



BWSR Pilot Seed Mixes

PILOT SEED MIXES:

These new “Pilot” seed mixes have been developed for a variety of restoration, conservation and stormwater uses. Goals were to meet the needs of common project types and to create direction for emerging topics such as biofuels, buffers, conservation grazing, and pollinators. All of the mixes were developed for specific functions and incorporate pollinator habitat to the extent possible. The mixes will remain as pilot mixes for a couple years until we understand how they are performing before we work to make them official state mixes. In many cases these mixes should be considered starting points for developing site specific mixes.

Note: Oats cover crop is included as a component of these seed mixes with the exception of some wetland mixes where cover species are not necessary. Winter wheat (at a similar rate to oats) may be selected in some cases where germination is needed later in the fall, followed by further green-up the following spring (oats will not come back the follow spring unless it re-establishes from seed).

The seed mixes in this document include:

- Beneficial Insects South West
- Biofuels/Biomass Northwest
- Biofuels/Biomass Southeast
- Biofuels/Biomass Southwest
- Compacted Trail General
- Conservation Grazing South West
- Dry Short Urban Buffer General
- Early Successional Floodplain General
- Eroding Bank Stabilization Northeast
- Eroding Bank Stabilization Northwest South
- Forest Groundcover East
- Honey Bee Plot Native Non-Native General
- Impoundment General
- Inundated Swale South West
- Landfill Pollinator Dry Northeast
- Landfill Pollinator Dry South West
- Landfill Pollinator Mesic Northeast
- Landfill Pollinator Mesic South West
- Little Bluestem Urban Prairie
- Low Diversity Buffer General
- Low Growing Solar Array Mix Northeast
- Low Growing Solar Array Mix South West
- Low Growing Solar Array Moist Soils South and West
- Mesic Short Urban Buffer Northeast
- Mesic Short Urban Buffer South West
- Mid Diversity Mesic to Dry Buffer South West
- Mid Diversity Moist Buffer Northeast
- Mid Diversity Moist Buffer South West
- Native Forage Buffer Mix South West
- Native Grass Waterway General
- Pollinator Plot Northwest
- Pollinator Plot Urban Southeast
- Pollinator Plots Northeast
- Pollinator Plots Southeast
- Pollinator Plots Southwest
- Sand Mine Reclamation South West
- Shallow Rooted BMP Mix General
- Silvopasture Southeast
- Stormwater Pond Pollinator Northeast
- Wet Meadow Forb/Sedge/Rush Southwest
- Wetland Construction General
- Wetland Seedbank Release Northeast

Beneficial Insects South & West

Function: Pollinator

Intent: Establishment of diverse vegetation for beneficial insects in agricultural areas

Planting Area: S & W

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91		
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Total Guild:		11.14	37.91	12.79%	82.2%
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Forb

Achillea millefolium	Common Yarrow	2	0.03		
Agastache foeniculum	Blue Giant Hyssop	2.1	0.06		
Allium stellatum	Prairie Wild Onion	0.28	0.07		
Amorpha canescens	Lead Plant	0.37	0.06		
Asclepias syriaca	Common Milkweed	0.2	0.14		
Asclepias tuberosa	Butterfly Milkweed	0.071	0.04		
Asclepias verticillata	Whorled Milkweed	0.1	0.02		
Coreopsis palmata	Bird's Foot Coreopsis	0.15	0.04		
Drymocallis arguta	Tall Cinquefoil	5.3	0.06		
Echinacea angustifolia	Narrow-leaved Purple Conefl	0.115	0.04		
Helenium autumnale	Autumn Sneezeweed	2.98	0.06		
Helianthus maximilianii	Maximilian's Sunflower	0.3	0.06		
Helianthus pauciflorus	Stiff Sunflower	0.074	0.05		
Heliopsis helianthoides	Ox-eye	0.9	0.39		
Liatris aspera	Rough Blazing Star	0.37	0.06		
Liatris ligulistylis	Northern Plains Blazing Star	0.19	0.05		
Monarda fistulosa	Wild Bergamot	1.2	0.05		
Monarda punctata	Horsemint	0.7	0.02		
Oligoneuron rigidum	Stiff Goldenrod	0.94	0.06		
Penstemon digitalis	Foxglove Beardtongue	2.98	0.06		

<i>Penstemon grandiflorus</i>	Large-flowered Beard Tongue	0.4	0.08
<i>Pycnanthemum virginianum</i>	Virginia Mountain Mint	3.81	0.05
<i>Rudbeckia hirta</i>	Black-eyed Susan	0.7	0.02
<i>Sisyrinchium campestre</i>	Field Blue-eyed Grass	0.2	0.01
<i>Solidago speciosa</i>	Showy Goldenrod	1.6	0.05
<i>Symphotrichum ericoides</i>	Heath Aster	1.7	0.02
<i>Symphotrichum laeve</i>	Smooth Aster	1.1	0.05
<i>Symphotrichum novae-angliae</i>	New England Aster	1	0.04
<i>Tradescantia bracteata</i>	Bracted Spiderwort	0.23	0.06
<i>Verbena hastata</i>	Blue Vervain	7	0.20
<i>Zizia aptera</i>	Heart-leaved Alexanders	0.26	0.06
<i>Zizia aurea</i>	Golden Alexanders	0.82	0.20

Total Guild:	40.14	2.30	46.07%	5.0%
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Graminoid

<i>Bouteloua curtipendula</i>	Side-oats Grama	3	1.36
<i>Elymus canadensis</i>	Canada Wild Rye	2	1.05
<i>Koeleria macrantha</i>	Junegrass	17	0.23
<i>Schizachyrium scoparium</i>	Little Bluestem	8	1.45
<i>Sporobolus heterolepis</i>	Prairie Dropseed	1.85	0.31

Total Guild:	31.85	4.41	36.55%	9.6%
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Legume

<i>Chamaecrista fasciculata</i>	Partridge Pea	1	1.01
<i>Dalea candida</i>	White Prairie Clover	1.5	0.21
<i>Dalea purpurea</i>	Purple Prairie Clover	1.5	0.27

Total Guild:	4	1.50	4.59%	3.2%
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Total Seed Mix:	87.13	46.12
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Function: Production

Intent: Native prairie biofuel production for Northwest MN

Planting Area: NW

Specialization: NRCS 643 & 512

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Cover					
Avena sativa	Oats* (See Cover crop note)	1.4	4.76		
Total Guild:		1.4	4.76	2.68%	33.7%

Forb					
Allium stellatum	Prairie Wild Onion	0.12	0.03		
Asclepias syriaca	Common Milkweed	0.16	0.11		
Asclepias tuberosa	Butterfly Milkweed	0.04	0.03		
Helianthus maximilianii	Maximilian's Sunflower	0.3	0.06		
Heliopsis helianthoides	Ox-eye	0.14	0.06		
Liatris aspera	Rough Blazing Star	0.18	0.03		
Liatris pycnostachya	Great Blazing Star	0.2	0.05		
Monarda fistulosa	Wild Bergamot	1.2	0.05		
Oligoneuron rigidum	Stiff Goldenrod	0.6	0.04		
Pycnanthemum virginianum	Virginia Mountain Mint	3	0.04		
Ratibida columnifera	Prairie Coneflower	1.2	0.08		
Rudbeckia hirta	Black-eyed Susan	4	0.12		
Sisyrinchium campestre	Field Blue-eyed Grass	0.17	0.01		
Smilacina racemosa	False Solomons Seal	0.01	0.07		
Symphyotrichum ericoides	Heath Aster	1.5	0.02		
Symphyotrichum laeve	Smooth Aster	0.61	0.03		
Symphyotrichum novae-angliae	New England Aster	0.6	0.03		
Verbena hastata	Blue Vervain	4	0.12		
Zizia aurea	Golden Alexanders	0.7	0.17		
Total Guild:		18.73	1.13	35.92%	8.0%

Graminoid

Andropogon gerardii	Big Bluestem	6	1.63
Bouteloua curtipendula	Side-oats Grama	1	0.45
Elymus canadensis	Canada Wild Rye	2	1.05
Elymus trachycaulus	Slender Wheatgrass	1.2	0.59
Hesperostipa spartea	Porcupine Grass	0.02	0.08
Panicum virgatum	Switchgrass	8	1.56
Schizachyrium scoparium	Little Bluestem	4	0.73
Sorghastrum nutans	Indian Grass	4	0.91
Spartina pectinata	Prairie Cordgrass	1	0.41

Total Guild:	27.22	7.41	52.20%	52.5%
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Legume

Astragalus canadensis	Canada Milk Vetch	1.2	0.19
Dalea candida	White Prairie Clover	1.5	0.21
Dalea purpurea	Purple Prairie Clover	2	0.36
Desmodium canadense	Canada Tick Trefoil	0.1	0.05

Total Guild:	4.8	0.82	9.20%	5.8%
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Total Seed Mix:	52.15	14.13
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Pilot

Biofuels/Biomass Southeast

Function: Production

Intent: Native prairie biofuel production for southeast MN

Planting Area: SE

Specialization: NRCS 643 & 512

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	1.4	4.76
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Total Guild:	1.4	4.76	2.64%	31.7%
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Forb

Asclepias syriaca	Common Milkweed	0.16	0.11
Asclepias tuberosa	Butterfly Milkweed	0.04	0.03
Asclepias verticillata	Whorled Milkweed	0.08	0.02

<i>Helianthus maximilianii</i>	Maximilian's Sunflower	0.3	0.06
<i>Heliopsis helianthoides</i>	Ox-eye	0.16	0.07
<i>Liatris aspera</i>	Rough Blazing Star	0.12	0.02
<i>Monarda fistulosa</i>	Wild Bergamot	2	0.08
<i>Oligoneuron rigidum</i>	Stiff Goldenrod	1	0.07
<i>Ranunculus fascicularis</i>	Early Buttercup	0.04	0.01
<i>Ratibida pinnata</i>	Gray-headed Coneflower	1	0.09
<i>Rudbeckia hirta</i>	Black-eyed Susan	8	0.24
<i>Sisyrinchium campestre</i>	Field Blue-eyed Grass	0.17	0.01
<i>Symphotrichum ericoides</i>	Heath Aster	1.5	0.02
<i>Symphotrichum laeve</i>	Smooth Aster	1	0.05
<i>Symphotrichum novae-angliae</i>	New England Aster	0.7	0.03
<i>Tradescantia bracteata</i>	Bracted Spiderwort	0.08	0.02
<i>Verbena hastata</i>	Blue Vervain	1.5	0.04
<i>Verbena stricta</i>	Hoary Vervain	0.5	0.05
<i>Zizia aurea</i>	Golden Alexanders	0.29	0.07

Total Guild:	18.64	1.08	35.14%	7.2%
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Graminoid

<i>Andropogon gerardii</i>	Big Bluestem	6	1.63
<i>Bouteloua curtipendula</i>	Side-oats Grama	1	0.45
<i>Elymus canadensis</i>	Canada Wild Rye	2.01	1.05
<i>Elymus trachycaulus</i>	Slender Wheatgrass	1.2	0.59
<i>Panicum virgatum</i>	Switchgrass	8	1.56
<i>Schizachyrium scoparium</i>	Little Bluestem	4	0.73
<i>Sorghastrum nutans</i>	Indian Grass	4	0.91
<i>Spartina pectinata</i>	Prairie Cordgrass	1	0.41

Total Guild:	27.21	7.34	51.29%	48.9%
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Legume

<i>Astragalus canadensis</i>	Canada Milk Vetch	1.2	0.19
<i>Chamaecrista fasciculata</i>	Partridge Pea	1	1.01

Dalea candida	White Prairie Clover	1.5	0.21
Dalea purpurea	Purple Prairie Clover	2	0.36
Desmodium canadense	Canada Tick Trefoil	0.1	0.05

Total Guild: 5.8 1.83 10.93% 12.2%

Total Seed Mix: 53.05 15.01

Pilot

Biofuels/Biomass Southwest

Function: Production

Intent: Native prairie biofuel production for southwest MN

Planting Area: SW

Specialization: NRCS 643 & 512

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	1.4	4.76
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Total Guild: 1.4 4.76 2.70% 29.9%

Forb

Asclepias syriaca	Common Milkweed	0.16	0.11
Asclepias tuberosa	Butterfly Milkweed	0.04	0.03
Echinacea angustifolia	Narrow-leaved Purple Conefl	0.2	0.08
Helianthus maximilianii	Maximilian's Sunflower	0.3	0.06
Heliopsis helianthoides	Ox-eye	0.14	0.06
Liatris aspera	Rough Blazing Star	0.2	0.03
Monarda fistulosa	Wild Bergamot	1.4	0.05
Oligoneuron rigidum	Stiff Goldenrod	1.2	0.08
Phlox pilosa	Prairie Phlox	0.08	0.01
Ratibida pinnata	Gray-headed Coneflower	2	0.18
Rudbeckia hirta	Black-eyed Susan	4	0.12
Sisyrinchium campestre	Field Blue-eyed Grass	0.17	0.01
Symphyotrichum laeve	Smooth Aster	0.6	0.03
Verbena stricta	Hoary Vervain	4	0.39
Zizia aurea	Golden Alexanders	1	0.25

Total Guild: 15.49 1.49 29.85% 9.4%

Graminoid

Andropogon gerardii	Big Bluestem	6	1.63
Bouteloua curtipendula	Side-oats Grama	1	0.45
Elymus canadensis	Canada Wild Rye	2	1.05
Elymus trachycaulus	Slender Wheatgrass	1.2	0.59
Nassella viridula	Green Needle Grass	1.7	0.44
Panicum virgatum	Switchgrass	8	1.56
Pascopyrum smithii	Western Wheatgrass	1.3	0.50
Schizachyrium scoparium	Little Bluestem	4	0.73
Sorghastrum nutans	Indian Grass	4	0.91

Total Guild: 29.2 7.86 56.27% 49.3%

Legume

Astragalus canadensis	Canada Milk Vetch	1.2	0.19
Chamaecrista fasciculata	Partridge Pea	1	1.01
Dalea candida	White Prairie Clover	1.5	0.21
Dalea purpurea	Purple Prairie Clover	2	0.36
Desmodium canadense	Canada Tick Trefoil	0.1	0.05

Total Guild: 5.8 1.83 11.18% 11.5%

Total Seed Mix: 51.89 15.94

Pilot

Compacted Trail General

Function: Conservation

Intent: Vegetation establishment on passive recreation trails. A couple species in this mix may be tender in some regions.

Planting Area: Statewide

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.13	37.88
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Total Guild: 11.13 37.88 19.53% 97.3%

Forb

Achillea millefolium	Common Yarrow	2	0.03
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Campanula rotundifolia	Harebell	7	0.02
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Total Guild:	9	0.05	15.80%	0.1%
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Graminoid

Bouteloua gracilis	Blue Grama	10	0.68
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Festuca subverticillata	Nodding Fescue	1.85	0.25
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Total Guild:	11.85	0.93	20.80%	2.4%
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Sedge

Juncus tenuis	Path Rush	25	0.07
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Total Guild:	25	0.07	43.88%	0.2%
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Total Seed Mix:	56.98	38.93
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Pilot

Conservation Grazing South & West

Function: Production

Intent: Native prairie conservation grazing for southern and western MN

Planting Area: S & W

Specialization: NRCS 643 & 512

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	1.42	4.83
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Total Guild:	1.42	4.83	2.69%	33.8%
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Forb

Coreopsis palmata	Bird's Foot Coreopsis	0.15	0.04
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Helianthus maximilianii	Maximilian's Sunflower	0.4	0.08
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Liatris aspera	Rough Blazing Star	0.4	0.07
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Monarda fistulosa	Wild Bergamot	1.4	0.05
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Potentilla arguta	Prairie Cinquefoil	2.4	0.03
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Ratibida pinnata	Gray-headed Coneflower	1	0.09
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Rudbeckia hirta	Black-eyed Susan	10	0.30
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Sisyrinchium campestre	Field Blue-eyed Grass	0.17	0.01
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Symphyotrichum laeve	Smooth Aster	0.6	0.03
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Verbena stricta	Hoary Vervain	1.5	0.15
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Viola pedatifida	Bearded Birdfoot Violet	0.14	0.01
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Zizia aurea	Golden Alexanders	0.8	0.20
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Total Guild:	18.96	1.06	35.85%	7.4%
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Graminoid

Andropogon gerardii	Big Bluestem	3	0.82
Bouteloua curtipendula	Side-oats Grama	4	1.82
Bromus kalmii	Kalm's Brome	0.9	0.31
Elymus canadensis	Canada Wild Rye	1	0.52
Elymus trachycaulus	Slender Wheatgrass	1	0.50
Elymus virginicus	Virginia Wild Rye	1	0.65
Koeleria macrantha	Junegrass	2	0.03
Panicum virgatum	Switchgrass	2	0.39
Schizachyrium scoparium	Little Bluestem	5	0.91
Sorghastrum nutans	Indian Grass	4	0.91
Sporobolus heterolepis	Prairie Dropseed	4	0.68

Total Guild:	27.9	7.52	52.76%	52.6%
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Legume

Astragalus canadensis	Canada Milk Vetch	1.2	0.19
Chamaecrista fasciculata	Partridge Pea	0.1	0.10
Dalea candida	White Prairie Clover	1.3	0.19
Dalea purpurea	Purple Prairie Clover	1.7	0.31
Lespedeza capitata	Round-headed Bush Clover	0.3	0.10

Total Guild:	4.6	0.89	8.70%	6.2%
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Total Seed Mix:	52.88	14.30
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Pilot

Deep Marsh

Function: Wetland

Intent: For the stabilization and establishment of deep marsh areas of wetland restoration projects.

