

Minnesota Prairie Conservation Plan 2010

*A habitat plan for native prairie, grassland, and
wetlands in the Prairie Region of western Minnesota*

STEVE CHAPLIN

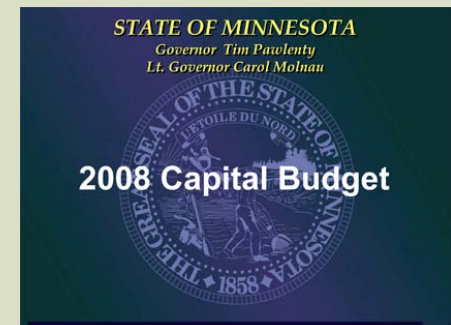
MINNESOTA PRAIRIE PLAN WORKING GROUP

JUNE 7, 2011



New Funding for Prairie Conservation

- In 2008, the citizens of Minnesota passed a constitutional amendment increasing the state sales tax by 3/8¢
- One third of the increase (\$70-100 M per year) is to restore, protect, and enhance prairies, forests, wetlands, and habitat for fish, game and wildlife



Minnesota Prairie Plan Working Group

Core group:

Marissa Ahlering, TNC

Steve Chaplin, TNC

Carmen Converse, DNR

Meredith Cornett, TNC

Ryan Drum, USFWS

Neal Feeken, TNC

Jason Garms, DNR

Diane Granfors, USFWS

Fred Harris, DNR

Greg Hoch, MPCS

John Jaschke, BWSR

Matt Holland, PF

Tom Landwehr, TNC
(facilitator)

