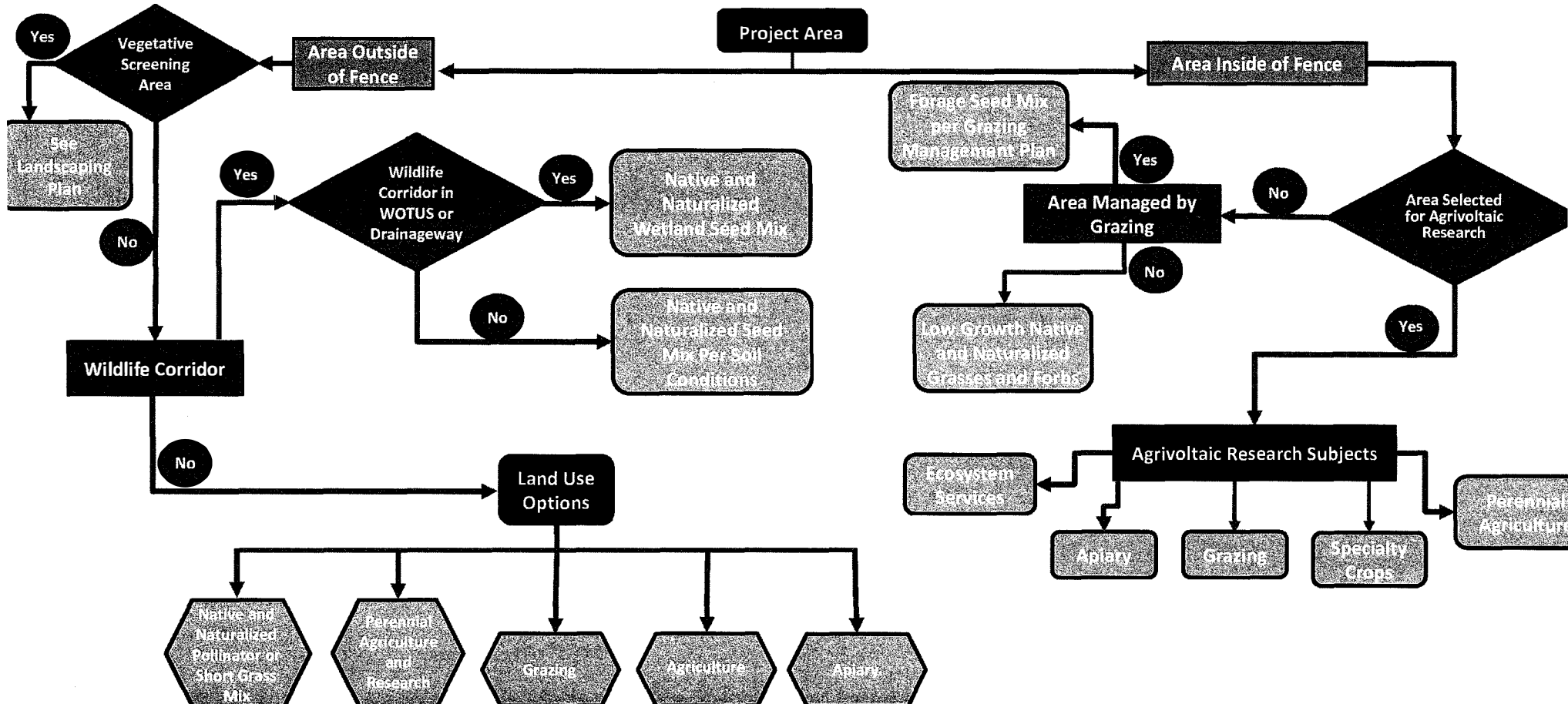


Kansas Sky Energy Center Vegetation Management Decision Tree



APPENDIX B - SEED MIXES

Mesic-Moist Short Mix

Shorter statured species mix of native cool and warm season grasses, sedges, rushes and wildflowers/forbs. This mix is best where low growth height is desired, such as solar arrays, or other areas where low height vegetation is desired. If a taller visual screen is desired at the outer perimeter/buffer or to establish wildlife corridors, a tall native pollinator mix may be used in such areas. Forbs listed in this table are all nectar plants for the Monarch Butterfly, beneficial to other pollinators such as bees and other butterflies.

If any species of this mix are unavailable, omitting or a substitution of a species may be made after review and approval by Owner.