Planting Area: Statewide

Specialization:

Scientific Name	Common Name	Seeds/ sa ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Forb

Acorus calamus	Sweet Flag	0.6	0.25
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Total Guild:	0.6	0.25	1.54%	8.1%
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Graminoid

Beckmannia syzigachne	American Slough Grass	20	1.09
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Glyceria grandis	Tall Manna Grass	10	0.39
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Total Guild:	30	1.48	77.12%	48.1%
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Sedge

Bolboschoenus fluviatilis	River Bulrush	1.2	0.76
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Eleocharis palustris	Marsh Spikerush	1.1	0.06
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Schoenoplectus tabernaemonta	Soft Stem Bulrush	6	0.53
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Total Guild:	8.3	1.35	21.34%	43.8%
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Total Seed Mix:	38.9	3.07
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State Mix

Dry Prairie General

Function: Conservation

Intent: General mesic prairie mix for native roadsides, ecological restoration, or conservation program plantings.

Planting Area: Statewide

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.13	37.88
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Total Guild:	11.13	37.88	11.43%	76.8%
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Forb

Agastache foeniculum	Blue Giant Hyssop	2.07	0.06
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Amorpha canescens	Lead Plant	0.42	0.07
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Asclepias tuberosa	Butterfly Milkweed	0.1	0.06
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Coreopsis palmata	Bird's Foot Coreopsis	0.21	0.06
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Helianthus pauciflorus	Stiff Sunflower	0.09	0.06
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Liatris aspera	Rough Blazing Star	0.25	0.04
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Monarda fistulosa	Wild Bergamot	1.42	0.06
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Oligoneuron rigidum	Stiff Goldenrod	0.83	0.06
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Penstemon grandiflorus	Large-flowered Beard Tongue	0.32	0.06
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Rudbeckia hirta	Black-eyed Susan	10.32	0.31
Solidago nemoralis	Gray Goldenrod	3.86	0.04
Symphotrichum ericoides	Heath Aster	2.58	0.04
Symphotrichum laeve	Smooth Aster	1.26	0.06
Verbena stricta	Hoary Vervain	1.29	0.13

Total Guild:	25.02	1.09	25.69%	2.2%
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Graminoid

Andropogon gerardii	Big Bluestem	2.57	0.70
Bouteloua curtipendula	Side-oats Grama	6.61	3.00
Bouteloua gracilis	Blue Grama	7.35	0.50
Bromus kalmii	Kalm's Brome	2.14	0.73
Elymus canadensis	Canada Wild Rye	1.91	1.00
Koeleria macrantha	Junegrass	18.37	0.25
Schizachyrium scoparium	Little Bluestem	16.53	3.00
Sorghastrum nutans	Indian Grass	3.09	0.70
Sporobolus heterolepis	Prairie Dropseed	0.73	0.12

Total Guild:	59.3	10.00	60.89%	20.3%
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Legume

Astragalus canadensis	Canada Milk Vetch	0.4	0.06
Dalea candida	White Prairie Clover	0.39	0.06
Dalea purpurea	Purple Prairie Clover	1.02	0.19
Desmodium canadense	Canada Tick Trefoil	0.13	0.06

Total Guild:	1.94	0.37	1.99%	0.7%
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Total Seed Mix:	97.39	49.34
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State Mix

Dry Prairie Northwest

Function: Conservation

Intent: Regional dry prairie reconstruction for wetland mitigation, ecological restoration, or conservation program plantings.

Planting Area: NW

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	1.34	4.56
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Total Guild:	1.34	4.56	1.87%	35.7%
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Forb

Allium stellatum	Prairie Wild Onion	0.12	0.03
Helianthus pauciflorus	Stiff Sunflower	0.05	0.03
Heliopsis helianthoides	Ox-eye	0.14	0.06
Liatris aspera	Rough Blazing Star	0.15	0.03
Liatris punctata	Dotted Blazing Star	0.05	0.02
Monarda fistulosa	Wild Bergamot	0.77	0.03
Oligoneuron rigidum	Stiff Goldenrod	0.45	0.03
Ratibida columnifera	Prairie Coneflower	0.93	0.06
Rudbeckia hirta	Black-eyed Susan	2.03	0.06
Solidago nemoralis	Gray Goldenrod	0.2	0.00
Symphotrichum ericoides	Heath Aster	1.1	0.01
Symphotrichum laeve	Smooth Aster	0.61	0.03
Zizia aptera	Heart-leaved Alexanders	0.24	0.05

Total Guild:	6.84	0.45	9.52%	3.5%
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Graminoid

Bouteloua curtipendula	Side-oats Grama	2.64	1.20
Bouteloua gracilis	Blue Grama	11	0.75
Bromus kalmii	Kalm's Brome	2.64	0.90
Elymus canadensis	Canada Wild Rye	1.91	1.00
Elymus trachycaulus	Slender Wheatgrass	2.54	1.26
Hesperostipa spartea	Porcupine Grass	0.11	0.44
Koeleria macrantha	Junegrass	18	0.25
Schizachyrium scoparium	Little Bluestem	8.26	1.50
Sporobolus cryptandrus	Sand Dropseed	15	0.20

Total Guild:	62.1	7.49	86.47%	58.6%
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Legume

Astragalus canadensis	Canada Milk Vetch	0.42	0.07
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Dalea candida	White Prairie Clover	0.42	0.06
Dalea purpurea	Purple Prairie Clover	0.6	0.11
Desmodium canadense	Canada Tick Trefoil	0.1	0.05

Total Guild: 1.54 0.29 2.14% 2.2%

Total Seed Mix: 71.82 12.79

State Mix

Dry Prairie Southeast

Function: Conservation

Intent: Regional dry prairie reconstruction for wetland mitigation, ecological restoration, or conservation program plantings.

Planting Area: SE

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	1.33	4.53		
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Total Guild: 1.33 4.53 1.53% 35.3%

Forb

Asclepias tuberosa	Butterfly Milkweed	0.09	0.06		
Asclepias verticillata	Whorled Milkweed	0.05	0.01		
Coreopsis palmata	Bird's Foot Coreopsis	0.2	0.05		
Heliopsis helianthoides	Ox-eye	0.13	0.06		
Liatris aspera	Rough Blazing Star	0.11	0.02		
Liatris punctata	Dotted Blazing Star	0.06	0.02		
Monarda fistulosa	Wild Bergamot	0.85	0.03		
Monarda punctata	Horsemint	0.8	0.02		
Oligoneuron rigidum	Stiff Goldenrod	0.98	0.07		
Penstemon grandiflorus	Large-flowered Beard Tongue	0.2	0.04		
Rudbeckia hirta	Black-eyed Susan	3.2	0.09		
Symphotrichum oolentangiense	Skyblue Aster	0.2	0.01		
Symphotrichum sericeum	Silky Aster	0.2	0.02		
Zizia aptera	Heart-leaved Alexanders	0.1	0.02		

Total Guild: 7.17 0.53 8.27% 4.1%

Graminoid

Bouteloua curtipendula	Side-oats Grama	2.48	1.13
Bouteloua gracilis	Blue Grama	10	0.68
Bromus kalmii	Kalm's Brome	0.9	0.31
Elymus canadensis	Canada Wild Rye	2.86	1.50
Elymus trachycaulus	Slender Wheatgrass	3	1.49
Koeleria macrantha	Junegrass	30	0.41
Muhlenbergia mexicana	Leafy Satin Grass	0.05	0.00
Schizachyrium scoparium	Little Bluestem	8.3	1.51
Sporobolus cryptandrus	Sand Dropseed	16	0.22
Sporobolus heterolepis	Prairie Dropseed	1.5	0.26

Total Guild:	75.09	7.48	86.57%	58.4%
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Legume

Dalea candida	White Prairie Clover	0.6	0.09
Dalea purpurea	Purple Prairie Clover	0.8	0.15
Lespedeza capitata	Round-headed Bush Clover	0.1	0.03

Total Guild:	1.5	0.27	1.73%	2.1%
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Sedge

Juncus tenuis	Path Rush	1.65	0.00
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Total Guild:	1.65	0.00	1.90%	0.0%
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Total Seed Mix:	86.74	12.81
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State Mix

Dry Prairie Southwest

Function: Conservation

Planting Area: SW

Specialization:

Intent: Regional dry prairie reconstruction for wetland mitigation, ecological restoration, or conservation program plantings.

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	1.9	6.47
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Total Guild:	1.9	6.47	2.55%	43.2%
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Forb

<i>Asclepias verticillata</i>	Whorled Milkweed	0.05	0.01
<i>Echinacea angustifolia</i>	Narrow-leaved Purple Conefl	0.2	0.08
<i>Heliopsis helianthoides</i>	Ox-eye	0.1	0.04
<i>Liatris aspera</i>	Rough Blazing Star	0.13	0.02
<i>Liatris punctata</i>	Dotted Blazing Star	0.05	0.02
<i>Monarda fistulosa</i>	Wild Bergamot	0.76	0.03
<i>Oligoneuron rigidum</i>	Stiff Goldenrod	1	0.07
<i>Rudbeckia hirta</i>	Black-eyed Susan	2.2	0.07
<i>Symphotrichum ericoides</i>	Heath Aster	0.9	0.01
<i>Symphotrichum laeve</i>	Smooth Aster	0.6	0.03
<i>Tradescantia bracteata</i>	Bracted Spiderwort	0.06	0.02
<i>Verbena stricta</i>	Hoary Vervain	1	0.10
<i>Zizia aurea</i>	Golden Alexanders	0.85	0.21

Total Guild:	7.9	0.70	10.59%	4.7%
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Graminoid

<i>Bouteloua curtipendula</i>	Side-oats Grama	3.08	1.40
<i>Bouteloua gracilis</i>	Blue Grama	13.9	0.95
<i>Elymus canadensis</i>	Canada Wild Rye	2.3	1.20
<i>Elymus trachycaulus</i>	Slender Wheatgrass	2.53	1.25
<i>Hesperostipa spartea</i>	Porcupine Grass	0.19	0.76
<i>Koeleria macrantha</i>	Junegrass	22	0.30
<i>Schizachyrium scoparium</i>	Little Bluestem	8.24	1.50
<i>Sporobolus cryptandrus</i>	Sand Dropseed	11	0.15

Total Guild:	63.24	7.51	84.79%	50.1%
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Legume

<i>Astragalus canadensis</i>	Canada Milk Vetch	0.4	0.06
<i>Dalea candida</i>	White Prairie Clover	0.4	0.06
<i>Dalea purpurea</i>	Purple Prairie Clover	0.55	0.10
<i>Desmodium canadense</i>	Canada Tick Trefoil	0.09	0.04
<i>Lespedeza capitata</i>	Round-headed Bush Clover	0.1	0.03

Total Guild:	1.54	0.30	2.06%	2.0%
Total Seed Mix:	74.58	14.97		

Pilot

Dry Short Urban Buffer General

Function: Buffers

Intent: Showy dry prairie buffer establishment in urban areas

Planting Area: Statewide

Specialization: NRCS 327

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.13	37.88		
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Total Guild:	11.13	37.88	19.35%	85.6%
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Forb

Asclepias syriaca	Common Milkweed	0.16	0.11		
Asclepias tuberosa	Butterfly Milkweed	0.1	0.06		
Liatris aspera	Rough Blazing Star	0.25	0.04		
Oligoneuron rigidum	Stiff Goldenrod	0.83	0.06		
Penstemon grandiflorus	Large-flowered Beard Tongue	0.32	0.06		
Pycnanthemum virginianum	Virginia Mountain Mint	1	0.01		
Rudbeckia hirta	Black-eyed Susan	5.15	0.15		
Solidago nemoralis	Gray Goldenrod	2	0.02		
Solidago ptarmicoides	Upland White Aster	1.26	0.05		
Symphotrichum ericoides	Heath Aster	2.58	0.04		
Tradescantia bracteata	Bracted Spiderwort	0.6	0.16		
Zizia aptera	Heart-leaved Alexanders	0.2	0.05		

Total Guild:	14.45	0.81	25.12%	1.8%
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Graminoid

Bouteloua curtipendula	Side-oats Grama	2	0.91		
Bromus kalmii	Kalm's Brome	0.5	0.17		
Koeleria macrantha	Junegrass	5.5	0.07		
Panicum virgatum	Switchgrass	6	1.17		

Schizachyrium scoparium	Little Bluestem	16.53	3.00
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Total Guild:	30.53	5.32	53.07%	12.0%
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Legume

Astragalus canadensis	Canada Milk Vetch	0.4	0.06
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Dalea purpurea	Purple Prairie Clover	1.02	0.19
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Total Guild:	1.42	0.25	2.47%	0.6%
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Total Seed Mix:	57.53	44.26
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State Mix

Dry Swale / Pond

Function: Stormwater

Intent: Temporarily flooded swales in agricultural settings.

Planting Area: Statewide

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild:	11.14	37.91	6.79%	65.3%
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Forb

Asclepias incarnata	Marsh Milkweed	0.1	0.06
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Heliopsis helianthoides	Ox-eye	0.2	0.09
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Rudbeckia hirta	Black-eyed Susan	2.49	0.07
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Verbena hastata	Blue Vervain	3.5	0.10
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Total Guild:	6.29	0.32	3.83%	0.5%
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Graminoid

Andropogon gerardii	Big Bluestem	5.5	1.50
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Beckmannia syzigachne	American Slough Grass	27.6	1.50
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Bromus ciliatus	Fringed Brome	6.05	1.65
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Elymus canadensis	Canada Wild Rye	7.64	4.00
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Elymus trachycaulus	Slender Wheatgrass	10.15	5.02
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Elymus virginicus	Virginia Wild Rye	3.85	2.50
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Panicum virgatum	Switchgrass	2.05	0.40
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Poa palustris	Fowl Bluegrass	76.5	1.60
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Sorghastrum nutans	Indian Grass	6.6	1.50
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Total Guild:	145.94	19.67	88.96%	33.9%
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Legume

Dalea purpurea	Purple Prairie Clover	0.5	0.09
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Desmodium canadense	Canada Tick Trefoil	0.19	0.09
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Total Guild:	0.69	0.18	0.42%	0.3%
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Total Seed Mix:	164.06	58.08
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Pilot

Early Successional Floodplain General

Function: Wetland

Intent: Cover establishment in floodplains where natural colonization will add to diversity over time

Planting Area: Statewide

Specialization: NRCS 342

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild:	11.14	37.91	23.99%	84.6%
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Forb

Asclepias incarnata	Marsh Milkweed	0.1	0.06
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Helenium autumnale	Autumn Sneezeweed	2	0.04
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Rudbeckia laciniata	Tall Coneflower	0.1	0.02
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Verbena hastata	Blue Vervain	3	0.09
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Total Guild:	5.2	0.21	11.20%	0.5%
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Graminoid

Elymus riparius	Riverbank Wild Rye	0.1	0.09
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Elymus trachycaulus	Slender Wheatgrass	2	0.99
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Elymus virginicus	Virginia Wild Rye	8	5.19
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Poa palustris	Fowl Bluegrass	20	0.42
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Total Guild:	30.1	6.69	64.81%	14.9%
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Total Seed Mix:	46.44	44.81
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Function:	Wetland	Intent:	Emergent wetland restoration for use in wetland mitigation, shoreline restoration, wet stormwater ponds where emergent vegetation is desired. Usually used in a 10 ft. band around open water.
Planting Area:	Statewide		
Specialization:			

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Forb					
Acorus calamus	Sweet Flag	0.67	0.28		
Alisma triviale	Common Water Plantain	9.7	0.40		
Asclepias incarnata	Marsh Milkweed	0.5	0.28		
Sagittaria latifolia	Broad-leaved Arrowhead	6.8	0.30		
Sparganium eurycarpum	Giant Bur Reed	0.09	0.49		
Total Guild:		17.76	1.75	15.80%	35.1%

Graminoid					
Beckmannia syzigachne	American Slough Grass	12.92	0.70		
Glyceria grandis	Tall Manna Grass	6.4	0.25		
Leersia oryzoides	Rice Cut Grass	3.7	0.30		
Total Guild:		23.02	1.25	20.49%	25.0%

Sedge					
Bolboschoenus fluviatilis	River Bulrush	1.2	0.76		
Carex comosa	Bristly Sedge	2	0.18		
Carex lacustris	Lake Sedge	0.24	0.06		
Carex stricta	Tussock Sedge	0.75	0.04		
Eleocharis acicularis	Least Spikerush	2.5	0.10		
Eleocharis palustris	Marsh Spikerush	1.9	0.10		
Juncus torreyi	Torrey's Rush	25	0.04		
Schoenoplectus pungens	Three-square Bulrush	1	0.23		
Schoenoplectus tabernaemonta	Soft Stem Bulrush	5	0.44		
Scirpus cyperinus	Woolgrass	32	0.05		
Total Guild:		71.59	2.00	63.71%	40.0%

Pilot

Eroding Bank Stabilization Northeast

Function: Buffers Intent: Stabilized steep eroding slopes with both early and later successional species.
 Planting Area: NE
 Specialization: NRCS 342

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Cover					
Avena sativa	Oats* (See Cover crop note)	11.14	37.91		
Total Guild:		11.14	37.91	12.54%	68.7%

Forb					
Achillea millefolium	Common Yarrow	2	0.03		
Anaphalis margaritacea	Pearly Everlasting	0.8	0.01		
Drymocallis arguta	Tall Cinquefoil	2	0.02		
Rudbeckia hirta	Black-eyed Susan	3	0.09		
Solidago nemoralis	Gray Goldenrod	3.5	0.03		
Total Guild:		11.3	0.18	12.72%	0.3%

Graminoid					
Andropogon gerardii	Big Bluestem	10	2.72		
Bromus ciliatus	Fringed Brome	8	2.18		
Calamagrostis canadensis	Bluejoint	5	0.05		
Elymus canadensis	Canada Wild Rye	8	4.19		
Elymus riparius	Riverbank Wild Rye	0.2	0.19		
Elymus trachycaulus	Slender Wheatgrass	12	5.94		
Elymus villosus	Downy Wild Rye	2	0.99		
Festuca subverticillata	Nodding Fescue	1.1	0.15		
Poa palustris	Fowl Bluegrass	19	0.40		
Schizachne purpurascens	False Melic	0.5	0.04		
Total Guild:		65.8	16.85	74.07%	30.5%

Legume					
Astragalus canadensis	Canada Milk Vetch	0.5	0.08		

Vicia americana

American Vetch

0.1

0.13

Total Guild:

0.6

0.21

0.68%

0.4%

Total Seed Mix:

88.84

55.15

Pilot

Eroding Bank Stabilization Northwest & South

Function: Conservation

Intent: Stabilized steep eroding slopes with both early and later successional species.