Tom Larson, USFWS

Jim Leach, USFWS

Kevin Lines, BWSR

Clint Miller, TCF

Mary Mitchell, USFWS

Darby Nelson, LSOHC

Ray Norrgard, DNR

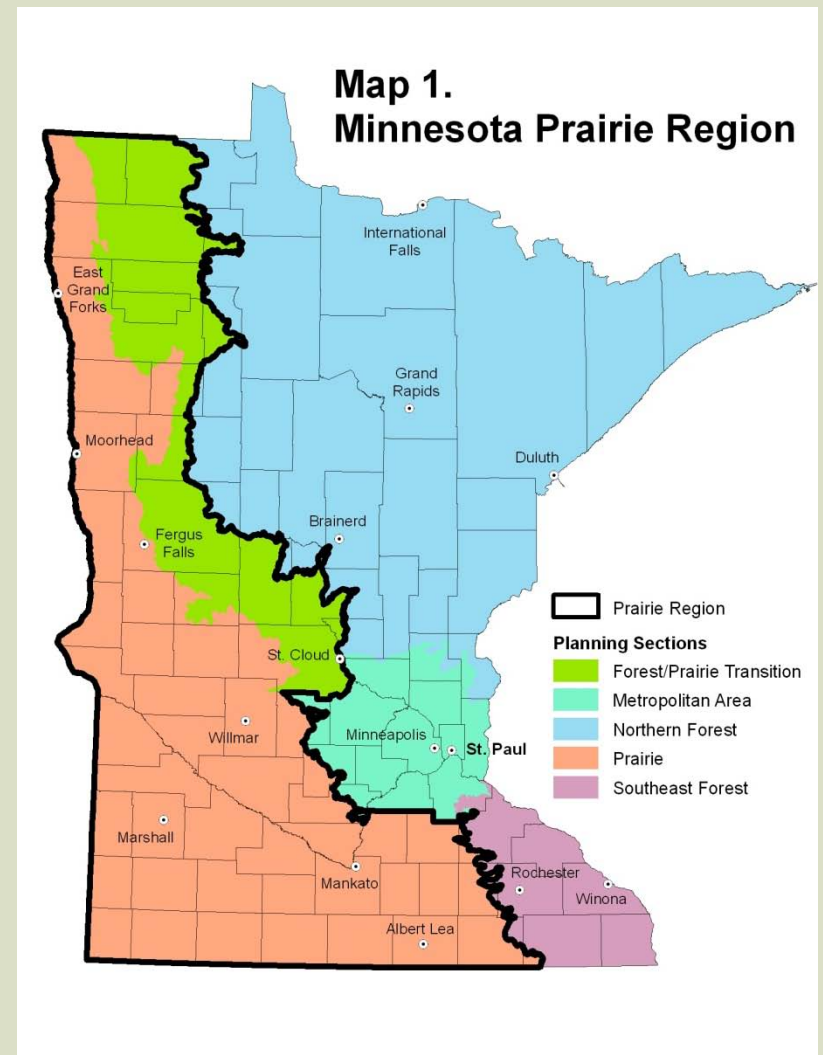
Mark Oja, NRCS

Bill Penning, DNR



Minnesota's Prairie Region

- 24.9 million acres
- Includes the Prairie and Forest-Prairie Transition Planning Sections employed by the Lessard-Sams Outdoors Heritage Council

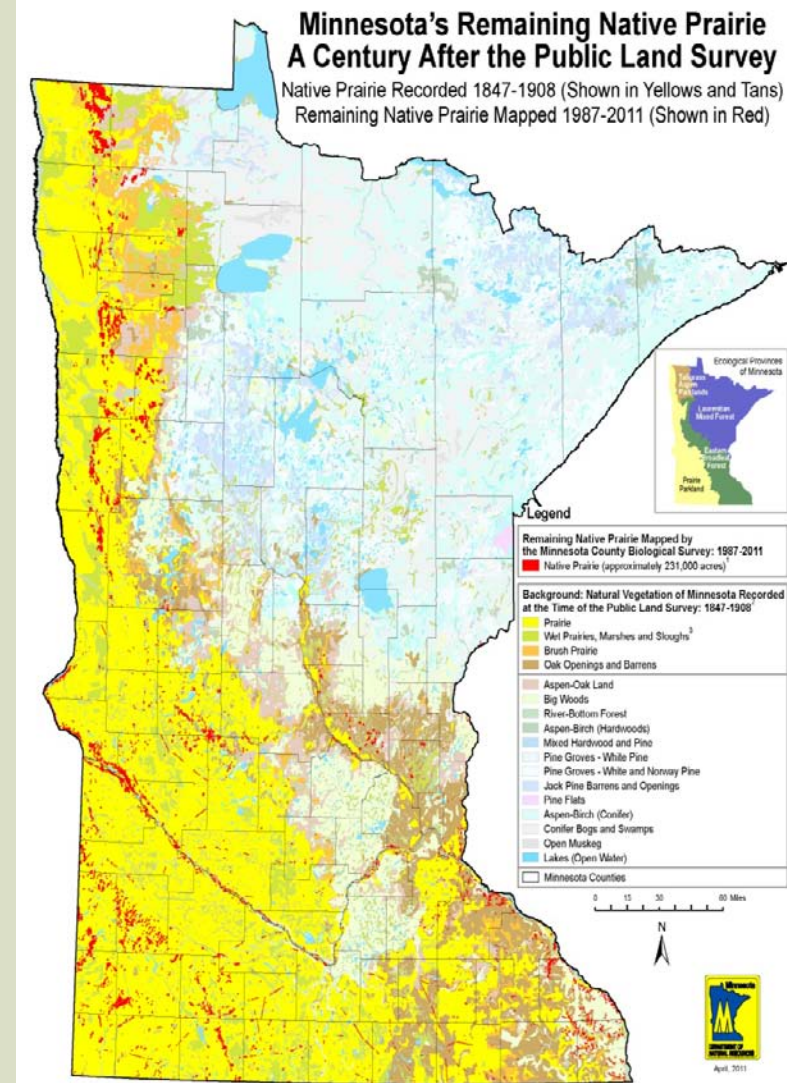


Minnesota Native Prairie

Of 18 million original prairie acres, less than 2% remain (235,000 acres)

~ 114,000 acres are legally unprotected

Even if we protect every acre of remaining native prairie, we can not maintain viable prairie animal species or many ecosystem functions



