment for native forbs, grasses, and sedges. Many forb species require 30-90 days of cold, moist stratification before germinating, and a dormant seeding is the easiest way to achieve the necessary stratification. The best months for a dormant seeding are December and January.

1. The only acceptable time frames for planting are dormant and spring. Dormant seeding for wildlife and pollinator plantings, with or without forbs, is strongly recommended and the dormant season dates are:
 - November 16 – March 15 for northern Missouri
 - December 1 – February 29 for southern Missouri
 - Either drilling or broadcast methods of planting can be used during the dormant season dates. Seed rates do not have to be increased for broadcast planting methods.
 - Northern Missouri is all counties to the north of Bates, Henry, Benton, Morgan, Moniteau, Cole, Osage, Gasconade, Franklin, and St. Louis Counties. Southern Missouri includes the previously listed counties and the remaining counties to the south.
2. Drilling* of seed is the only acceptable method for spring season plantings. The spring season dates are:
 - March 16 to May 31 for northern Missouri
 - March 1 to May 15 in southern Missouri

*Brillion or Trillion seeders are considered broadcast methods and not drilling.

SEEDING MIXES AND LOCATION AND LAYOUT (SEE PLAN MAP):

General Requirements:

1. Seed for native species of grasses, forbs, or legumes used for wildlife plantings will be genetic seed source and grown in areas identified in the Seed Source Geography identified in Figure 1 and Figure 2. The seed tag must identify the county and state where the genetic seed source was collected and county and state where it was grown. All seed mixes that contain forbs should be certified as Missouri Certified Source Identified Class, when possible, for wildlife and pollinator plantings. All seed mixes listed in this job sheet will contain multiple species (at least 3) from Tables 1, 2, and 3 and Table 1 of the Missouri Native Forb Information Sheet (IS-MO-643Native Forb), in addition to following the specifications listed under each seed mix.
2. Only viable, high quality and adapted seed will be used. All seed shall have a current seed test within 10 months of the planting date that lists germination, purity, and hard seed as a percentage for determining pure live seed and lists the percent of weed seed present that meets State seed quality law standards. Seed must be clean and relatively free of weed seed and other contaminants. Seed that has become wet, moldy, or otherwise damaged in transit or storage is not acceptable.



3. Acceptable cultivars or selections from Table 2 can be used (genetic seed source must be within the Seed Source Geography in Figure 1, but may be grown outside the Seed Source Geography).
4. Soil test and fertility/nutrient additions are not required.
5. For the list of approved forbs, seeding techniques, and additional specifications refer to the Missouri Native Forb Information Sheet (IS-MO-643Native Forb).
6. Species should be adapted to the site where they are planted. See Table 1 of the Missouri Native Forb Information Sheet (IS-MO-643Native Forb) and the appropriate Ecological Site Description to determine suitable habitats for each species. For example, a species normally found in wetlands or wetter than normal soils should not be included in a mix for an upland site.
7. The inclusion of at least 1 species of approved milkweed (*Asclepias* spp.) is strongly encouraged for the monarch butterfly.
8. If you are establishing native forbs or grasses (see Table 3 - Approved Grass/Grass-Like Species, and Table 1 of the Missouri Native Forb Information Sheet (IS-MO643Native Forb)), as part of a restoration of a plant community considered to be rare or declining in Missouri (tallgrass prairie, oak savanna, or glades), be certain to follow the requirements of the Restoration and Management of Rare or Declining Habitats (643) conservation practice standard, and applicable job sheets, which require plant material selection based on:
 - A. The use of Missouri Source Identified Class (herbaceous material) – Missouri source is defined as a native plant source that genetically originated in Missouri; was not introduced; and existed within the state borders prior to arrival of settlers. The location of the wild growing parents must be within Missouri and implies that the geographical location is known.
 - B. All seed from herbaceous material shall comply with Missouri seed laws including Missouri Crop Improvement Association guidance. All seed will comply with the Association of Official Seed Certifying Agencies (AOSCA) certification procedures (including appropriate tagging) to include third-party verification by the Missouri Crop Improvement Association of source, genetic identity, and genetic purity of wildland collected or field or nursery grown plant germplasm materials. Seed must be Missouri origin (grown in Missouri) and certified as Missouri Source Identified Class. If Missouri origin (grown) Source Identified Class seed is not available Missouri Source Identified Class seed may be obtained only from the area identified in the Seed Source Geography in Figure 1.