Planting Area: NW & S

Specialization: NRCS 342

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa

Oats* (See Cover crop note)

11.14

37.91

Total Guild:

11.14

37.91

12.58%

62.8%

Forb

Achillea millefolium

Common Yarrow

0.7

0.01

Rudbeckia hirta

Black-eyed Susan

2.49

0.07

Verbena hastata

Blue Vervain

1.9

0.06

Total Guild:

5.09

0.14

5.75%

0.2%

Graminoid

Andropogon gerardii

Big Bluestem

10

2.72

Bromus ciliatus

Fringed Brome

8

2.18

Elymus canadensis

Canada Wild Rye

8

4.19

Elymus riparius

Riverbank Wild Rye

0.175

0.16

Elymus trachycaulus

Slender Wheatgrass

12

5.94

Elymus virginicus

Virginia Wild Rye

6

3.89

Panicum virgatum

Switchgrass

4

0.78

Poa palustris

Fowl Bluegrass

16

0.34

Sorghastrum nutans

Indian Grass

7

1.59

Total Guild:

71.175

21.78

80.38%

36.1%

Legume

Astragalus canadensis

Canada Milk Vetch

0.2

0.03

Chamaecrista fasciculata

Partridge Pea

0.2

0.20

Dalea purpurea	Purple Prairie Clover	0.5	0.09
Desmodium canadense	Canada Tick Trefoil	0.19	0.09
Vicia americana	American Vetch	0.051	0.07

Total Guild: 1.141 0.49 1.29% 0.8%

Total Seed Mix: 88.546 60.32

Pilot

Forest Groundcover East

Function: Woodland

Intent: Soil stabilizing in forests following invasive species removal and other disturbance

Planting Area: NE & E

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild: 11.14 37.91 66.43% 96.4%

Forb

Eurybia macrophylla	Large-leaved Aster	0.2	0.02
Geranium maculatum	Wild Geranium	0.1	0.05
Hydrophyllum virginianum	Virginia Waterleaf	0.1	0.10
Osmorhiza claytonii	Clayton's Sweet Cicely	0.1	0.11
Rudbeckia laciniata	Tall Coneflower	0.22	0.04
Smilacina racemosa	False Solomons Seal	0.01	0.07
Solidago flexicaulis	Zigzag Goldenrod	1.3	0.04

Total Guild: 2.03 0.43 12.10% 1.1%

Graminoid

Elymus hystrix	Bottlebrush Grass	0.5	0.18
Elymus villosus	Downy Wild Rye	1	0.50
Festuca subverticillata	Nodding Fescue	1.8	0.25

Total Guild: 3.3 0.92 19.68% 2.3%

Sedge

Carex sprengeii	Sprengel's Sedge	0.3	0.08
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Total Guild: 0.3 0.08 1.79% 0.2%

Pilot

High Diversity Native & Non-Native Honey Bee Plot

Function: Pollinator Intent: Native and Non-native vegetation establishment for honey bee plantings up to a few acres in size. This mix contains non-native plant species, so BWSR approval is required for use on BWSR funded projects.

Planting Area: Statewide

Specialization: NRCS 327

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Forb					
Agastache foeniculum	Blue Giant Hyssop	0.4	0.01		
Asclepias syriaca	Common Milkweed	0.2	0.14		
Asclepias tuberosa	Butterfly Milkweed	0.1	0.06		
Asclepias verticillata	Whorled Milkweed	0.15	0.04		
Astragalus crassicaarpus	Ground Plum	0.1	0.05		
Coreopsis palmata	Bird's Foot Coreopsis	0.15	0.04		
Helianthus maximilianii	Maximilian's Sunflower	0.3	0.06		
Monarda fistulosa	Wild Bergamot	3	0.12		
Penstemon grandiflorus	Large-flowered Beard Tongue	0.32	0.06		
Pycnanthemum virginianum	Virginia Mountain Mint	1	0.01		
Solidago canadensis	Canada Goldenrod	0.8	0.01		
Solidago speciosa	Showy Goldenrod	1	0.03		
Symphotrichum ericoides	Heath Aster	1.8	0.02		
Symphotrichum laeve	Smooth Aster	1.2	0.06		
Viola pedatifida	Bearded Birdfoot Violet	0.2	0.02		
Zizia aurea	Golden Alexanders	0.5	0.12		

Total Guild: 11.22 0.86 31.11% 16.2%

Graminoid

Bouteloua curtipendula	Side-oats Grama	1	0.45		
Elymus canadensis	Canada Wild Rye	0.6	0.31		
Schizachyrium scoparium	Little Bluestem	3	0.54		
Sorghastrum nutans	Indian Grass	0.5	0.11		

Sporobolus heterolepis	Prairie Dropseed	1	0.17
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Total Guild:	6.1	1.60	16.91%	30.0%
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Legume

Chamaecrista fasciculata	Partridge Pea	0.7	0.71
Dalea candida	White Prairie Clover	2	0.29
Dalea purpurea	Purple Prairie Clover	3	0.54
Medicago sativa	Alfalfa	3	0.58
Trifolium hybridum	Alsike Clover	4	0.26
Trifolium repens	White Clover	4	0.24
Vicia americana	American Vetch	0.05	0.07

Total Guild:	16.75	2.68	46.44%	50.3%
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Sedge

Carex brevior	Short Sedge	2	0.19
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Total Guild:	2	0.19	5.54%	3.5%
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Total Seed Mix:	36.07	5.32
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Pilot

Impoundment General

Function: Stormwater

Intent: Flood tolerant vegetation establishment in floodwater impoundment areas

Planting Area: Statewide

Specialization:

Scientific Name	Common Name	Seeds/ sa ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild:	11.14	37.91	7.48%	74.7%
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Forb

Anemone canadensis	Canada Anemone	0.16	0.05
Asclepias incarnata	Marsh Milkweed	0.18	0.10
Bidens frondosa	Leafy Beggarticks	0.15	0.08
Doellingeria umbellata	Flat-topped Aster	1.25	0.05
Euthamia graminifolia	Grass-leaved Goldenrod	1.65	0.01
Eutrochium maculatum	Spotted Joe Pye Weed	1.5	0.04

Helenium autumnale	Autumn Sneezeweed	4.8	0.10
Physostegia virginiana	Obedient Plant	0.1	0.02
Rudbeckia laciniata	Tall Coneflower	0.3	0.06
Solidago gigantea	Giant Goldenrod	2.8	0.03
Symphotrichum novae-angliae	New England Aster	1.45	0.06
Verbena hastata	Blue Vervain	4.45	0.13
Zizia aurea	Golden Alexanders	0.62	0.15

Total Guild:	19.41	0.90	13.03%	1.8%
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Graminoid

Andropogon gerardii	Big Bluestem	7.35	2.00
Bromus ciliatus	Fringed Brome	8	2.18
Elymus trachycaulus	Slender Wheatgrass	5	2.48
Elymus virginicus	Virginia Wild Rye	4	2.59
Leersia oryzoides	Rice Cut Grass	1.5	0.12
Panicum virgatum	Switchgrass	8	1.56
Poa palustris	Fowl Bluegrass	10	0.21
Spartina pectinata	Prairie Cordgrass	1	0.41

Total Guild:	44.85	11.54	30.11%	22.8%
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Sedge

Carex pellita	Wooly Sedge	0.34	0.03
Carex scoparia	Lance-fruited Oval sedge	2.5	0.08
Scirpus atrovirens	Dark Green Bulrush	31.7	0.19
Scirpus cyperinus	Woolgrass	39	0.06

Total Guild:	73.54	0.36	49.38%	0.7%
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Total Seed Mix:	148.94	50.72
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Function: Stormwater

Intent: Vegetation establishment for swales with persistent inundation

Planting Area: S & W

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Cover					
Avena sativa	Oats* (See Cover crop note)	11.14	37.91		
Total Guild:		11.14	37.91	7.83%	79.1%
Forb					
Asclepias incarnata	Marsh Milkweed	0.43	0.24		
Helenium autumnale	Autumn Sneezeweed	1	0.02		
Impatiens capensis	Spotted Touch-Me-Not	0.03	0.02		
Lobelia siphilitica	Great Lobelia	4	0.02		
Verbena hastata	Blue Vervain	5	0.15		
Vernonia fasciculata	Bunched Ironweed	0.5	0.06		
Total Guild:		10.96	0.51	7.70%	1.1%
Graminoid					
Beckmannia syzigachne	American Slough Grass	30	1.63		
Elymus virginicus	Virginia Wild Rye	10	6.48		
Glyceria grandis	Tall Manna Grass	4	0.16		
Leersia oryzoides	Rice Cut Grass	2.2	0.18		
Poa palustris	Fowl Bluegrass	40	0.84		
Total Guild:		86.2	9.29	60.58%	19.4%
Sedge					
Scirpus atrovirens	Dark Green Bulrush	34	0.20		
Total Guild:		34	0.20	23.89%	0.4%
Total Seed Mix:		142.3	47.91		

Function: Pollinator

Intent: Dry prairie mix for landfill plantings

Planting Area: NE

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Cover					
Avena sativa	Oats* (See Cover crop note)	11.13	37.88		
Total Guild:		11.13	37.88	12.95%	80.2%
Forb					
Agastache foeniculum	Blue Giant Hyssop	2.07	0.06		
Asclepias tuberosa	Butterfly Milkweed	0.1	0.06		
Helianthus pauciflorus	Stiff Sunflower	0.09	0.06		
Monarda fistulosa	Wild Bergamot	1.42	0.06		
Oligoneuron rigidum	Stiff Goldenrod	0.83	0.06		
Penstemon grandiflorus	Large-flowered Beard Tongue	1	0.19		
Rudbeckia hirta	Black-eyed Susan	10.32	0.31		
Solidago nemoralis	Gray Goldenrod	3.86	0.04		
Symphotrichum ericoides	Heath Aster	2.58	0.04		
Symphotrichum laeve	Smooth Aster	1.26	0.06		
Verbena stricta	Hoary Vervain	2	0.19		
Viola pedatifida	Bearded Birdfoot Violet	0.14	0.01		
Total Guild:		25.67	1.14	29.86%	2.4%
Graminoid					
Andropogon gerardii	Big Bluestem	2.57	0.70		
Bromus kalmii	Kalm's Brome	6	2.04		
Elymus canadensis	Canada Wild Rye	1.91	1.00		
Koeleria macrantha	Junegrass	16	0.22		
Schizachyrium scoparium	Little Bluestem	18	3.27		
Sorghastrum nutans	Indian Grass	2.8	0.64		
Total Guild:		47.28	7.86	55.00%	16.7%
Legume					

Dalea candida	White Prairie Clover	0.39	0.06
Dalea purpurea	Purple Prairie Clover	1.5	0.27

Total Guild:	1.89	0.33	2.20%	0.7%
Total Seed Mix:	85.97	47.20		

Pilot

Landfill Pollinator Dry South & West

Function: Pollinator

Intent: Dry prairie mix for landfill plantings

Planting Area: S & W

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)	
Cover						
Avena sativa	Oats* (See Cover crop note)	11.13	37.88			
		Total Guild:	11.13	37.88	12.05%	78.9%

Forb

Agastache foeniculum	Blue Giant Hyssop	2.07	0.06
Asclepias tuberosa	Butterfly Milkweed	0.1	0.06
Asclepias verticillata	Whorled Milkweed	0.1	0.02
Coreopsis palmata	Bird's Foot Coreopsis	0.21	0.06
Helianthus pauciflorus	Stiff Sunflower	0.09	0.06
Liatris aspera	Rough Blazing Star	0.25	0.04
Monarda fistulosa	Wild Bergamot	1.42	0.06
Oligoneuron rigidum	Stiff Goldenrod	0.83	0.06
Penstemon grandiflorus	Large-flowered Beard Tongue	1	0.19
Phlox pilosa	Prairie Phlox	0.08	0.01
Rudbeckia hirta	Black-eyed Susan	10.32	0.31
Solidago nemoralis	Gray Goldenrod	3.86	0.04
Symphyotrichum ericoides	Heath Aster	2.58	0.04
Symphyotrichum laeve	Smooth Aster	1.26	0.06
Verbena stricta	Hoary Vervain	2	0.19
Viola pedatifida	Bearded Birdfoot Violet	0.14	0.01

Total Guild: 26.31 1.27 28.49% 2.7%

Graminoid

Andropogon gerardii	Big Bluestem	2.57	0.70
Bouteloua curtipendula	Side-oats Grama	4	1.82
Bouteloua gracilis	Blue Grama	6	0.41
Bromus kalmii	Kalm's Brome	1	0.34
Elymus canadensis	Canada Wild Rye	1.91	1.00
Koeleria macrantha	Junegrass	16	0.22
Schizachyrium scoparium	Little Bluestem	18	3.27
Sorghastrum nutans	Indian Grass	2.8	0.64
Sporobolus heterolepis	Prairie Dropseed	0.73	0.12

Total Guild: 53.01 8.51 57.41% 17.7%

Legume

Dalea candida	White Prairie Clover	0.39	0.06
Dalea purpurea	Purple Prairie Clover	1.5	0.27

Total Guild: 1.89 0.33 2.05% 0.7%

Total Seed Mix: 92.34 47.99

Pilot

Landfill Pollinator Mesic Northeast

Function: Pollinator

Intent: Mesic prairie mix for landfill plantings

Planting Area: NE

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild: 11.14 37.91 13.52% 73.7%

Forb

Agastache foeniculum	Blue Giant Hyssop	1.82	0.06
Asclepias syriaca	Common Milkweed	0.16	0.11
Asclepias tuberosa	Butterfly Milkweed	0.06	0.04
Geranium maculatum	Wild Geranium	0.02	0.01

Helianthus pauciflorus	Stiff Sunflower	0.09	0.06
Heliopsis helianthoides	Ox-eye	0.4	0.17
Monarda fistulosa	Wild Bergamot	1.61	0.06
Oligoneuron rigidum	Stiff Goldenrod	0.94	0.06
Rudbeckia hirta	Black-eyed Susan	10.56	0.31
Sisyrinchium campestre	Field Blue-eyed Grass	0.17	0.01
Symphotrichum ericoides	Heath Aster	2.3	0.03
Symphotrichum laeve	Smooth Aster	1.26	0.06
Verbena hastata	Blue Vervain	1.5	0.04
Verbena stricta	Hoary Vervain	0.64	0.06
Zizia aurea	Golden Alexanders	0.23	0.06

Total Guild:	21.76	1.15	26.42%	2.2%
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Graminoid

Andropogon gerardii	Big Bluestem	5	1.36
Bromus kalmii	Kalm's Brome	8	2.72
Elymus canadensis	Canada Wild Rye	2	1.05
Elymus trachycaulus	Slender Wheatgrass	2	0.99
Panicum virgatum	Switchgrass	10	1.94
Schizachyrium scoparium	Little Bluestem	16	2.90
Sorghastrum nutans	Indian Grass	5	1.13

Total Guild:	48	12.10	58.27%	23.5%
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Legume

Dalea candida	White Prairie Clover	0.44	0.06
Dalea purpurea	Purple Prairie Clover	1.03	0.19

Total Guild:	1.47	0.25	1.78%	0.5%
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Total Seed Mix:	82.37	51.42
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Function: Pollinator

Intent: Mesic prairie mix for landfill plantings

Planting Area: S & W

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Cover					
Avena sativa	Oats* (See Cover crop note)	11.14	37.91		
Total Guild:		11.14	37.91	13.01%	71.8%

Forb					
Agastache foeniculum	Blue Giant Hyssop	1.82	0.06		
Asclepias syriaca	Common Milkweed	0.16	0.11		
Asclepias tuberosa	Butterfly Milkweed	0.06	0.04		
Helianthus pauciflorus	Stiff Sunflower	0.09	0.06		
Heliopsis helianthoides	Ox-eye	0.4	0.17		
Liatris aspera	Rough Blazing Star	0.18	0.03		
Monarda fistulosa	Wild Bergamot	1.61	0.06		
Oligoneuron rigidum	Stiff Goldenrod	0.94	0.06		
Phlox pilosa	Prairie Phlox	0.08	0.01		
Rudbeckia hirta	Black-eyed Susan	10.56	0.31		
Sisyrinchium campestre	Field Blue-eyed Grass	0.17	0.01		
Symphotrichum ericoides	Heath Aster	2.3	0.03		
Symphotrichum laeve	Smooth Aster	1.26	0.06		
Verbena hastata	Blue Vervain	1.5	0.04		
Verbena stricta	Hoary Vervain	0.64	0.06		
Zizia aurea	Golden Alexanders	0.23	0.06		
Total Guild:		22	1.18	25.70%	2.2%

Graminoid					
Andropogon gerardii	Big Bluestem	5	1.36		
Bouteloua curtipendula	Side-oats Grama	3	1.36		
Bromus kalmii	Kalm's Brome	8	2.72		

<i>Elymus canadensis</i>	Canada Wild Rye	2	1.05
<i>Elymus trachycaulus</i>	Slender Wheatgrass	2	0.99
<i>Panicum virgatum</i>	Switchgrass	10	1.94
<i>Schizachyrium scoparium</i>	Little Bluestem	16	2.90
<i>Sorghastrum nutans</i>	Indian Grass	5	1.13

Total Guild:	51	13.47	59.57%	25.5%
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Legume

<i>Dalea candida</i>	White Prairie Clover	0.44	0.06
<i>Dalea purpurea</i>	Purple Prairie Clover	1.03	0.19

Total Guild:	1.47	0.25	1.72%	0.5%
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Total Seed Mix:	85.61	52.81
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Pilot

Little Bluestem Urban Prairie

Function: Conservation

Planting Area: Statewide

Specialization:

Intent: Little bluestem dry prairie for urban areas where the planting mix needs to be simple for aesthetic purposes and to decrease maintenance

