327 - 420 CONSERVATION COVER - MONARCH HABITAT

Seed Mix Design

		DATE	11/2/2026
	N/A		
LANDOWNER	MN PF Monarch Pollinator Mix	TRACT/FIELD	
	N/A 0		
PLANNER	Pheasants Forever	Acres to Seed	1.00

Seed tag type: Tag shows purity only as % of mix (purity, germ)

Set Seed Tag Type to Seed Mix Design

Copy to Certifica

GRASS SPECIES	Ref #	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		Background Information SEEDS/lb.	SEEDS/ SQ. FOOT At 1 lb/ac Rate	POUNDS PLS
					Planned			Can't Exceed	Planned %			
Big bluestem	1	0.45			0 to 25	0.45	1.82	19.7	OK	176000	4.0	0.45
Blue grama	3	0.1			0 to 20	0.10	1.72	18.7	OK	750000	17.2	0.10
Indiangrass	7				0 to 25	0.00	0.00	0.0	OK	193000	4.4	0.00
Little bluestem	6	0.4			0 to 30	0.40	2.63	28.5	OK	286000	6.6	0.40
Prairie cordgrass	8				0 to 5	0.00	0.00	0.0	OK	183000	4.2	0.00
Prairie dropseed	10				0 to 10	0.00	0.00	0.0	OK	224000	5.1	0.00
Prairie sandreed	4				0 to 30	0.00	0.00	0.0	OK	275000	6.3	0.00
Rough dropseed	9	0.05			0 to 10	0.05	0.55	6.0	OK	480000	11.0	0.05
Side oats grama	2	0.5			0 to 30	0.50	2.07	22.4	OK	180000	4.1	0.50
If no species entered this row	199				0	0.00	0.00	0.0	OK	0	0.0	0.00
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Canada bluejoint	13				0 to 5	0.00	0.00	0.0	OK	4480000	102.8	0.00
Canada wild rye	14				0 to 10	0.00	0.00	0.0	OK	115000	2.6	0.00
Green needlegrass	21				0 to 10	0.00	0.00	0.0	OK	180000	4.1	0.00
Junegrass	20				0 to 5	0.00	0.00	0.0	OK	2315000	53.1	0.00
Kalms brome	12				0 to 10	0.00	0.00	0.0	OK	128000	2.9	0.00
Porcupine grass	19				0 to 10	0.00	0.00	0.0	OK	57000	1.3	0.00
Slender wheatgrass	15				0 to 10	0.00	0.00	0.0	OK	155000	3.6	0.00
Virginia wild rye	16	0.2			0 to 10	0.20	0.44	4.8	OK	96000	2.2	0.00
Western wheatgrass	22				0 to 10	0.00	0.00	0.0	OK	112000	2.6	0.00
Fringed brome	11				0 to 10	0.00	0.00	0.0	OK	160000	3.7	0.00
American mannagrass	17				0 to 10	0.00	0.00	0.0	OK	1280000	29.4	0.00
Fowl mannagrass	18				0 to 10	0.00	0.00	0.0	OK	2561328	58.8	0.00
Bicknell's sedge	23				0 to 10	0.00	0.00	0.0	OK	560000	12.9	0.00
Common fox sedge	27				0 to 10	0.00	0.00	0.0	OK	1598652	36.7	0.00
Pointed broom sedge	25				0 to 10	0.00	0.00	0.0	OK	1346000	30.9	0.00
			0		TOTAL - Pounds PLS Drilled	1.70	9.22	100.0				

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

FORB SPECIES	REF #	Input Desired PLS	N/A	N/A		Planned PLS/ Acre in ounces.	TOTAL SEEDS/ SQ. FOOT	% OF FORB MIX BY SEEDS/FT 2/		Background Information SEEDS/oz	SEEDS/ SQ. FOOT At 1 oz/ac Rate	Bloom Period Early = April-June Mid = June-August Late = August-Oct.	BLOOM COLOR	MONARCH	OUNCES PLS
DRY TO MESIC														4/	
Butterfly weed	42					0.00	0.00	0.0	OK	4300	0.10	Mid	Orange	LH	0.00
Compass plant	67					0.00	0.00	0.0	OK	660	0.02	Mid	Yellow	H	0.00

