



Lessard-Sams Outdoor Heritage Council

ML 2022 Request for Funding

General Information

Date: 06/04/2021

Proposal Title: DNR Grassland Enhancement - Phase 14

Funds Requested: \$10,396,700

Manager Information

Manager's Name: Greg Hoch

Title: Prairie Habitat Supervisor

Organization: DNR

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Location Information

County Location(s): Dakota, Washington, Sherburne, Fillmore, Wabasha, Goodhue, Grant, Traverse, Becker, Otter Tail, Marshall, Stevens, Clay, Roseau, Wilkin, Norman, Mahnommen, Kittson, Pope, Douglas, Red Lake, Polk, Cottonwood, Martin, Jackson, Freeborn, Dodge, Steele, Faribault, Le Sueur, Nicollet, McLeod, Kandiyohi, Meeker, Chippewa, Redwood, Brown, Lincoln, Lyon, Big Stone, Lac qui Parle, Winona, Stearns, Todd, Pennington, Yellow Medicine, Swift, Houston, Scott, Carver, Morrison and Olmsted.

Eco regions in which work will take place:

- Northern Forest
- Forest / Prairie Transition
- Prairie
- Metro / Urban
- Southeast Forest

Activity types:

- Restore
- Enhance

Priority resources addressed by activity:

- Prairie
- Wetlands

Narrative

Abstract

Grasslands continue to be the most threatened habitat in the state. This programmatic request will build on the DNR's history of enhancing and restoring grasslands, embedded wetlands, and oak savannas to increase wildlife populations. The Prairie Plan, Pheasant Plan, and Wildlife Action Plan will guide our efforts to ensure we are operating in a strategic and targeted manner. This proposal will enhance and restore grasslands on parcels that are permanently protected and most open to public hunting, including DNR WMAs, SNAs, AMAs, Native Prairie Bank (NPB) easements, State Forests, as well as federal WPAs and NWRs.

Design and Scope of Work

In many farmland counties less than five percent of the area is in public wildlife lands, often much less. We continue to lose about 200 acres of native prairie per year. While Minnesota does have acres enrolled in CRP as well as state programs such as RIM and CREP, there is still very little grassland left in many counties of the state. As such, we need to make sure the remaining grasslands, especially those open to public recreation are as diverse and productive as possible. These lands provide wildlife habitat as well as

Wildlife and pollinator populations are a fraction of what they were even a decade ago. Water quality, especially nitrate contamination, is a human health and wildlife issue. Restoring and enhancing grasslands are one of the most effective ways to improve all of these issues. Grasslands and embedded wetlands are also very good at sequestering and storing carbon, helping to mitigate the effects of climate change. Grassland and wetland restoration and enhancement, carefully guided by planning, is one of the best ways to address many of these issues.

This programmatic request seeks funding to enhance grassland habitat on permanently protected grasslands and prairies, most of which are open to public hunting. Without periodic management to simulate historical disturbance patterns, grassland lose diversity and productivity. Invasive species may increase and woody vegetation will encroach into the grasslands, changing their very character and the species that inhabit the area. The activities listed in this proposal will use BMPs for grassland enhancement and diverse local ecotype seed mixes for restoration.

The SNA program will be funding the same Seasonal and Technician positions they have requested in the past. This year we are adding Contract Administration staff, which we have done every 3-4 years in the past.

We are adding two Prairie Restoration Biologists, which are new positions. These positions will work with staff and vendors to help design seed mixes for restorations, work with contractors/vendors to order seed and seed supply issues, and help coordinate seed harvest programs and consortiums around the state. Last, they will assess past OHF funded prairie restorations and address specific management questions in an adaptive management framework to help inform staff and develop/modify BMPs for future restoration work. They will communicate these results and refinements to BMPs back to DNR staff and the conservation community multiple times each year at professional meetings and field days.

How does the proposal address habitats that have significant value for wildlife species of greatest conservation need, and/or threatened or endangered species, and list targeted species?

Grasslands and grassland wildlife continue to be the most threatened habitat and populations, both in Minnesota and across the Midwest.

According to the Wildlife Action Plan, Minnesota's grasslands contain 4 state threatened species, 14 state endangered species, and 29 species of concern. The species on this list include 1 amphibian, 11 birds, 5 mammals, 16 moths and butterflies, 9 other invertebrates, and 5 reptiles. The Dakota skipper was recently federally listed as threatened and the Poweshiek's skipperling as endangered. Minnesota is a key state for monarch butterflies and they need the pollen and nectar found in grasslands to complete their life cycle.

With few exceptions, grasslands for game species, nongame species, SGCN, and T&E species are similar. They all need habitat composed of a diversity of native grasses and forbs. Enhancements for one species will almost always benefit dozens of other species in the habitat. Many species of invertebrates and pollinators need a diversity and abundance of flowering plants. Many birds need grassland free of trees. All species need clean water free of sediment and chemical pollutants. While the work proposed here will benefit game species, non-game species, SGCN, and T&E, it will also go beyond these objectives to provide numerous ecosystem services such as water filtration, floodwater retention and reduced flood damage, and create pollinator habitat to help sustain segments of the agricultural economy.

What is the degree of timing/opportunistic urgency and why it is necessary to spend public money for this work as soon as possible?

Traditionally, grasslands and wetlands have been seen primarily as wildlife habitat. We have Plans that tell us how to best do this work on the landscape. In recent years researchers in Minnesota and surrounding states are showing how strategic landscape planning for grassland/wetland work can improve water quality for wildlife and people. Water quality issues continue to be a economic and health problem in rural Minnesota. Grasslands and embedded wetlands are also very good for sequestering and storing carbon, helping to mitigate climate change effects. Combining wildlife, climate, and water efforts shows how strategic planning can benefit wildlife and people at the same time.