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

<i>Avena sativa</i>	Oats* (See Cover crop note)	11.13	37.88
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Total Guild:	11.13	37.88	16.57%	84.4%
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Forb

<i>Asclepias tuberosa</i>	Butterfly Milkweed	0.1	0.06
<i>Asclepias verticillata</i>	Whorled Milkweed	0.05	0.01
<i>Liatris aspera</i>	Rough Blazing Star	0.25	0.04
<i>Penstemon grandiflorus</i>	Large-flowered Beard Tongue	0.32	0.06
<i>Rudbeckia hirta</i>	Black-eyed Susan	10.32	0.31
<i>Solidago nemoralis</i>	Gray Goldenrod	2	0.02
<i>Solidago ptarmicoides</i>	Upland White Aster	1.26	0.05
<i>Symphotrichum ericoides</i>	Heath Aster	2.58	0.04
<i>Symphotrichum laeve</i>	Smooth Aster	0.8	0.04

Tradescantia bracteata	Bracted Spiderwort	0.6	0.16
Verbena stricta	Hoary Vervain	1.2	0.12
Zizia aptera	Heart-leaved Alexanders	0.2	0.05

Total Guild: 19.68 0.96 29.30% 2.1%

Graminoid

Bouteloua curtipendula	Side-oats Grama	2	0.91
Bouteloua gracilis	Blue Grama	6	0.41
Bromus kalmii	Kalm's Brome	4	1.36
Koeleria macrantha	Junegrass	6	0.08
Schizachyrium scoparium	Little Bluestem	16.53	3.00

Total Guild: 34.53 5.76 51.41% 12.8%

Legume

Astragalus canadensis	Canada Milk Vetch	0.4	0.06
Dalea candida	White Prairie Clover	0.4	0.06
Dalea purpurea	Purple Prairie Clover	1.02	0.19

Total Guild: 1.82 0.31 2.71% 0.7%

Total Seed Mix: 67.16 44.90

Pilot

Low Diversity Buffer General

Function: Buffers

Intent: Low diversity native grass buffer mix for chemicals may impact pollinators

Planting Area: Statewide

Specialization: NRCS 393

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Graminoid					
Andropogon gerardii	Big Bluestem	18	4.90		
Elymus canadensis	Canada Wild Rye	3	1.57		
Panicum virgatum	Switchgrass	16	3.11		
Sorghastrum nutans	Indian Grass	18	4.08		
		Total Guild:	55	13.67	##### 100.0%

Pilot

Low Growing Solar Array Mix Northeast

Function: Pollinator Intent: Low growing native vegetation establishment for under solar panels in Northeastern MN
 Planting Area: NE
 Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Cover					
Avena sativa	Oats* (See Cover crop note)	11.13	37.88		
Total Guild:		11.13	37.88	19.27%	88.4%

Forb

Achillea millefolium	Common Yarrow	0.66	0.01		
Allium stellatum	Prairie Wild Onion	0.73	0.18		
Anemone canadensis	Canada Anemone	0.18	0.06		
Aquilegia canadensis	Columbine	0.44	0.03		
Asclepias tuberosa	Butterfly Milkweed	0.1	0.06		
Euthamia graminifolia	Grass-leaved Goldenrod	1.4	0.01		
Galium boreale	Northern Bedstraw	0.28	0.01		
Geranium maculatum	Wild Geranium	0.02	0.01		
Liatris aspera	Rough Blazing Star	0.25	0.04		
Penstemon grandiflorus	Large-flowered Beard Tongue	0.5	0.10		
Potentilla arguta	Prairie Cinquefoil	0.1	0.00		
Pycnanthemum virginianum	Virginia Mountain Mint	0.82	0.01		
Rudbeckia hirta	Black-eyed Susan	1.58	0.05		
Sisyrinchium campestre	Field Blue-eyed Grass	0.52	0.03		
Smilacina racemosa	False Solomons Seal	0.01	0.07		
Solidago nemoralis	Gray Goldenrod	1.2	0.01		
Solidago ptarmicoides	Upland White Aster	1	0.04		
Symphotrichum ericoides	Heath Aster	0.8	0.01		
Symphotrichum laeve	Smooth Aster	0.63	0.03		

Symphyotrichum lateriflorum	Calico Aster	1	0.01
Zizia aptera	Heart-leaved Alexanders	0.55	0.12

Total Guild: 12.77 0.91 22.11% 2.1%

Graminoid

Bromus kalmii	Kalm's Brome	3	1.02
Danthonia spicata	Poverty Grass	6	0.65
Festuca rubra	Red Fescue	12	1.42
Koeleria macrantha	Junegrass	4.59	0.06

Total Guild: 25.59 3.16 44.30% 7.4%

Legume

Astragalus canadensis	Canada Milk Vetch	0.4	0.06
Dalea candida	White Prairie Clover	1.7	0.24
Dalea purpurea	Purple Prairie Clover	1.02	0.19

Total Guild: 3.12 0.49 5.40% 1.1%

Sedge

Carex bicknellii	Bicknell's Sedge	0.95	0.15
Carex brevior	Short Sedge	2.1	0.20
Carex scoparia	Lance-fruited Oval sedge	2.1	0.07

Total Guild: 5.15 0.42 8.92% 1.0%

Total Seed Mix: 57.76 42.85

Pilot Low Growing Solar Array Mix South & West

Function: Pollinator

Intent: Low growing native vegetation establishment for under solar panels in south and west MN

Planting Area: S & W

Specialization:

Scientific Name	Common Name	Seeds/ sa ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	6	20.42
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Total Guild: 6 20.42 12.85% 77.9%

Forb

Achillea millefolium	Common Yarrow	0.41	0.01
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<i>Allium stellatum</i>	Prairie Wild Onion	0.51	0.13
<i>Anemone canadensis</i>	Canada Anemone	0.18	0.06
<i>Anemone cylindrica</i>	Long-headed Thimbleweed	0.6	0.06
<i>Asclepias syriaca</i>	Common Milkweed	0.46	0.31
<i>Asclepias verticillata</i>	Whorled Milkweed	0.32	0.08
<i>Astragalus crassicaulis</i>	Ground Plum	0.36	0.19
<i>Echinacea angustifolia</i>	Narrow-leaved Purple Coneflower	0.64	0.25
<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	0.8	0.01
<i>Galium boreale</i>	Northern Bedstraw	0.4	0.02
<i>Liatris aspera</i>	Rough Blazing Star	0.28	0.05
<i>Lobelia spicata</i>	Rough-spiked Lobelia	1.03	0.00
<i>Monarda fistulosa</i>	Wild Bergamot	0.8	0.03
<i>Penstemon grandiflorus</i>	Large-flowered Beard Tongue	0.48	0.09
<i>Phlox pilosa</i>	Prairie Phlox	0.11	0.02
<i>Potentilla arguta</i>	Prairie Cinquefoil	0.53	0.01
<i>Pycnanthemum virginianum</i>	Virginia Mountain Mint	0.76	0.01
<i>Ratibida columnifera</i>	Prairie Coneflower	0.96	0.06
<i>Rudbeckia hirta</i>	Black-eyed Susan	1.58	0.05
<i>Sisyrinchium campestris</i>	Field Blue-eyed Grass	0.52	0.03
<i>Solidago rigida</i>	Stiff Goldenrod	0.47	0.03
<i>Solidago speciosa</i>	Showy Goldenrod	0.55	0.02
<i>Symphotrichum ericoides</i>	Heath Aster	0.46	0.01
<i>Symphotrichum laeve</i>	Smooth Aster	0.63	0.03
<i>Zizia aurea</i>	Heart-leaved Alexanders	0.55	0.12

Total Guild:	14.39	1.66	30.83%	6.3%
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Graminoid

<i>Bouteloua curtipendula</i>	Side-oats Grama	3.31	1.50
<i>Bouteloua gracilis</i>	Blue Grama	4.59	0.31
<i>Koeleria macrantha</i>	Junegrass	4.59	0.06
<i>Schizachyrium scoparium</i>	Little Bluestem	4.13	0.75

Sporobolus heterolepis	Prairie Dropseed	2.94	0.50
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Total Guild:	19.56	3.13	41.90%	11.9%
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Legume

Astragalus canadensis	Canada Milk Vetch	0.78	0.12
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Dalea candida	White Prairie Clover	1.74	0.25
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Dalea purpurea	Purple Prairie Clover	2.07	0.38
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Total Guild:	4.59	0.75	9.83%	2.9%
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Sedge

Carex bicknellii	Bicknell's Sedge	0.78	0.12
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Carex brevior	Short Sedge	0.67	0.06
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Carex pensylvanica	Pennsylvania Sedge	0.69	0.06
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Total Guild:	2.14	0.25	4.58%	1.0%
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Total Seed Mix:	46.68	26.21
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Pilot

Low Growing Solar Array Moist Soils South and West

Function: Pollinator

Intent: Low growing native vegetation establishment for under solar panels in south and west MN

Planting Area: S & W

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.13	37.88
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Total Guild:	11.13	37.88	10.11%	93.3%
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Forb

Allium stellatum	Prairie Wild Onion	0.73	0.18
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Anemone canadensis	Canada Anemone	0.18	0.06
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Asclepias incarnata	Marsh Milkweed	0.43	0.24
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Euthamia graminifolia	Grass-leaved Goldenrod	1.4	0.01
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Galium boreale	Northern Bedstraw	0.26	0.01
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Lobelia siphilitica	Great Lobelia	2.9	0.02
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Phlox pilosa	Prairie Phlox	0.08	0.01
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Potentilla arguta	Prairie Cinquefoil	0.1	0.00
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<i>Pycnanthemum virginianum</i>	Virginia Mountain Mint	0.85	0.01
<i>Ratibida columnifera</i>	Prairie Coneflower	1.58	0.10
<i>Rudbeckia hirta</i>	Black-eyed Susan	1.58	0.05
<i>Sisyrinchium campestre</i>	Field Blue-eyed Grass	0.52	0.03
<i>Symphotrichum laeve</i>	Smooth Aster	0.63	0.03
<i>Symphotrichum puniceum</i>	Red-stemmed Aster	5	0.17
<i>Zizia aurea</i>	Golden Alexanders	1	0.25

Total Guild: 17.24 1.18 15.66% 2.9%

Graminoid

<i>Calamagrostis canadensis</i>	Bluejoint	5	0.05
<i>Glyceria striata</i>	Fowl Manna Grass	3.3	0.10
<i>Leersia oryzoides</i>	Rice Cut Grass	3.1	0.25
<i>Poa palustris</i>	Fowl Bluegrass	20	0.42

Total Guild: 31.4 0.82 28.53% 2.0%

Legume

<i>Astragalus canadensis</i>	Canada Milk Vetch	0.4	0.06
<i>Dalea candida</i>	White Prairie Clover	1.7	0.24

Total Guild: 2.1 0.31 1.91% 0.8%

Sedge

<i>Carex scoparia</i>	Lance-fruited Oval sedge	2.1	0.07
<i>Carex stipata</i>	Common Fox Sedge	2.1	0.17
<i>Carex vulpinoidea</i>	Brown Fox Sedge	4	0.11
<i>Scirpus cyperinus</i>	Woolgrass	40	0.06

Total Guild: 48.2 0.41 43.79% 1.0%

Total Seed Mix: 110.07 40.58

State Mix

Mesic Prairie General

Function: Conservation

Intent: General mesic prairie mix for native roadsides, ecological restoration, or conservation program plantings.

Planting Area: Statewide

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild:	11.14	37.91	15.80%	76.3%
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Forb

Agastache foeniculum	Blue Giant Hyssop	1.82	0.06
Amorpha canescens	Lead Plant	0.25	0.04
Asclepias syriaca	Common Milkweed	0.06	0.04
Asclepias tuberosa	Butterfly Milkweed	0.06	0.04
Helianthus pauciflorus	Stiff Sunflower	0.09	0.06
Heliopsis helianthoides	Ox-eye	0.29	0.13
Liatris aspera	Rough Blazing Star	0.18	0.03
Liatris pycnostachya	Great Blazing Star	0.13	0.03
Monarda fistulosa	Wild Bergamot	1.61	0.06
Oligoneuron rigidum	Stiff Goldenrod	0.94	0.06
Rudbeckia hirta	Black-eyed Susan	10.56	0.31
Symphyotrichum ericoides	Heath Aster	2.3	0.03
Symphyotrichum laeve	Smooth Aster	1.26	0.06
Verbena hastata	Blue Vervain	1.5	0.04
Verbena stricta	Hoary Vervain	0.64	0.06
Zizia aurea	Golden Alexanders	0.23	0.06

Total Guild:	21.92	1.12	31.09%	2.3%
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Graminoid

Andropogon gerardii	Big Bluestem	7.35	2.00
Bouteloua curtipendula	Side-oats Grama	3.53	1.60
Bromus kalmii	Kalm's Brome	1.47	0.50
Elymus canadensis	Canada Wild Rye	2.23	1.17
Elymus trachycaulus	Slender Wheatgrass	2.53	1.25
Panicum virgatum	Switchgrass	0.32	0.06
Schizachyrium scoparium	Little Bluestem	8.82	1.60
Sorghastrum nutans	Indian Grass	8.82	2.00

Sporobolus heterolepis	Prairie Dropseed	0.39	0.07
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Total Guild:	35.46	10.25	50.29%	20.6%
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Legume

Astragalus canadensis	Canada Milk Vetch	0.39	0.06
Dalea candida	White Prairie Clover	0.44	0.06
Dalea purpurea	Purple Prairie Clover	1.03	0.19
Desmodium canadense	Canada Tick Trefoil	0.13	0.06

Total Guild:	1.99	0.38	2.82%	0.8%
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Total Seed Mix:	70.51	49.66
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State Mix

Mesic Prairie Northwest

Function: Conservation

Intent: Regional mesic prairie reconstruction for wetland

Planting Area: NW

mitigation, ecological restoration, or conservation program plantings.

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	1.12	3.81
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Total Guild:	1.12	3.81	2.71%	30.3%
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Forb

Allium stellatum	Prairie Wild Onion	0.12	0.03
Heliopsis helianthoides	Ox-eye	0.14	0.06
Liatris aspera	Rough Blazing Star	0.18	0.03
Liatris pycnostachya	Great Blazing Star	0.24	0.06
Monarda fistulosa	Wild Bergamot	0.77	0.03
Oligoneuron rigidum	Stiff Goldenrod	0.45	0.03
Pycnanthemum virginianum	Virginia Mountain Mint	3	0.04
Ratibida columnifera	Prairie Coneflower	0.93	0.06
Rudbeckia hirta	Black-eyed Susan	2.2	0.07
Symphyotrichum ericoides	Heath Aster	1.1	0.01
Symphyotrichum laeve	Smooth Aster	0.61	0.03

Verbena hastata	Blue Vervain	2.91	0.09
Zizia aurea	Golden Alexanders	0.7	0.17

Total Guild: 13.35 0.71 32.35% 5.6%

Graminoid

Andropogon gerardii	Big Bluestem	3.67	1.00
Bouteloua curtipendula	Side-oats Grama	2.64	1.20
Elymus canadensis	Canada Wild Rye	1.91	1.00
Elymus trachycaulus	Slender Wheatgrass	2.54	1.26
Hesperostipa spartea	Porcupine Grass	0.11	0.44
Panicum virgatum	Switchgrass	0.9	0.18
Schizachyrium scoparium	Little Bluestem	8.28	1.50
Sorghastrum nutans	Indian Grass	5.29	1.20

Total Guild: 25.34 7.77 61.40% 61.8%

Legume

Astragalus canadensis	Canada Milk Vetch	0.37	0.06
Dalea candida	White Prairie Clover	0.42	0.06
Dalea purpurea	Purple Prairie Clover	0.5	0.09
Desmodium canadense	Canada Tick Trefoil	0.17	0.08

Total Guild: 1.46 0.29 3.54% 2.3%

Total Seed Mix: 41.27 12.58

State Mix

Mesic Prairie Southeast

Function: Conservation

Planting Area: SE

Specialization:

Intent: Regional mesic prairie reconstruction for wetland mitigation, ecological restoration, or conservation program plantings.

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	1.2	4.08
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Total Guild: 1.2 4.08 3.13% 30.0%

Forb

Asclepias tuberosa	Butterfly Milkweed	0.1	0.06
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<i>Asclepias verticillata</i>	Whorled Milkweed	0.05	0.01
<i>Heliopsis helianthoides</i>	Ox-eye	0.12	0.05
<i>Liatris aspera</i>	Rough Blazing Star	0.15	0.03
<i>Liatris pycnostachya</i>	Great Blazing Star	0.14	0.03
<i>Monarda fistulosa</i>	Wild Bergamot	0.18	0.01
<i>Oligoneuron rigidum</i>	Stiff Goldenrod	0.31	0.02
<i>Ratibida pinnata</i>	Gray-headed Coneflower	0.2	0.02
<i>Rudbeckia hirta</i>	Black-eyed Susan	1.54	0.05
<i>Symphyotrichum ericoides</i>	Heath Aster	0.4	0.01
<i>Symphyotrichum laeve</i>	Smooth Aster	1	0.05
<i>Tradescantia bracteata</i>	Bracted Spiderwort	0.15	0.04
<i>Verbena hastata</i>	Blue Vervain	1.5	0.04
<i>Verbena stricta</i>	Hoary Vervain	1.05	0.10
<i>Zizia aurea</i>	Golden Alexanders	0.29	0.07

Total Guild:	7.18	0.59	18.72%	4.4%
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Graminoid

<i>Andropogon gerardii</i>	Big Bluestem	3.3	0.90
<i>Bouteloua curtipendula</i>	Side-oats Grama	3.01	1.37
<i>Elymus canadensis</i>	Canada Wild Rye	2.01	1.05
<i>Elymus trachycaulus</i>	Slender Wheatgrass	2.28	1.13
<i>Panicum virgatum</i>	Switchgrass	1.1	0.21
<i>Schizachyrium scoparium</i>	Little Bluestem	7	1.27
<i>Sorghastrum nutans</i>	Indian Grass	8.82	2.00

Total Guild:	27.52	7.93	71.74%	58.2%
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Legume

<i>Astragalus canadensis</i>	Canada Milk Vetch	1	0.16
<i>Chamaecrista fasciculata</i>	Partridge Pea	0.6	0.61
<i>Dalea candida</i>	White Prairie Clover	0.06	0.01
<i>Dalea purpurea</i>	Purple Prairie Clover	0.5	0.09
<i>Desmodium canadense</i>	Canada Tick Trefoil	0.3	0.15

Total Guild:	2.46	1.01	6.41%	7.4%
Total Seed Mix:	38.36	13.62		

State Mix

Mesic Prairie Southwest

Function: Conservation Intent: Regional mesic prairie reconstruction for wetland mitigation, ecological restoration, or conservation program plantings.

