

327 CONSERVATION COVER - MONARCH HABITAT

Seed Mix Design

DATE 1/6/2023

LANDOWNER

MN PF327Monarch CP42,CP2 2023

N/A

TRACT/FIELD

COPY TO SEEDING PLAN

PLANNER

Pheasants Forever

N/A 0

Acres to Seed 1.00

Seed tag type

GRASS SPECIES	Input desired PLS	N/A	N/A	PLANNED % OF GRASS COMPONENT BY SEEDS/SQ. FOOT	Planned PLS/ Acre in lbs.	TOTAL SEEDS/ SQ. FOOT	% OF GRASS MIX BY	SEEDS/lb.	SEEDS/ SQ. FOOT At 1 lb/ac Rate	POUNDS PLS	Background Information	
											Can't Exceed	Planned %
				Planned			Can't Exceed					
Big Bluestem	0.45			0 to 25	0.45	1.82	21.1	OK	176000	4.0	0.45	
select Can or Virginia Wildrye				0 to 10	0.00	0.00	0.0	OK	96000	2.2	0.00	
Little Bluestem	0.4			0 to 50	0.40	2.63	30.5	OK	286000	6.6	0.40	
Prairie Dropseed				0 to 50	0.00	0.00	0.0	OK	224000	5.1	0.00	
Rough Dropseed	0.19			0 to 25	0.19	2.09	24.3	OK	480000	11.0	0.19	
Side-oats grama	0.5			0 to 25	0.50	2.07	24.0	OK	180000	4.1	0.50	
					0.00	0.00	0.0	OK	0	0.0	0.00	
					0.00	0.00	0.0	OK		0.0	0.00	
					0.00	0.00	0.0	OK		0.0	0.00	
					0.00	0.00	0.0	OK		0.0	0.00	
<b>TOTAL - Pounds PLS Drill Seeding</b>					1.54	8.60	100.0					

Copy to Certificate

1/ ACTUAL SEEDS PER SQUARE FOOT SHALL BE WITHIN THE RANGE SPECIFIED IN PLANNED CONDITION

FORB SPECIES	Input desired PLS	N/A	N/A		Planned PLS/ Acre in ounces.	TOTAL SEEDS/ SQ. FOOT	% OF FORB MIX BY SEEDS/FT 2/	SEEDS/oz	SEEDS/ SQ. FOOT At 1 oz/ac Rate	Background Information		BLOOM COLOR	MONARCH	OUNCES PLS
										Bloom Period				
										Early = April-June Mid = June-August Late = August-Oct.				
<b>DRY TO MESIC</b>														
Butterfly Weed					0.00	0.00	0.0	OK	4300	0.10	Mid	Orange	LH	0.00
Compass Plant					0.00	0.00	0.0	OK	660	0.02	Mid	Yellow	H	0.00
Culvers Root	0.16				0.16	2.94	11.1	OK	800000	18.37	Mid	White	H	0.16
Dotted Blazingstar					0.00	0.00	0.0	OK	7000	0.16	Mid	Rose	H	0.00
Foxglove Beardtongue	0.48				0.48	1.43	5.4	OK	130000	2.98	Early	Yellow		0.48
Ground Plum					0.00	0.00	0.0	OK	5200	0.12	Early	Purple		0.00
Hoary Vervain	0.56				0.56	0.36	1.4	OK	28000	0.64	Mid	Blue	H	0.56
Lance-leaved Coreopsis					0.00	0.00	0.0	OK	20000	0.46	Early	White	H	0.00
Leadplant	0.24			Legume	0.24	0.09	0.3	OK	16000	0.37	Mid	Purple	H	0.24
Ontario Blazingstar					0.00	0.00	0.0	OK	14000	0.32	Late	Purple	H	0.00
Purple Coneflower, Narrow Leaved					0.00	0.00	0.0	OK	7000	0.16	Mid	Pink	H	0.00
Purple Coneflower, Eastern					0.00	0.00	0.0	OK	7000	0.16	Mid	Pink	VH	0.00
Rough Blazingstar					0.00	0.00	0.0	OK	16000	0.37	Late	Purple	VH	0.00
Showy Goldenrod					0.00	0.00	0.0	OK	95000	2.18	Late	Yellow	VH	0.00
Large-flowered Penstemon	0.32				0.32	0.10	0.4	OK	14000	0.32	Early	Lavender		0.32
Sky Blue Aster					0.00	0.00	0.0	OK	80000	1.84	Late	Blue	H	0.00
Smooth Aster	0.48				0.48	0.61	2.3	OK	55000	1.26	Late	Blue	H	0.48
Spotted Beebalm					0.00	0.00	0.0	OK	70000	1.61	Mid	Lavender	H	0.00
Stiff Sunflower					0.00	0.00	0.0	OK	4000	0.09	Mid	Yellow	H	0.00
Stiff Tickseed					0.00	0.00	0.0	OK	10000	0.23	Mid	Yellow	H	0.00
Wild Blue Phlox					0.00	0.00	0.0	OK	12500	0.29	Early	Blue	H	0.00
Wild Lupine				Legume	0.00	0.00	0.0	OK	1100	0.03	Early	Lavender		0.00