Culver's root	103	**0.16**				**0.16**	2.94	11.4	**OK**	800000	18.37	**Mid**	**White**	H	0.16
Dotted blazing star	30					**0.00**	0.00	0.0	**OK**	7000	0.16	**Mid**	**Purple**	H	0.00
Foxglove Beardtongue	62	**0.48**				**0.48**	1.43	5.5	**OK**	130000	2.98	**Early**	**White**		0.48
Ground plum	28					**0.00**	0.00	0.0	**OK**	5200	0.12	**Early**	**Purple**		0.00
Hoary vervain	74	**0.8**				**0.80**	0.51	2.0	**OK**	28000	0.64	**Mid**	**Blue**	H	0.80
Lance-leaved coreopsis	48					**0.00**	0.00	0.0	**OK**	20000	0.46	**Early**	**Yellow**	H	0.00
Leadplant	37	**0.24**			Legume	**0.24**	0.09	0.3	**OK**	16000	0.37	**Mid**	**Purple**	H	0.24
Ontario blazing star	29					**0.00**	0.00	0.0	**OK**	14000	0.32	**Late**	**Purple**	H	0.00
Purple Coneflower - Narrow	53					**0.00**	0.00	0.0	**OK**	7000	0.16	**Mid**	**Pink**	H	0.00
Purple Coneflower - Eastern	113					**0.00**	0.00	0.0	**OK**	7000	0.16	**Mid**	**Pink**	VH	0.00
Rough blazing star	58					**0.00**	0.00	0.0	**OK**	16000	0.37	**Late**	**Purple**	VH	0.00
Showy goldenrod	69					**0.00**	0.00	0.0	**OK**	95000	2.18	**Late**	**Yellow**	VH	0.00
Large-flowered penstemon (Sh	32					**0.00**	0.00	0.0	**OK**	14000	0.32	**Early**	**Lavender**		0.00
Sky blue aster	71					**0.00**	0.00	0.0	**OK**	80000	1.84	**Late**	**Blue**	H	0.00
Smooth aster	70	**0**				**0.00**	0.00	0.0	**OK**	55000	1.26	**Late**	**Blue**	H	0.00
Spotted beebalm	60					**0.00**	0.00	0.0	**OK**	70000	1.61	**Mid**	**avender/Gre**	H	0.00
Stiff sunflower	55					**0.00**	0.00	0.0	**OK**	4000	0.09	**Late**	**Yellow**	H	0.00
Stiff stickseed	49					**0.00**	0.00	0.0	**OK**	10000	0.23	**Mid**	**Yellow**	H	0.00
Whorled milkweed	43					**0.00**	0.00	0.0	**OK**	11000	0.25	**Mid**	**White**	H	0.00
Wild lupine	31				Legume	**0.00**	0.00	0.0	**OK**	1100	0.03	**Early**	**Purple**		0.00
White wild indigo	45				Legume	**0.00**	0.00	0.0	**OK**	1700	0.04	**Early**	**White**		0.00
MESIC to WET MESIC															