Planting Area: SW

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	1.42	4.83		
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Total Guild:	1.42	4.83	3.55%	34.9%
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Forb

Echinacea angustifolia	Narrow-leaved Purple Conefl	0.2	0.08		
Heliopsis helianthoides	Ox-eye	0.14	0.06		
Liatris aspera	Rough Blazing Star	0.2	0.03		
Liatris pycnostachya	Great Blazing Star	0.1	0.02		
Monarda fistulosa	Wild Bergamot	0.9	0.04		
Oligoneuron rigidum	Stiff Goldenrod	0.5	0.03		
Ratibida pinnata	Gray-headed Coneflower	0.8	0.07		
Rudbeckia hirta	Black-eyed Susan	2	0.06		
Symphotrichum laeve	Smooth Aster	0.6	0.03		
Verbena hastata	Blue Vervain	2.5	0.07		
Verbena stricta	Hoary Vervain	0.5	0.05		
Zizia aurea	Golden Alexanders	1	0.25		

Total Guild:	9.44	0.80	23.58%	5.7%
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Graminoid

Andropogon gerardii	Big Bluestem	3.3	0.90		
Bouteloua curtipendula	Side-oats Grama	1.98	0.90		
Elymus canadensis	Canada Wild Rye	1.71	0.90		
Elymus trachycaulus	Slender Wheatgrass	2.27	1.12		

Nassella viridula	Green Needle Grass	1.7	0.44
Panicum virgatum	Switchgrass	0.8	0.16
Pascopyrum smithii	Western Wheatgrass	1.3	0.50
Schizachyrium scoparium	Little Bluestem	8.27	1.50
Sorghastrum nutans	Indian Grass	6.63	1.50

Total Guild:	27.96	7.91	69.85%	57.1%
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Legume

Astragalus canadensis	Canada Milk Vetch	0.4	0.06
Chamaecrista fasciculata	Partridge Pea	0.1	0.10
Dalea candida	White Prairie Clover	0.2	0.03
Dalea purpurea	Purple Prairie Clover	0.4	0.07
Desmodium canadense	Canada Tick Trefoil	0.11	0.05

Total Guild:	1.21	0.32	3.02%	2.3%
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Total Seed Mix:	40.03	13.86
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Pilot

Mesic Short Urban Buffer Northeast

Function: Buffers

Intent: Stabilized steep eroding slopes with both early and later successional species.

Planting Area: NE

Specialization: NRCS 327

Scientific Name	Common Name	Seeds/ sa ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.13	37.88
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Total Guild:	11.13	37.88	16.48%	83.0%
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Forb

Achillea millefolium	Common Yarrow	1	0.02
Anaphalis margaritacea	Pearly Everlasting	0.8	0.01
Asclepias syriaca	Common Milkweed	0.16	0.11
Asclepias tuberosa	Butterfly Milkweed	0.071	0.04
Geranium maculatum	Wild Geranium	0.02	0.01
Helianthus pauciflorus	Stiff Sunflower	0.07	0.05

<i>Pycnanthemum virginianum</i>	Virginia Mountain Mint	0.9	0.01
<i>Rudbeckia hirta</i>	Black-eyed Susan	10.32	0.31
<i>Smilacina racemosa</i>	False Solomons Seal	0.01	0.07
<i>Solidago nemoralis</i>	Gray Goldenrod	3.5	0.03
<i>Symphotrichum ericoides</i>	Heath Aster	2	0.03
<i>Symphotrichum laeve</i>	Smooth Aster	1.26	0.06
<i>Verbena stricta</i>	Hoary Vervain	1.29	0.13
<i>Zizia aurea</i>	Golden Alexanders	0.8	0.20

Total Guild: 22.201 1.07 32.87% 2.3%

Graminoid

<i>Bouteloua curtipendula</i>	Side-oats Grama	3.4	1.54
<i>Bouteloua gracilis</i>	Blue Grama	8	0.54
<i>Bromus kalmii</i>	Kalm's Brome	2	0.68
<i>Elymus riparius</i>	Riverbank Wild Rye	0.22	0.21
<i>Schizachyrium scoparium</i>	Little Bluestem	18	3.27
<i>Sporobolus heterolepis</i>	Prairie Dropseed	1.1	0.19

Total Guild: 32.72 6.43 48.44% 14.1%

Legume

<i>Dalea candida</i>	White Prairie Clover	0.39	0.06
<i>Dalea purpurea</i>	Purple Prairie Clover	1.1	0.20

Total Guild: 1.49 0.26 2.21% 0.6%

Total Seed Mix: 67.541 45.63

Pilot

Mesic Short Urban Buffer South & West

Function: Buffers

Intent: Showy prairie buffer establishment in urban areas

Planting Area: S & W

Specialization: NRCS 327

Scientific Name	Common Name	Seeds/ sa ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

<i>Avena sativa</i>	Oats* (See Cover crop note)	11.13	37.88
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Total Guild: 11.13 37.88 16.91% 82.4%

Forb

<i>Achillea millefolium</i>	Common Yarrow	1	0.02
<i>Asclepias tuberosa</i>	Butterfly Milkweed	0.071	0.04
<i>Asclepias verticillata</i>	Whorled Milkweed	0.1	0.02
<i>Coreopsis palmata</i>	Bird's Foot Coreopsis	0.15	0.04
<i>Helianthus pauciflorus</i>	Stiff Sunflower	0.07	0.05
<i>Liatris aspera</i>	Rough Blazing Star	0.25	0.04
<i>Phlox pilosa</i>	Prairie Phlox	0.08	0.01
<i>Rudbeckia hirta</i>	Black-eyed Susan	9	0.27
<i>Sisyrinchium campestre</i>	Field Blue-eyed Grass	0.17	0.01
<i>Solidago speciosa</i>	Showy Goldenrod	2	0.06
<i>Symphotrichum ericoides</i>	Heath Aster	2	0.03
<i>Symphotrichum laeve</i>	Smooth Aster	1.26	0.06
<i>Tradescantia ohiensis</i>	Ohio Spiderwort	0.1	0.03
<i>Verbena stricta</i>	Hoary Vervain	1.29	0.13
<i>Viola pedatifida</i>	Bearded Birdfoot Violet	0.14	0.01
<i>Zizia aurea</i>	Golden Alexanders	0.8	0.20

Total Guild: 18.481 1.02 28.08% 2.2%

Graminoid

<i>Bouteloua curtipendula</i>	Side-oats Grama	3.4	1.54
<i>Bouteloua gracilis</i>	Blue Grama	8	0.54
<i>Bromus kalmii</i>	Kalm's Brome	2	0.68
<i>Elymus riparius</i>	Riverbank Wild Rye	0.22	0.21
<i>Schizachyrium scoparium</i>	Little Bluestem	20	3.63
<i>Sporobolus heterolepis</i>	Prairie Dropseed	1.1	0.19

Total Guild: 34.72 6.79 52.75% 14.8%

Legume

<i>Dalea candida</i>	White Prairie Clover	0.39	0.06
<i>Dalea purpurea</i>	Purple Prairie Clover	1.1	0.20

Total Guild: 1.49 0.26 2.26% 0.6%

Pilot

Mid Diversity Mesic to Dry Buffer South & West

Function: Buffers

Intent: Mid diversity mesic prairie buffer establishment

Planting Area: S & W

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91		
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Total Guild:	11.14	37.91	20.88%	82.1%
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Forb

Asclepias tuberosa	Butterfly Milkweed	0.05	0.03		
Liatris aspera	Rough Blazing Star	0.18	0.03		
Monarda fistulosa	Wild Bergamot	1.61	0.06		
Oligoneuron rigidum	Stiff Goldenrod	1	0.07		
Phlox pilosa	Prairie Phlox	0.065	0.01		
Rudbeckia hirta	Black-eyed Susan	6	0.18		
Symphotrichum ericoides	Heath Aster	1.5	0.02		
Verbena stricta	Hoary Vervain	1.45	0.14		
Zizia aurea	Golden Alexanders	0.23	0.06		

Total Guild:	12.085	0.60	22.65%	1.3%
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Graminoid

Andropogon gerardii	Big Bluestem	6	1.63		
Bouteloua curtipendula	Side-oats Grama	3	1.36		
Elymus canadensis	Canada Wild Rye	0.5	0.26		
Elymus trachycaulus	Slender Wheatgrass	1.2	0.59		
Panicum virgatum	Switchgrass	6	1.17		
Schizachyrium scoparium	Little Bluestem	7	1.27		
Sorghastrum nutans	Indian Grass	5	1.13		

Total Guild:	28.7	7.42	53.80%	16.1%
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Legume

Astragalus canadensis	Canada Milk Vetch	0.39	0.06
Dalea purpurea	Purple Prairie Clover	1.03	0.19

Total Guild: 1.42 0.25 2.66% 0.5%

Total Seed Mix: 53.345 46.18

Pilot

Mid Diversity Moist Buffer Northeast

Function: Buffers

Intent: Mid diversity native buffer establishment in moist areas in northeast MN

Planting Area: NE

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91		
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Total Guild: 11.14 37.91 7.17% 84.5%

Forb

Asclepias incarnata	Marsh Milkweed	0.18	0.10		
Doellingeria umbellata	Flat-topped Aster	1.25	0.05		
Euthamia graminifolia	Grass-leaved Goldenrod	2.2	0.02		
Eutrochium maculatum	Spotted Joe Pye Weed	2	0.06		
Mimulus ringens	Blue Monkey Flower	16.5	0.02		
Sisyrinchium campestre	Field Blue-eyed Grass	0.17	0.01		
Solidago gigantea	Giant Goldenrod	2	0.02		
Symphotrichum lanceolatum	Eastern Panicked Aster	2	0.03		
Verbena hastata	Blue Vervain	4	0.12		

Total Guild: 30.3 0.43 19.49% 1.0%

Graminoid

Andropogon gerardii	Big Bluestem	8.2	2.23		
Bromus ciliatus	Fringed Brome	6	1.63		
Calamagrostis canadensis	Bluejoint	2.8	0.03		
Elymus virginicus	Virginia Wild Rye	3	1.94		
Glyceria grandis	Tall Manna Grass	2	0.08		

Poa palustris	Fowl Bluegrass	15	0.31
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Total Guild:	37	6.23	23.80%	13.9%
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Sedge

Carex scoparia	Lance-fruited Oval sedge	1	0.03
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Scirpus atrovirens	Dark Green Bulrush	36	0.21
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Scirpus cyperinus	Woolgrass	40	0.06
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Total Guild:	77	0.31	49.54%	0.7%
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Total Seed Mix:	155.44	44.88
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Pilot

Mid Diversity Moist Buffer South & West

Function: Buffers

Intent: Mid diversity native buffer establishment in moist areas in southern and western MN

Planting Area: S & W

Specialization: NRCS 342

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	3.12	10.62
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Total Guild:	3.12	10.62	3.01%	62.6%
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Forb

Asclepias incarnata	Marsh Milkweed	0.15	0.09
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Eupatorium perfoliatum	Common Boneset	1.6	0.03
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Euthamia graminifolia	Grass-leaved Goldenrod	1.6	0.01
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Eutrochium maculatum	Spotted Joe Pye Weed	0.75	0.02
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Helenium autumnale	Autumn Sneezeweed	2	0.04
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Helianthus grosseserratus	Sawtooth Sunflower	0.2	0.04
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Lobelia siphilitica	Great Lobelia	4	0.02
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Mimulus ringens	Blue Monkey Flower	12	0.01
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Sisyrinchium campestre	Field Blue-eyed Grass	0.17	0.01
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Symphotrichum lanceolatum	Eastern Panicked Aster	1.1	0.02
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Verbena hastata	Blue Vervain	4	0.12
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Zizia aurea	Golden Alexanders	0.5	0.12
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Total Guild:	28.07	0.53	27.04%	3.1%
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Graminoid

Andropogon gerardii	Big Bluestem	8.2	2.23
Elymus virginicus	Virginia Wild Rye	4	2.59
Glyceria grandis	Tall Manna Grass	6.6	0.26
Leersia oryzoides	Rice Cut Grass	1	0.08
Poa palustris	Fowl Bluegrass	14	0.29

Total Guild:	33.8	5.46	32.57%	32.2%
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Sedge

Carex stipata	Common Fox Sedge	0.8	0.06
Carex vulpinoidea	Brown Fox Sedge	3	0.08
Scirpus atrovirens	Dark Green Bulrush	35	0.21

Total Guild:	38.8	0.35	37.38%	2.1%
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Total Seed Mix:	103.79	16.96
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State Mix

Native Construction

Function: Stabilization

Planting Area: Statewide

Specialization:

Intent: Mid-term soil stabilization using native species. Also suitable for sides of agricultural drainage ditches or low-diversity mesic prairie plantings.

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild:	11.14	37.91	14.30%	73.3%
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Forb

Monarda fistulosa	Wild Bergamot	0.39	0.02
Rudbeckia hirta	Black-eyed Susan	3	0.09
Verbena stricta	Hoary Vervain	0.5	0.05

Total Guild:	3.89	0.15	4.99%	0.3%
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Graminoid

Andropogon gerardii	Big Bluestem	4.6	1.25
Bouteloua curtipendula	Side-oats Grama	2.21	1.00
Bromus ciliatus	Fringed Brome	5.67	1.54

Elymus canadensis	Canada Wild Rye	3.82	2.00
Elymus trachycaulus	Slender Wheatgrass	6.33	3.13
Elymus virginicus	Virginia Wild Rye	3.09	2.00
Panicum virgatum	Switchgrass	3.85	0.75
Poa palustris	Fowl Bluegrass	28.5	0.60
Sorghastrum nutans	Indian Grass	4.4	1.00

Total Guild:	62.47	13.28	80.17%	25.7%
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Legume

Chamaecrista fasciculata	Partridge Pea	0.27	0.27
Desmodium canadense	Canada Tick Trefoil	0.15	0.07

Total Guild:	0.42	0.35	0.54%	0.7%
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Total Seed Mix:	77.92	51.69
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Pilot

Native Forage Buffer Mix South & West

Function: Buffers

Intent: Native buffer seed mix that can be hayed once or twice a year

Planting Area: S & W

Specialization: NRCS 393

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild:	11.14	37.91	21.85%	74.6%
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Forb

Helianthus maximilianii	Maximilian's Sunflower	0.3	0.06
Ratibida pinnata	Gray-headed Coneflower	2.15	0.20

Total Guild:	2.45	0.26	4.81%	0.5%
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Graminoid

Andropogon gerardii	Big Bluestem	8	2.18
Bromus ciliatus	Fringed Brome	2	0.54
Bromus kalmii	Kalm's Brome	1	0.34
Elymus canadensis	Canada Wild Rye	3	1.57
Elymus trachycaulus	Slender Wheatgrass	4	1.98

Elymus virginicus	Virginia Wild Rye	3	1.94
Panicum virgatum	Switchgrass	7	1.36
Sorghastrum nutans	Indian Grass	6	1.36

Total Guild: 34 11.28 66.69% 22.2%

Legume

Chamaecrista fasciculata	Partridge Pea	0.99	1.00
Dalea candida	White Prairie Clover	1.3	0.19
Dalea purpurea	Purple Prairie Clover	1.1	0.20

Total Guild: 3.39 1.38 6.65% 2.7%

Total Seed Mix: 50.98 50.83

Pilot

Native Grass Waterway General

Function: Stormwater

Intent: Native vegetation establishment for grass waterway establishment

Planting Area: Statewide

Specialization: NRCS 342

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild: 11.14 37.91 21.33% 83.9%

Forb

Monarda fistulosa	Wild Bergamot	1.61	0.06
Oligoneuron rigidum	Stiff Goldenrod	0.94	0.06
Rudbeckia hirta	Black-eyed Susan	10.56	0.31
Symphotrichum lanceolatum	Eastern Panicked Aster	2.3	0.04
Zizia aurea	Golden Alexanders	0.23	0.06

Total Guild: 15.64 0.53 29.94% 1.2%

Graminoid

Andropogon gerardii	Big Bluestem	7	1.91
Bromus kalmii	Kalm's Brome	1	0.34
Elymus canadensis	Canada Wild Rye	0.5	0.26
Elymus trachycaulus	Slender Wheatgrass	2.53	1.25

Panicum virgatum	Switchgrass	6	1.17
Sorghastrum nutans	Indian Grass	7	1.59

Total Guild: 24.03 6.52 46.01% 14.4%

Legume

Astragalus canadensis	Canada Milk Vetch	0.39	0.06
Dalea purpurea	Purple Prairie Clover	1.03	0.19

Total Guild: 1.42 0.25 2.72% 0.6%

Total Seed Mix: 52.23 45.21

State Mix

Oats Cover Crop

Function: Cover

Intent: Temporary cover crop for spring and summer plantings

Planting Area: Statewide

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	44.54	151.58		
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Total Guild: 44.54 151.58 ##### 100.0%

Total Seed Mix: 44.54 151.58

Pilot

Pollinator Plot Northwest

Function: Pollinator

Intent: Diverse pollinator habitat establishment for conservation plantings a few acres in size in northwest

Planting Area: NW

Specialization: NRCS CP 42

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.13	37.88		
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Total Guild: 11.13 37.88 25.03% 89.3%

