

**Conservation Meadow - Wet-mesic (wet prairie) Statewide Seed Mix**

Guild	Scientific Name	Common Name	Rate: PLS lb/acre	Rate: Seeds/sqft	Height	Successional stage	Hydro- logic Zone	Pollinator Value	Bloom Time (month)	Notes - Wildlife Value, Regional Suitability (E.S. = Ecological Section)
G	<i>Andropogon gerardii</i>	big bluestem	1.25	4.59	36-96	L	M - D	Nests	8,9	
G	<i>Bromus ciliatus</i>	fringed brome	1.6	5.88	24-48	M	S	None	7,8	Rare or not native across much of southern MN
G	<i>Calamagrostis canadensis</i>	bluejoint	0.04	4.00	24-60	L	S	None	6,7,8	Not appropriate for NW MN; replace with <i>C. stricta</i> (limited availability; obtain via combine-harvest)
G	<i>Carex hystericina</i>	porcupine sedge	0.18	1.98	36	M	E	None	6,7	
G	<i>Carex interior</i>	interior sedge	0.01	0.14	24	L	S, M	None	6	
G	<i>Carex scoparia</i>	pointed broom sedge	0.1	3.09	24	L	S	None	6,7	Substitute for <i>C. pellita</i> (state seed mix); lower mortality
G	<i>Carex stipata</i>	awl-fruited sedge	0.2	2.50	36	L	S	None	6,7	Substitute for <i>C. stricta</i> (state seed mix); higher germination
G	<i>Carex vulpinoidea</i>	fox sedge	0.1	3.50	36	E	S	None	8,9	
G	<i>Elymus virginicus</i>	Virginia wild rye	1.75	2.70	48	M	S - MZ	None	7,8	
G	<i>Glyceria grandis</i>	tall manna grass	0.15	3.80	48-60	L	E	None	7	
G	<i>Glyceria striata</i>	fowl manna grass	0.13	4.30	36	M	S	None	7,8,9	
G	<i>Juncus dudleyi</i>	Dudley's rush	0.01	11.75	24	E	M	None	6,7,8	
G	<i>Panicum virgatum</i>	switchgrass	0.75	3.85	24-84	M	M, MZ	None	7,8,9	
G	<i>Poa palustris</i>	fowl bluegrass	0.2	9.60	24	M	S, M	None	6,7,8,9	
G	<i>Scirpus atrovirens</i>	dark green bulrush	0.1	17.74	60	E	S	None	6,7,8	
G	<i>Scirpus cyperinus</i>	woolgrass	0.03	16.00	60	E	S	Nests	8,9,10	Historically rare in most of E.S. 4 and 9
G	<i>Sorghastrum nutans</i>	Indian grass	0.5	2.20	36-96	L	M	Nests	8,9	
G	<i>Spartina pectinata</i>	prairie cordgrass	0.5	1.21	48-120	L	S	None	7,8,9	
G	<i>Sporobolus heterolepis</i>	prairie dropseed	0.25	1.47	18-48	L	MZ	Nests	8,9	
<b>Graminoids subtotal: 19</b>										
F	<i>Anemone canadensis</i>	Canada anemone	0.03	0.09	12-24	L	S	Low	5,6,7	
F	<i>Asclepias incarnata</i>	swamp milkweed	0.08	0.14	21-48	L	S	High	6,7	
L	<i>Desmodium canadense</i>	Canada tick trefoil	0.5	1.00	24-48	M	MZ	Low	7,8	Historically rare in E.S. 4
A	<i>Doellingeria umbellata</i> ( <i>Aster umbellatus</i> )	flat-topped aster	0.05	1.20	40-72	L	S, M	Medium	8,9	Rare in E.S. 9, associated with groundwater seepage
A	<i>Eupatorium perfoliatum</i>	common boneset	0.03	2.00	36-60	L	S	High	8,9	
A	<i>Euthamia graminifolia</i> <i>Eutrochium maculatum</i> ( <i>Eupatorium maculatum</i> )	grass-leaved goldenrod spotted Joe pye weed	0.02	2.00	24	M	M, MZ	Low	7,8,9	
F	<i>Gentiana andrewsii</i>	bottle gentian	0.02	2.06	6-24	L	M, MZ	High	8,9	
A	<i>Helenium autumnale</i>	autumn sneezeweed	0.05	2.39	24-36	M	S	High	8,9,10	
A	<i>Helianthus maximiliani</i>	Maximilian's sunflower	0.02	0.10	48-60	E	M, MZ	High	9,10	