Project Name-	Acres Seeded with Mix-	Location-			
Common & Scientific Name	Height of plant & species notes	Blooming Period (flowers all season provide nectar as the Monarch migrates spring thru fall)	Wetland Indicator Status (MW)	Color of Flower	PLS lbs./acre and % by weight
GRASSES and grass-like plants such as sedges or rushes –	Native grasses and grass-like are larval host plants to many species of pollinators.	Flowers of grasses and grass-like plants are small and inconspicuous			Approximately 60-90% by weight
Virginia Wild Rye, <i>Elymus virginicus</i>	24", seed head may extend to 36"		FACW		
Autumn Bentgrass, <i>Agrostis perennans</i>	24"		FAC		
Fox Sedge, <i>Carex vulpinoidea</i>	24", seed head may extend to 36"		FACW		
June Grass, <i>Koeleria macrantha</i>	24"		UPL		
Prairie Dropseed, <i>Sporobolus heterolepis</i>	24"		FACU		
Path Rush, <i>Juncus tenuis</i>	12"		FAC		
Inland Rush, <i>Juncus interior</i>	24"		FAC		
Dudley's Rush, <i>Juncus dudleyi</i>	24"		FACW		
EARLY SEASON BLOOMING FORBS –	High Quality Nectar Plants of the Monarchs and other pollinators.				Approximately 10-40% by weight
Blackeyed Susan, <i>Rudbeckia hirta</i>	12-24"	May-June-July-Aug.-Sept	FACU	yellow	
Dakota Verbena, <i>Glandularia bipinnatifida</i>	6-18"	May-June-July	NI	lavender	
Indian Paintbrush, <i>Castilleja coccinea</i>	6-24"	May-June-July	FAC	Red-orange	
Red Clover, <i>Trifolium pratense</i>	6-36"	May-June-July-Aug-Sept	FACU	Pink-purple	
Dutch Clover, <i>Trifolium repens</i>	8"	May-June-July-Aug-Sept	FACU	white	

MID-SEASON BLOOMING FORBS –	High Quality Nectar Plants of the Monarchs and other pollinators.				
Purple Prairie Clover, <i>Dalea purpurea</i>	12-24"	June-July-Aug.	NI	purple	
Lanceleaf Coreopsis, <i>Coreopsis lanceolata</i>	12-24"	June-July	FACU	yellow	
Slender Mountain Mint, <i>Pycnanthemum tenuifolium</i>	24"	July-Aug.	FAC	white	
Yarrow, <i>Achillea millefolium</i>	18"	June-July-Aug.-Sept	FACU	white	
LATE SEASON BLOOMING FORBS –	High Quality Nectar Plants of the Monarchs and other pollinators.				
Heath Aster, <i>Symphotrichum erichoides</i>	12-24"	Sept.-Oct.	FACU	White	
Spotted Bee Balm, <i>Monarda punctata</i>	12-24"	July-Aug.-Sept	FACU	lavender	
Partridge Pea, <i>Chamaecrista fasciculata</i>	24"	July-Aug.-Sept	FACU	yellow	
American Wild Mint, <i>Mentha arvensis</i>	24"	July-Aug.-Sept	FACW	white	
					60-65 PLS/acre total

Seeding March thru September - Add Oats (*Avena sativa*) at rate of 10-20 lbs per acre, to the mix to serve as a temporary cover crop.

Seeding August thru November - Add Winter Wheat (*Triticum aestivum*) at 10-60 lbs per acre OR Annual Rye (*Lolium multiflorum*) at 30-45 lbs per acre to the mix to serve as a temporary cover crop.

Indicator Category

Estimated Probability of Occurrence in Wetlands

Obligate Wetland (OBL)	Plants that almost always occur in wetlands; >99% of the time.
Facultative Wetland (FACW)	Plants that usually occur in wetlands; 67-99% of the time.
Facultative (FAC)	Plants that are just as likely to occur in wetland and in non-wetland areas; 34-66% of the time.
Facultative Upland (FACU)	Plants that occasionally occur in wetlands; 1-33% of the time.
Upland (UPL)	Plants that almost always occur in uplands; 99% of the time.
No Indicator (NI)	Assigned to plants that lack sufficient information to base an indicator status.
No Agreement (NA)	Assigned where reviewers could not achieve a unanimous agreement for an

Wet Mid-Tall Mix

Forbs listed in this table are nectar plants for the Monarch Butterfly and beneficial to other pollinators such as bees and other butterflies. If any species of this mix are unavailable, omitting or a substitution of a species may be made after review and approval by Owner.