Describe how the proposal uses science-based targeting that leverages or expands corridors and complexes, reduces fragmentation or protects areas identified in the MN County Biological Survey:

The projects in this proposal will be guided primarily by the Prairie Conservation Plan as well as the Pheasant and Duck Action Plans. First and foremost, these Plans outline focal areas (Core Areas and Habitat Complexes) where we can build on an existing base of conservation lands and improve the habitat there. The Prairie Plan identifies specific corridors and complexes that connect larger core areas. The latest science is telling us that it isn't the size of an individual habitat parcel that matters as much as the amount of habitat in the larger surrounding landscape. These Plans, and the work proposed here, build on these concepts of landscape level habitat planning. We will not restrict ourselves to these focal areas. There are critical habitats outside these areas. However, we will use these Plans to focus our efforts in areas where they can have the greatest wildlife benefits. The first Conservation Focus Area is in the prairie region of the state. Additionally, conservation partners (DNR, USFWS, TNC, and Audubon) recently received a grant through the USFWS to help us monitor habitat quality, wildlife abundance, and the response of wildlife to all OHF funded activities in these areas. Partners recently published a research paper on their first years of data. The DNR and our conservation partners take these funds, and the monitoring of outputs and outcomes, seriously.

Which two sections of the Minnesota Statewide Conservation and Preservation Plan are most applicable to this project?

- H1 Protect priority land habitats

Which two other plans are addressed in this proposal?

- Long Range Plan for the Ring-Necked Pheasant in MN
- Minnesota Prairie Conservation Plan

Describe how your program will advance the indicators identified in the plans selected:

The Prairie Plan, Pheasant Plan, and Duck Plan identify target acreages for enhancement and help guide where on the landscape those activities should occur. These funds, combined with other DNR funds and funding through the USFWS, as well as other grants to our conservation partners (ie. North American Wetland Conservation Act and others), are all part of the overall strategy among the conservation community for increasing the acres enhanced and restored of grasslands and associated wetlands in Minnesota.

These plans also help guide and focus that work where the science tells us we will have the biggest return in habitat quality and wildlife populations for the investment. Conservation partners in the prairie region continue to apply existing monitoring protocols such as the Grassland Monitoring Team (GMT) and work to develop statistically robust new monitoring protocols.

Which LSOHC section priorities are addressed in this proposal?

Forest / Prairie Transition

- Protect, enhance, and restore rare native remnant prairie

Metro / Urban

- Protect, enhance, and restore remnant native prairie, Big Woods forests, and oak savanna with an emphasis on areas with high biological diversity

Northern Forest

- Restore and enhance habitat on existing protected properties, with preference to habitat for rare, endangered, or threatened species identified by the Minnesota County Biological Survey

Prairie

- Restore or enhance habitat on public lands

Southeast Forest

- Protect, enhance, and restore remnant goat prairies

Describe how your program will produce and demonstrate a significant and permanent conservation legacy and/or outcomes for fish, game, and wildlife as indicated in the LSOHC priorities:

The work conducted under this proposal will be done on land under permanent conservation protection. However, by the very nature of habitat management, these enhancements will not be permanent. Grasslands rely on periodic

disturbances. To maintain the health and diversity of grasslands, they need burning, grazing, or other ecological disturbances, at least every 4 to 6 years.

With our restorations, we are leaving a lasting legacy. In recent years the use of 40-80 species seed mixes and local ecotype seed is dramatically improving the quality of our restorations for wildlife and pollinators. The diversity and structure of our newer restorations looks much better than restorations from even a few years ago.

What other fund may contribute to this proposal?

- N/A

Does this proposal include leveraged funding?

No

Per MS 97A.056, Subd. 24, Please explain whether the request is supplanting or is a substitution for any previous funding that was not from a legacy fund and was used for the same purpose.

These funds are for additional enhance/restoration work beyond what the DNR is already conducting. These funds are not supplanting or substituting any funds.

Non-OHF Appropriations

Year	Source	Amount
2020	Game and Fish (Wildlife Operations)	24607000
2020	Dedicated Accounts (Duck Stamp, Pheasant Stamp, etc)	2900000
2020	Heritage Enhancement Acct	3499000

How will you sustain and/or maintain this work after the Outdoor Heritage Funds are expended?

We select projects with these funds that strategically enhance priority habitats. We will continue management of these sites with agency staff DNR and USFWS. The OHF provides Minnesota's conservation community with a large amount of non-Federal dollars as match that other Midwestern states don't have. In recent years, the Minnesota prairie conservation partners have been coordinating to maximize our efforts with funding sources such as the North American Wetland Conservation Act (NAWCA).

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
2025	Those listed above and OHF	Monitor subset of projects	Document results	Determine capacity for traditional funds to meet results
2026 and beyond	Those listed above and OHF	Continue monitoring	adapt results to future projects	seek funding for continued monitoring

Identify indicator species and associated quantities this habitat will typically support:

Pheasant

By looking at the ratios of CRP acres in Minnesota to pheasant harvest, we can estimate that every three acres of grassland habitat has the potential to produce one harvested pheasant rooster.

Prairie Chickens

According to the research literature and personal observations in Minnesota, prairie chickens require a minimum of 320 acres of high quality grasslands with no areas hostile to grassland wildlife (woodlots, farmsteads, etc) near these grasslands. For every 320 acre patch of high quality grassland in the prairie chicken range in the northwest part of the state, we can expect there to be a lek, or booming ground. The average size of booming grounds in Minnesota is 11 males.

Bobolink and Grasshopper Sparrow

The breeding territory size of bobolinks and grasshopper sparrows is 1.7 and 2.1 acres respectively in high quality habitat in Wisconsin. If all of the habitat was occupied, a 100 acres of habitat could potentially hold approximately 60 and 48 pairs of bobolinks and grasshopper sparrows respectively.