Forb

Agastache foeniculum	Blue Giant Hyssop	0.35	0.01
Allium stellatum	Prairie Wild Onion	0.041	0.01
Amorpha canescens	Lead Plant	0.37	0.06

<i>Asclepias syriaca</i>	Common Milkweed	0.32	0.22
<i>Asclepias tuberosa</i>	Butterfly Milkweed	0.1	0.06
<i>Echinacea angustifolia</i>	Narrow-leaved Purple Conefl	0.16	0.06
<i>Helianthus maximiliani</i>	Maximilian's Sunflower	0.3	0.06
<i>Helianthus pauciflorus</i>	Stiff Sunflower	0.09	0.06
<i>Heliopsis helianthoides</i>	Ox-eye	0.14	0.06
<i>Liatris aspera</i>	Rough Blazing Star	0.37	0.06
<i>Monarda fistulosa</i>	Wild Bergamot	1.61	0.06
<i>Oligoneuron rigidum</i>	Stiff Goldenrod	0.94	0.06
<i>Phlox pilosa</i>	Prairie Phlox	0.08	0.01
<i>Pycnanthemum virginianum</i>	Virginia Mountain Mint	0.82	0.01
<i>Rudbeckia hirta</i>	Black-eyed Susan	4	0.12
<i>Sisyrinchium campestre</i>	Field Blue-eyed Grass	0.17	0.01
<i>Solidago nemoralis</i>	Gray Goldenrod	2.18	0.02
<i>Symphotrichum ericoides</i>	Heath Aster	1.6	0.02
<i>Symphotrichum laeve</i>	Smooth Aster	1.26	0.06
<i>Verbena hastata</i>	Blue Vervain	6	0.18
<i>Viola pedatifida</i>	Bearded Birdfoot Violet	0.14	0.01
<i>Zizia aurea</i>	Golden Alexanders	0.25	0.06

Total Guild:	21.291	1.30	47.89%	3.1%
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Graminoid

<i>Andropogon gerardii</i>	Big Bluestem	2.3	0.63
<i>Bouteloua curtipendula</i>	Side-oats Grama	1.8	0.82
<i>Elymus canadensis</i>	Canada Wild Rye	0.8	0.42
<i>Hesperostipa spartea</i>	Porcupine Grass	0.02	0.08
<i>Schizachyrium scoparium</i>	Little Bluestem	3	0.54
<i>Sporobolus heterolepis</i>	Prairie Dropseed	3.6	0.61

Total Guild:	11.52	3.10	25.91%	7.3%
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Legume

<i>Astragalus canadensis</i>	Canada Milk Vetch	0.39	0.06
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Desmodium canadense

Canada Tick Trefoil

0.13

0.06

Total Guild:

0.52

0.13

1.17%

0.3%

Total Seed Mix:

44.461

42.41

Pilot

Pollinator Plot Urban Southeast

Function: Pollinator

Intent: Diverse pollinator habitat establishment for conservation plantings a few acres in size in urban areas

Planting Area: SE

Specialization: NRCS 327 Jobsheet #16

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa

Oats* (See Cover crop note)

11.13

37.88

Total Guild:

11.13

37.88

17.81%

87.2%

Forb

Agastache foeniculum

Blue Giant Hyssop

0.4

0.01

Allium stellatum

Prairie Wild Onion

0.2

0.05

Amorpha canescens

Lead Plant

0.37

0.06

Asclepias syriaca

Common Milkweed

0.2

0.14

Asclepias tuberosa

Butterfly Milkweed

0.1

0.06

Coreopsis palmata

Bird's Foot Coreopsis

0.2

0.05

Echinacea angustifolia

Narrow-leaved Purple Conefl

0.16

0.06

Helenium autumnale

Autumn Sneezeweed

2.98

0.06

Helianthus maximiliani

Maximilian's Sunflower

0.3

0.06

Helianthus pauciflorus

Stiff Sunflower

0.09

0.06

Heliopsis helianthoides

Ox-eye

0.14

0.06

Liatris aspera

Rough Blazing Star

0.37

0.06

Liatris ligulistylis

Northern Plains Blazing Star

0.2

0.05

Monarda fistulosa

Wild Bergamot

1.61

0.06

Monarda punctata

Horsemint

1

0.03

Oligoneuron rigidum

Stiff Goldenrod

0.94

0.06

Penstemon digitalis

Foxglove Beardtongue

2.98

0.06

<i>Penstemon grandiflorus</i>	Large-flowered Beard Tongue	0.3	0.06
<i>Phlox pilosa</i>	Prairie Phlox	0.05	0.01
<i>Pycnanthemum virginianum</i>	Virginia Mountain Mint	0.9	0.01
<i>Rudbeckia hirta</i>	Black-eyed Susan	4	0.12
<i>Rudbeckia triloba</i>	Brown-eyed Susan	2	0.16
<i>Sisyrinchium campestre</i>	Field Blue-eyed Grass	0.17	0.01
<i>Solidago speciosa</i>	Showy Goldenrod	2.18	0.06
<i>Symphotrichum ericoides</i>	Heath Aster	1.8	0.02
<i>Symphotrichum laeve</i>	Smooth Aster	1.26	0.06
<i>Symphotrichum novae-angliae</i>	New England Aster	1	0.04
<i>Tradescantia bracteata</i>	Bracted Spiderwort	0.23	0.06
<i>Verbena stricta</i>	Hoary Vervain	1.45	0.14
<i>Veronicastrum virginicum</i>	Culver's Root	7	0.02
<i>Viola pedatifida</i>	Bearded Birdfoot Violet	0.14	0.01
<i>Zizia aurea</i>	Golden Alexanders	0.25	0.06

Total Guild:	34.97	1.88	55.95%	4.3%
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Graminoid

<i>Bouteloua curtipendula</i>	Side-oats Grama	2.25	1.02
<i>Elymus canadensis</i>	Canada Wild Rye	2	1.05
<i>Koeleria macrantha</i>	Junegrass	3.5	0.05
<i>Schizachyrium scoparium</i>	Little Bluestem	5.5	1.00
<i>Sporobolus heterolepis</i>	Prairie Dropseed	1.85	0.31

Total Guild:	15.1	3.43	24.16%	7.9%
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Legume

<i>Astragalus canadensis</i>	Canada Milk Vetch	0.39	0.06
<i>Chamaecrista fasciculata</i>	Partridge Pea	0.06	0.06
<i>Dalea candida</i>	White Prairie Clover	0.44	0.06
<i>Dalea purpurea</i>	Purple Prairie Clover	0.41	0.07

Total Guild:	1.3	0.26	2.08%	0.6%
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Pilot

Pollinator Plots Northeast

Function: Pollinator Intent: Diverse pollinator mix for conservation plantings a few acres in size in northeast MN
 Planting Area: NE
 Specialization: NRCS 327 Jobsheet #16

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Cover					
Avena sativa	Oats* (See Cover crop note)	11.13	37.88		
Total Guild:		11.13	37.88	11.60%	87.1%

Forb

Achillea millefolium	Common Yarrow	8	0.12		
Agastache foeniculum	Blue Giant Hyssop	2	0.06		
Allium stellatum	Prairie Wild Onion	0.2	0.05		
Anaphalis margaritacea	Pearly Everlasting	0.82	0.01		
Asclepias syriaca	Common Milkweed	0.32	0.22		
Asclepias tuberosa	Butterfly Milkweed	0.1	0.06		
Doellingeria umbellata	Flat-topped Aster	1	0.04		
Drymocallis arguta	Tall Cinquefoil	7	0.08		
Eutrochium maculatum	Spotted Joe Pye Weed	2	0.06		
Geranium maculatum	Wild Geranium	0.02	0.01		
Helenium autumnale	Autumn Sneezeweed	2.98	0.06		
Helianthus giganteus	Giant Sunflower	0.09	0.02		
Mimulus ringens	Blue Monkey Flower	16	0.02		
Oligoneuron rigidum	Stiff Goldenrod	4	0.27		
Rosa blanda	Smooth Wild Rose	0.06	0.06		
Rudbeckia hirta	Black-eyed Susan	6	0.18		
Sisyrinchium campestre	Field Blue-eyed Grass	0.17	0.01		
Smilacina racemosa	False Solomons Seal	0.01	0.07		
Solidago nemoralis	Gray Goldenrod	6	0.05		

Solidago ptarmicoides	Upland White Aster	1	0.04
Symphyotrichum ciliolatum	Lindley's Aster	1	0.03
Symphyotrichum laeve	Smooth Aster	2.4	0.12
Verbena hastata	Blue Vervain	6	0.18
Verbena stricta	Hoary Vervain	1	0.10
Zizia aurea	Golden Alexanders	0.05	0.01

Total Guild: 68.22 1.94 71.13% 4.5%

Graminoid

Andropogon gerardii	Big Bluestem	3.8	1.03
Bromus ciliatus	Fringed Brome	4.4	1.20
Danthonia spicata	Poverty Grass	2	0.22
Elymus hystrix	Bottlebrush Grass	0.45	0.16
Schizachyrium scoparium	Little Bluestem	5.5	1.00

Total Guild: 16.15 3.61 16.84% 8.3%

Legume

Dalea purpurea	Purple Prairie Clover	0.41	0.07
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Total Guild: 0.41 0.07 0.43% 0.2%

Total Seed Mix: 95.91 43.50

Pilot

Pollinator Plots Southeast

Function: Pollinator

Intent: Diverse pollinator habitat establishment for conservation plantings a few acres in size in southeast MN

Planting Area: SE

Specialization: NRCS 327 Jobsheet #16

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.13	37.88
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Total Guild: 11.13 37.88 18.27% 86.8%

Forb

Amorpha canescens	Lead Plant	0.37	0.06
Asclepias syriaca	Common Milkweed	0.32	0.22
Asclepias tuberosa	Butterfly Milkweed	0.072	0.05

Baptisia alba		0.02	0.03
Coreopsis palmata	Bird's Foot Coreopsis	0.11	0.03
Geranium maculatum	Wild Geranium	0.02	0.01
Helenium autumnale	Autumn Sneezeweed	2.98	0.06
Helianthus maximilianii	Maximilian's Sunflower	0.3	0.06
Helianthus pauciflorus	Stiff Sunflower	0.057	0.04
Heliopsis helianthoides	Ox-eye	0.14	0.06
Liatris aspera	Rough Blazing Star	0.3	0.05
Liatris ligulistylis	Northern Plains Blazing Star	0.19	0.05
Monarda fistulosa	Wild Bergamot	1.61	0.06
Monarda punctata	Horsemint	1	0.03
Oligoneuron rigidum	Stiff Goldenrod	0.94	0.06
Penstemon digitalis	Foxglove Beardtongue	2.98	0.06
Penstemon grandiflorus	Large-flowered Beard Tongue	0.4	0.08
Pycnanthemum virginianum	Virginia Mountain Mint	1	0.01
Ranunculus fascicularis	Early Buttercup	0.04	0.01
Rudbeckia hirta	Black-eyed Susan	2.11	0.06
Rudbeckia triloba	Brown-eyed Susan	2	0.16
Sisyrinchium campestre	Field Blue-eyed Grass	0.17	0.01
Solidago speciosa	Showy Goldenrod	1.5	0.04
Symphyotrichum ericoides	Heath Aster	2	0.03
Symphyotrichum laeve	Smooth Aster	1.26	0.06
Symphyotrichum novae-angliae	New England Aster	1	0.04
Tradescantia bracteata	Bracted Spiderwort	0.15	0.04
Verbena stricta	Hoary Vervain	1	0.10
Veronicastrum virginicum	Culver's Root	4.8	0.02
Viola pedatifida	Bearded Birdfoot Violet	0.14	0.01
Zizia aurea	Golden Alexanders	0.25	0.06

Total Guild:	29.229	1.68	47.97%	3.9%
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Graminoid

Andropogon gerardii	Big Bluestem	2.3	0.63
Bouteloua curtipendula	Side-oats Grama	2.3	1.04
Elymus canadensis	Canada Wild Rye	1.2	0.63
Koeleria macrantha	Junegrass	6	0.08
Schizachyrium scoparium	Little Bluestem	5.5	1.00
Sporobolus heterolepis	Prairie Dropseed	1.8	0.31

Total Guild:	19.1	3.68	31.35%	8.4%
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Legume

Astragalus canadensis	Canada Milk Vetch	0.39	0.06
Chamaecrista fasciculata	Partridge Pea	0.06	0.06
Chamaecrista fasciculata	Partridge Pea	0.02	0.02
Dalea candida	White Prairie Clover	0.44	0.06
Dalea purpurea	Purple Prairie Clover	0.41	0.07
Desmodium canadense	Canada Tick Trefoil	0.13	0.06
Lupinus perennis	Wild Lupine	0.018	0.04

Total Guild:	1.468	0.39	2.41%	0.9%
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Total Seed Mix:	60.927	43.63
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Pilot

Pollinator Plots Southwest

Function: Pollinator

Intent: Diverse pollinator habitat establishment for conservation plantings a few acres in size in southwest MN

Planting Area: SW

Specialization: NRCS 327 Jobsheet #16

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.13	37.88
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Total Guild:	11.13	37.88	17.81%	86.6%
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Forb

Agastache foeniculum	Blue Giant Hyssop	1	0.03
Allium stellatum	Prairie Wild Onion	0.25	0.06
Amorpha canescens	Lead Plant	0.6	0.10

<i>Asclepias syriaca</i>	Common Milkweed	0.32	0.22
<i>Asclepias tuberosa</i>	Butterfly Milkweed	0.072	0.05
<i>Coreopsis palmata</i>	Bird's Foot Coreopsis	0.15	0.04
<i>Echinacea angustifolia</i>	Narrow-leaved Purple Conefl	0.16	0.06
<i>Helenium autumnale</i>	Autumn Sneezeweed	2.98	0.06
<i>Helianthus maximilianii</i>	Maximilian's Sunflower	0.3	0.06
<i>Helianthus pauciflorus</i>	Stiff Sunflower	0.09	0.06
<i>Heliopsis helianthoides</i>	Ox-eye	0.14	0.06
<i>Liatris aspera</i>	Rough Blazing Star	0.37	0.06
<i>Monarda fistulosa</i>	Wild Bergamot	1.61	0.06
<i>Oligoneuron rigidum</i>	Stiff Goldenrod	0.94	0.06
<i>Penstemon digitalis</i>	Foxglove Beardtongue	2.98	0.06
<i>Penstemon grandiflorus</i>	Large-flowered Beard Tongue	0.2	0.04
<i>Phlox pilosa</i>	Prairie Phlox	0.065	0.01
<i>Pycnanthemum virginianum</i>	Virginia Mountain Mint	3	0.04
<i>Rudbeckia hirta</i>	Black-eyed Susan	4	0.12
<i>Sisyrinchium campestre</i>	Field Blue-eyed Grass	0.17	0.01
<i>Solidago speciosa</i>	Showy Goldenrod	2.18	0.06
<i>Symphotrichum ericoides</i>	Heath Aster	1.8	0.02
<i>Symphotrichum laeve</i>	Smooth Aster	1.26	0.06
<i>Symphotrichum novae-angliae</i>	New England Aster	1.52	0.06
<i>Tradescantia bracteata</i>	Bracted Spiderwort	0.15	0.04
<i>Verbena stricta</i>	Hoary Vervain	1	0.10
<i>Veronicastrum virginicum</i>	Culver's Root	7	0.02
<i>Viola pedatifida</i>	Bearded Birdfoot Violet	0.14	0.01
<i>Zizia aurea</i>	Golden Alexanders	0.25	0.06

Total Guild:	34.697	1.72	55.51%	3.9%
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Graminoid

<i>Andropogon gerardii</i>	Big Bluestem	2.3	0.63
<i>Bouteloua curtipendula</i>	Side-oats Grama	1.8	0.82

<i>Elymus canadensis</i>	Canada Wild Rye	2	1.05
<i>Koeleria macrantha</i>	Junegrass	1.8	0.02
<i>Schizachyrium scoparium</i>	Little Bluestem	5.5	1.00
<i>Sporobolus heterolepis</i>	Prairie Dropseed	1.85	0.31

Total Guild: 15.25 3.83 24.40% 8.7%

Legume

<i>Astragalus canadensis</i>	Canada Milk Vetch	0.39	0.06
<i>Chamaecrista fasciculata</i>	Partridge Pea	0.06	0.06
<i>Dalea candida</i>	White Prairie Clover	0.44	0.06
<i>Dalea purpurea</i>	Purple Prairie Clover	0.41	0.07
<i>Desmodium canadense</i>	Canada Tick Trefoil	0.13	0.06

Total Guild: 1.43 0.32 2.29% 0.7%

Total Seed Mix: 62.507 43.75

State Mix

Riparian Northeast

Function: Wetland

Planting Area: NE

Specialization:

Intent: Native riparian and floodplain plantings for wetland mitigation, ecological restoration, or general permanent cover. Tolerates partial shade.

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

<i>Avena sativa</i>	Oats* (See Cover crop note)	11.14	37.91
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Total Guild: 11.14 37.91 5.50% 85.4%

Forb

<i>Asclepias incarnata</i>	Marsh Milkweed	0.21	0.12
<i>Doellingeria umbellata</i>	Flat-topped Aster	1	0.04
<i>Eupatorium perfoliatum</i>	Common Boneset	3	0.05
<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	9	0.07
<i>Eutrochium maculatum</i>	Spotted Joe Pye Weed	3.7	0.11
<i>Helianthus giganteus</i>	Giant Sunflower	0.25	0.07
<i>Impatiens capensis</i>	Spotted Touch-Me-Not	0.05	0.03

Mimulus ringens	Blue Monkey Flower	13	0.02
Solidago gigantea	Giant Goldenrod	1.5	0.02
Verbena hastata	Blue Vervain	7.35	0.22

Total Guild: 39.06 0.74 19.27% 1.7%

Graminoid

Beckmannia syzigachne	American Slough Grass	27.64	1.50
Calamagrostis canadensis	Bluejoint	6	0.06
Elymus riparius	Riverbank Wild Rye	0.53	0.50
Elymus virginicus	Virginia Wild Rye	3.08	2.00
Glyceria grandis	Tall Manna Grass	6.5	0.25
Glyceria striata	Fowl Manna Grass	3	0.09
Leersia oryzoides	Rice Cut Grass	1.93	0.15
Poa palustris	Fowl Bluegrass	33.5	0.70

Total Guild: 82.18 5.26 40.55% 11.8%

Sedge

Carex scoparia	Lance-fruited Oval sedge	2	0.06
Carex stricta	Tussock Sedge	0.8	0.04
Carex vulpinoidea	Brown Fox Sedge	7.5	0.20
Juncus tenuis	Path Rush	10	0.03
Scirpus atrovirens	Dark Green Bulrush	20	0.12
Scirpus cyperinus	Woolgrass	30	0.05

Total Guild: 70.3 0.50 34.69% 1.1%

Total Seed Mix: 202.68 44.41

State Mix

Riparian South & West

Function: Wetland

Planting Area: S & W

Specialization:

Intent: Native riparian and floodplain plantings for wetland mitigation, ecological restoration, or general permanent cover. Tolerates partial shade.