Project Name-

Acres Seeded with Mix-

Location-

Common & Scientific Name	Height of plant & species notes	Blooming Period (flowers all season provide nectar as the Monarch migrates spring thru fall)	Wetland Indicator Status	Color of Flower	PLS lbs./acre and % by weight
GRASSES and grass-like plants such as sedges or rushes –	Native grasses and grass-like are larval host plants to many species of pollinators.	Flowers of grasses and grass-like plants are small and inconspicuous			Approximately xx% by weight
Switchgrass, <i>Panicum virgatum</i> (Blackwell or Native)	48"		FAC		
Little Bluestem, <i>Andropogon gerardii</i> (Native or Aldous)	36", partial shade to sun		FAC		
Prairie Cordgrass, <i>Spartina pectinata</i>	8 feet – TALL, sharp grassbaldes		FACW		
Virginia Wild Rye, <i>Elymus virginicus</i>	24", partial shade to sun		FACW		
Franks Sedge, <i>Carex frankii</i>	24"		OBL		
Porcupine Sedge, <i>Carex hystericina</i>	36"		OBL		
Fox Sedge, <i>Carex vulpinoidea</i>	24"		FACW		
Path Rush, <i>Juncus tenuis</i>	12"		FAC		
Plains Oval Sedge, <i>Carex brevior</i>	12"		FAC		
Inland Rush, <i>Juncus interior</i>	24"		FAC		
EARLY SEASON BLOOMING FORBS –	High Quality Nectar Plants of the Monarchs and other pollinators.				Approximately XX% by weight
Golden Alexanders, <i>Zizia aurea</i>	36"	April-May-June	FAC	yellow	
Seedbox, <i>Ludwigia alternifolia</i>	36"	May-June-July	OBL	yellow	
Pale Spiked Lobelia, <i>Lobelia spicata</i>	24"	May-June-July-Aug.	FAC	purple	
MID-SEASON BLOOMING FORBS –	High Quality Nectar Plants of the Monarchs and other pollinators.				

Swamp Milkweed, <i>Asclepis Incarnita</i>	48"	June-July-Aug	OBL	pink	
Scarlet Toothcup, <i>Ammania coccinea</i>	48"	June-July-Aug.	OBL	pink	
Swamp Marigold, <i>Bidens aristosa</i>	48"	June- July-Aug.-Sept	FACW	yellow	
Frog Fruit, <i>Phyla lanceolata</i>	6"	June-July-Aug.-Sept	OBL	pink	
LATE SEASON BLOOMING FORBS -	High Quality Nectar Plants of the Monarchs and other pollinators.				
Great Blue Lobelia, <i>Loebelia siphilitica</i>	36"	July-Aug.-Sept	OBL	blue	
Cardinal Flower, <i>Loebelia cardinalis</i>	48"	July-Aug.Sept	OBL	red	
New England Aster, <i>Symphotrichum nocae-angliae</i>	60"	Aug.-Sept.-Oct.	FACW	purple	

Seeding March thru September - Add Oats (*Avena sativa*) at rate of 10-20 lbs per acre, to the mix to serve as a temporary cover crop.

Seeding August thru November - Add Winter Wheat (*Triticum aestivum*) at 10-60 lbs per acre OR Annual Rye (*Lolium multiflorum*) at 30-45 lbs per acre to the mix to serve as a temporary cover crop.

Indicator Category

Estimated Probability of Occurrence in Wetlands

Obligate Wetland (OBL)	Plants that almost always occur in wetlands; >99% of the time.
Facultative Wetland (FACW)	Plants that usually occur in wetlands; 67-99% of the time.
Facultative (FAC)	Plants that are just as likely to occur in wetland and in non-wetland areas; 34-66% of the time.
Facultative Upland (FACU)	Plants that occasionally occur in wetlands; 1-33% of the time.
Upland (UPL)	Plants that almost always occur in uplands; 99% of the time.
No Indicator (NI)	Assigned to plants that lack sufficient information to base an indicator status.
No Agreement (NA)	Assigned where reviewers could not achieve a unanimous agreement for an

Mesic-Moist, Mid-Tall Mix

Forbs listed in this table are nectar plants for the Monarch Butterfly and beneficial to other pollinators such as bees and other butterflies. If any species of this mix are unavailable, omitting or a substitution of a species may be made after review and approval by Owner.