Monarch Butterfly

Research from the University of Minnesota has shown that it takes approximately 30 milkweed result in one monarch butterfly contributing to the overwintering Mexican population. Grasslands can have between 100-250 milkweed stems per acre. An acre of restored or enhanced grassland could potentially contribute 3 to 8 monarchs to the population.

How will the program directly involve, engage, and benefit BIPOC (Black, Indigenous, People of Color) and diverse communities:

The Minnesota DNR has adopted advancing diversity, equity and inclusion (DEI) as a key priority in its 2020-22 strategic plan. The plan focuses on increasing the cultural competence of our staff, creating a workforce that is reflective of Minnesota, continuing to strengthen tribal consultation and building partnerships with diverse communities.

DNR's OHF projects aim to serve all Minnesotans. At the same time, we are bringing more focus in all our work to BIPOC and diverse communities. OHF achieves high quality habitat that provides ecosystem services like clean water and carbon sequestration that support environmental justice. OHF also supports public access and recreational opportunities on these lands. Project scoring and implementation benefit BIPOC and diverse communities through recreational opportunities that are close-to-home, culturally responsive and accessible to Minnesotans with disabilities.

Activity Details

Requirements

If funded, this proposal will meet all applicable criteria set forth in MS 97A.056?

Yes

Will restoration and enhancement work follow best management practices including MS 84.973 Pollinator Habitat Program?

Yes

Is the restoration and enhancement activity on permanently protected land per 97A.056, Subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15?

Yes

Where does the activity take place?

- WMA
- WPA
- SNA
- AMA
- Permanently Protected Conservation Easements
- Refuge Lands
- State Forests

Land Use

Will there be planting of any crop on OHF land purchased or restored in this program?

Yes

Explain what will be planted:

There may be an instance of very limited rowcrop planting as part of a restoration process. But this would only be for a very short time before the site is planted to native grasses and forbs. Some of the crops may be GMO, but none of the crops should be treated with neonicotinoid seed coats and any farming will follow standard chemical use practices as outlined in DNR Operational Orders.

Other OHF Appropriation Awards

Have you received OHF dollars in the past through LSOHC?

Yes

Approp Year	Approp Amount Received	Amount Spent to Date	Leverage Reported in AP	Leverage Realized to Date	Acres Affected in AP	Acres Affected to Date	Complete/Final Report Approved?
2020	\$3,534,000	\$219,479	-	-	13,874	389	No
2019	\$8,861,000	\$1,337,200	-	-	88,333	2,626	No
2018	\$4,007,000	\$1,704,600	-	-	21,100	6,880	No
2017	\$3,950,000	\$2,590,000	-	-	30,170	43,634	No
2016	\$3,983,000	\$2,710,600	-	-	41,338	41,108	No

Timeline

Activity Name	Estimated Completion Date
WMA Enhancement / Restoration - contracts	6/30/2027
SNA / NPB Enhancements	6/30/2027

Budget

Totals

Item	Funding Request	Antic. Leverage	Leverage Source	Total
Personnel	\$2,144,500	-	-	\$2,144,500
Contracts	\$6,554,800	-	-	\$6,554,800
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	\$226,700	-	-	\$226,700
Professional Services	-	-	-	-
Direct Support Services	\$271,100	-	-	\$271,100
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	\$10,000	-	-	\$10,000
Supplies/Materials	\$1,189,600	-	-	\$1,189,600
DNR IDP	-	-	-	-
Grand Total	\$10,396,700	-	-	\$10,396,700

Personnel

Position	Annual FTE	Years Working	Funding Request	Antic. Leverage	Leverage Source	Total
Wildlife Contract Specialists	1.1	5.0	470000	-	-	\$470,000
Prairie Restoration Biologist	2.0	5.0	930000	-	-	\$930,000
SNA Laborers and Seasonal Crew	0.39	4.0	55000	-	-	\$55,000
SNA-NPB Specialists and Technicians	2.43	4.0	679500	-	-	\$679,500
SNA Contract and Project Mtg	0.03	4.0	10000	-	-	\$10,000

Amount of Request: \$10,396,700

Amount of Leverage: -

Leverage as a percent of the Request: 0.0%

DSS + Personnel: \$2,415,600

As a % of the total request: 23.23%

Easement Stewardship: -

As a % of the Easement Acquisition: -

Does this proposal have the ability to be scalable?

Yes

If the project received 70% of the requested funding

Describe how the scaling would affect acres/activities and if not proportionately reduced, why?

This proposal is composed of numerous projects. If we receive less than we request, we can scale back the number of projects and acres accordingly.

Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?

Personnel would be scaled back, but possibly not as much as contract work as we still need a certain baseline staff component to oversee work no matter how many contracts or projects there are.

If the project received 50% of the requested funding

Describe how the scaling would affect acres/activities and if not proportionately reduced, why?

This proposal is composed of numerous projects. If we receive less than we request, we can scale back the number of projects and acres accordingly.

Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?

Personnel would be scaled back, but possibly not as much as contract work as we still need a certain baseline staff component to oversee work no matter how many contracts or projects there are, or the acres within each project.

Personnel

Has funding for these positions been requested in the past?

Yes

Please explain the overlap of past and future staffing and position levels previously received and how that is coordinated over multiple years?

This funding will be used to pay project-associated costs for staff paid almost exclusively with special project funds. These positions would not exist, but for special project funding received through the OHF and other funds. Each year these staff code time working on OHF related acquisition activities using specific funding string codes. Funding for the Prairie Restoration Biologist is new.

Contracts

What is included in the contracts line?

This line includes contracts for restoration and enhancement work that the DNR or Roving Crews don't have the specialized equipment or staff to conduct. Contracts increase our capacity to impact acres beyond what staff alone are capable of.

Travel

Does the amount in the travel line include equipment/vehicle rental?

Yes

Explain the amount in the travel line outside of traditional travel costs of mileage, food, and lodging

There could be some rental for specialized equipment on a specific project, but if so it would be a very small part of the travel budget.