Source Identified Certification means:

- Parent seed is collected from natural remnant Missouri populations.
 - No selection, testing, or breeding for specific traits.
 - Production fields are inspected to verify species, source, and lack of noxious weeds.
 - Seed is certified for purity and germination.
9. Maximilian sunflower (*Helianthus maximiliani*) can be used at a rate of less than 0.1 seeds per square foot. Prairie Gold Maximilian sunflower cultivar (*Helianthus maximiliani* Schrad) can also be used at this reduced rate.

See the Wildlife Habitat Planting Conservation Practice Standard (CPS) (420), Restoration and Management of Rare or Declining Habitats CPS (643), Native Forb Information Sheet (IS-MO643Native Forb), Monarch Habitat Information Sheet (IS-MO-643Monarch, and Native Pollinators Job Sheet (JS-MO643Pollinator) for additional specifications.

SPECIFIC HABITAT REQUIREMENTS:

☐ **Pollinator, Brood-rearing, and Native Browse Plantings:**

1. Minimum seeding rate of 15 Pure Live Seeds (PLS)/ft² for all species, maximum of 30 PLS/ft².
2. Minimum of 20 native flowering forb species with at least 3 species in each bloom period (spring, summer, and fall).
3. No single forb species will be included at rates over 10 percent PLS/ft² or less than 0.1 percent PLS/ft².
4. Annual/biennial forbs will not exceed 10 percent (combined) of the mix by PLS/ft².
5. Grasses are not required in the mix for areas with slopes <5%, but may comprise a maximum of 25 percent of PLS/ft², at the planner's discretion, if erosion or applicability of management is a concern.



6. In portions of the field with slopes $\geq 5\%$, the planner may increase the total mix to 40 PLS/ft² with 10 PLS/ft² of native shortgrass, such as little bluestem, based on surrounding land uses, size of planting, and other site characteristics, with the following exceptions:
 - Areas of concentrated water flow will need to be evaluated by the planner. Where continued erosion is a concern, seed these small areas with 20 PLS/ft² of native shortgrass with the total PLS/ft² not to exceed 50 PLS/ft². If 20 PLS/ft² of native shortgrass seeding will not be expected to keep the area in compliance (sheet & rill erosion to T) and control ephemeral gullies, the area will be ruled ineligible and excluded unless fixed using the appropriate conservation practice.

☐ **Monarch Plantings:**

1. Minimum seeding rate of 15 Pure Live Seeds (PLS)/ft² for all species, maximum of 30 PLS/ft².
2. Minimum of 20 native flowering forb species with at least 3 species in each bloom period (spring, summer, and fall).
3. At least 60% of the total pure live seed PLS/ft² of at least 6 species must come from the Preferred Forbs for Monarchs list in Table 1 of the Monarch Habitat Information Sheet (IS-MO-643Monarch) with a minimum of 3 percent of the mix by PLS/ft² comprised of milkweed seed. Two thirds of this milkweed seed should be common milkweed (*Asclepias syriaca*). The remaining third of the milkweed seeds should be butterfly milkweed (*Asclepias tuberosa*) on well drained upland soils or swamp milkweed (*Asclepias incarnata*) on richer, less well drained soils. See the Monarch Habitat Information Sheet (IS-MO-643Monarch) for more information.
4. No single forb species will be included at rates over 10 percent PLS/ft² or less than 0.1 percent PLS/ft².
5. Annual/biennial forbs will not exceed 10 percent (combined) of the mix by PLS/ft².
6. Grasses are not required in the mix for areas with slopes $< 5\%$, but may comprise a maximum of 25 percent of PLS/ft², at the planner's discretion, if erosion or applicability of management is a concern.
7. In portions of the field with slopes $\geq 5\%$, the planner may increase the total mix to 40 PLS/ft² with 10 PLS/ft² of native shortgrass, such as little bluestem, based on surrounding land uses, size of planting, and other site characteristics, with the following exceptions:
 - Areas of concentrated water flow will need to be evaluated by the planner. Where continued erosion is a concern, seed these small areas with 20 PLS/ft² of native shortgrass with the total PLS/ft² not to exceed 50 PLS/ft². If 20 PLS/ft² of native shortgrass seeding will not be expected to keep the area in compliance (sheet & rill erosion to T) and control ephemeral gullies, the area will be ruled ineligible and excluded unless fixed using the appropriate conservation practice.

