



Vegetation Establishment – Alexandria Session

CREP Seeding Guidelines:

CRP Practice	State of MN Requirements for Vegetation Establishment
CP-2	<p>327 Standard (native species only)</p> <p>Minimum: 1.A - Native Grasses and Forbs</p> <p>Preferred: 1.A - Native Grasses and Forbs: Additional forbs up to Standard maximum</p> <p>Additional Option: Refer to NRCS/BWSR Guidelines for seed mixtures benefitting monarchs and beneficial insects. Monarch Food Plots limited to 10% of the offered CP-2 acres.</p>

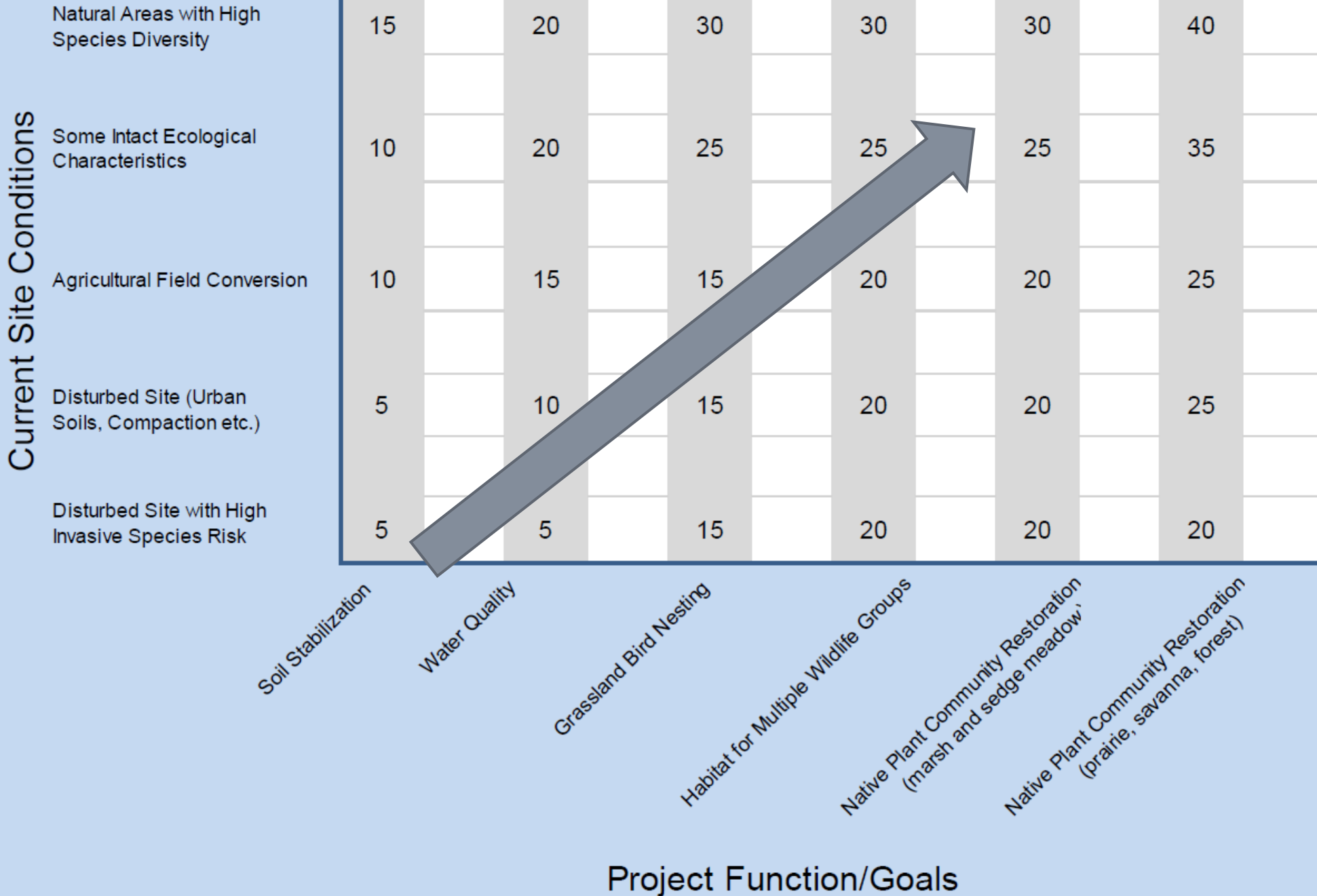
CRP Practice	State of MN Requirements for Vegetation Establishment
CP-21	<p>393 Standard (native species only)</p> <p>Minimum: Use of Table 12 required (native species only)</p> <p>Preferred: Additional use of Table 13: Additional forbs up to Standard maximum, when width allows</p>