Functional Prairie Systems

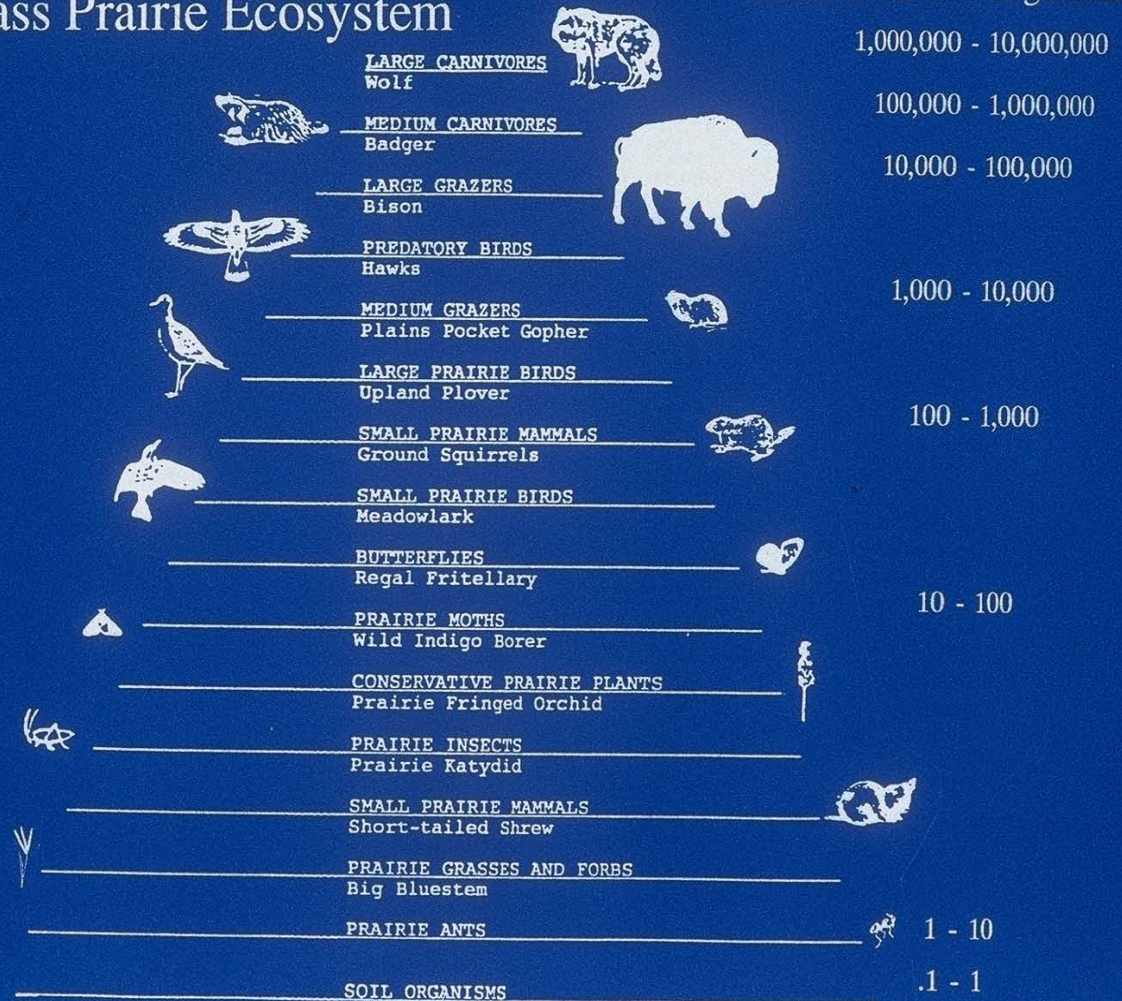
“A native prairie ecosystem that is of sufficient size, habitat condition, and landscape composition to maintain natural ecological processes and viable populations of nearly all of the native animals and plants that would naturally be found there”



Size Matters

Pyramid of Life Tallgrass Prairie Ecosystem

Acres of continuous liveable habitat
needed to survive for generations.



Conservation Vision for the Prairie Region

“In strategic locations, large areas of prairie, grassland, and associated habitats will be protected and restored to create functioning prairie systems that provide major opportunities for sustainable grass-based agriculture such as grazing and haying. These functioning landscapes will also contribute clean water, fish and wildlife habitat complexes, high quality recreational opportunities, and thriving rural communities where Minnesota’s citizens will want to live and visit.”



Multifunctional Landscapes

Can grass-based economic uses provide a sufficient return on labor and investment to sustain rural families and communities?



Prairie Seed Harvest at Glacial Ridge
Prairie Restorations Inc.