Project Name-

Acres Seeded with Mix-

Location-

Common & Scientific Name	Height of plant & species notes	Blooming Period (flowers all season provide nectar as the Monarch migrates spring thru fall)	Wetland Indicator Status	Color of Flower	PLS lbs./acre and % by weight
GRASSES and grass-like plants such as sedges or rushes –	Native grasses and grass-like are larval host plants to many species of pollinators.	Flowers of grasses and grass-like plants are small and inconspicuous			Approximately xx% by weight
Switchgrass, <i>Panicum virgatum</i> (Blackwell or Native)	48"		FAC		
Indian Grass, <i>Sorghastrum nutans</i> (Native, Cheyenne or Scout)	6 feet tall		FACU		
Little Bluestem, <i>Andropogon gerardii</i> (Native or Aldous)	36", partial shade to sun		FAC		
Side Oats, <i>Bouteloua curtipendula</i> (Native or El Reno)	24"		NI		
Virginia Wild Rye, <i>Elymus virginicus</i>	24", partial shade to sun		FACW		
Autumn Bentgrass, <i>Agrostis perennans</i>	24", prefers partial shade		FAC		
Canada Wild Rye, <i>Elyms canadensis</i>	48"		FACU		
Fox Sedge, <i>Carex vulpinoidea</i>	24"		FACW		
Path Rush, <i>Juncus tenuis</i>	12"		FAC		
Plains Oval Sedge, <i>Carex brevior</i>	12"		FAC		
Inland Rush, <i>Juncus interior</i>	24"		FAC		
Copper Shouldered Oval Sedge, <i>Carex bicknelli</i>	36"		FACU		
EARLY SEASON BLOOMING FORBS –	High Quality Nectar Plants of the Monarchs and other pollinators.				Approximately XX% by weight
Blackeyed Susan, <i>Rudbeckia hirta</i>	12-24"	May-June-July-Aug.-Sept	FACU	yellow	
Lanceleaf Coreopsis, <i>Coreopsis lanceolata</i>	12-24"	June-July	FACU	yellow	
Common Milkweed, <i>Asclepias syriaca</i>	36"	June-July-Aug.	FACU	pink	
Indian Paintbrush, <i>Castilleja coccinea</i>	6-24"	May-June-July	FAC	Red-orange	

Golden Alexander, <i>Zizia aurea</i>	36"	April-May-June	FAC	yellow	
Butterfly Milkweed, <i>Asclepias tuberosa</i>	12-24" larval host plant of Monarch	May-June-July-Aug.-Sept.	NI	orange	
MID-SEASON BLOOMING FORBS –	High Quality Nectar Plants of the Monarchs and other pollinators.				
Purple Prairie Clover, <i>Dalea purpurea</i>	12-24"	June-July-Aug.	NI	purple	
White Prairie Clover, <i>Dalea candida</i>	12-24"	June-July-Aug.	NI	white	
Slender Mountain Mint, <i>Pycnanthemum tenuifolium</i>	24"	July-Aug.	FAC	white	
Sullivants Milkweed, <i>Asclepias sullivantii</i>	24"-48"	June-July	FAC	Pink- lt.purple	
Pale Spike Lobelia, <i>Lobelia spicata</i>	24"	May-June-July-Aug.	FAC	white	
LATE SEASON BLOOMING FORBS -	High Quality Nectar Plants of the Monarchs and other pollinators.				
Spotted Bee Balm, <i>Monarda punctata</i>	12-24"	July-Aug.-Sept	FACU	lavender	
Partridge Pea, <i>Chamaecrista fasciculata</i>	24"	July-Aug.-Sept	FACU	yellow	
American Wild Mint, <i>Mentha arvensis</i>	24"	July-Aug.-Sept	FACW	white	
Prairie Blazing Star, <i>Liatris pycnostachya</i>	48"	July-Aug.-Sept	FAC	purple	
Blue Vervain, <i>Verbena hastata</i>	5 feet	July-Aug.-Sept	FACW	purple	
Yarrow, <i>Achillea millefolium</i>	18"	June-July-Aug.-Sept	FACU	white	
Bearded Beggarticks, <i>Bidens polylepis</i>	48"	Aug.-Sept-Oct	NI	yellow	
					60-65 PLS/acre total

Seeding March thru September - Add Oats (*Avena sativa*) at rate of 10-20 lbs per acre, to the mix to serve as a temporary cover crop.

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<i>Indicator Category</i>	<i>Estimated Probability of Occurrence in Wetlands</i>
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