CREP Seeding Guidelines:

CRP Practice	State of MN Requirements for Vegetation Establishment
CP-23	657 Standard (native species only)
	Minimum - Adjacent Upland: Herbaceous Upland: 327 – Conservation Cover, Native Grasses, Forbs and Legumes Forested Upland: 612 - Tree/Shrub Establishment Minimum - Wetland: Refer to Technical Note #31: 657 - Wetland Restoration

CRP Practice	State of MN Requirements for Vegetation Establishment
CP-23a	657 Standard (native species only)
	Minimum - Adjacent Upland: 643 - Tallgrass Prairie Specifications Preferred - Adjacent Upland: Refer to NRCS/BWSR Guidelines for seed mixtures benefitting monarchs and beneficial insects. Minimum - Wetland: Refer to Technical Note #31: 657 - Wetland Restoration

Minimum Recommended Number of Species



Seed Calculators:

- Can be found on the NRCS e-fotg
- <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/mn/technical/ecoscience/agronomy/?cid=nrcseprd1316625>

Seeding Tools

- 512 - Forage and Biomass Planting (XLSM; 1 MB)
- Conservation Seeding Calculator Workbook – 8/2018 (XLS; 561 KB)
 - 327 – Conservation Cover
 - 342 – Critical Area Planting
 - 393 – Filter Strip
 - 643 – Restoration of Rare or Declining Natural Communities
 - 657 – Wetland Restoration
- Conservation Reserve Enhancement Program (CREP) Seeding Calculator Workbook – 8/2018

NRCS Seed Calculators

PRACTICE (check)		643 - Restoration and Management of Declining Habitats								
		CRP CP-25/CP-38E - Restoration and Management of Declining Habitat								
		CRP CP-23 - Wetland Restoration Buffer								
		CRP CP-27/28 - Farmable Wetland Buffer								
		CRP CP-37 - Duck Nesting Habitat								
		OTHER								
Background Information										
GRASS SPECIES	PLANNED % OF GRASS COMPONENT BY SEEDS/SQ. FOOT	POUNDS PLS./AC.	TOTAL SEEDS/ SQ. FOOT	% BY SEEDS SQ./FT		SEEDS/ SQ. FOOT At 1 lb. Rate	COC Selected	COC Reference	Total Pounds PLS	
				1/	2/					
	Planned			Can't Exceed	Planned %					
Indiangrass	0 to 25	0.00	0.0	#DIV/0!	#DIV/0!	193000	4.4	4	0.0	
Big Bluestem	0 to 25	0.00	0.0	#DIV/0!	#DIV/0!	176000	4.0	4	0.0	
Sideoats Grama	0 to 30	0.00	0.0	#DIV/0!	#DIV/0!	180000	4.1	6	0.0	
Little Bluestem	0 to 30	0.00	0.0	#DIV/0!	#DIV/0!	286000	6.6	5	0.0	
Prairie Sandreed	0 to 30	0.00	0.0	#DIV/0!	#DIV/0!	275000	6.3	7	0.0	
Blue Grama	0 to 20	0.00	0.0	#DIV/0!	#DIV/0!	750000	17.2	8	0.0	
Switchgrass	0 to 5	0.00	0.0	#DIV/0!	#DIV/0!	390000	9.0	5	0.0	
Prairie Cordgrass	0 to 5	0.00	0.0	#DIV/0!	#DIV/0!	183000	4.2	4	0.0	
Prairie Dropseed	0 to 10	0.00	0.0	#DIV/0!	#DIV/0!	224000	5.1	9	0.0	
Rough Dropseed	0 to 10	0.00	0.0	#DIV/0!	#DIV/0!	480000	11.0	9	0.0	
Canada Wildrye	0 to 10	0.00	0.0	#DIV/0!	#DIV/0!	115000	2.6	5	0.0	
Green Needlegrass	0 to 10	0.00	0.0	#DIV/0!	#DIV/0!	180000	4.1	5	0.0	
Porcupine grass	0 to 10	0.00	0.0	#DIV/0!	#DIV/0!	57000	1.3	6	0.0	
June grass	0 to 5	0.00	0.0	#DIV/0!	#DIV/0!	2315000	53.1	7	0.0	
Western Wheatgrass	0 to 10	0.00	0.0	#DIV/0!	#DIV/0!	112000	2.6	2	0.0	
Slender Wheatgrass	0 to 10	0.00	0.0	#DIV/0!	#DIV/0!	155000	3.6	5	0.0	
Canada Bluejoint	0 to 5	0.00	0.0	#DIV/0!	#DIV/0!	4480000	102.8	5	0.0	
Virginia Wildrye	0 to 10	0.00	0.0	#DIV/0!	#DIV/0!	96000	2.2	3	0.0	
Kalms Brome	0 to 10	0.00	0.0	#DIV/0!	#DIV/0!	128000	2.9	5	0.0	
TOTAL Pounds PLS		0.00	0.0	#DIV/0!		AVE COC GRASS		#DIV/0!		

