



## Lessard-Sams Outdoor Heritage Council

DNR Grassland Enhancement Phase 15

ML 2023 Request for Funding

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### General Information

**Date:** 06/15/2022

**Proposal Title:** DNR Grassland Enhancement Phase 15

**Funds Requested:** \$8,187,900

### Manager Information

**Manager's Name:** Greg Hoch

**Title:** Prairie Habitat Supervisor

**Organization:** DNR

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### Location Information

**County Location(s):** Lyon, Big Stone, Yellow Medicine, Brown, Jackson, Mower, Redwood, Swift, Lac qui Parle, Cottonwood, Houston, Wabasha, Fillmore, Goodhue, Olmsted, Sherburne, Washington, Anoka, Dakota, Stearns, Morrison, Grant, Traverse, Becker, Otter Tail, Marshall, Stevens, Clay, Roseau, Wilkin, Norman, Mahnomen, Kittson, Pope, Douglas, Red Lake, Polk, Renville, Chippewa, Murray, Martin, Meeker, Dodge, Lincoln, Le Sueur, Faribault, Carlton, Winona and Nicollet.

**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. 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 14,850 acres parcels that are permanently protected and most open to public hunting using prescribed fire, tree removal, high-diversity seedings, and similar practices.

**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 pollinator habitat and ecosystem services such as floodwater capture and groundwater recharge.

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.

The Prairie Restoration Specialist builds on a program we started with the last appropriation. The DNR and partners have been restoring grasslands with OHF support for over a decade. This provides a unique opportunity to evaluate and assess these projects. Each restoration should be seen as an opportunity to learn and improve the next seeding using adaptive management or continuous improvement models. These staff will focus specifically on OHF funded grassland restorations and developed fine-scale, long-term assessments of these projects. They will communicate these results and refinements to BMPs to the conservation community and be a conduit for information between the science community and restoration practitioners. Using this information, these staff will work with practitioners and vendors to continue to refine seed mixes, planting practices, and post-restoration management.

## **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?**

Yes

**Explain the leverage:**

We do use P-R dollars to match all the funds in these appropriations.

**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
2021	Game and Fish (Wildlife Operations)	20166000
2021	Dedicated Accounts (Duck Stamp, Pheasant Stamp, etc)	10641000
2021	Heritage Enhancement Acct	4120000

**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
2026	Those listed above and OHF	Monitor subset of projects	Document results	Determine capacity for traditional funds to meet results
2027 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	\$950,400	-	-	13,874	735	No
2019	\$8,861,000	\$2,515,000	-	-	88,333	2,626	No
2018	\$4,007,000	\$1,704,600	-	-	21,100	6,880	No
2017	\$3,950,000	\$3,774,500	-	-	30,170	43,634	No
2016	\$3,983,000	\$3,947,300	-	-	41,338	41,108	No

### Timeline

Activity Name	Estimated Completion Date
WMA Enhancement / Restoration - contracts	6/30/2028
SNA / NPB Enhancements	6/30/2028





**Budget****Totals**

<b>Item</b>	<b>Funding Request</b>	<b>Antic. Leverage</b>	<b>Leverage Source</b>	<b>Total</b>
Personnel	\$1,388,200	-	-	\$1,388,200
Contracts	\$5,257,800	-	-	\$5,257,800
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	\$134,300	-	-	\$134,300
Professional Services	-	-	-	-
Direct Support Services	\$239,400	-	-	\$239,400
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	\$9,700	-	-	\$9,700
Supplies/Materials	\$1,158,500	-	-	\$1,158,500
DNR IDP	-	-	-	-
<b>Grand Total</b>	<b>\$8,187,900</b>	<b>-</b>	<b>-</b>	<b>\$8,187,900</b>

**Personnel**

<b>Position</b>	<b>Annual FTE</b>	<b>Years Working</b>	<b>Funding Request</b>	<b>Antic. Leverage</b>	<b>Leverage Source</b>	<b>Total</b>
Prairie Restoration Specialist	2.0	5.0	\$900,000	-	-	\$900,000
SNA Laborers and Seasonal Crew	0.29	4.0	\$40,000	-	-	\$40,000
SNA-NPB Specialists and Technicians	1.52	4.0	\$426,800	-	-	\$426,800
SNA Contract and Project Mtg	0.06	4.0	\$21,400	-	-	\$21,400

**Amount of Request:** \$8,187,900**Amount of Leverage:** -**Leverage as a percent of the Request:** 0.0%**DSS + Personnel:** \$1,627,600**As a % of the total request:** 19.88%**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 proportionally.