☐ **High Diversity Planting:**

1. Minimum seeding rate of 15 PLS/ft² for all species, maximum of 30 PLS/ft².
2. Minimum of 50 native flowering forb species with at least 3 species in each bloom period (spring, summer, and fall).
3. No single species, forb or grass, will be included at rates over 10 percent PLS/ft² or less than 0.1 percent PLS/ft².
4. Annual/biennial forbs will not exceed 10 percent (combined) of the mix by PLS/ft².
5. Grasses are not required in the mix for areas with slopes $< 5\%$, but may comprise a maximum of 25 percent of PLS/ft², at the planner's discretion, if erosion or applicability of management is a concern.
6. In portions of the field with slopes $\geq 5\%$, the planner may increase the total mix to 40 PLS/ft² with 10 PLS/ft² of native shortgrass, such as little bluestem, based on surrounding land uses, size of planting, and other site characteristics, with the following exceptions:
 - Areas of concentrated water flow will need to be evaluated by the planner. Where continued erosion is a concern, seed these small areas with 20 PLS/ft² of native shortgrass with the total PLS/ft² not to exceed 50 PLS/ft². If 20 PLS/ft² of native shortgrass seeding will not be expected to keep the area in compliance (sheet & rill erosion to T) and control ephemeral gullies, the area will be ruled ineligible and excluded unless fixed using the appropriate conservation practice.



☐ **Nesting Cover (quail and early successional bird species and for field border plantings):**

1. Minimum seeding rate of 20 PLS/ft² for all species, maximum of 30 PLS/ft².
2. Native grasses comprise 40-50 percent of the total PLS/ft², and must include at least 2 different species of grasses. Little bluestem and/or side-oats gramma is required to be included.
3. Forbs must comprise ≥50 percent of total PLS/ft² and include at least 20 native species.
4. No single species of forb will be included at rates over 10 percent by PLS/ft² or less than 0.1% PLS/ft².
5. Annual/biennial forbs will not exceed 10 percent (combined) of the mix by PLS/ft².

☐ **Bedding/Winter Cover (deer/pheasants):**

1. Minimum seeding rate of 15 PLS/ft² for all species, maximum of 30 PLS/ft².
2. Minimum of 3 native grass species required, each of which must be at rates of at least 10 percent of the total grasses by PLS/ft².
3. ≥75 percent of PLS/ft² of the mix must be native warm-season grass species (contact an Area Biologist to determine species to consider). Including a native cool-season grass component is also recommended.
4. Tall and aggressive forbs should be included in the mix to be able to compete with grasses (consult with an Area Biologist to determine species to consider).

☐ **Prairie or Savanna Natural Community Restoration/Enhancement:**

1. Minimum seeding rate of 20 PLS/ft² for all species, maximum of 40 PLS/ft².
2. At least 4 native grasses (unless the Ecological Site Description does not include 4 species) must be included comprising a minimum of 40 percent up to a maximum of 60 percent of the total mix by PLS/ft².
3. At least 20 forbs/legumes must be included comprising a minimum of 40 percent up to a maximum of 60 percent of the total mix by PLS/ft².
4. Utilize the Reference State Plant Community list located in the Ecological Site Description for the site to help select species that would be best suited for restoration/enhancement.
5. No single species, forb or grass, will be included at rates over 10 percent by PLS/ft² or less than 0.1 percent PLS/ft².
6. Annual/biennial forbs will not exceed 10 percent (combined) of the mix by PLS/ft².
7. Dormant seeding is required for 643 herbaceous plantings.
8. The use of multiple native warm-season and cool-season grasses is highly encouraged to increase overall diversity of the planting. If the site is currently infested with undesirable cool-season species, such as tall fescue, incorporating native cool-season grasses may not be appropriate until tall fescue is eradicated.
9. See the Restoration and Management of Rare or Declining Habitats (643) conservation practice standard, Savanna Information Sheet (IS-MO-643Savanna), and Prairie Information Sheet (IS-MO-643Prairie) for additional specifications.