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild:	11.14	37.91	5.84%	85.4%
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Forb

Asclepias incarnata	Marsh Milkweed	0.21	0.12
Eupatorium perfoliatum	Common Boneset	2	0.03
Eutrochium maculatum	Spotted Joe Pye Weed	2	0.06
Helenium autumnale	Autumn Sneezeweed	2.5	0.05
Helianthus giganteus	Giant Sunflower	0.25	0.07
Impatiens capensis	Spotted Touch-Me-Not	0.08	0.05
Lobelia siphilitica	Great Lobelia	5	0.03
Mimulus ringens	Blue Monkey Flower	5.07	0.01
Pycnanthemum virginianum	Virginia Mountain Mint	4	0.05
Rudbeckia laciniata	Tall Coneflower	0.25	0.05
Solidago gigantea	Giant Goldenrod	2	0.02
Verbena hastata	Blue Vervain	5	0.15
Vernonia fasciculata	Bunched Ironweed	0.5	0.06

Total Guild:	28.86	0.74	15.14%	1.7%
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Graminoid

Beckmannia syzigachne	American Slough Grass	24.9	1.36
Elymus riparius	Riverbank Wild Rye	0.53	0.50
Elymus virginicus	Virginia Wild Rye	2.7	1.75
Glyceria grandis	Tall Manna Grass	6.5	0.25
Glyceria striata	Fowl Manna Grass	3	0.09
Leersia oryzoides	Rice Cut Grass	2	0.16
Poa palustris	Fowl Bluegrass	40	0.84
Spartina pectinata	Prairie Cordgrass	0.74	0.31

Total Guild:	80.37	5.25	42.15%	11.8%
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Sedge

Carex scoparia	Lance-fruited Oval sedge	2	0.06
Carex stricta	Tussock Sedge	0.8	0.04
Carex vulpinoidea	Brown Fox Sedge	7.5	0.20

Juncus tenuis	Path Rush	10	0.03
Scirpus atrovirens	Dark Green Bulrush	20	0.12
Scirpus cyperinus	Woolgrass	30	0.05

Total Guild: 70.3 0.50 36.87% 1.1%

Total Seed Mix: 190.67 44.41

Pilot

Sand Mine Reclamation South & West

Function: Grassland

Intent: Dry prairie establishment on disturbed sites with sandy soils

Planting Area: S & W

Specialization:

Scientific Name	Common Name	Seeds/ sa ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.13	37.88
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Total Guild: 11.13 37.88 14.71% 79.4%

Forb

Asclepias tuberosa	Butterfly Milkweed	0.1	0.06
Asclepias verticillata	Whorled Milkweed	0.1	0.02
Coreopsis palmata	Bird's Foot Coreopsis	0.21	0.06
Geum triflorum	Prairie Smoke	0.1	0.01
Liatris aspera	Rough Blazing Star	0.25	0.04
Monarda punctata	Horsemint	1.42	0.04
Oligoneuron rigidum	Stiff Goldenrod	0.83	0.06
Penstemon grandiflorus	Large-flowered Beard Tongue	0.32	0.06
Rudbeckia hirta	Black-eyed Susan	10.32	0.31
Solidago speciosa	Showy Goldenrod	2	0.06
Symphotrichum ericoides	Heath Aster	2.58	0.04
Symphotrichum oolentangiense	Skyblue Aster	1.26	0.04
Viola pedatifida	Bearded Birdfoot Violet	0.14	0.01
Zizia aptera	Heart-leaved Alexanders	0.2	0.05

Total Guild: 19.83 0.86 26.21% 1.8%

Graminoid

Bouteloua curtipendula	Side-oats Grama	4	1.82
Bromus kalmii	Kalm's Brome	4	1.36
Koeleria macrantha	Junegrass	6	0.08
Panicum virgatum	Switchgrass	8	1.56
Schizachyrium scoparium	Little Bluestem	18	3.27
Sporobolus cryptandrus	Sand Dropseed	1.8	0.02
Sporobolus heterolepis	Prairie Dropseed	1	0.17

Total Guild:	42.8	8.28	56.56%	17.3%
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Legume

Astragalus canadensis	Canada Milk Vetch	0.4	0.06
Chamaecrista fasciculata	Partridge Pea	0.39	0.39
Dalea purpurea	Purple Prairie Clover	1.1	0.20
Lupinus perennis	Wild Lupine	0.018	0.04

Total Guild:	1.908	0.70	2.52%	1.5%
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Total Seed Mix:	75.668	47.71
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Pilot

Shallow Rooted BMP Mix General

Function: Buffers

Intent: Establish prairie vegetation over perforated drain tile where deep rooted species could plug tile

Planting Area: Statewide

Specialization: NRCS 327

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	9	30.63
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Total Guild:	9	30.63	12.48%	62.1%
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Forb

Monarda fistulosa	Wild Bergamot	2.6	0.10
Solidago canadensis	Canada Goldenrod	4	0.04

Total Guild:	6.6	0.14	9.15%	0.3%
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Graminoid

Bouteloua gracilis	Blue Grama	18	1.23
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Bromus ciliatus	Fringed Brome	8	2.18
Bromus kalmii	Kalm's Brome	3	1.02
Elymus canadensis	Canada Wild Rye	6	3.14
Elymus trachycaulus	Slender Wheatgrass	13	6.44
Elymus virginicus	Virginia Wild Rye	7	4.54

Total Guild:	55	18.54	76.28%	37.6%
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Sedge

Carex vulpinoidea	Brown Fox Sedge	1.5	0.04
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Total Guild:	1.5	0.04	2.08%	0.1%
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Total Seed Mix:	72.1	49.35
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Pilot

Silvopasture Southeast

Function: Production

Intent: Vegetation establishment in silvopasture areas

Planting Area: SE

Specialization: NRCS 512

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	1.42	4.83
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Total Guild:	1.42	4.83	3.58%	30.3%
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Graminoid

Bromus kalmii	Kalm's Brome	1.8	0.61
Elymus canadensis	Canada Wild Rye	3	1.57
Elymus trachycaulus	Slender Wheatgrass	4	1.98
Elymus virginicus	Virginia Wild Rye	3	1.94
Festuca rubra	Red Fescue	10	1.18
Panicum virgatum	Switchgrass	8	1.56

Total Guild:	29.8	8.85	75.21%	55.5%
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Legume

Astragalus canadensis	Canada Milk Vetch	1.5	0.24
Chamaecrista fasciculata	Partridge Pea	1	1.01
Dalea candida	White Prairie Clover	3	0.43

Dalea purpurea	Purple Prairie Clover	2.5	0.45		
Lespedeza capitata	Round-headed Bush Clover	0.4	0.14		
Total Guild:		8.4	2.27	21.20%	14.2%
Total Seed Mix:		39.62	15.95		

State Mix

Soil Building Cover Crop

Function: Cover

Intent: Temporary cover crop with soil building function

Planting Area: Statewide

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Cover					
Avena sativa	Oats* (See Cover crop note)	26.72	90.93		
Total Guild:		26.72	90.93	88.59%	64.6%
Legume					
Pisum sativum	Field Pea	3.44	49.82		
Total Guild:		3.44	49.82	11.41%	35.4%
Total Seed Mix:		30.16	140.75		

State Mix

Stormwater Northeast

Function: Stormwater

Intent: Stormwater pond edges, temporarily flooded dry ponds, and temporarily flooded ditch bottoms

Planting Area: NE

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Cover					
Avena sativa	Oats* (See Cover crop note)	11.14	37.91		
Total Guild:		11.14	37.91	5.08%	78.5%
Forb					
Anemone canadensis	Canada Anemone	0.3	0.10		
Asclepias incarnata	Marsh Milkweed	0.8	0.45		
Doellingeria umbellata	Flat-topped Aster	2.5	0.10		
Eupatorium perfoliatum	Common Boneset	3	0.05		

Euthamia graminifolia	Grass-leaved Goldenrod	5	0.04
Eutrochium maculatum	Spotted Joe Pye Weed	5.1	0.15
Mimulus ringens	Blue Monkey Flower	20	0.02
Solidago gigantea	Giant Goldenrod	2	0.02
Symphotrichum lanceolatum	Eastern Panicked Aster	1	0.02
Thalictrum dasycarpum	Tall Meadow-Rue	0.4	0.10

Total Guild: 40.1 1.06 18.28% 2.2%

Graminoid

Bromus ciliatus	Fringed Brome	14.75	4.02
Calamagrostis canadensis	Bluejoint	4.8	0.05
Elymus canadensis	Canada Wild Rye	3.82	2.00
Elymus virginicus	Virginia Wild Rye	3.09	2.00
Glyceria grandis	Tall Manna Grass	4	0.16
Poa palustris	Fowl Bluegrass	30.4	0.64

Total Guild: 60.86 8.86 27.74% 18.3%

Sedge

Carex hystericina	Porcupine Sedge	1	0.09
Carex scoparia	Lance-fruited Oval sedge	1.3	0.04
Scirpus atrovirens	Dark Green Bulrush	45	0.27
Scirpus cyperinus	Woolgrass	60	0.10

Total Guild: 107.3 0.50 48.91% 1.0%

Total Seed Mix: 219.4 48.32

Pilot

Stormwater Pond Pollinator Northeast

Function: Stormwater

Intent: Stormwater pond vegetation establishment for pollinator habitat establishment

Planting Area: NE

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild: 11.14 37.91 8.74% 79.7%

Forb

<i>Agastache foeniculum</i>	Blue Giant Hyssop	3	0.09
<i>Asclepias incarnata</i>	Marsh Milkweed	0.22	0.12
<i>Asclepias syriaca</i>	Common Milkweed	0.32	0.22
<i>Asclepias tuberosa</i>	Butterfly Milkweed	0.09	0.06
<i>Eupatorium perfoliatum</i>	Common Boneset	4	0.07
<i>Eutrochium maculatum</i>	Spotted Joe Pye Weed	2	0.06
<i>Gentiana andrewsii</i>	Bottle Gentian	5	0.05
<i>Helenium autumnale</i>	Autumn Sneezeweed	6.5	0.14
<i>Lobelia siphilitica</i>	Great Lobelia	6	0.03
<i>Mimulus ringens</i>	Blue Monkey Flower	20	0.02
<i>Monarda fistulosa</i>	Wild Bergamot	5	0.19
<i>Oligoneuron rigidum</i>	Stiff Goldenrod	3.1	0.21
<i>Pycnanthemum virginianum</i>	Virginia Mountain Mint	3	0.04
<i>Rudbeckia hirta</i>	Black-eyed Susan	4	0.12
<i>Sisyrinchium campestre</i>	Field Blue-eyed Grass	0.17	0.01
<i>Symphotrichum novae-angliae</i>	New England Aster	2	0.08
<i>Verbena hastata</i>	Blue Vervain	5.8	0.17
<i>Zizia aurea</i>	Golden Alexanders	0.05	0.01

Total Guild: 70.25 1.69 55.15% 3.6%

Graminoid

<i>Andropogon gerardii</i>	Big Bluestem	5	1.36
<i>Beckmannia syzigachne</i>	American Slough Grass	10	0.54
<i>Bromus ciliatus</i>	Fringed Brome	3	0.82
<i>Elymus canadensis</i>	Canada Wild Rye	1.5	0.79
<i>Elymus trachycaulus</i>	Slender Wheatgrass	2	0.99
<i>Elymus virginicus</i>	Virginia Wild Rye	1.5	0.97
<i>Panicum virgatum</i>	Switchgrass	4	0.78
<i>Poa palustris</i>	Fowl Bluegrass	12	0.25
<i>Sorghastrum nutans</i>	Indian Grass	4	0.91

Total Guild:	43	7.41	33.75%	15.6%
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Legume

Dalea purpurea	Purple Prairie Clover	3	0.54
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Total Guild:	3	0.54	2.35%	1.1%
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Total Seed Mix:	127.39	47.55
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State Mix

Stormwater South & West

Function: Stormwater

Intent: Stormwater pond edges, temporarily flooded dry ponds, and temporarily flooded ditch bottoms.

Planting Area: S & W

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild:	11.14	37.91	6.16%	78.4%
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Forb

Anemone canadensis	Canada Anemone	0.2	0.07
Asclepias incarnata	Marsh Milkweed	0.2	0.11
Bidens frondosa	Leafy Beggarticks	0.2	0.11
Doellingeria umbellata	Flat-topped Aster	1.5	0.06
Eutrochium maculatum	Spotted Joe Pye Weed	2.19	0.06
Helenium autumnale	Autumn Sneezeweed	5.97	0.13
Physostegia virginiana	Obedient Plant	0.3	0.07
Rudbeckia laciniata	Tall Coneflower	0.37	0.07
Symphotrichum novae-angliae	New England Aster	1.56	0.07
Verbena hastata	Blue Vervain	1.85	0.05
Zizia aurea	Golden Alexanders	0.79	0.20

Total Guild:	15.13	1.00	8.37%	2.1%
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Graminoid

Andropogon gerardii	Big Bluestem	7.35	2.00
Bromus ciliatus	Fringed Brome	8.1	2.21
Calamagrostis canadensis	Bluejoint	6.4	0.06

Elymus trachycaulus	Slender Wheatgrass	2.53	1.25
Elymus virginicus	Virginia Wild Rye	2.31	1.50
Panicum virgatum	Switchgrass	1.93	0.38
Poa palustris	Fowl Bluegrass	50.7	1.06
Sorghastrum nutans	Indian Grass	0.55	0.12
Spartina pectinata	Prairie Cordgrass	0.91	0.38

Total Guild:	80.78	8.96	44.67%	18.5%
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Sedge

Carex stipata	Common Fox Sedge	3.1	0.25
Scirpus atrovirens	Dark Green Bulrush	31.7	0.19
Scirpus cyperinus	Woolgrass	39	0.06

Total Guild:	73.8	0.50	40.81%	1.0%
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Total Seed Mix:	180.85	48.36
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Pilot

Wet Meadow Forb/Sedge/Rush South & West

Function: Wetland

Intent: Wet meadow establishment where reed canary grass is a risk and grass specific herbicides will be used

Planting Area: SW

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	3.12	10.62
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Total Guild:	3.12	10.62	1.68%	75.8%
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Forb

Asclepias incarnata	Marsh Milkweed	0.43	0.24
Eupatorium perfoliatum	Common Boneset	1.3	0.02
Euthamia graminifolia	Grass-leaved Goldenrod	2.6	0.02
Eutrochium maculatum	Spotted Joe Pye Weed	0.75	0.02
Helenium autumnale	Autumn Sneezeweed	1	0.02
Helianthus grosseserratus	Sawtooth Sunflower	0.2	0.04
Lobelia siphilitica	Great Lobelia	3.2	0.02

Mimulus ringens	Blue Monkey Flower	9	0.01
Pycnanthemum virginianum	Virginia Mountain Mint	5.1	0.06
Solidago gigantea	Giant Goldenrod	2	0.02
Symphotrichum lanceolatum	Eastern Panicked Aster	1.5	0.03
Thalictrum dasycarpum	Tall Meadow-Rue	0.11	0.03
Verbena hastata	Blue Vervain	5	0.15
Vernonia fasciculata	Bunched Ironweed	0.3	0.03
Veronicastrum virginicum	Culver's Root	4.8	0.02
Zizia aurea	Golden Alexanders	1	0.25

Total Guild:	38.29	0.98	20.61%	7.0%
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Graminoid

Elymus virginicus	Virginia Wild Rye	1.55	1.00
Leersia oryzoides	Rice Cut Grass	3.1	0.25
Poa palustris	Fowl Bluegrass	16.5	0.35

Total Guild:	21.15	1.60	11.39%	11.4%
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Sedge

Carex pellita	Wooly Sedge	0.5	0.05
Carex scoparia	Lance-fruited Oval sedge	1.6	0.05
Carex stipata	Common Fox Sedge	2.6	0.21
Carex stricta	Tussock Sedge	0.5	0.03
Carex vulpinoidea	Brown Fox Sedge	5	0.14
Juncus tenuis	Path Rush	15	0.04
Scirpus atrovirens	Dark Green Bulrush	35	0.21
Scirpus cyperinus	Woolgrass	63	0.10

Total Guild:	123.2	0.82	66.32%	5.8%
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Total Seed Mix:	185.76	14.01
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Function: Wetland

Intent: Wet meadow / Sedge meadow reconstruction for wetland mitigation or ecological restoration.