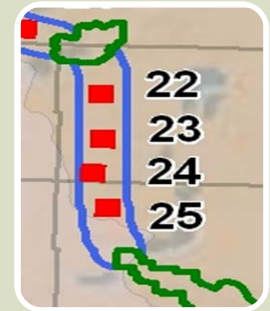
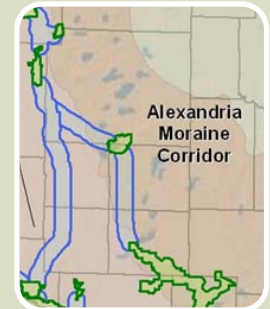
Prairie Conservation Overview

1. Core Areas

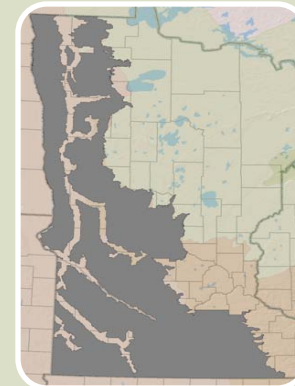


2. Corridors

- a) Prairie/Grassland Complexes
- b) Remainder of Corridors



3. Agricultural Matrix





Minnesota Prairie Core Areas

36 landscapes, 1.5 million acres, ranging from 5,000 - 300,000 acres