☐ **Glade and Woodland Natural Community Restoration/Enhancement:**

1. Minimum seeding rate of 20 PLS/ft² for all species, maximum of 40 PLS/ft².
2. At least 3 native grasses (unless the Ecological Site Description does not include 3 species) must be included comprising a minimum of 20 percent up to a maximum of 40 percent of the total mix by PLS/ft².
3. At least 20 forbs/legumes must be included comprising a minimum of 60 percent up to a maximum of 80 percent of the total mix by PLS/ft².
4. Utilize the Reference State Plant Community list located in the Ecological Site Description for the site to help select species that would be best suited for restoration/enhancement.
5. No single species, forb or grass, will be included at rates over 10 percent by PLS/ft² or less than 0.1 percent PLS/ft².
6. Annual/biennial forbs will not exceed 10 percent (combined) of the mix by PLS/ft².
7. Dormant seeding is required for 643 herbaceous plantings.
8. The use of multiple native warm-season and cool-season grasses is highly encouraged to increase overall diversity of the planting.
9. See the Restoration and Management of Rare or Declining Habitats (643) conservation practice standard and Glade Information Sheet (IS-MO-643Glade) for additional specifications.



☐ **CRP Wildlife and Pollinator Practices:**

CRP practices may have additional requirements. Follow CRP program policy when implementing CRP practices.

OPERATION AND MAINTENANCE:

Care after Planting

☐ ***First and second year maintenance:*** Removal of competing vegetation is normally carried out for 1 growing season following establishment. Where applicable, mow as often as necessary during the first growing season to control competing vegetation. Competing vegetation and native grasses and wildflowers should be cut to a height of 6 inches when the average weed height is 1 foot. A flail-type mower is preferred, as it thoroughly cuts and shreds the vegetation and avoids smothering native grass and wildflower seedlings. Do not mow once the planting has gone dormant in late fall. During the second year mow only if weeds are out-competing the native grasses and wildflowers. The second year mowing should only be completed between March 15 and May 1, or make certain that you mow above the height of the forb seedlings. Mow, clip or use approved herbicides as often as necessary to control noxious weeds and undesirable plants during the establishment period. Avoid the use of broad spectrum herbicides and spot treat infestations with a selective herbicide.

☐ ***Long-term Management:*** Once the stand is established the introduction of management practices is essential to maintain the vegetative community. Management practice will vary by landowner objectives.

Comment:



Wildlife Planting Practice Check Out and Certification

Land Owner:	Checkout Date:
Contract Number:	Farm:
Contract Item(s):	Tract:
Planting Method:	Planting Date:
Purpose of Seeding:	

Information listed below (or attached) documents that the work was completed in compliance with practice plans and specifications. This is based upon check-out of the as-built (applied) practice at the time of construction and/or application. Attach an as-built/applied map that shows specific location and extent of the certified practice. A GPS unit shall be utilized to identify boundaries where the applied practice is not clearly evident and defined and to mark the location of sample plots within the stand. As-applied maps will be free of clutter and focus on the applied practice. Where feasible, remove all layers not associated with the practice being checked. As-applied maps will include the following information: producer name, county, farm/tract numbers, clearly marked boundaries of completed practice, quantity approved, date checked, name of checker, CIN (if applicable). Digital photos of the applied practice are also encouraged.

Attach actual materials and amounts used (seed tags, seed certification) and a copy of a signed, fully completed Seeding Plan from the current Missouri Wildlife Seed Calculator.