### **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 proportionally.

## **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.

## **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?**

Yes

**Are the funds confirmed?**

No

**What is the approximate date you anticipate receiving confirmation of the federal funds?**

These funds will be matched with Pittman-Robertson, which is part of the DNR's annual funding cycle.

Output Tables**Acres by Resource Type (Table 1)**

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	0	1,301	0	0	1,301
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	16,518	0	0	16,518
<b>Total</b>	<b>0</b>	<b>17,819</b>	<b>0</b>	<b>0</b>	<b>17,819</b>

**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
<b>Total</b>	<b>1,000</b>

**Total Requested Funding by Resource Type (Table 2)**

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	\$972,000	-	-	\$972,000
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	\$7,215,900	-	-	\$7,215,900
<b>Total</b>	<b>-</b>	<b>\$8,187,900</b>	<b>-</b>	<b>-</b>	<b>\$8,187,900</b>

**Acres within each Ecological Section (Table 3)**

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	32	70	262	937	0	1,301
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	430	456	2,162	13,470	0	16,518
<b>Total</b>	<b>462</b>	<b>526</b>	<b>2,424</b>	<b>14,407</b>	<b>0</b>	<b>17,819</b>

**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	\$167,300	\$533,200	-	\$972,000
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	\$329,100	\$302,000	\$1,473,000	\$5,111,800	-	\$7,215,900
<b>Total</b>	<b>\$424,300</b>	<b>\$478,300</b>	<b>\$1,640,300</b>	<b>\$5,645,000</b>	<b>-</b>	<b>\$8,187,900</b>

**Average Cost per Acre by Resource Type (Table 5)**

Type	Wetland	Prairie	Forest	Habitat
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Restore	-	\$747	-	-
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	-	\$436	-	-

### Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	\$2,975	\$2,518	\$638	\$569	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	\$765	\$662	\$681	\$379	-