Wild White Indigo				Legume	0.00	0.00	0.0	OK	1700	0.04	Early	White		0.00
<b>Whorled Milkweed</b>					0.00	0.00	0.0	OK	11000	0.25	Mid - Late	White	LH	0.00

MESIC to WET MESIC					0.00									
Common Ox-eye	0.24				0.24	0.03	0.1	OK	6300	0.14	Mid	Yellow	H	0.24
Giant Sunflower					0.00	0.00	0.0	OK	10000	0.23	Late	Yellow	H	0.00
Great Blue Lobelia	0.47				0.47	5.39	20.4	OK	500000	11.48	Late	Blue	H	0.47
Ironweed					0.00	0.00	0.0	OK	24000	0.55	Late	Purple	H	0.00
Meadow Blazingstar					0.00	0.00	0.0	OK	11000	0.25	Late	Purple	VH	0.00
Rattlesnake Master					0.00	0.00	0.0	OK	7500	0.17	Mid	White	H	0.00
Sawtooth Sunflower					0.00	0.00	0.0	OK	10000	0.23	Late	Yellow	H	0.00
Tall Blazingstar	0.08				0.08	0.02	0.1	OK	11000	0.25	Mid	Purple	H	0.08
Virginia Bluebells					0.00	0.00	0.0	OK	9700	0.22	Early	Blue	H	0.00
Wild Bergamot	3.04				3.04	4.89	18.5	OK	70000	1.61	Mid	Lavender	VH	3.04
<b>WET</b>					<b>0.00</b>									
Boneset	0.4				0.40	1.47	5.6	OK	160000	3.67	Late	White	H	0.40
Cup Plant					0.00	0.00	0.0	OK	1400	0.03	Mid	Yellow	H	0.00
Joe-pye Weed	0.8				0.80	1.74	6.6	OK	95000	2.18	Mid	Rose	VH	0.80
New England Aster					0.00	0.00	0.0	OK	66000	1.52	Late	Purple	VH	0.00
Swamp Milkweed					0.00	0.00	0.0	OK	4800	0.11	Mid	Red	LH	0.00
<b>DRY to WET MESIC</b>					<b>0.00</b>									
Black-eyed Susan	2.48				2.48	5.24	19.8	OK	92000	2.11	Late	Yellow	H	2.48
Common Milkweed	5.76				5.76	0.53	2.0	OK	4000	0.09	Mid	Purple	LH	5.76
Yellow Giant Hyssop					0.00	0.00	0.0	OK	91000	2.09	Late	Purple	H	0.00
Grassleaved Goldenrod					0.00	0.00	0.0	OK	350000	8.03	Mid	Yellow	H	0.00
Maximilian Sunflower	0.48				0.48	0.14	0.5	OK	13000	0.30	Late	Yellow	H	0.48
Spiderworts	0.08				0.08	0.02	0.1	OK	10000	0.23	Early	Blue		0.08
Stiff Goldenrod	0.8				0.80	0.75	2.8	OK	41000	0.94	Late	Yellow	VH	0.80
White Prairie Clover	1.6			Legume	1.60	0.70	2.6	OK	19000	0.44	Mid	White	H	1.60
<b>ADDITIONAL APPROVED SPECIES 7/</b>					<b>0.00</b>									
duck weed					0.00	0.00	0.0	OK		0.00				0.00
					0.00	0.00	0.0	OK		0.00				0.00
					0.00	0.00	0.0	OK		0.00				0.00
					0.00	0.00	0.0	OK		0.00				0.00
					0.00	0.00	0.0	OK		0.00				0.00
					0.00	0.00	0.0	OK		0.00				0.00
<b>TOTAL - OUNCES PLS Drill Seeding</b>					<b>18.47</b>	<b>26.46</b>	<b>100.0</b>							

Total Species by Bloom Period	
Early Total	3.00
Mid Total	9.00
Late Total	6.00

TOTAL SEEDS/FT 6/  OK

PERCENT GRASS  OK

PERCENT FORBS 3/  OK

PERCENT MILKWEED  OK

% FORBS THAT ARE MONARCH PREFERRED 8/  OK

2/ Individual species not to exceed 20% of forb component by seeds/ft

3/ 75-80% forbs

4/ LH - Larval Host, H - High Value Nectar, VH - Very High Value Nectar

5/ Milkweeds shall comprise a minimum 1.5% of the total mixture

6/ Minimum 35-40 seeds/ft2

7/ Consult appropriate NRCS Area Resource Conservationist or Biologist for prior approval

8/ A minimum 60% of the forbs must be monarch preferred (column M).

83.33333

Optional Trees and Shrubs			Bloom Period
American Plum		Prunus a	April - May
Black Willow		Salix nigra	April - May
Button Bush		Cephalar	June - August
Common Chokecherry		Prunus v	April - June
Common Ninebark		Physocal	May - July
False Indigo*		Amorpha	June - August
Fragrant False Indigo*		Amorpha	June - August
New Jersey Tea		Ceanoth	June - August
Pussy Willow		Salix disc	April - May
Red Osier Dogwood		Cornus s	May - August
Saskatoon Serviceberry		Amelancl	April - May
Silky Dogwood		Cornus a	May - July
Wild Rose		Rosea sp	June -August