Field Number	Planted Acres	Average PLS/ft ² Per Acre	Total Forb Species(count)	Total Grass Species(count)

Certification Statement:

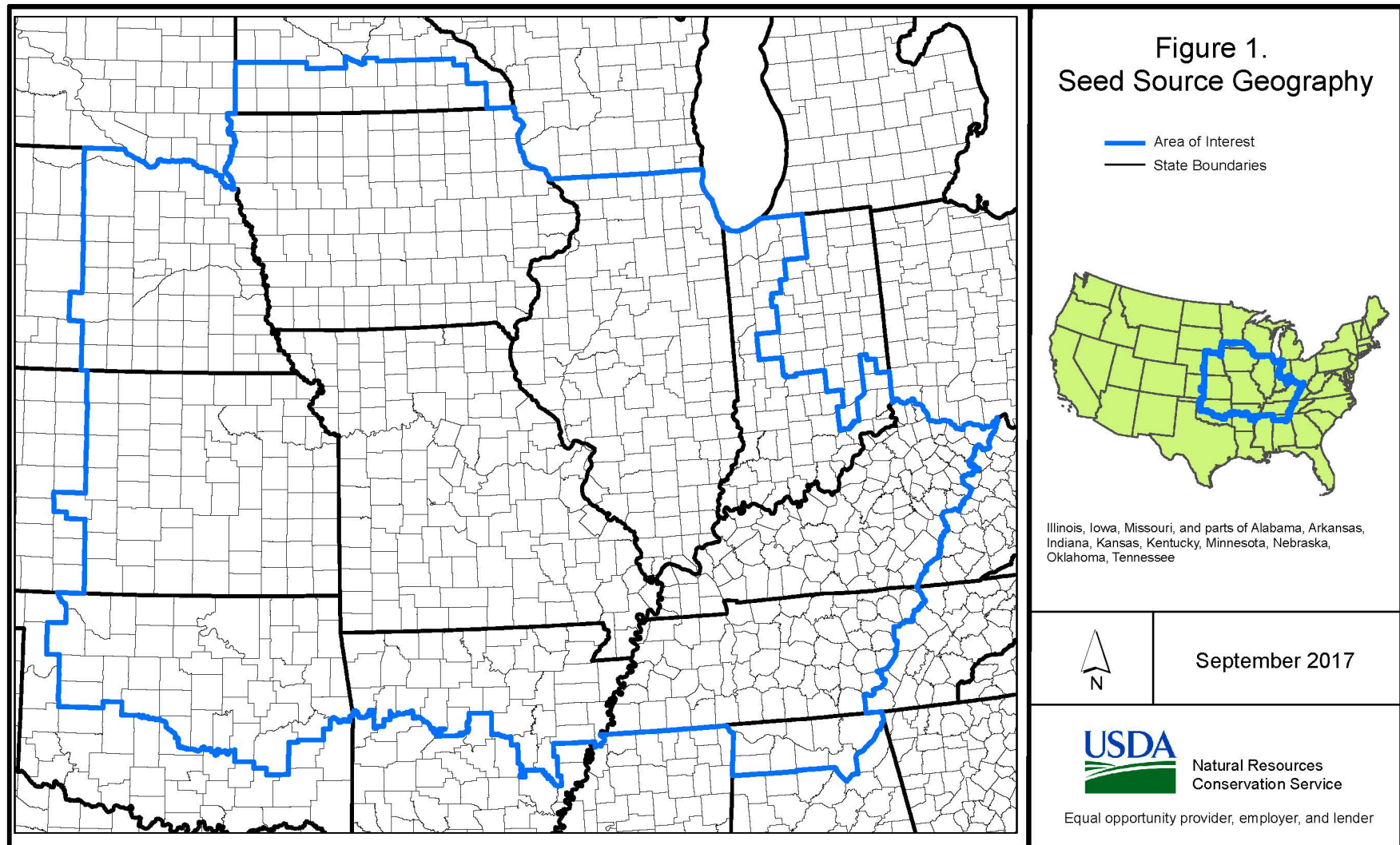
I certify that implementation of this conservation practice is complete, meets criteria for the stated purpose(s), and meets the NRCS conservation practice standard and specifications.