- Easy to use calculators for determining seed mixes
- Use the findings along with info on suitable alternative from the NRCS tech note #31 to find a mix that works with your seed vendor.

Specific calculator for each practice type:

GRASS SPECIES	PLANNED % OF GRASS MIX BY SEEDS/SQ. FOOT	POUNDS PLS./AC.	TOTAL SEEDS/ SQ. FOOT	% BY SEEDS SQ./FT 1/	Seeds/Pound	SEEDS/ SQ. FOOT At 1 lb./Ac Rate	TOTAL POUNDS PLS	
	Planned							
Big Bluestem	0 to 50	0.00	0.0	#DIV/0!	#DIV/0!	176000	4.0	0.0
Blue Grama	0 to 25	0.00	0.0	#DIV/0!	#DIV/0!	750000	17.2	0.0
Indiangrass	0 to 25	0.00	0.0	#DIV/0!	#DIV/0!	193000	4.4	0.0
Little Bluestem	0 to 25	0.00	0.0	#DIV/0!	#DIV/0!	286000	6.6	0.0
Prairie Cordgrass	0 to 100	0.00	0.0	#DIV/0!	#DIV/0!	183000	4.2	0.0
Sideoats Grama	0 to 25	0.00	0.0	#DIV/0!	#DIV/0!	180000	4.1	0.0
Switchgrass	0 to 100	0.00	0.0	#DIV/0!	#DIV/0!	390000	9.0	0.0
Canada Wildrye	0 to 25	0.00	0.0	#DIV/0!	#DIV/0!	115000	2.6	0.0
Fringed Brome	0 to 50	0.00	0.0	#DIV/0!	#DIV/0!	160000	3.7	0.0
Green Needlegrass	0 to 25	0.00	0.0	#DIV/0!	#DIV/0!	180000	4.1	0.0
Kalms Brome	0 to 25	0.00	0.0	#DIV/0!	#DIV/0!	128000	2.9	0.0
Slender Wheatgrass	0 to 25	0.00	0.0	#DIV/0!	#DIV/0!	155000	3.6	0.0
Virginia Wildrye	0 to 25	0.00	0.0	#DIV/0!	#DIV/0!	96000	2.2	0.0
Western Wheatgrass	0 to 50	0.00	0.0	#DIV/0!	#DIV/0!	112000	2.6	0.0
TOTAL POUNDS PLS		0.00	0.0	#DIV/0!				
1/ ACTUAL SEEDS PER SQUARE FOOT SHALL BE WITHIN THE RANGE SPECIFIED IN PLANNED CONDITION								
								Background Information
FORB SPECIES		OUNCES PLS./AC.	TOTAL SEEDS/ SQ. FOOT	% FORBS BY SEEDS SQ./FT	SEEDS/oz	SEEDS/ SQ. FOOT At 1 oz/ac Rate	TOTAL OUNCES PLS	
Canada Goldenrod	(Solidago canadensis)	0.00	0.00	#DIV/0!	287500	6.6	0.0	
Cup Plant	(Silphium perfoliatum)	0.00	0.00	#DIV/0!	1400	0.0	0.0	
Giant Hyssop	(Agastache foeniculum)	0.00	0.00	#DIV/0!	91000	2.1	0.0	
Giant/Late Goldenrod	(Solidago gigantea)	0.00	0.00	#DIV/0!	250000	5.7	0.0	
Grass-leaved Goldenrod	(Euthamia graminifolia)	0.00	0.00	#DIV/0!	350000	8.0	0.0	
Ironweed	(Veronia fasticulata)	0.00	0.00	#DIV/0!	24000	0.6	0.0	
Joe-pye Weed	(Eutrochium maculatum)	0.00	0.00	#DIV/0!	95000	2.2	0.0	
Mountain Mint	(Pycnanthemum virginianum)	0.00	0.00	#DIV/0!	220000	5.1	0.0	
New England Aster	(Symphyotrichum novae-angliae)	0.00	0.00	#DIV/0!	66000	1.5	0.0	
Sneezeweed	(Helenium autumnale)	0.00	0.00	#DIV/0!	130000	3.0	0.0	
Stiff Goldenrod	(Solidago rigida)	0.00	0.00	#DIV/0!	41000	0.9	0.0	
Panicled Aster	(Symphyotrichum)	0.00	0.00	#DIV/0!	156000	3.6	0.0	
Swamp Milkweed	(Asclepias incarnata)	0.00	0.00	#DIV/0!	4800	0.1	0.0	
White Sage	(Artemisia ludoviciana)	0.00	0.00	#DIV/0!	4048000	92.9	0.0	
Wild Bergamot	(Monarda fistulosa)	0.00	0.00	#DIV/0!	70000	1.6	0.0	
Yellow Coneflower	(Ratibida pinnata)	0.00	0.00	#DIV/0!	30000	0.7	0.0	
TOTAL OUNCES PLS		0.00	0.0	#DIV/0!				