I understand and agree that lodging, meals, and mileage must comply with the current MMB Commissioner

Plan:

Yes

Direct Support Services

How did you determine which portions of the Direct Support Services of your shared support services is direct to this program?

We used the DNR's Direct and Necessary (D&N) calculator that was created for LSOHC/OHF and LCCMR/ENRTF proposals.

Other Equipment/Tools

Give examples of the types of Equipment and Tools that will be purchased?

This would be primarily fire equipment such as drip torches, backpack water pumps, etc.

Federal Funds

Do you anticipate federal funds as a match for this program?

No

Output Tables

Acres by Resource Type (Table 1)

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	0	1,063	0	0	1,063
Protect in Fee with State PILT Liability	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0
Protect in Easement	0	0	0	0	0
Enhance	0	63,596	0	0	63,596
Total	0	64,659	0	0	64,659

How many of these Prairie acres are Native Prairie? (Table 1b)

Type	Native Prairie (acres)
Restore	0
Protect in Fee with State PILT Liability	0
Protect in Fee w/o State PILT Liability	0
Protect in Easement	0
Enhance	1,000
Total	1,000

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	\$1,172,000	-	-	\$1,172,000
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	\$9,224,700	-	-	\$9,224,700
Total	-	\$10,396,700	-	-	\$10,396,700

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	32	70	262	699	0	1,063
Protect in Fee with State PILT Liability	0	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0
Enhance	930	656	3,162	58,848	0	63,596
Total	962	726	3,424	59,547	0	64,659

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	\$95,200	\$176,300	\$267,300	\$633,200	-	\$1,172,000
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	\$429,100	\$402,000	\$1,973,000	\$6,420,600	-	\$9,224,700
Total	\$524,300	\$578,300	\$2,240,300	\$7,053,800	-	\$10,396,700

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	-	\$1,102	-	-

Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	-	\$145	-	-

Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	\$2,975	\$2,518	\$1,020	\$905	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	\$461	\$612	\$623	\$109	-

Target Lake/Stream/River Feet or Miles

Outcomes

Programs in forest-prairie transition region:

- Protected, restored, and enhanced nesting and migratory habitat for waterfowl, upland birds, and species of greatest conservation need ~ *Migratory game and non-game birds will be some of the primary beneficiaries of this work. We hope to continue to strengthen partnerships with the University of Minnesota to incorporate graduate students into research and monitoring work.*

Programs in metropolitan urbanizing region:

- Core areas protected with highly biologically diverse wetlands and plant communities, including native prairie, Big Woods, and oak savanna ~ *Monitoring will take place with the base level monitoring conducted by DNR staff and staff from other agencies/NGOs.*

Programs in the northern forest region:

- Healthy populations of endangered, threatened, and special concern species as well as more common species ~ *Monitoring will take place with the base level monitoring conducted by DNR staff and staff from other agencies/NGOs. This includes surveys such as pheasant, sharp-tailed grouse, and woodcock, which are all dependent on open areas.*

Programs in prairie region:

- Restored and enhanced upland habitats ~ *The multi-agency/NGO Grassland Monitoring Team (GMT) has developed standardized protocols for sampling grassland vegetation and a number of the sites on this request will be sampled over the 5 year period.*

Programs in southeast forest region:

- Healthier populations of endangered, threatened, and special concern species as well as more common species ~ *Monitoring will primarily be done through studies conducted by the DNR's Ecological and Water Resources Division of key indicator species such as timber rattlesnakes.*

Parcels

Sign-up Criteria?

No

Explain the process used to identify, prioritize, and select the parcels on your list:

Parcels are identified by Area Wildlife Managers and approved by Regional Managers. Priorities are set by the Plans identified earlier in this proposal.