X

Planner/Technical Service Provider

*Attachments: As-built Map, Seed tags, Seeding Plan, Pictures

Figure 1. Seed Source Geography – Eligible Counties Per State



**FIGURE 2. SEED SOURCE GEOGRAPHY – ELIGIBLE COUNTIES PER STATE**

Alabama (9)	Illinois	Spencer	Lincoln	Butler
Colbert	All Counties	St. Joseph	Linn	Caldwell
Franklin		Starke	Lyon	Calloway
Jackson	Iowa	Sullivan	Marion	Campbell
Lauderdale	All Counties	Switzerland	Marshall	Carlisle
Lawrence		Tippecanoe	McPherson	Carroll
Limestone	Indiana (56)	Vanderburgh	Miami	Casey
Madison	Bartholomew	Vermillion	Mitchell	Christian
Marshall	Benton	Vigo	Montgomery	Clark
Morgan	Brown	Warren	Morris	Clinton
	Clark	Warrick	Nemaha	Crittenden
Arkansas (36)	Clay	Washington	Neosho	Cumberland
Baxter	Crawford	White	Osage	Daviess
Benton	Daviess		Osborne	Edmonson
Boone	Dearborn	Kansas (67)	Ottawa	Estill
Carroll	Dubois	Allen	Pawnee	Fayette
Clay	Fayette	Anderson	Pottawatomie	Fleming
Cleburne	Floyd	Atchison	Pratt	Franklin
Conway	Fountain	Barber	Reno	Fulton
Craighead	Franklin	Barton	Republic	Gallatin
Crawford	Gibson	Bourbon	Rice	Garrard
Crittenden	Greene	Brown	Riley	Grant
Cross	Harrison	Butler	Russell	Graves
Franklin	Jackson	Chase	Saline	Grayson
Fulton	Jasper	Chautauqua	Sedgwick	Green
Greene	Jefferson	Cherokee	Shawnee	Hancock
Independence	Johnson	Clay	Smith	Hardin
Izard	Knox	Cloud	Stafford	Harrison
Jackson	Lake	Coffey	Sumner	Hart
Johnson	LaPorte	Cowley	Wabaunsee	Henderson
Lawrence	Lawrence	Crawford	Washington	Henry
Madison	Marshall	Dickinson	Wilson	Hickman
Marion	Martin	Doniphan	Woodson	Hopkins
Mississippi	Monroe	Douglas	Wyandotte	Jefferson
Monroe	Morgan	Elk		Jessamine
Newton	Newton	Ellsworth	Kentucky (91)	Kenton
Poinsett	Ohio	Franklin	Adair	Larue
Pope	Orange	Geary	Allen	Lewis
Prairie	Owen	Greenwood	Anderson	Lincoln
Randolph	Parke	Harper	Ballard	Livingston
Searcy	Perry	Harvey	Barren	Logan
Sharp	Pike	Jackson	Bath	Lyon
St. Francis	Porter	Jefferson	Boone	Madison
Stone	Posey	Jewell	Bourbon	Marion
Van Buren	Pulaski	Johnson	Boyle	Marshall
Washington	Putnam	Kingman	Bracken	Mason
White	Ripley	Labette	Breckinridge	McCracken
Woodruff	Scott	Leavenworth	Bullitt	McLean



Meade	Olmsted	Nemaha	Mayes	Hardeman
Mercer	Pipestone	Nuckolls	McIntosh	Hardin
Metcalfe	Rock	Otoe	Muskogee	Haywood
Monroe	Steele	Pawnee	Noble	Henderson
Montgomery	Waseca	Pierce	Nowata	Henry
Muhlenberg	Watonswan	Platte	Okfuskee	Hickman
Nelson		Polk	Oklahoma	Houston
Nicholas	Missouri	Richardson	Okmulgee	Humphreys
Ohio	All Counties	Saline	Osage	Jackson
Oldham		Sarpy	Ottawa	Lake
Owen	Nebraska (55)	Saunders	Pawnee	Lauderdale
Pendleton	Adams	Seward	Payne	Lawrence
Powell	Antelope	Sherman	Pittsburg	Lewis
Pulaski	Boone	Stanton	Pottawatomie	Lincoln
Robertson	Boyd	Thayer	Rogers	Macon
Rockcastle	Buffalo	Thurston	Seminole	Madison
Russell	Burt	Valley	Sequoyah	Marshall
Scott	Butler	Washington	Tulsa	Maurry
Shelby	Cass	Wayne	Wagoner	McNairy
Simpson	Cedar	Webster	Washington	Montgomery
Spencer	Clay	Wheeler	Woods	Moore
Taylor	Colfax	York	Woodward	Obion
Todd	Cuming			Overton
Trigg	Dakota	Oklahoma (42)	Tennessee (61)	Perry
Trimble	Dixon	Adair	Bedford	Pickett
Union	Dodge	Alfalfa	Benton	Putnam
Warren	Douglas	Blaine	Cannon	Robertson
Washington	Fillmore	Canadian	Carroll	Rutherford
Wayne	Franklin	Cherokee	Cheatham	Shelby
Webster	Gage	Cleveland	Chester	Smith
Woodford	Garfield	Craig	Clay	Stewart
	Greeley	Creek	Coffee	Sumner
Minnesota (17)	Hall	Custer	Crockett	Tipton
Blue Earth	Hamilton	Delaware	Davidson	Trousdale
Cottonwood	Holt	Dewey	Decatur	Van Buren
Dodge	Howard	Garfield	DeKalb	Warren
Faribault	Jefferson	Grant	Dickson	Wayne
Fillmore	Johnson	Haskell	Dyer	Weakley
Freeborn	Kearney	Hughes	Fayette	White
Jackson	Knox	Kay	Fentress	Williamson
Martin	Lancaster	Kingfisher	Franklin	Wilson
Mower	Madison	Lincoln	Gibson	
Murray	Merrick	Logan	Giles	
Nobles	Nance	Major	Grundy	