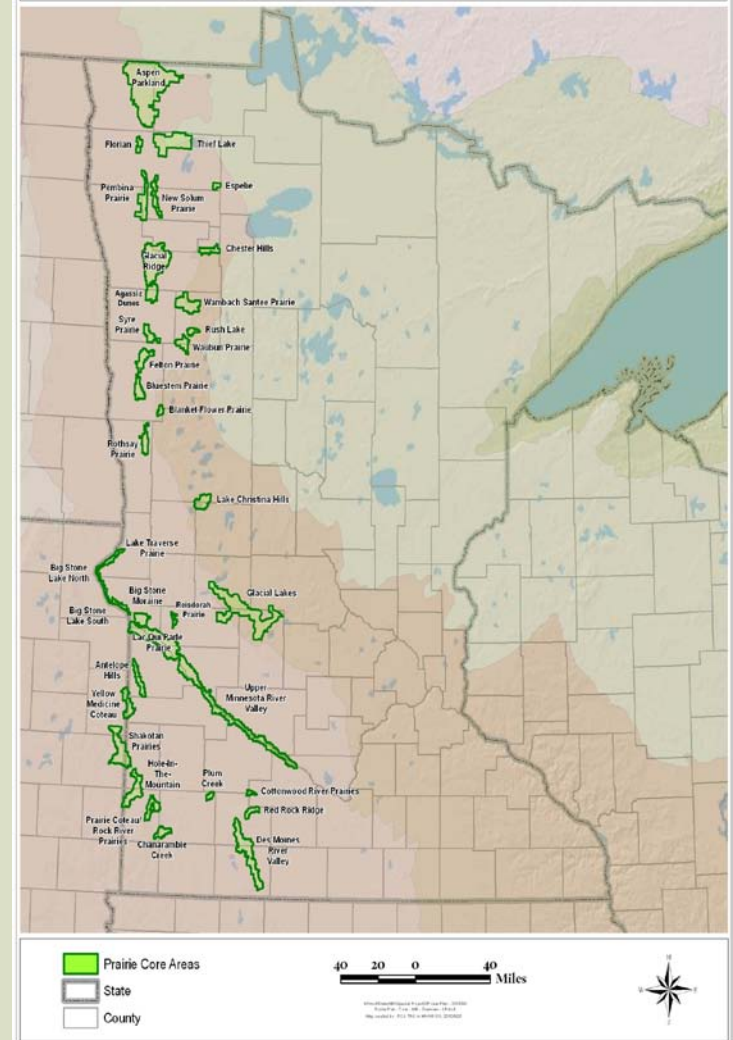
Captures 71% of native prairie

~ 10% of landscapes are native prairie

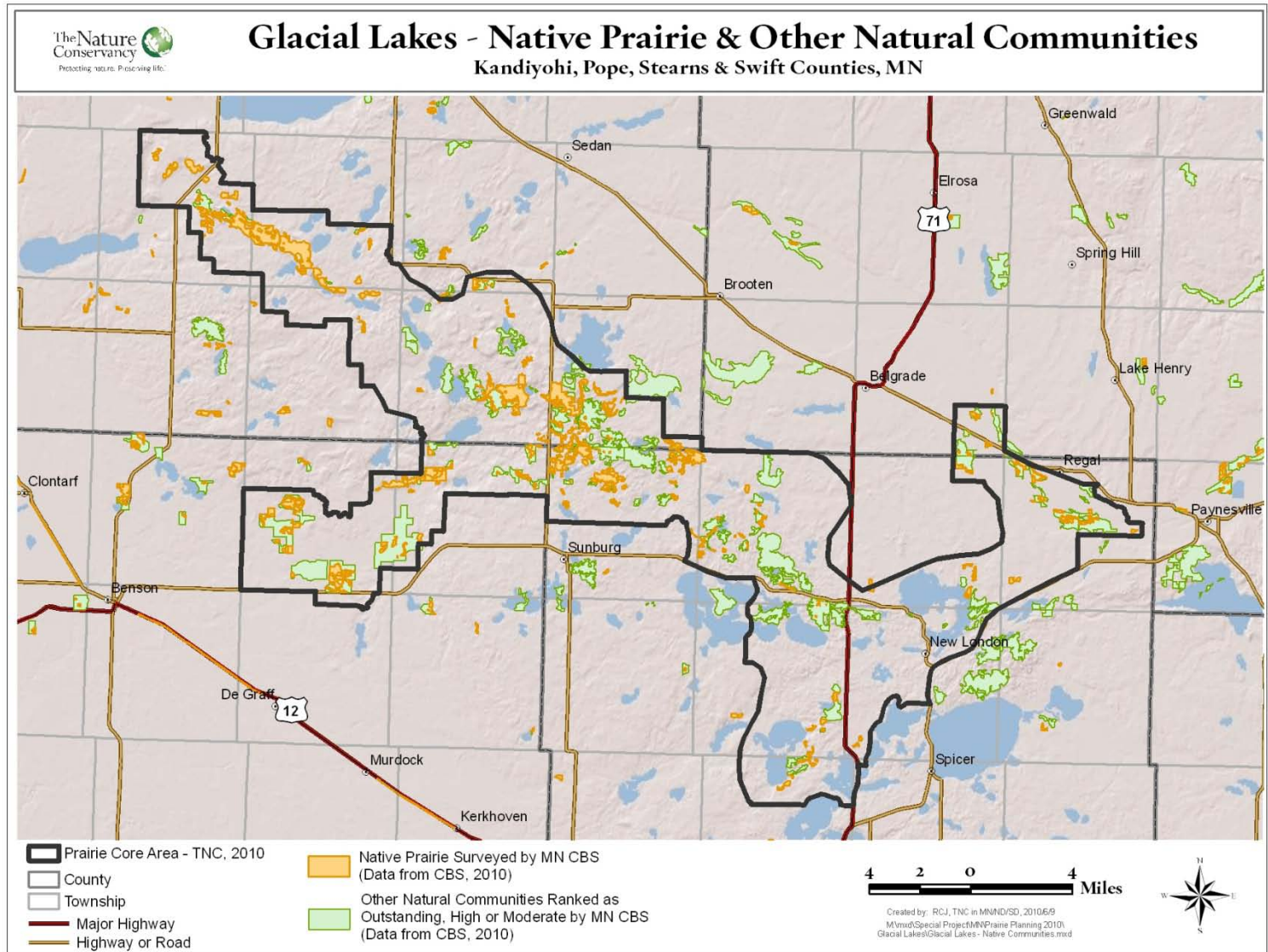
Goal: 40% grassland, 20% wetland, 50% permanent protection



Map 4. Prairie Core Areas



Glacial Lakes Prairie Landscape



Glacial Lakes Prairie Core Area (Acres)