Restore / Enhance Parcels

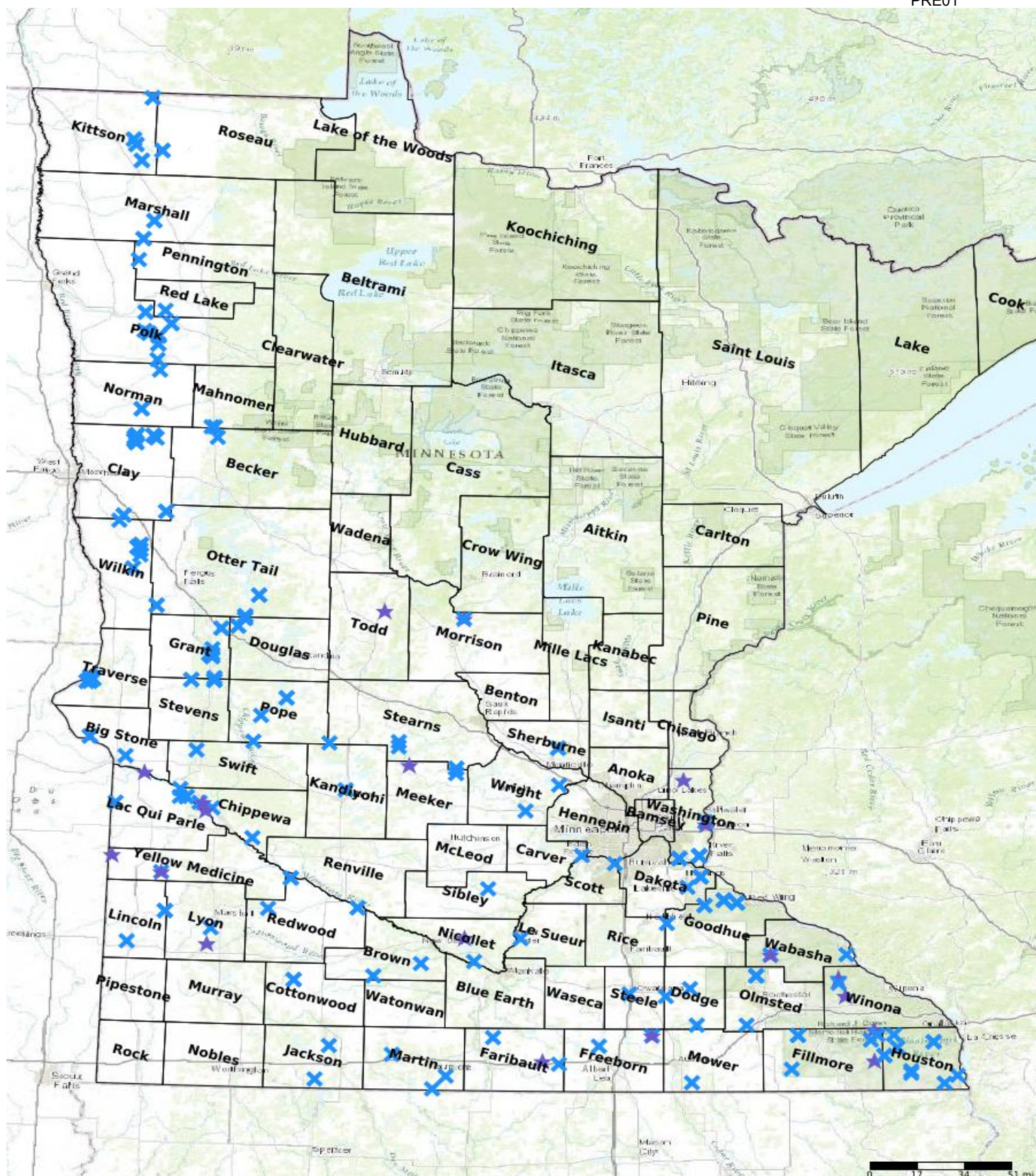
Name	County	TRDS	Acres	Est Cost	Existing Protection
White Earth 20 NPB	Becker	14241220	15	\$7,000	Yes
Prior 31 NPB	Big Stone	12347231	30	\$12,500	Yes
Lac qui Parle WMA: Main Unit	Big Stone	11943224	150	\$180,000	Yes
Prior 31 NPB	Big Stone	12347231	15	\$47,000	Yes
Schelberg NPB	Big Stone	12146201	50	\$9,000	Yes
Lac qui Parle WMA: Main Unit	Big Stone	12045202	62	\$60,000	Yes
Wood Lake WMA	Brown	10833228	120	\$102,000	Yes
Joseph A. Tauer Prairie SNA	Brown	10931235	12	\$5,000	Yes
Seminary Fen SNA	Carver	11623235	10	\$15,000	Yes
Lac qui Parle WMA: Main Unit	Chippewa	11943224	100	\$100,000	Yes
Lac qui Parle WMA	Chippewa	11842213	175	\$125,000	Yes
Lac qui Parle WMA	Chippewa	11942234	5	\$16,000	Yes
Cuka WMA	Chippewa	11639205	100	\$750,000	Yes
Lac qui Parle WMA: Main Unit	Chippewa	11943203	190	\$100,000	Yes
Lac qui Parle WMA: Main Unit	Chippewa	11841208	16	\$60,000	Yes
Lac qui Parle WMA	Chippewa	11942235	38	\$29,000	Yes
Felton Prairie SNA-Assinaboia Unit	Clay	14245220	10	\$6,000	Yes
Strand N & S NPB	Clay	14244219	15	\$7,000	Yes
Felton Prairie SNA-Shrike Unit	Clay	14245230	15	\$7,000	Yes
Andrea WMA	Clay	13345206	500	\$50,000	Yes
Felton Prairie SNA-Assinaboia Unit	Clay	14245220	20	\$15,000	Yes
Felton Prairie SNA-Assinaboia Unit	Clay	14245220	10	\$7,000	Yes
Strand N & S NPB	Clay	14244219	20	\$10,000	Yes
Felton Prairie SNA-Bicentennial Units	Clay	14145205	10	\$7,000	Yes
Felton Prairie SNA-Bicentennial Units	Clay	14145205	1	\$5,000	Yes
Blanket Flower SNA	Clay	13744214	15	\$7,000	Yes
Ulen 29-1 NPB	Clay	14244229	13	\$7,000	Yes
Blanket Flower SNA	Clay	13744214	1	\$7,000	Yes
Blue Mounds 10-1 NPB	Clay	12439210	10	\$7,000	Yes
Felton Prairie SNA-Dakota Skipper & County Prairie Units	Clay	14245231	15	\$7,000	Yes
Felton Prairie SNA-Dakota Skipper & County Prairie Units	Clay	14245231	5	\$12,000	Yes
Storden 4b NPB	Cottonwood	10737204	10	\$6,000	Yes
Bennett WMA	Cottonwood	10129206	1,737	\$80,000	Yes
Swan Lake WMA	Cottonwood	10225201	200	\$200,000	Yes
Storden 4b NPB	Cottonwood	10737204	8	\$25,500	Yes
Chimney Rock SNA	Dakota	11417231	11	\$9,000	Yes
Hastings Sand Coulee SNA	Dakota	11417211	11	\$10,000	Yes
Hastings Sand Coulee SNA	Dakota	11417211	10	\$2,000	Yes
Hastings Sand Coulee SNA	Dakota	11417211	2	\$1,000	Yes
Aurora WMA	Dodge	10117216	1,000	\$63,000	Yes
Hythecker Prairie SNA	Dodge	10718231	19	\$9,000	Yes
Iron Horse Prairie SNA	Dodge	10517227	10	\$23,000	Yes
Pheasants Forever WMA	Dodge	10717217	60	\$50,000	Yes