Common oxeye	86	1.7				1.70	0.25	1.0	OK	6300	0.14	Mid	Yellow	H	1.70
Giant sunflower	84					0.00	0.00	0.0	OK	10000	0.23	Late	Yellow	H	0.00
Great blue lobelia	91	0.45				0.45	5.17	20.0	OK	500000	11.48	Late	Blue	H	0.45
Ironweed	102					0.00	0.00	0.0	OK	24000	0.55	Late	Purple	H	0.00
Meadow blazing star	89					0.00	0.00	0.0	OK	11000	0.25	Late	Purple	H	0.00
Rattlesnake master	81	1				1.00	0.17	0.7	OK	7500	0.17	Mid	White	VH	1.00
Sawtooth sunflower	85					0.00	0.00	0.0	OK	10000	0.23	Late	Yellow	H	0.00
Tall blazing star	90	0.08				0.08	0.02	0.1	OK	11000	0.25	Late	Purple	H	0.08
Longbract spiderwort	72	0.05				0.05	0.01	0.0	OK	10000	0.23	Early	Blue	H	0.05
Wild bergamot	94	3.04				3.04	4.89	18.9	OK	70000	1.61	Mid	Lavender	H	3.04
WET															
Boneset	105	0.4				0.40	1.47	5.7	OK	160000	3.67	Late	White	H	0.00
Cup plant	110					0.00	0.00	0.0	OK	1400	0.03	Mid	Yellow	H	
Joe pye weed	106	0.8				0.80	1.74	6.8	OK	95000	2.18	Mid	Pink	H	0.80
New England aster	99					0.00	0.00	0.0	OK	66000	1.52	Late	Purple	VH	0.00
Swamp milkweed	78					0.00	0.00	0.0	OK	4800	0.11	Mid	Pink	VH	0.00
DRY to WET MESIC															
Black-eyed susan	120	2.37				2.37	5.01	19.4	OK	92000	2.11	Mid	Yellow	H	2.37
Common milkweed	112	5.76				5.76	0.53	2.0	OK	4000	0.09	Mid	Pink	H	5.76
Prairie spiderwort	*73*					0.00	0.00	0.0	OK	8000	0.18	Early	Blue	LH	0.00
Grass-leaved goldenrod	82					0.00	0.00	0.0	OK	350000	8.03	Mid	Yellow	H	0.00
Maximilian sunflower	116	0.48				0.48	0.14	0.6	OK	13000	0.30	Late	Yellow	H	0.48
Heart-leaved alexander	76	0.1				0.10	0.03	0.1	OK	12000	0.28	Early	Yellow	H	0.10
Stiff goldenrod	118	0.8				0.80	0.75	2.9	OK	41000	0.94	Late	Yellow		0.80
White prairie clover	50	1.6			Legume	1.60	0.70	2.7	OK	19000	0.44	Mid	White	VH	1.60
ADDITIONAL APPROVED SPECIES 7/															
Swamp milkweed	78					0.00	0.00	0.0	OK	4800	0.11	Mid	Pink	VH	0.00
If no species entered this row	199					0.00	0.00	0.0	OK	0	0.00	0	0	0	0.00
If no species entered this row	199					0.00	0.00	0.0	OK	0	0.00	0	0	0	0.00
If no species entered this row	199					0.00	0.00	0.0	OK	0	0.00	0	0	0	0.00
If no species entered this row	199					0.00	0.00	0.0	OK	0	0.00	0	0	0	0.00
If no species entered this row	199					0.00	0.00	0.0	OK	0	0.00	0	0	0	0.00
Whorled milkweed	43					0.00	0.00	0.0	OK	11000	0.25	Mid	White	VH	0.00
			0		TOTAL - OUNCES PLS Drilled	20.31	25.84	100.0							

Total Species by Bloom Period

Early Total	3.00
Mid Total	10.00
Late Total	5.00

TOTAL SEEDS/FT 6/	35.1	OK
Percent Grass	26.30	Ok
PERCENT FORBS 3/	73.70	Ok
PERCENT MILKWEED 5/	1.51	OK
% FORBS THAT ARE MONARCH PREFERRED 8/	88.89	OK
em, Indiangrass and Switch combined are < 10% of mix	5%	OK

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

3/ 50- 75% 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/ Must Have 3 species from each bloom period

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

9/ 25- 50% Grasses

88.88889

Optional Trees and Shrubs					Bloom Period
American Plum				Prunus a	April - May
Black Willow				Salix nigr	April - May
Button Bush				Cephalan	June - August
Common Chokecherry				Prunus v	April - June
Common Ninebark				Physocar	May - July
False Indigo*				Amorpha	June - August
Fragrant False Indigo*				Amorpha	June - August
New Jersey Tea				Ceanothu	June - August
Pussy Willow				Salix disc	April - May
Red Osier Dogwood				Cornus s	May - August
Saskatoon Serviceberry				Amelanch	April - May
Silky Dogwood				Cornus a	May - July