### 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
Blaine Preserve SNA	Anoka	03123226	5	-	Yes
Blaine Preserve SNA	Anoka	03123226	5	-	Yes
White Earth 20 NPB	Becker	14241220	10	\$5,200	Yes
Prior 31 NPB	Big Stone	12347231	30	\$12,600	Yes
Prior 31 NPB	Big Stone	12347231	15	\$47,000	Yes
Lac qui Parle WMA: Main Unit	Big Stone	11943224	150	\$60,000	Yes
Lac qui Parle WMA: Controlled Hunting Zone	Big Stone	11841206	272	\$200,000	Yes
Lac qui Parle WMA: Main Unit	Big Stone	12045202	62	\$60,000	Yes
Odessa 19-1 NPB	Big Stone	12145219	20	\$7,200	Yes
Clinton Prairie SNA	Big Stone	12347216	50	\$8,500	Yes
Schelberg NPB	Big Stone	12146201	50	\$11,200	Yes
Cottonwood River Prairie SNA	Brown	10935231	50	\$5,000	Yes
Wood Lake WMA	Brown	10833233	300	\$53,000	Yes
Bashaw WMA: Central Unit	Brown	10831230	320	\$32,000	Yes
Rosenau-Lambrecht WMA: Main Unit	Brown	11031216	30	\$9,000	Yes
Firebird WMA	Carlton	04721225	140	\$164,500	Yes
Cuka WMA	Chippewa	11639205	100	\$500,000	Yes
Lac qui Parle WMA: Main Unit	Chippewa	11943202	500	\$50,000	Yes
Lac qui Parle WMA: Controlled Hunting Zone	Chippewa	11942236	32	\$50,000	Yes
Lac qui Parle WMA: Controlled Hunting Zone	Chippewa	11942234	5	\$15,000	Yes
Lac qui Parle WMA: Controlled Hunting Zone	Chippewa	11842213	175	\$125,000	Yes
Lac qui Parle WMA: Main Unit	Chippewa	11943203	190	\$100,000	Yes
Lac qui Parle WMA: Controlled Hunting Zone	Chippewa	11842212	71	\$60,000	Yes
Lac qui Parle WMA: Main Unit	Chippewa	11943224	100	\$100,000	Yes
Ulen 29-1 NPB	Clay	14244229	10	\$5,200	Yes
Felton Prairie SNA-Shrike Unit	Clay	14245230	5	\$2,600	Yes
Felton Prairie SNA-Dakota Skipper & County Prairie Units	Clay	14245231	5	\$2,600	Yes
Blanket Flower SNA	Clay	13744214	1	\$660	Yes
Blanket Flower SNA	Clay	13744214	5	\$2,600	Yes
Felton Prairie SNA-Bicentennial Units	Clay	14145205	1	\$660	Yes
Felton Prairie SNA-Bicentennial Units	Clay	14145205	5	\$2,600	Yes
Felton Prairie SNA-Assinaboia Unit	Clay	14245220	5	\$6,600	Yes
Felton Prairie SNA-Dakota Skipper & County Prairie Units	Clay	14245231	5	\$3,300	Yes
Felton Prairie SNA-Assinaboia Unit	Clay	14245220	5	\$2,600	Yes
Strand N & S NPB	Clay	14244219	5	\$5,000	Yes
Strand N & S NPB	Clay	14244219	5	\$2,600	Yes
Blue Mounds 10-1 NPB	Clay	12439210	5	\$2,600	Yes
Talcot Lake WMA	Cottonwood	10538207	129	\$100,000	Yes
Storden 4b NPB	Cottonwood	10737204	10	\$5,180	Yes
Storden 4b NPB	Cottonwood	10737204	10	\$25,480	Yes
Lac qui Parle WMA: Main Unit	Cottonwood	10225201	200	\$200,000	Yes
Bennett WMA	Cottonwood	10129206	1,000	\$100,000	Yes