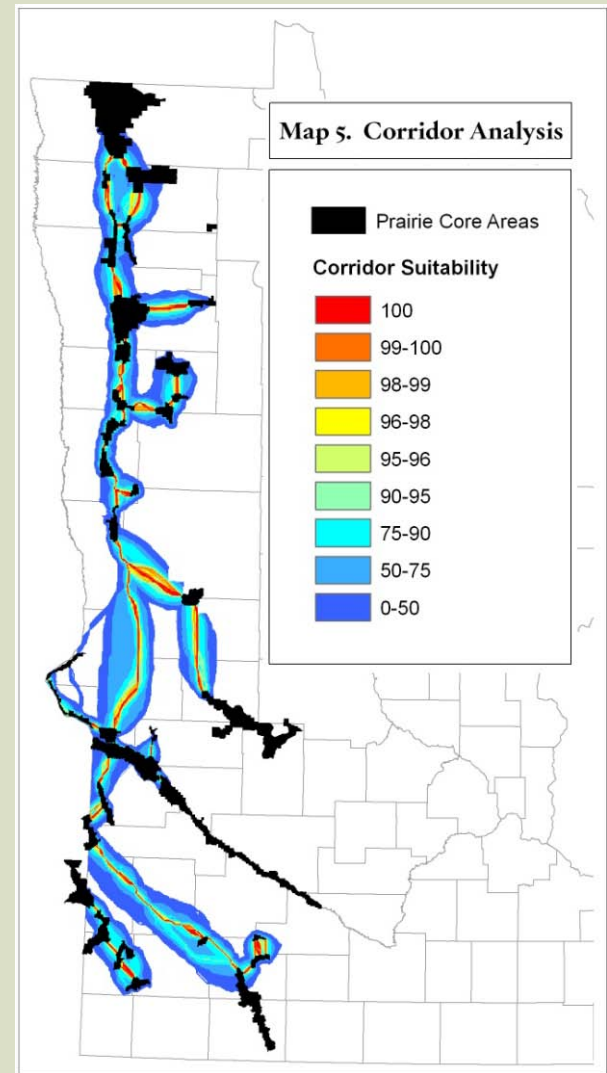
Core Area Acreage	169,305
Native Prairie (NP)	7,223
Other Grassland	55,362
Grassland Habitat Shortfall from 40% Goal	5,137
Wetland	36,326
Wetland Habitat Shortfall from 20% Goal	0
Protected NP	2,813
NP Protection Shortfall	4,410
Protected Other Grassland	8,227
Grassland Protection Shortfall	18,411
Grassland in CRP	14,224
Protected Wetland	8,170
Wetland Protection Shortfall	8,760





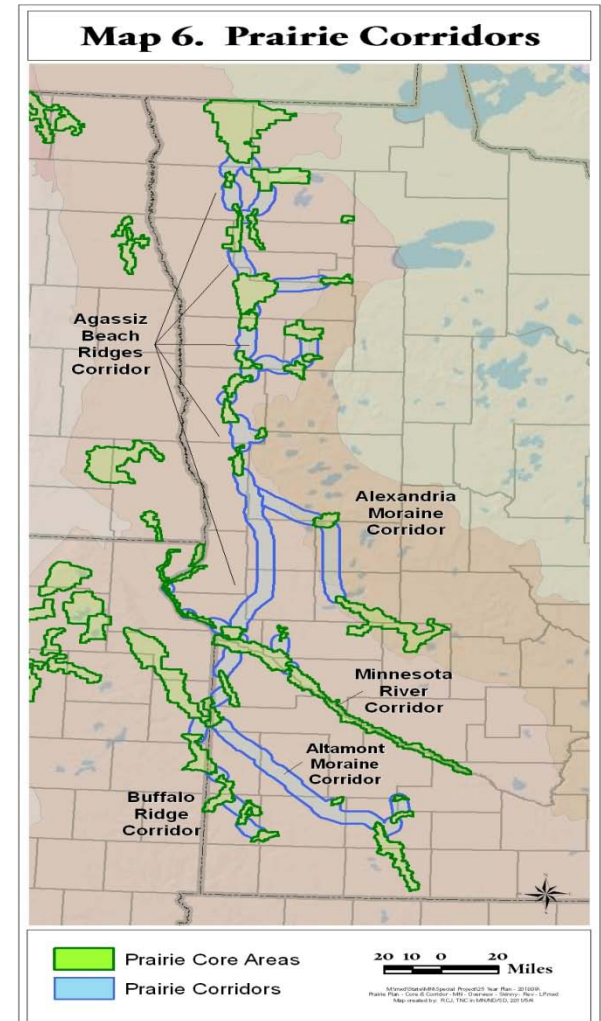
Minnesota Prairie Corridors

Habitat Suitability Analysis based on 28 species of waterfowl, marsh birds, grassland passerines, shorebirds, and game birds