F	<i>Iris versicolor</i>	northern blue flag	0.3	0.14	24-36	L	S, M	Low	5,6,7	Do not use in western half of E.S. 9
A	<i>Liatis ligulistylis</i>	northern plains blazing star	0.05	0.18	18-36	L	S - MZ	High	8,9	
A	<i>Liatis pycnostachya</i>	great blazing star	0.02	0.10	24-48	L	M, MZ	High	7,8	Not native north of Polk Co in E.S. 4
F	<i>Lobelia siphilitica</i>	great lobelia	0.01	1.40	12-48	M	M	Very High	7,8,9	Not native north of Polk Co in E.S. 4
F	<i>Lobelia spicata</i>	rough-spiked lobelia	0.01	0.33	12-24	M	M, MZ	High	8,9	
F	<i>Lycopus americanus</i>	cut-leaved bugleweed	0.03	1.43	24	M	S, M	None	7,8,9	
F	<i>Mimulus ringens</i>	blue monkey flower	0.01	6.40	24	M	S	Low	6,7,8,9	
F	<i>Pedicularis lanceolata</i>	swamp lousewort	0.04	0.65	6-18	M	M	Medium	8,9	
F	<i>Pycnanthemum virginianum</i>	Virginia mountain mint	0.08	6.50	12-36	L	S - MZ	High	6,7,8,9	Do not use in E.S. 4 north of Pennington Co
A	<i>Rudbeckia laciniata</i>	tall coneflower	0.02	0.10	48-72	M	M	High	8,9	
A	<i>Solidago riddellii</i>	Riddell's goldenrod	0.05	1.71	36	L	M	Very High	8,9,10	
A	<i>Symphyotrichum lanceolatum</i> ( <i>Aster lanceolatus</i> )	eastern panicled aster	0.03	1.72	24-48	L	S	Medium	9,10	
A	<i>Symphyotrichum novae-angliae</i> ( <i>Aster</i> )	New England aster	0.05	1.21	36-54	L	S	Very High	9,10	
A	<i>Symphyotrichum puniceum</i> ( <i>Aster puniceus</i> )	red-stemmed aster	0.08	2.40	60	L	S	High	8,9,10	
F	<i>Thalictrum dasycarpum</i>	tall meadow-rue	0.12	0.48	20-60	L	S	None	5,6,7	
F	<i>Verbena hastata</i>	blue vervain	0.15	5.25	24-72	M	S - MZ	Medium	7,8,9	
A	<i>Vernonia fasciculata</i>	bunched ironweed	0.03	0.30	30-51	L	S	High	8,9	
F	<i>Veronicastrum virginicum</i>	Culver's root	0.02	6.00	36-72	L	S - MZ	Very High	7,8	
F	<i>Zizia aurea</i>	golden alexanders	0.25	1.03	12-36	M	M, MZ	Low	4,5,6	
<b>Forbs subtotal: 29</b>					<b>Guild:</b> G = grasses and grasslike species F = forbs (flowering plants) A = flowering plants in the Aster family (Asteraceae) L = nitrogen fixing plants in the legume family (Fabaceae)					
<b>Total Species Richness: 48</b>			<b>Total Seeding Rate:</b>							
			11.5 lbs/acre	150 Seeds/sqft						
			(Opt.) Cover Crop - Oats/Winter Wheat	2.76 Seeds/sqft						
<b>Total Cost/Acre: \$1210</b>			6.2 lbs/acre							
Seed mix cost estimate based on 2013 pricing										
<p><b>PLS:</b> Pure live seed (% pure * % viable / 100) (See, for example: <a href="https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/lapmctn9045.pdf">https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/lapmctn9045.pdf</a>)</p> <p><b>Successional stage:</b> E = early M = mid L = late</p> <p><b>Hydrologic zone:</b> E = emergent S = saturated M = moist MZ = mesic D = dry</p> <p><b>Source:</b> State Seed Mix 34-262 with additions/substitutions selected from the Native Seed Mix Design Worksheet and other sources. For more information, see: <a href="http://nature.org/MNPrairieRestorationGuides">nature.org/MNPrairieRestorationGuides</a>.</p>										