Lund 21-1 NPB	Douglas	13040221	5	\$10,000	Yes
Lund 21-1 NPB	Douglas	13040221	15	\$7,000	Yes
Lund 2-1 NPB	Douglas	13040202	5	\$10,000	Yes
Lund 2-1 NPB	Douglas	13040202	15	\$7,000	Yes
Chadderdon WMA	Faribault	10224211	790	\$20,000	Yes
Rice Lake WMA	Faribault	10427221	27	\$35,000	Yes
Chisholm Valley WMA	Fillmore	10212221	247	\$124,000	Yes
Pin Oak Prairie SNA	Fillmore	10412214	10	\$9,000	Yes
Pin Oak Prairie SNA	Fillmore	10412214	10	\$5,000	Yes
Schueler WMA	Fillmore	10307230	109	\$276,500	Yes
Schueler WMA	Fillmore	10408203	70	\$62,600	Yes
Choice WMA	Fillmore	10208203	57	\$49,020	Yes
Rushford SF complex	Fillmore	10408214	150	\$93,000	Yes
Peterson SF complex	Fillmore	10408228	150	\$125,000	Yes
Manchester WMA	Freeborn	10322202	28	\$20,000	Yes
Wo Wacintanka WMA	Freeborn	10419216	60	\$35,000	Yes
Wo Wacintanka WMA	Freeborn	10419216	11	\$22,000	Yes
Warsaw 7-1 NPB	Goodhue	11118207	20	\$13,000	Yes
Cannon River Turtle Preserve SNA	Goodhue	11316225	5	\$1,000	Yes
Cannon River Turtle Preserve SNA	Goodhue	11316225	20	\$13,000	Yes
Cannon River Turtle Preserve SNA	Goodhue	11316225	12	\$54,000	Yes
Spring Creek Prairie SNA	Goodhue	11315234	5	\$5,000	Yes
Spring Creek Prairie SNA	Goodhue	11315234	5	\$1,000	Yes
River Terrace Prairie SNA	Goodhue	11217201	8	\$7,000	Yes
Cannon River Turtle Preserve SNA	Goodhue	11316225	15	\$5,000	Yes
River Terrace Prairie SNA	Goodhue	11217201	12	\$10,000	Yes
Buck Family Memorial WMA	Goodhue	10514230	80	\$80,000	Yes
Spring Creek Prairie SNA	Goodhue	11315234	22	\$15,000	Yes
Elk Lake 18-1 NPB	Grant	12841218	15	\$7,000	Yes
Pelican Lake-27-1 NPB	Grant	13041227	1	\$8,000	Yes
Pelican Lake-27-1 NPB	Grant	13041227	15	\$7,000	Yes
Woodke A & B NPB	Grant	12741232	15	\$7,000	Yes
Olsen NPB	Grant	12841206	15	\$7,000	Yes
Elk Lake 19-1 NPB	Grant	12841219	15	\$7,000	Yes
Elk Lake 18-1 NPB	Grant	12841218	1	\$7,000	Yes
Lien 13-1 NPB	Grant	12842213	15	\$7,000	Yes
Land 17-1 NPB	Grant	12641205	5	\$10,000	Yes
Land 17-1 NPB	Grant	12641205	15	\$7,000	Yes
Elk Lake 19-1 NPB	Grant	12841219	1	\$7,000	Yes
Hokah SF complex	Houston	10405234	100	\$80,000	Yes
Yucatan WMA complex	Houston	10307230	100	\$5,000	Yes
Caledonia 28-1 NPB	Houston	10206228	5	\$5,000	Yes
Mound Prairie SNA	Houston	10405234	20	\$13,000	Yes
Jefferson SF complex	Houston	10104219	500	\$365,000	Yes
Reno SF complex	Houston	10104202	200	\$115,000	Yes
Vinegar Ridge SF complex	Houston	10407215	700	\$120,000	Yes
Wetbark SF complex	Houston	10307211	350	\$250,000	Yes
Caledonia 33-1 NPB	Houston	10206233	3	\$3,000	Yes
Holthe Prairie SNA	Jackson	10335208	10	\$7,000	Yes
Case Lake WMA	Jackson	10136215	100	\$100,000	Yes
Leudtke WMA	Jackson	10130233	37	\$50,000	Yes
Willmar WMA	Kandiyohi	12035236	29	\$10,000	Yes
Lake Bronson Parkland SNA	Kittson	16146225	5	\$10,000	Yes
Lake Bronson Parkland SNA	Kittson	16146225	15	\$7,000	Yes
Norway 1-1 NPB	Kittson	16046201	2	\$10,000	Yes
Norway 1-1 NPB	Kittson	16046201	15	\$7,000	Yes
Caribou 2	Kittson	16345202	10	\$7,000	Yes
Caribou 2	Kittson	16345202	15	\$10,000	Yes