Hastings Sand Coulee SNA	Dakota	11417211	5	-	Yes
Chimney Rock SNA	Dakota	11417231	5	-	Yes
Hastings Sand Coulee SNA	Dakota	11417211	5	-	Yes
Aurora WMA	Dodge	10117216	1,000	\$63,000	Yes
Lund 2-1 NPB	Douglas	13040202	5	\$2,600	Yes
Lund 21-1 NPB	Douglas	13040221	5	\$2,600	Yes
Lund 21-1 NPB	Douglas	13040221	2	\$1,320	Yes
Andrea WMA	Douglas	12737225	90	\$45,000	Yes
Lund 2-1 NPB	Douglas	13040202	2	\$1,320	Yes
Chadderdon WMA	Faribault	10224211	790	\$20,000	Yes
Rice Lake WMA	Faribault	10427221	27	\$50,000	Yes
Walnut Lake WMA	Faribault	10225201	157	\$75,000	Yes
Peterson SF complex	Fillmore	10408228	150	\$57,925	Yes
Beaver Creek WMA	Fillmore	10113228	232	\$116,000	Yes
Rushford SF complex	Fillmore	10408214	150	\$74,900	Yes
Pin Oak Prairie SNA	Fillmore	10412214	5	-	Yes
River Terrace Prairie SNA	Goodhue	11217201	5	-	Yes
Cannon River Turtle Preserve SNA	Goodhue	11316225	5	-	Yes
Spring Creek Prairie SNA	Goodhue	11315234	5	-	Yes
Warsaw 7-1 NPB	Goodhue	11118207	5	-	Yes
River Terrace Prairie SNA	Goodhue	11217201	5	-	Yes
Cannon River Turtle Preserve SNA	Goodhue	11316225	3	\$5,650	Yes
Cannon River Turtle Preserve SNA	Goodhue	11316225	10	-	Yes
Pelican Lake-27-1 NPB	Grant	13041227	5	\$2,600	Yes
Woodke A & B NPB	Grant	12741232	5	\$2,600	Yes
Elk Lake 19-1 NPB	Grant	12841219	5	\$2,600	Yes
Elk Lake 19-1 NPB	Grant	12841219	2	\$1,660	Yes
Lien 13-1 NPB	Grant	12842213	5	\$2,600	Yes
Olsen NPB	Grant	12841206	5	\$2,600	Yes
Pelican Lake-27-1 NPB	Grant	13041227	1	\$660	Yes
Reno SF complex	Houston	10104202	100	\$16,000	Yes
Vinegar Ridge SF complex	Houston	10407215	525	\$55,100	Yes
Caledonia 28-1 NPB	Houston	10206228	5	-	Yes
Hokah SF complex	Houston	10405234	80	\$65,500	Yes
Wetbark SF complex	Houston	10307211	175	\$128,800	Yes
Jefferson SF complex	Houston	10104219	420	\$222,200	Yes
Yucatan WMA complex	Houston	10307230	20	\$30,500	Yes
Caledonia 33-1 NPB	Houston	10206233	2	-	Yes
Petersburg 27-2	Jackson	10134227	10	\$5,100	Yes
Petersburg 26-1 NPB	Jackson	10134226	40	\$5,100	Yes
Petersburg 27-1	Jackson	10134227	10	\$22,500	Yes
Des Moines River Prairie SNA	Jackson	10435219	60	\$62,000	Yes
Lewisville WMA	Jackson	10130233	1	\$50,000	Yes
Arvison 5	Kittson	15945205	5	\$4,800	Yes
Caribou 2	Kittson	16345202	5	\$5,000	Yes
Caribou 2	Kittson	16345202	5	\$2,600	Yes
Norway 1-1 NPB	Kittson	16046201	5	\$2,600	Yes
Lake Bronson Parkland SNA	Kittson	16146225	5	\$2,600	Yes
Lake Bronson Parkland SNA	Kittson	16146225	2	\$2,320	Yes
Norway 1-1 NPB	Kittson	16046201	2	\$1,320	Yes
Arvison 5	Kittson	15945205	5	\$2,600	Yes
Hantho 25-1 NPB	Lac qui Parle	11943225	20	\$11,200	Yes
Lac qui Parle WMA: Controlled Hunting Zone	Lac qui Parle	11842210	10	\$30,000	Yes
Hantho 17-1 NPB	Lac qui Parle	11943217	25	\$11,000	Yes
Lac qui Parle 36-1 NPB	Lac qui Parle	11842236	50	\$11,200	Yes
Lac qui Parle 36-1 NPB	Lac qui Parle	11842236	30	\$25,000	Yes
Bob Gehlen WMA	Le Sueur	11026211	61	\$100,000	Yes