**TABLE 1: Seeds with Good to Excellent Wildlife Rating**

Species	Erosion Control Rating	Wildlife Habitat Rating	Wet Soil Tolerance Rating	Drought Tolerance Rating
Cool Season Legumes:				
Alsike Clover	Good	Good	High	Low
Alfalfa	Fair	Excellent	None	High
Warm Season Legumes:				
Common Lespedeza ^{1/}	Poor	Excellent	Low	High
Illinois Bundleflower	Fair	Excellent	None	Medium
Partridge Pea ^{1/}	Fair	Excellent	None	Medium
Purple Prairieclover	Poor	Good	None	High
Roundhead Bushclover	Poor	Good	None	High
Showy Ticktrefoil	Fair	Excellent	None	High
Cool Season Grasses:				
Canada Wildrye	Good	Excellent	Low	Medium
Virginia Wildrye	Good	Excellent	Medium	Medium
Orchardgrass	Fair	Excellent	None	Medium
Perennial Ryegrass	Poor	Good	None	Low
Redtop	Good	Good	Medium	Low
Timothy	Good	Excellent	Low	Low
Warm Season Grasses:				
Big Bluestem	Fair	Good	Medium	High
Composite Dropseed	Fair	Good	None	High
Eastern Gamagrass	Poor	Good	Medium	Medium
Indiangrass	Fair	Excellent	Low	Medium
Little Bluestem	Good	Excellent	None	High
Sideoats Grama	Good	Excellent	None	Medium
Switchgrass	Good	Good	Medium	Medium

^{1/}These species are annual species; plant in the dormant or spring planting periods to allow seed set to occur. Check to make sure that the use of these species meets the local environmental conditions and any program requirements prior to planning in the seed mixture.