Pelan 5-1 NPB	Kittson	15945205	15	\$7,000	Yes
Pelan 5-1 NPB	Kittson	15945205	10	\$10,000	Yes
Yellow Bank Hills SNA	Lac qui Parle	11846204	20	\$9,000	Yes
Lac qui Parle WMA: Main Unit	Lac qui Parle	11943222	600	\$40,000	Yes
Bob Gehlen WMA	Le Sueur	11026211	61	\$70,000	Yes
Bue-tiful Acres WMA	Lincoln	11045231	500	\$50,000	Yes
Bosque WMA	Lincoln	11244236	40	\$30,300	Yes
Bosque WMA	Lincoln	11041231	99	\$79,200	Yes
Bosque WMA	Lincoln	11244236	40	\$70,000	Yes
Bue-tiful Acres WMA	Lyon	11141232	160	\$10,000	Yes
Lake Grove 31-1 NPB	Mahnomen	14341231	10	\$7,000	Yes
Popple Grove 36-1 NPB	Mahnomen	14342236	15	\$7,000	Yes
Marsh Grove 36-1 NPB	Marshall	15645236	1	\$10,000	Yes
Viking 4 NPB	Marshall	15445204	15	\$12,000	Yes
Marsh Grove 36-1 NPB	Marshall	15645236	15	\$7,000	Yes
Viking 4 NPB	Marshall	15445204	15	\$7,000	Yes
Rooney Run WMA	Martin	10332228	230	\$10,000	Yes
Arlington WMA	McLeod	11327206	47	\$25,000	Yes
Corinna WMA	Meeker	11826201	400	\$45,000	Yes
Kingston WMA	Meeker	12129228	57	\$37,000	Yes
Teal Scurry WMA	Meeker	12131207	95	\$95,000	Yes
Ripley Esker SNA	Morrison	04231218	20	\$13,000	Yes
Ripley Esker SNA	Morrison	04231218	10	\$25,000	Yes
Swan Lake WMA	Nicollet	11029212	87	\$88,915	Yes
Swan Lake WMA: North Star Unit	Nicollet	10928228	61	\$54,900	Yes
Prairie Smoke Dunes SNA	Norman	14644217	15	\$7,000	Yes
Sandpiper Prairie SNA	Norman	14445233	5	\$12,000	Yes
Sandpiper Prairie SNA	Norman	14445233	15	\$7,000	Yes
Oronoco Prairie SNA	Olmsted	10814222	23	\$20,000	Yes
Oronoco Prairie SNA	Olmsted	10814222	5	\$1,000	Yes
Oronoco Prairie SNA	Olmsted	10814222	15	\$4,500	Yes
Wallace NPB	Otter Tail	13140235	5	\$15,000	Yes
Otter Tail Prairie SNA	Otter Tail	13144217	2	\$5,000	Yes
Otter Tail Prairie SNA	Otter Tail	13144217	15	\$7,000	Yes
Nidaros 21-1 NPB	Otter Tail	13239221	5	\$8,000	Yes
Wallace NPB	Otter Tail	13140235	15	\$7,000	Yes
Nidaros 21-1 NPB	Otter Tail	13239221	15	\$7,000	Yes
Pembina WMA	Pennington	15345217	20	\$50,000	Yes
Pembina Trail SNA-Crookston Prairie Unit	Polk	14944213	5	\$5,000	Yes
Garfield 30-1 NPB	Polk	14744230	15	\$7,000	Yes
Godfrey 7-1 NPB	Polk	14844207	1	\$7,000	Yes
Thorson Prairie WMA	Polk	14945234	100	\$25,000	Yes
Pembina Trail SNA-Foxboro Unit	Polk	14845203	10	\$8,000	Yes
Godfrey 7-1 NPB	Polk	14844207	15	\$7,000	Yes
Gentilly 27-1 NPB	Polk	15045227	15	\$7,000	Yes
Pembina Trail SNA-Foxboro Unit	Polk	14845203	15	\$7,000	Yes
Agassiz Dunes SNA	Polk	14844230	5	\$15,000	Yes
Agassiz Dunes SNA	Polk	14844230	10	\$7,000	Yes
Gentilly 27-1 NPB	Polk	15045227	1	\$7,000	Yes
Pembina Trail SNA-Crookston Prairie Unit	Polk	14944213	10	\$7,000	Yes
Fibranz NPB	Pope	12647206	15	\$7,000	Yes
Minnewaska 1-1 NPB	Pope	12538201	15	\$7,000	Yes
Minnewaska 1-1 NPB	Pope	12538201	10	\$10,000	Yes
Langhei Prairie SNA	Pope	12339232	15	\$7,000	Yes
Lake Johanna 31-2 NPB	Pope	12335231	10	\$7,000	Yes
Fibranz NPB	Pope	12647206	2	\$10,000	Yes
Lake Pleasant 22-1 NPB	Red Lake	15044222	15	\$7,000	Yes
Phyllis Voosen WMA	Redwood	11238219	120	\$75,000	Yes