Planting Area: NE

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Cover					
Avena sativa	Oats* (See Cover crop note)	3.05	10.38		
Total Guild:		3.05	10.38	1.66%	64.0%
Forb					
Anemone canadensis	Canada Anemone	0.3	0.10		
Asclepias incarnata	Marsh Milkweed	0.43	0.24		
Doellingeria umbellata	Flat-topped Aster	2.5	0.10		
Eupatorium perfoliatum	Common Boneset	5	0.09		
Euthamia graminifolia	Grass-leaved Goldenrod	5	0.04		
Eutrochium maculatum	Spotted Joe Pye Weed	5	0.14		
Mimulus ringens	Blue Monkey Flower	25	0.03		
Solidago gigantea	Giant Goldenrod	2.3	0.03		
Symphotrichum lanceolatum	Eastern Panicked Aster	2	0.03		
Total Guild:		47.53	0.80	25.88%	5.0%
Graminoid					
Bromus ciliatus	Fringed Brome	8.1	2.21		
Calamagrostis canadensis	Bluejoint	10	0.10		
Elymus virginicus	Virginia Wild Rye	2.31	1.50		
Glyceria grandis	Tall Manna Grass	6.3	0.25		
Poa palustris	Fowl Bluegrass	31	0.65		
Total Guild:		57.71	4.69	31.43%	28.9%
Sedge					
Carex scoparia	Lance-fruited Oval sedge	1.5	0.05		
Carex stricta	Tussock Sedge	0.85	0.04		
Scirpus atrovirens	Dark Green Bulrush	33	0.20		
Scirpus cyperinus	Woolgrass	40	0.06		

Graminoid

Bromus ciliatus	Fringed Brome	4.45	1.21
Calamagrostis canadensis	Bluejoint	5	0.05
Elymus virginicus	Virginia Wild Rye	1.55	1.00
Glyceria grandis	Tall Manna Grass	3.9	0.15
Glyceria striata	Fowl Manna Grass	3.3	0.10
Leersia oryzoides	Rice Cut Grass	3.1	0.25
Poa palustris	Fowl Bluegrass	16.5	0.35

Total Guild:	37.8	3.11	20.38%	19.8%
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Sedge

Carex comosa	Bristly Sedge	2.36	0.21
Carex scoparia	Lance-fruited Oval sedge	1.6	0.05
Carex stipata	Common Fox Sedge	2.1	0.17
Carex stricta	Tussock Sedge	0.5	0.03
Carex vulpinoidea	Brown Fox Sedge	5	0.14
Juncus tenuis	Path Rush	15	0.04
Scirpus atrovirens	Dark Green Bulrush	30	0.18
Scirpus cyperinus	Woolgrass	50	0.08

Total Guild:	106.56	0.89	57.45%	5.7%
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Total Seed Mix:	185.48	15.74
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State Mix

Wet Prairie

Function: Wetland

Intent: Wet prairie reconstruction for wetland mitigation or ecological restoration.

Planting Area: Statewide

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	2.76	9.39
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Total Guild:	2.76	9.39	2.27%	52.6%
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Forb

Anemone canadensis	Canada Anemone	0.09	0.03
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<i>Asclepias incarnata</i>	Marsh Milkweed	0.14	0.08
<i>Doellingeria umbellata</i>	Flat-topped Aster	1.2	0.05
<i>Eupatorium perfoliatum</i>	Common Boneset	2	0.03
<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	2	0.02
<i>Eutrochium maculatum</i>	Spotted Joe Pye Weed	1.5	0.04
<i>Helenium autumnale</i>	Autumn Sneezeweed	2.39	0.05
<i>Helianthus grosseserratus</i>	Sawtooth Sunflower	0.3	0.05
<i>Liatris pycnostachya</i>	Great Blazing Star	0.1	0.02
<i>Lobelia siphilitica</i>	Great Lobelia	1.4	0.01
<i>Mimulus ringens</i>	Blue Monkey Flower	6.4	0.01
<i>Pycnanthemum virginianum</i>	Virginia Mountain Mint	6.5	0.08
<i>Symphotrichum puniceum</i>	Red-stemmed Aster	2.4	0.08
<i>Verbena hastata</i>	Blue Vervain	5.25	0.15
<i>Vernonia fasciculata</i>	Bunched Ironweed	0.3	0.03
<i>Veronicastrum virginicum</i>	Culver's Root	6	0.02
<i>Zizia aurea</i>	Golden Alexanders	1.03	0.25

Total Guild:	39	1.02	32.09%	5.7%
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Graminoid

<i>Andropogon gerardii</i>	Big Bluestem	3.67	1.00
<i>Bromus ciliatus</i>	Fringed Brome	6.08	1.66
<i>Calamagrostis canadensis</i>	Bluejoint	4	0.04
<i>Elymus virginicus</i>	Virginia Wild Rye	2.7	1.75
<i>Glyceria grandis</i>	Tall Manna Grass	3.8	0.15
<i>Glyceria striata</i>	Fowl Manna Grass	3.5	0.11
<i>Panicum virgatum</i>	Switchgrass	3.85	0.75
<i>Poa palustris</i>	Fowl Bluegrass	9.6	0.20
<i>Sorghastrum nutans</i>	Indian Grass	2.2	0.50
<i>Spartina pectinata</i>	Prairie Cordgrass	1.2	0.50

Total Guild:	40.6	6.64	33.40%	37.2%
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Legume

Desmodium canadense	Canada Tick Trefoil	1	0.50
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Total Guild:	1	0.50	0.82%	2.8%
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Sedge

Carex pellita	Wooly Sedge	0.47	0.05
Carex stricta	Tussock Sedge	0.48	0.02
Carex vulpinoidea	Brown Fox Sedge	3.5	0.10
Scirpus atrovirens	Dark Green Bulrush	17.74	0.10
Scirpus cyperinus	Woolgrass	16	0.03

Total Guild:	38.19	0.30	31.42%	1.7%
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Total Seed Mix:	121.55	17.85
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Pilot

Wetland Construction General

Function:	Wetland	Intent:	Establishment of native vegetation on embankments and other constructed areas as part of wetland restoration projects
Planting Area:	Statewide		
Specialization:	NRCS 342		

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild:	11.14	37.91	14.85%	73.3%
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Forb

Asclepias syriaca	Common Milkweed	0.16	0.11
Monarda fistulosa	Wild Bergamot	0.39	0.02
Rudbeckia hirta	Black-eyed Susan	3	0.09
Verbena hastata	Blue Vervain	0.8	0.02

Total Guild:	4.35	0.24	5.80%	0.5%
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Graminoid

Andropogon gerardii	Big Bluestem	5.5095	1.50
Beckmannia syzigachne	American Slough Grass	6.06	0.33
Bouteloua curtipendula	Side-oats Grama	1.6088	0.73
Bromus ciliatus	Fringed Brome	3.7832	1.03
Elymus canadensis	Canada Wild Rye	3.82	2.00

Elymus trachycaulus	Slender Wheatgrass	5.0505	2.50
Elymus virginicus	Virginia Wild Rye	3.0854	2.00
Panicum virgatum	Switchgrass	7.7135	1.50
Poa palustris	Fowl Bluegrass	15.28	0.32
Sorghastrum nutans	Indian Grass	6.6115	1.50

Total Guild: 58.5224 13.41 78.02% 25.9%

Legume

Dalea purpurea	Purple Prairie Clover	1	0.18
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Total Guild: 1 0.18 1.33% 0.4%

Total Seed Mix: 75.0124 51.74

State Mix

Wetland Rehabilitation

Function: Wetland

Intent: Interseeding into establishing wetlands after weed control spraying. Also suitable for two to five year short term soil stabilization for areas with saturated soils.

Planting Area: Statewide

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Forb

Bidens cernua	Nodding Bur Marigold	1	0.13
Lycopus americanus	Water Horehound	23.15	0.48
Mimulus ringens	Blue Monkey Flower	30	0.04

Total Guild: 54.15 0.65 19.13% 11.9%

Graminoid

Elymus virginicus	Virginia Wild Rye	4.63	3.00
Poa palustris	Fowl Bluegrass	47.8	1.00

Total Guild: 52.43 4.00 18.52% 73.4%

Sedge

Carex vulpinoidea	Brown Fox Sedge	7.5	0.20
Juncus tenuis	Path Rush	59	0.16
Scirpus atrovirens	Dark Green Bulrush	60	0.36
Scirpus cyperinus	Woolgrass	50	0.08

Total Guild: 176.5 0.80 62.35% 14.7%

Pilot Wetland Seedbank Release Northeast

Function: Wetland Intent: Early successional cover establishment in wetlands where native seedbank will add diversity. Not intended for seeding in Fall.
 Planting Area: NE
 Specialization:

Scientific Name	Common Name	Seeds/ sa ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Cover					
Avena sativa	Oats* (See Cover crop note)	20	68.06		
Total Guild:		20	68.06	50.00%	98.4%

Graminoid					
Beckmannia syzigachne	American Slough Grass	20	1.09		
Total Guild:		20	1.09	50.00%	1.6%
Total Seed Mix:		40	69.15		

State Mix Winter Wheat Cover Crop

Function: Cover Intent: Temporary cover crop for fall plantings
 Planting Area: Statewide
 Specialization:

Scientific Name	Common Name	Seeds/ sa ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Cover					
Triticum aestivum	Winter Wheat	26.08	100.00		
Total Guild:		26.08	100.00	#####	100.0%
Total Seed Mix:		26.08	100.00		

State Mix Woodland Edge Central

Function: Conservation Intent: Partly shaded grassland planting for native roadsides, reclamation, etc in central MN
 Planting Area: Central
 Specialization:

Scientific Name	Common Name	Seeds/ sa ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild:	11.14	37.91	17.73%	77.9%
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Forb

Achillea millefolium	Common Yarrow	2	0.03
Agastache foeniculum	Blue Giant Hyssop	2.1	0.06
Amorpha canescens	Lead Plant	0.21	0.04
Anaphalis margaritacea	Pearly Everlasting	1.3	0.02
Heliopsis helianthoides	Ox-eye	0.3	0.13
Monarda fistulosa	Wild Bergamot	1.6	0.06
Osmorhiza claytonii	Clayton's Sweet Cicely	0.06	0.07
Rosa blanda	Smooth Wild Rose	0.09	0.09
Rudbeckia hirta	Black-eyed Susan	6.8	0.20
Solidago speciosa	Showy Goldenrod	1.8	0.05
Symphyotrichum laeve	Smooth Aster	1.3	0.06
Symphyotrichum oolentangiense	Skyblue Aster	1.8	0.06
Zizia aurea	Golden Alexanders	0.23	0.06

Total Guild:	19.59	0.93	31.18%	1.9%
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Graminoid

Andropogon gerardii	Big Bluestem	1.85	0.50
Bouteloua curtipendula	Side-oats Grama	2.2	1.00
Bromus ciliatus	Fringed Brome	2	0.54
Bromus kalmii	Kalm's Brome	4.4	1.50
Danthonia spicata	Poverty Grass	3.4	0.37
Elymus canadensis	Canada Wild Rye	1.43	0.75
Elymus trachycaulus	Slender Wheatgrass	2.53	1.25
Elymus virginicus	Virginia Wild Rye	2.7	1.75
Schizachyrium scoparium	Little Bluestem	6.2	1.13
Sorghastrum nutans	Indian Grass	2.2	0.50

Total Guild:	28.91	9.29	46.02%	19.1%
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Legume

Astragalus canadensis	Canada Milk Vetch	1.58	0.25
Dalea candida	White Prairie Clover	0.4	0.06
Dalea purpurea	Purple Prairie Clover	1	0.18
Lespedeza capitata	Round-headed Bush Clover	0.2	0.07

Total Guild: 3.18 0.56 5.06% 1.1%

Total Seed Mix: 62.82 48.69

State Mix

Woodland Edge Northeast

Function: Conservation

Intent: Partly shaded grassland planting for native roadsides, reclamation, etc in north-central and northeast MN

Planting Area: NE

Specialization:

Scientific Name	Common Name	Seeds/ sa ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild: 11.14 37.91 9.18% 80.5%

Forb

Achillea millefolium	Common Yarrow	2	0.03
Anaphalis margaritacea	Pearly Everlasting	1.3	0.02
Doellingeria umbellata	Flat-topped Aster	1	0.04
Drymocallis arguta	Tall Cinquefoil	5.3	0.06
Eurybia macrophylla	Large-leaved Aster	0.18	0.02
Oligoneuron rigidum	Stiff Goldenrod	2.1	0.14
Rosa blanda	Smooth Wild Rose	0.15	0.16
Rudbeckia hirta	Black-eyed Susan	8.7	0.26
Solidago nemoralis	Gray Goldenrod	6.8	0.06
Solidago ptarmicoides	Upland White Aster	1	0.04
Symphotrichum ciliolatum	Lindley's Aster	1	0.03
Symphotrichum laeve	Smooth Aster	2.9	0.14

Total Guild: 32.43 1.00 26.72% 2.1%

Graminoid

Bromus ciliatus	Fringed Brome	8.1	2.21
Calamagrostis canadensis	Bluejoint	12.9	0.13
Danthonia spicata	Poverty Grass	4.6	0.50
Elymus canadensis	Canada Wild Rye	2.38	1.25
Elymus trachycaulus	Slender Wheatgrass	5.06	2.50
Poa palustris	Fowl Bluegrass	41.5	0.87
Schizachne purpurascens	False Melic	2.9	0.25

Total Guild:	77.44	7.70	63.79%	16.3%
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Legume

Vicia americana	American Vetch	0.38	0.50
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Total Guild:	0.38	0.50	0.31%	1.1%
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Total Seed Mix:	121.39	47.12
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State Mix

Woodland Edge Northwest

Function: Conservation

Intent: Partly shaded grassland planting for native roadsides, reclamation, etc in far northwest MN

Planting Area: NW

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
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Cover

Avena sativa	Oats* (See Cover crop note)	11.14	37.91
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Total Guild:	11.14	37.91	15.92%	77.6%
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Forb

Achillea millefolium	Common Yarrow	2	0.03
Agastache foeniculum	Blue Giant Hyssop	4.1	0.12
Amorpha canescens	Lead Plant	0.15	0.03
Anemone virginiana	Tall Thimbleweed	0.3	0.03
Aquilegia canadensis	Columbine	0.4	0.03
Artemisia ludoviciana	Prairie Sage	2.9	0.03
Doellingeria umbellata	Flat-topped Aster	0.8	0.03
Heliopsis helianthoides	Ox-eye	0.1	0.04

Oligoneuron rigidum	Stiff Goldenrod	0.91	0.06
Rosa blanda	Smooth Wild Rose	0.1	0.10
Rudbeckia hirta	Black-eyed Susan	10.35	0.31
Solidago ptarmicoides	Upland White Aster	1.3	0.06
Thalictrum dasycarpum	Tall Meadow-Rue	0.92	0.23
Zizia aurea	Golden Alexanders	0.51	0.13

Total Guild:	24.84	1.23	35.49%	2.5%
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Graminoid

Andropogon gerardii	Big Bluestem	1.85	0.50
Bouteloua curtipendula	Side-oats Grama	2.2	1.00
Bromus ciliatus	Fringed Brome	3.04	0.83
Bromus kalmii	Kalm's Brome	5.88	2.00
Calamagrostis canadensis	Bluejoint	6.4	0.06
Danthonia spicata	Poverty Grass	3.46	0.38
Elymus canadensis	Canada Wild Rye	1.91	1.00
Elymus trachycaulus	Slender Wheatgrass	2.53	1.25
Elymus virginicus	Virginia Wild Rye	2.7	1.75
Schizachyrium scoparium	Little Bluestem	0.35	0.06
Sorghastrum nutans	Indian Grass	2.19	0.50

Total Guild:	32.51	9.33	46.45%	19.1%
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Legume

Dalea candida	White Prairie Clover	0.4	0.06
Dalea purpurea	Purple Prairie Clover	1	0.18
Vicia americana	American Vetch	0.1	0.13

Total Guild:	1.5	0.37	2.14%	0.8%
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Total Seed Mix:	69.99	48.84
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Function: Conservation

Intent: Partly shaded grassland planting for native roadsides, reclamation, etc in southern and western MN.

Planting Area: S & W

Specialization:

Scientific Name	Common Name	Seeds/ sq ft	Rate (lb/ac)	% Mix (by sqft)	% Mix (by wt)
Cover					
Avena sativa	Oats* (See Cover crop note)	11.14	37.91		
Total Guild:		11.14	37.91	18.33%	79.4%

Forb

Achillea millefolium	Common Yarrow	2	0.03		
Agastache foeniculum	Blue Giant Hyssop	3.2	0.10		
Ageratina altissima	White Snakeroot	1.7	0.03		
Heliopsis helianthoides	Ox-eye	0.3	0.13		
Monarda fistulosa	Wild Bergamot	1.6	0.06		
Oligoneuron rigidum	Stiff Goldenrod	0.9	0.06		
Osmorhiza claytonii	Clayton's Sweet Cicely	0.06	0.07		
Rosa blanda	Smooth Wild Rose	0.06	0.06		
Rudbeckia hirta	Black-eyed Susan	6.1	0.18		
Scrophularia lanceolata	Lance-leaved Figwort	3.2	0.05		
Solidago flexicaulis	Zigzag Goldenrod	0.5	0.02		
Solidago speciosa	Showy Goldenrod	1.8	0.05		
Symphotrichum laeve	Smooth Aster	1.3	0.06		
Zizia aurea	Golden Alexanders	0.46	0.11		

Total Guild:		23.18	1.01	38.14%	2.1%
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Graminoid

Andropogon gerardii	Big Bluestem	3.68	1.00		
Bouteloua curtipendula	Side-oats Grama	2.2	1.00		
Bromus kalmii	Kalm's Brome	4.4	1.50		
Elymus canadensis	Canada Wild Rye	2.38	1.25		
Elymus hystrix	Bottlebrush Grass	0.88	0.32		

Elymus trachycaulus	Slender Wheatgrass	3.18	1.57
Panicum virgatum	Switchgrass	0.3	0.06
Schizachyrium scoparium	Little Bluestem	3.4	0.62
Sorghastrum nutans	Indian Grass	4.4	1.00

Total Guild:	24.82	8.31	40.84%	17.4%
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Legume

Dalea candida	White Prairie Clover	1.2	0.17
Desmodium canadense	Canada Tick Trefoil	0.29	0.14
Vicia americana	American Vetch	0.14	0.19

Total Guild:	1.63	0.50	2.68%	1.1%
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Total Seed Mix:	60.77	47.73
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