327 CREP CP2 Monarch Food Plot | 327 CREP CP2 MonFoodPlotExample | 327 CREP CP2 CP23 Native | **393 CREP CP-21 Natives**

Multiple tabs within the workbook



When Can Restoration or Reimbursement Occur?

- RIM can start to C/S any eligible costs starting when the RIM Agreement is executed
- RIM can reimburse after the RIM Easement has been recorded

Certifying Veg Work, Submitting for Payment

E. SWCD CERTIFICATION			
I certify that an inspection has been performed and that the items identified in part C have been completed and are in accordance with the required practice standards and specifications.		I certify that I have reviewed this voucher and all supporting information and that to the best of my knowledge and belief, the quantities and billed costs or disbursements are accurate and are in accordance with terms of the program identified.	
(Conservation District Technical Representative)		(Date)	(Authorized SWCD Representative)
			(Date)

- SWCD Certification:
 - Signatures here certify that all costs are accurate, ok to be paid by BWSR, and the project meets BWSR standards.
 - Can be signed by:
 - SWCD tech,
 - SWCD manager,
 - SWCD Board member,
 - other SWCD-authorized persons which may be Farm Bill or NRCS staff
 - Who should sign is determined by each SWCD

RIM Conservation Planning

SWCD CHECKLIST Conservation Easement Acquisition *Part II*

Conservation Plan Package

___ CEPPW (original or amended)
___ Conservation Plan map

___ Conservation Practice Plan
___ Conservation Plan Signature Page (send with recorded easement)

Easement Stage

- 15) Date _____ Received updated property abstract from the landowner (if applicable)
- 16) Date _____ Requested title insurance commitment from title insurance agent
- 17) Date _____ Received title insurance commitment (Should be within 14 days of request.)
- 18) Date _____ Obtain copies of consents, subordinations, and other related documents pertaining to exceptions listed in Schedule B of title commitment
- 19) Date _____ Conservation Plan package completed and sent to BWSR (contains components listed above)
- 20) Date _____ Title insurance commitment and copies of related documents mailed or emailed to BWSR (email to bwsr.rim@state.mn.us)

Notes: 1) Title commitment must be sent to BWSR in the same format as originally received. 2) Do not send originals of consents or other documents that need to be recorded. 3) If lender suddenly requests to be listed as a co-payee, and they are not already listed as such on the agreement, request written permission from the landowner to add the lender as a co-payee, and forward it to BWSR.