**TABLE 2: NATIVE GRASS SPECIES, CULTIVARS OR SELECTIONS FOR USE IN MISSOURI**

Grass Species	Cultivar	Area of Use ^{1/}	Source of Collection
Native Cool Season Grasses			
Virginia Wildrye	Cuivre River	Statewide	Eastern Missouri
	O'Ma'Ha	North Missouri	East and Northeast Nebraska
Native Warm Season Grasses			
Big Bluestem	Rountree	Statewide	Western Iowa
	OZ-70	Statewide	Southern Missouri, Southern Illinois, Northern Arkansas, and Eastern Oklahoma
	Kaw	Statewide	Eastern Kansas
	Pawnee	North Missouri	North Central Kansas and South Central Nebraska
	Champ	Statewide	North Central Nebraska
Little Bluestem	Aldous	Statewide	Eastern Kansas
	Cimarron	South Missouri, sandy sites only	Southwest Kansas and Oklahoma Panhandle
	Camper	North Missouri	North Central Kansas and South Central Nebraska
	Ozark	Statewide	Missouri and Southern Illinois
Eastern Gamagrass	Pete	Statewide	Kansas and Oklahoma
	PMK-24	Statewide	Kansas and Oklahoma
Sideoats Grama	Butte	North Missouri	North Central Nebraska
	El Reno	Statewide	Central Oklahoma
	Trailway	Statewide	North Central Nebraska
Indiangrass	Rumsey	Statewide	Southern Illinois
	Osage	Statewide	Eastern and Central Kansas and Oklahoma
	Cheyenne	Statewide	Western Oklahoma
	Nebraska 54	North Missouri	Nebraska
Switchgrass	Cave-In-Rock	Statewide	Southern Illinois
	Blackwell	Statewide	North Central Oklahoma
	Alamo	Lowland Sites – South Missouri	South Central Texas
	Kanlow	Lowland Sites - Statewide	East Central Oklahoma
	Pathfinder	North Missouri	North Central and South Central Nebraska
	Trailblazer	North Missouri	Selection from Pathfinder
	Nebraska 28	North Missouri	North Central Nebraska
Native Warm Season Legumes and Forbs			
Illinois Bundleflower	Reno Germplasm	Statewide	Kansas
Partridge Pea	Riley	Statewide	Kansas
	Lark Selection	Statewide	Arkansas
Purple Prairieclover	Kaneb	Statewide	Kansas
Roundhead Bushclover	Kanoka	Statewide	Kansas, Nebraska, Oklahoma
Showy Ticktrefoil	Alexander Germplasm	Statewide	Illinois
Grayhead Coneflower	Sunglow	Statewide	Kansas
Maximilian sunflower ^{2/}	Prairie Gold	Statewide	Kansas

^{1/} Northern Missouri is all counties to the north of Bates, Henry, Benton, Morgan, Moniteau, Cole, Osage, Gasconade, Franklin, and St. Louis Counties. Southern Missouri includes the previously listed counties and the remaining counties to the south.

^{2/} Maximilian sunflower cultivar (*Helianthus maximiliani* Schrad) can be used at a rate of less than .1 seeds per square foot.



TABLE 3 - APPROVED GRASS/GRASS LIKE SPECIES - species selection will only be made from appropriate habitat type based on planting site evaluation.

Common Name	Scientific Name	Habitat Type *
GRASSES/GRASS LIKE		
Winter bent grass	<i>Agrostis hyemalis</i>	S, DP, MP, WP
Big bluestem	<i>Andropogon gerardii</i>	S, DP, MP, WP, G
Splitbeard bluestem	<i>Andropogon ternarius</i>	DP, G
Broomsedge	<i>Andropogon virginicus</i>	S, DP, MP, WP, G
Sideoats grama	<i>Bouteloua curtipendula</i>	S, DP, MP, G
River oats	<i>Chasmanthium latifolium</i>	S, MP, WP
Canada wildrye	<i>Elymus canadensis</i>	S, MP, WP
Virginia wildrye	<i>Elymus virginicus</i>	S, MP, WP, G
Cluster fescue	<i>Festuca paradoxa</i>	S, DP, MP, WP
Junegrass	<i>Koeleria cristata</i>	S, DP, MP
Switchgrass	<i>Panicum virgatum</i>	S, DP, MP, WP, G
Beaked rush	<i>Rhynchospora globularis</i>	MP, WP
Little bluestem	<i>Schizachyrium scoparium</i>	S, DP, MP, G
Tall nutgrass	<i>Scleria triglomerata</i>	S, DP, MP, WP, G
Indian grass	<i>Sorghastrum nutans</i>	S, DP, MP, G
Prairie cordgrass	<i>Spartina pectinata</i>	WP
Tall dropseed	<i>Sporobolus compositus</i>	S, DP, MP, G
Prairie dropseed	<i>Sporobolus heterolepis</i>	S, DP, MP, G
Porcupine grass	<i>Stipa spartea</i>	DP, MP
Purple top	<i>Tridens flavus</i>	S, MP
Eastern gamagrass	<i>Tripsacum dactyloides</i>	S, DP, MP, WP
Short's sedge	<i>Carex shortiana</i>	S, MP, WP
Six weeks fescue	<i>Vulpia octoflora</i>	S, DP, MP, G

***S = Oak Savanna, DP= Dry Prairie, MP=Mesic Prairie, WP= Wet Prairie, G=Glade**