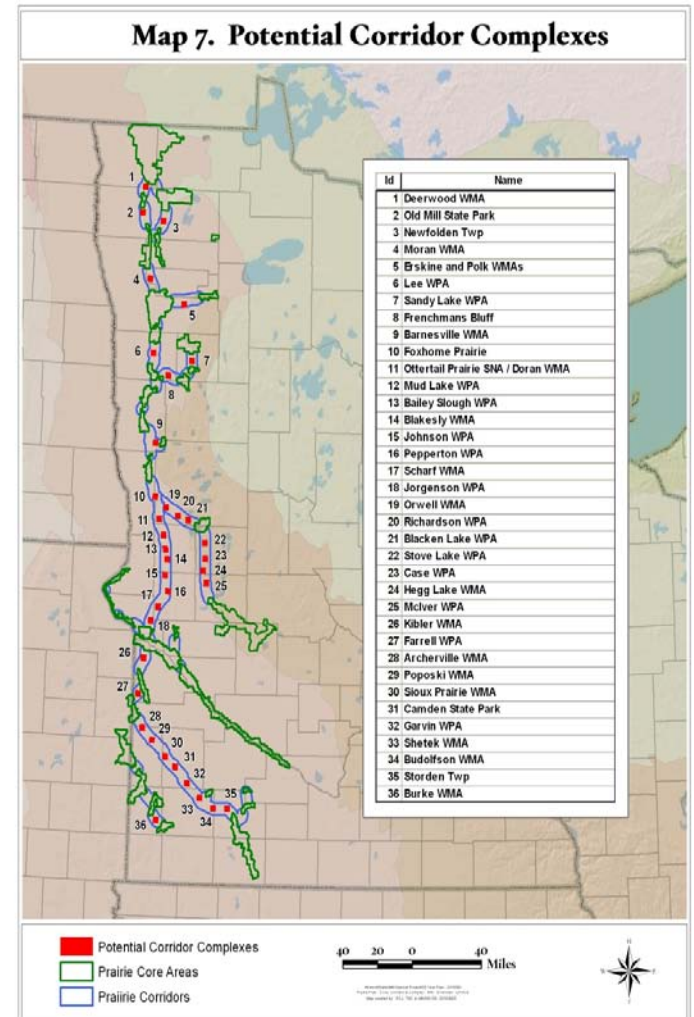
Minnesota Prairie Corridors

- Five major corridors along geomorphological features
- Corridors 6 miles wide
- 1.6 million acres total