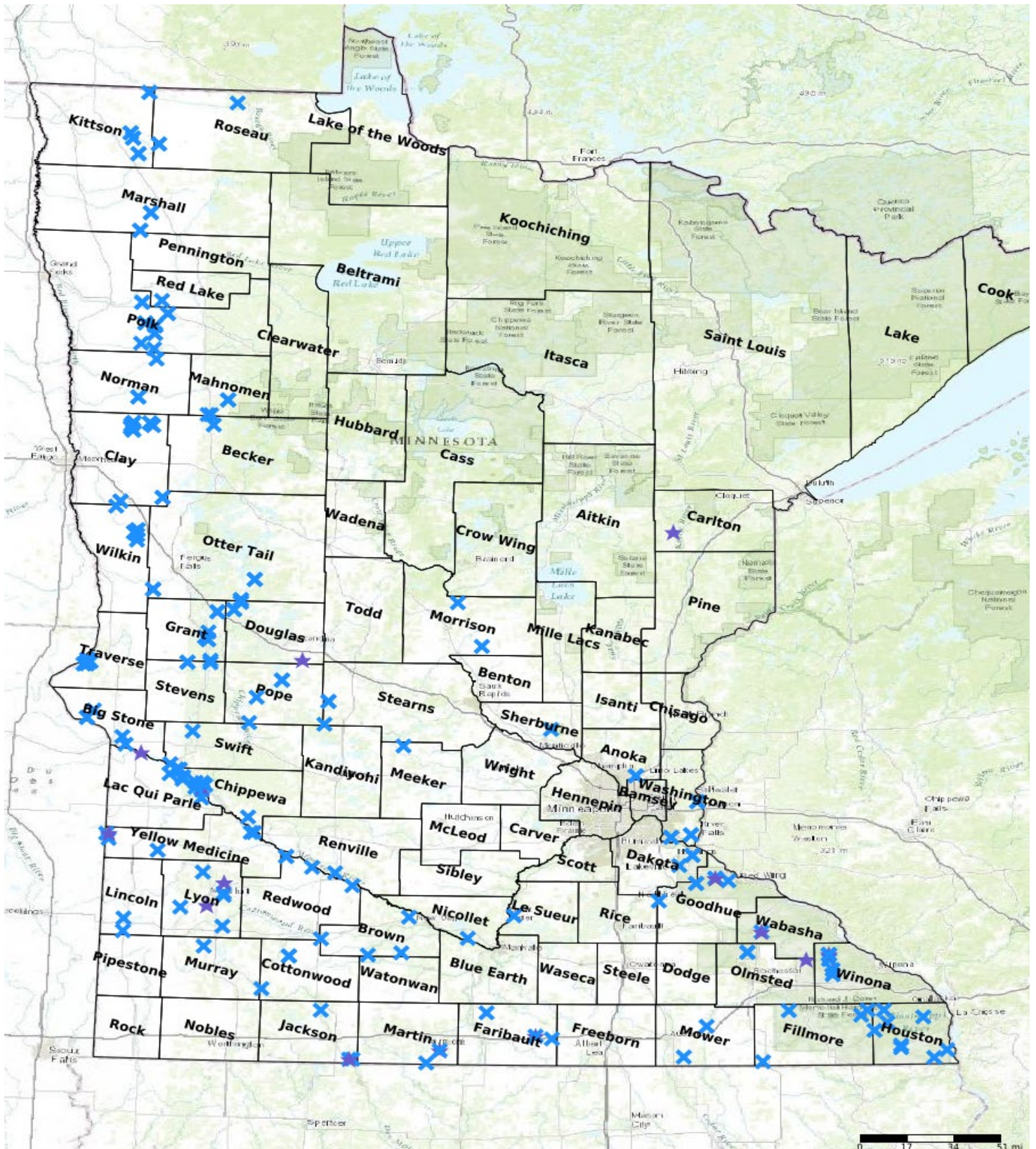
Amiret WMA	Lincoln	10945230	500	\$50,000	Yes
Bue-tiful Acres WMA	Lincoln	11045231	500	\$50,000	Yes
Glynn Prairie SNA	Lyon	10940207	30	\$5,300	Yes
Bue-tiful Acres WMA	Lyon	11141232	100	\$80,000	Yes
Prairie Marshes WMA	Lyon	11043201	452	\$155,000	Yes
Clifton WMA	Lyon	11140206	729	\$160,000	Yes
Clifton WMA	Lyon	11140207	306	\$25,000	Yes
Vallers WMA	Lyon	11341230	737	\$25,000	Yes
Green Valley WMA	Lyon	11240218	87	\$21,750	Yes
Rosedale fen	Mahnomen	14441236	5	\$2,600	No
Rosedale fen	Mahnomen	14441236	2	\$1,320	No
Lake Grove 31-1 NPB	Mahnomen	14341231	5	\$2,600	Yes
Popple Grove 36-1 NPB	Mahnomen	14342236	5	\$2,600	Yes
Marsh Grove 36-1 NPB	Marshall	15645236	5	\$2,600	Yes
Viking 4 NPB	Marshall	15445204	5	\$2,600	Yes
Viking 4 NPB	Marshall	15445204	5	\$5,000	Yes
Marsh Grove 36-1 NPB	Marshall	15645236	1	\$660	Yes
East Chain WMA	Martin	10129206	100	\$185,000	Yes
Teal Scurry WMA	Meeker	12131207	95	\$95,000	Yes
Ripley Esker SNA	Morrison	04231218	5	-	Yes
Rice Area Sportsmens Club WMA	Morrison	03931213	79	\$39,500	Yes
Wild Indigo SNA	Mower	10316215	30	\$40,000	Yes
Skandia WMA	Murray	10841219	2,500	\$250,000	Yes
Swan Lake WMA: North Star Unit	Nicollet	10928228	61	\$54,900	Yes
Sandpiper Prairie SNA	Norman	14445233	2	\$1,320	Yes
Sandpiper Prairie SNA	Norman	14445233	5	\$2,600	Yes
Prairie Smoke Dunes SNA	Norman	14644217	5	\$2,600	Yes
Whitewater WMA: Main Branch Unit	Olmsted	10710236	20	\$34,200	Yes