Swedes Forest NPBs	Redwood	11437220	10	\$13,000	Yes
Sherman 15 NPB	Redwood	11234215	10	\$9,000	Yes
Sherman 15 NPB	Redwood	11234215	10	\$31,500	Yes
Swedes Forest NPBs	Redwood	11437220	1	\$5,500	Yes
Two Rivers Aspen Parkland SNA	Roseau	16044217	10	\$7,000	Yes
Two Rivers Aspen Parkland SNA	Roseau	16044217	10	\$25,000	Yes
Savage Fen SNA	Scott	11521216	10	\$15,000	Yes
Uncas Dunes SNA	Sherburne	03427228	56	\$40,000	Yes
Minnesota Veterans WMA	Sherburne	12024215	22	\$12,080	Yes
Uncas Dunes SNA	Sherburne	03427228	15	\$11,000	Yes
Dr. L. Daniel Frenzel Jr and Virginia Frenzel WMA	Stearns	12129216	20	\$10,950	Yes
Christopher Kurilla WMA	Stearns	12232203	650	\$75,000	Yes
Alice Hamm WMA	Stearns	12129216	160	\$20,000	Yes
Christopher Kurilla WMA	Stearns	12332227	300	\$103,428	Yes
Somerset WMA	Steele	10720229	80	\$80,000	Yes
Verlyn Marth Memorial Prairie SNA	Stevens	12642206	15	\$7,000	Yes
Swan Lake 5-1	Stevens	12641205	15	\$7,000	Yes
Verlyn Marth Memorial Prairie SNA	Stevens	12642206	1	\$7,000	Yes
Fairfield 21-1 NPB	Swift	12242221	30	\$62,000	Yes
Long Prairie River WMA	Todd	13133214	60	\$151,320	Yes
Walls 7-2 NPB	Traverse	12647207	1	\$10,000	Yes
Walls 7-1 NPB	Traverse	12647207	15	\$7,000	Yes
Walls 7-1 NPB	Traverse	12647207	2	\$10,000	Yes
Walls 8-1 NPB	Traverse	12647208	15	\$7,000	Yes
Walls 18-1 NPB	Traverse	12647218	15	\$7,000	Yes
Windsor 13-1 NPB	Traverse	12648213	20	\$7,000	Yes
Windsor 13-1 NPB	Traverse	12648213	5	\$10,000	Yes
Walls 7-2 NPB	Traverse	12647207	15	\$7,000	Yes
Kellogg Weaver Dunes SNA	Wabasha	10909207	15	\$8,000	Yes
Whitewater WMA complex	Wabasha	10710202	250	\$150,000	Yes
Zumbro Falls Woods SNA	Wabasha	10913208	5	\$1,000	Yes
Zumbro Falls Woods SNA	Wabasha	10913208	15	\$37,500	Yes
St. Croix Savanna SNA	Washington	02920215	10	\$3,000	Yes
Lost Valley Prairie SNA	Washington	02720220	38	\$24,000	Yes
Lost Valley Prairie SNA	Washington	02720220	23	\$17,000	Yes
Lost Valley Prairie SNA	Washington	02720220	10	\$3,000	Yes
Lost Valley Prairie SNA	Washington	02720220	20	\$17,000	Yes
Lost Valley Prairie SNA	Washington	02720220	5	\$1,000	Yes
Hardwood Creek WMA	Washington	03221226	16	\$49,600	Yes
Bayport WMA	Washington	02920222	16	\$45,600	Yes
Grey Cloud Dunes SNA	Washington	02721229	20	\$17,000	Yes
St. Croix Savanna SNA	Washington	02920215	21	\$14,000	Yes
Grey Cloud Dunes SNA	Washington	02721229	5	\$4,000	Yes
Grey Cloud Dunes SNA	Washington	02721229	15	\$5,000	Yes
Grey Cloud Dunes SNA	Washington	02721229	23	\$15,000	Yes
St. Croix Savanna SNA	Washington	02920215	5	\$1,000	Yes
Tanberg 21-1 NPB	Wilkin	13545221	2	\$10,000	Yes
Tanberg 21-1 NPB	Wilkin	13545221	15	\$7,000	Yes
Tanberg 29-1 NPB	Wilkin	13545229	15	\$7,000	Yes
Atherton 5-1 NPB	Wilkin	13646205	10	\$7,000	Yes
Akron 9 NPB	Wilkin	13445209	10	\$7,000	Yes
Tanberg 33-1 NPB	Wilkin	13545233	15	\$7,000	Yes
Tanberg 29-2 NPB	Wilkin	13545229	15	\$7,000	Yes
Tanberg 20-1 NPB	Wilkin	13746227	2	\$8,000	Yes
Tanberg 20-1 NPB	Wilkin	13746227	15	\$7,000	Yes
Whitewater WMA: Main Branch Unit	Winona	10810226	22	\$26,700	Yes
Whitewater WMA: South Branch Unit	Winona	10709231	98	\$91,500	Yes

Antelope Valley SNA	Yellow Medicine	11444214	17	\$15,000	Yes
Antelope Valley SNA	Yellow Medicine	11444214	28	\$6,000	Yes
Mound Spring Prairie SNA	Yellow Medicine	11546217	10	\$14,000	Yes



Parcel Map
DNR Grassland Enhancement - Phase 14
(Data Generated From Parcel List)

DNR Grasslands Phase 14



WHAT

Enhancement and Restoration of
Grasslands and Prairies
Focus on Prairie Plan Core Areas
and

Pheasant Action Plan Habitat
Complexes

WHY

Landscape level approach to
conservation

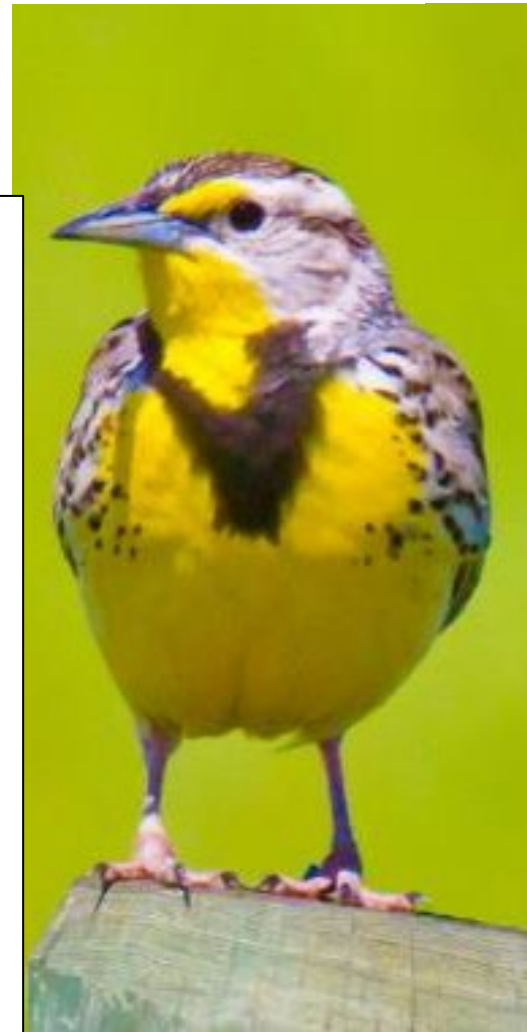
Game species, songbirds,
pollinators, SGCN, T&E species
Clean Water, Carbon and Wildlife
are all connected

HOW

Prescribed Fire, Tree Removal,
Invasive Species Control
Diverse, Local Ecotype Seed
Mixes

WHERE

DNR WMAs, SNAs, and Native
Prairie Bank
USFWS Refuges and WPAs



Enhance and restore
64,000 acres
\$10,396,700





Local contractors help agency staff collect large volumes of local ecotype seed from the prairie.



The FINAL PRODUCT, a diverse stand of local ecotype plants providing nesting cover for wildlife as well as nectar and pollen for pollinators.