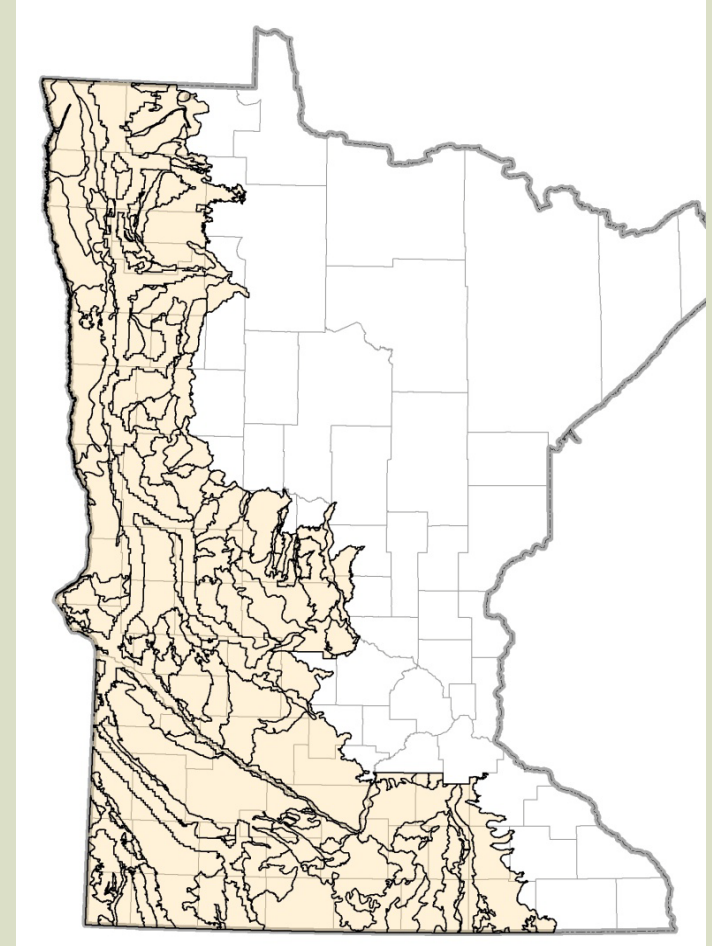
Habitat Complexes within Corridors

1. 9 square miles
2. Every 6 miles
3. 40% grassland, 20% wetland, 50% of grassland and wetland protected
4. Outside of complexes, at least 10% of each section



The Agricultural Matrix – The rest of the Prairie Region

- 21.7 million acres total
- 104 Landtype associations
- Goal: 10% of each LTA in perennial cover protected permanently or under 10-15 year contract



Prioritization within the Agricultural Matrix

1. Proximity to native prairie
2. Areas of High or Outstanding Biodiversity Significance
3. Bordering public conservation land
4. Containing restorable wetlands
5. Priority basins or basins with portfolio lakes
6. Proximity to high priority shallow lakes
7. Adjacent to high priority warm-water streams
8. Adjacent to other watercourse or water body
9. Within a Grassland Bird Conservation Area or an Important Bird Area
10. Highly erodible soils



Native Prairie Protection Goals (Acres)



	Corridor Core	Corridor Complex	General Corridor	Agricultural Matrix	Total
Fee Acquisition (\$2,700 / acre)	21,932	645	1,782	7,127	31,486
Easement (\$2,340 / acre)	51,176	1,506	4,157	16,629	73,468
Total	73,108	2,151	5,939	23,756	104,954

\$256 M

Grassland and Wetland Protection Goals (Acres)



	Core	Corridor Complex	General Corridor	Agricultural Matrix	Total
Fee Acquisition (\$2,700 / acre)	41,514	9,960	8,885	149,426	209,785
Easement (\$1,200 / acre)	53,224	12,048	17,769	298,852	381,893
Contract (\$734*/acre)	22,359	0	62,193	1,045,983	1,129,403
Total	117,097	22,007	88,847	1,494,262	1,721,081

\$1,854 M

Grassland and Wetland Restoration Goals (Acres)

	Corridor Core	Corridor Complex	General Corridor	Agricultural Matrix	Total
After fee acquisition (\$4,000 + \$500 restoration/acre)	18,095	5,785	2,627	25,095	51,602
After easement (\$3,000 + \$500 restoration / acre)	36,189	11,570	5,254	50,190	103,204
After signing 10-15 year contract (\$734* + \$500 restoration)	126,663	40,496	18,390	175,666	361,215
Total	180,947	57,852	26,271	250,952	516,022

\$1,039 M



Annual Enhancement Goals on Protected Lands (Acres) – Costs over 25 Years



	Core	Corridor Complex	General Corridor	Agricultural Matrix	Total
Native Prairie (\$20 / acre/ yr)	22,390	493	650	3,402	26,935
Other Grasslands (\$20 / acre/ yr)	25,831	2,867	4,964	47,194	80,856
Wetlands (\$20 / acre/ yr)	31,277	2,098	4,246	69,673	107,292
Total	79,498	5,457	9,860	120,268	215,083

\$108 M

Annual Enhancement Goals on Unprotected Lands (Acres) – Costs over 25 Years

	Corridor Core	Corridor Complex	General Corridor	Agricultur al Matrix	Total
Native Prairie (\$20 / acre/ yr)	8,935	289	567	2,265	12,056
Other Grasslands (\$20 / acre/ yr)	42,224	4,178	27,771	279,422	353,595
Wetlands (\$20 / acre/ yr)	16,990	1,671	11,695	196,445	226,802
Total	68,150	6,138	40,034	478,132	592,453

\$296 M



Take Home Message

Even with major new conservation funding, “grass-based” agriculture will be essential to drive the voluntary protection and restoration of grassland and wetland.

No other factor will play a greater role in the creation and maintenance of prairie landscapes than the profitability of private and leased public lands.