Oronoco Prairie SNA	Olmsted	10814222	5	-	Yes
Whitewater WMA: Main Branch Unit	Olmsted	10711203	336	\$310,000	Yes
Whitewater WMA: Callahan Unit	Olmsted	10610201	200	\$253,500	Yes
Oronoco Prairie SNA	Olmsted	10814222	5	-	Yes
Wallace NPB	Otter Tail	13140235	2	\$1,320	Yes
Nidaros 21-1 NPB	Otter Tail	13239221	2	\$1,320	Yes
Nidaros 21-1 NPB	Otter Tail	13239221	5	\$2,600	Yes
Wallace NPB	Otter Tail	13140235	5	\$2,600	Yes
Otter Tail Prairie SNA	Otter Tail	13144217	2	\$1,320	Yes
Otter Tail Prairie SNA	Otter Tail	13144217	5	\$2,600	Yes
Pembina Trail SNA-Foxboro Unit	Polk	14845203	5	\$6,600	Yes
Gentilly 27-1 NPB	Polk	15045227	5	\$2,600	Yes
Pembina Trail SNA-Crookston Prairie Unit	Polk	14944213	5	\$2,600	Yes
Pembina Trail SNA-Foxboro Unit	Polk	14845203	5	\$2,600	Yes
Godfrey 7-1 NPB	Polk	14844207	1	\$660	Yes
Pembina Trail SNA-Crookston Prairie Unit	Polk	14944213	5	\$3,300	Yes
Agassiz Dunes SNA	Polk	14844230	10	\$5,200	Yes
Agassiz Dunes SNA	Polk	14844230	2	\$1,660	Yes
Godfrey 7-1 NPB	Polk	14844207	5	\$2,600	Yes
Gentilly 27-1 NPB	Polk	15045227	1	\$660	Yes
Liberty WMA	Polk	14745216	538	\$141,500	Yes
Garfield 30-1 NPB	Polk	14744230	5	\$2,600	Yes
Fibranz NPB	Pope	12647206	2	\$1,320	Yes
Minnewaska 1-1 NPB	Pope	12538201	2	\$1,320	Yes
Lake Johanna 31-2 NPB	Pope	12335231	5	\$2,600	Yes
Langhei Prairie SNA	Pope	12339232	5	\$2,600	Yes
Fibranz NPB	Pope	12647206	5	\$2,600	Yes
Minnewaska 1-1 NPB	Pope	12538201	5	\$2,600	Yes
Lake Pleasant 22-1 NPB	Red Lake	15044222	5	\$2,600	Yes