RIM Conservation Planning

- Conservation planning is not just a checklist item
- Conservation planning should begin day 1
- Should be a recurring topic when meeting with landowner
- Most effort should be spent on conservation planning and site prep
- Understand landowners abilities
- Review official plan when they sign CRP, review again when they sign easement
- Be adaptive



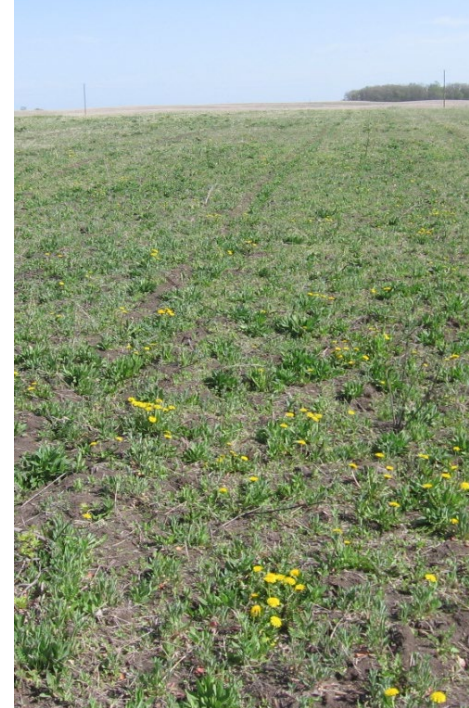


Communication is Key

- Communicate clear expectations
- Landowner responsibilities
- Site prep
- Timeframe
- Upfront costs
- Weed control

- Repeat, Repeat, Repeat

- You never know what information the landowner will hold on to







Expectations Versus Reality







Developing Seed Mixes

- How many develop seed mixes?
- Species prices
- Assumption High Diversity = High Cost
- Contract with Agassiz Seed

Seed Mix 1		
Species	PLS/acre	seeds/sqft
Indiangrass	1	4.4
Big Bluestem	1.2	4.8
Sideoats Grama	1.25	5.2
Blue Grama	0.25	4.3
Canda Wildrye	0.1	0.3
Virginia Wildrye	0.9	2
Showy Penstemon	4	1.29
Lance-leaved Coreopsis	3	1.38
Giant Sunflower	7	1.01
Golden Alexander	4	1.01
Sneezeweed	0.75	2.24
Black-eyed Susan	1	2.11
Common Milkweed	3.85	0.35
Maxmillian Sunflower	7	2.09
White Prairie Clover	5	2.18
Total Species	15	
Total seeds/sqft	35.3	
% Grass	59.6	
% Flower	40.4	
% Milkweed	1	
% Forbs Monarch Prefere	67	
Total PLS/Acre	6.925	

\$500+/acre

Seed Mix 2		
Species	PLS/acre	seeds/sqft
Indiangrass	1	4.4
Big Bluestem	1	4
Sideoats Grama	1	4.1
Blue Grama	0.2	3.4
Slender Wheatgrass	0.6	2.1
Virginia Wildrye	0.5	1.1
Little BlueStem	0.5	3.3
Dotted Blazingstar	0.1	0.02
Purple Coneflower	0.1	0.02
Showy Penstemon	0.1	0.03
Butterfly Weed	0.2	0.02
Evening Primrose	0.5	1.03
Hoary Vervain	1	0.64
Lance-leaved Coreopsis	2	0.92
Leadplant	0.3	0.11
Long Handed Coneflower		1.93
Canada Milkweed		0.39
Common Ox-eye	1	0.14
Golden Alexanders	1	0.25
Great Blue Lobelia	0.1	1.15
Meadow Blazing Star	0.1	0.03
Wild Bergamot	1	1.61
New England Aster	0.1	0.15
Swamp Milkweed	0.5	0.06
Blackeyed Susan	1	2.11
Common Milkweed	4	0.37
Giant Hysopp	0.4	0.84
Purple Prairie Clover	4.25	1.76
Max Sunflower	0.5	0.15
Stiff Goldenrod	1	0.94
White Prairie Clover	1	0.44
Total Species	31	
Total seeds/sqft	37.7	
% Grass	59.9	
% Flower	40.1	
% Milkweed	1.17	
% Forbs Monarch Prefered	79	
Total PLS/Acre	6.25	

\$200/acre

- Pollinator Habitat: The Art & Science of Managing for High Quality and Cost Effectiveness - July 28, 2016 by Peter Berthelsen, Conservation Blueprint





Working with Landowners & Vendors

- Be comfortable being the middle man
- Understand vendors experience
- Encourage bids
- Offer to review seed mixes prior to planting
- Understand there's more than one way to achieve the same results
- Vendor Issues to be aware of
 - Assignment of payment issues
 - Seed mix prices
 - Site Prep – rock picking etc.



Cost Share Vouchers

- Review bills and invoices
- Certifying Work
- Timeframes
- Working with FSA
- Partial Payments



Key Take Aways

- Conservation planning should begin day 1
- Communication
- Most effort should be spent on conservation planning and site prep
- Be adaptive

Questions?