Swedes Forest NPBs	Redwood	11437220	10	\$14,620	Yes
Cedar Rock WMA: South East Unit	Redwood	11336210	50	\$75,000	Yes
Cedar Mountain SNA	Redwood	11234215	20	\$60,000	Yes
Swedes Forest NPBs	Redwood	11437220	1	\$5,250	Yes
Beaver Falls WMA	Renville	11335223	20	\$9,000	Yes
Two Rivers Aspen Parkland SNA	Roseau	16044217	10	\$5,200	Yes
Two Rivers Aspen Parkland SNA	Roseau	16044217	2	\$1,320	Yes
Roseau Lake WMA	Roseau	16340220	720	\$144,000	Yes
Uncas Dunes SNA	Sherburne	03427228	5	-	Yes
Sedan Brook Prairie	Stearns	12435217	5	-	Yes
Sedan Brook Prairie	Stearns	12435217	5	-	Yes
Swan Lake 5-1	Stevens	12641205	5	\$2,600	Yes
Verlyn Marth Memorial Prairie SNA	Stevens	12642206	1	\$660	Yes
Verlyn Marth Memorial Prairie SNA	Stevens	12642206	10	\$5,200	Yes
Fairfield 21-1 NPB	Swift	12242221	30	\$62,000	Yes
Lac qui Parle WMA: Main Unit	Swift	12043229	116	\$30,000	Yes
Windsor 13-1 NPB	Traverse	12648213	6	\$2,600	Yes
Walls 7-2 NPB	Traverse	12647207	1	\$660	Yes
Walls 7-2 NPB	Traverse	12647207	10	\$5,200	Yes
Walls 7-1 NPB	Traverse	12647207	2	\$1,320	Yes
Walls 7-1 NPB	Traverse	12647207	10	\$5,200	Yes
Walls 8-1 NPB	Traverse	12647208	10	\$5,200	Yes
Walls 18-1 NPB	Traverse	12647218	5	\$2,600	Yes
Windsor 13-1 NPB	Traverse	12648213	2	\$1,320	Yes
Whitewater WMA complex	Wabasha	10710202	10	\$15,200	Yes
Zumbro Falls Woods SNA	Wabasha	10913208	2	\$4,100	Yes
Zumbro Falls Woods SNA	Wabasha	10913208	5	-	Yes
Grey Cloud Dunes SNA	Washington	02721229	5	-	Yes
Lost Valley Prairie SNA	Washington	02720220	10	-	Yes
St. Croix Savanna SNA	Washington	02920215	5	-	Yes
Grey Cloud Dunes SNA	Washington	02721229	8	-	Yes
Lost Valley Prairie SNA	Washington	02720220	5	-	Yes
St. Croix Savanna SNA	Washington	02920215	5	-	Yes
Tanberg 33-1 NPB	Wilkin	13545233	5	\$2,600	Yes
Tanberg 29-1 NPB	Wilkin	13545229	5	\$2,600	Yes
Tanberg 21-1 NPB	Wilkin	13545221	2	\$1,320	Yes
Tanberg 21-1 NPB	Wilkin	13545221	5	\$2,600	Yes
Akron 9 NPB	Wilkin	13445209	10	\$5,200	Yes
Tanberg 20-1 NPB	Wilkin	13746227	5	\$2,600	Yes
Atherton 5-1 NPB	Wilkin	13646205	5	\$2,600	Yes
Tanberg 20-1 NPB	Wilkin	13746227	2	\$1,320	Yes
Tanberg 29-2 NPB	Wilkin	13545229	5	\$2,600	Yes
Whitewater WMA: Main Branch Unit	Winona	10810226	87	\$86,925	Yes
Whitewater WMA: Main Branch Unit	Winona	10810226	75	\$95,000	Yes
Whitewater WMA: Main Branch Unit	Winona	10810226	55	\$99,000	Yes
Whitewater WMA: South Branch Unit	Winona	10710225	75	\$60,000	Yes
Whitewater WMA: Main Branch Unit	Winona	10810226	167	\$207,000	Yes
Minnesota Falls 3-1 NPB	Yellow Medicine	11539203	40	\$52,000	Yes
Mound Spring Prairie SNA	Yellow Medicine	11546217	5	\$18,000	Yes
Blue Devil Valley SNA	Yellow Medicine	11539204	7	\$12,000	Yes
Mound Spring Prairie SNA	Yellow Medicine	11546218	30	\$8,000	Yes
Mound Spring Prairie SNA	Yellow Medicine	11546229	77	\$8,000	Yes

Antelope Valley SNA	Yellow Medicine	11444214	20	\$7,000	Yes
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## Parcel Map





# 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  
17,800 acres  
\$8,187,900







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



Snowseeding the mix of dozens of grasses and wildflower seed.



When trees get too large, they must be removed mechanically.

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

