

Environment and Natural Resources Trust Fund  
2014 Request for Proposals (RFP)

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**Project Title:**

Achieve Conservation Objectives through Grazing - Monitor Response

**Category:** F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat

**Total Project Budget:** \$ 1,416,480

**Proposed Project Time Period for the Funding Requested:** 3 Years, July 2014 - July 2017

**Other Non-State Funds:** \$ 300,000

**Summary:**

The Minnesota Prairie Plan calls for ecological disturbance to maintain diversity. This proposal will provide for conservation grazing materials on 10,00-acres of WMAs and monitoring to develop best management practices.

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**Sponsoring Organization:** MN DNR

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**Location**

**Region:** Central, Northwest, Southwest, Southeast

**County Name:** Statewide

**City / Township:** see attached map

**MP:** 0613-2-141-proposa

**Budget:** 0613-2-141-bud

**Qual:** 0613-2-141-qualifi

**Map:** 0613-2-141-map-G

**Resolution:**

**List:**

|  |       |                    |           |                   |            |                       |       |           |
|--|-------|--------------------|-----------|-------------------|------------|-----------------------|-------|-----------|
|  | _____ | Funding Priorities | _____     | Multiple Benefits | _____      | Outcomes              | _____ | Knowledge |
|  | Base  |                    |           |                   |            |                       |       |           |
|  | _____ | Extent of Impact   | _____     | Innovation        | _____      | Scientific/Tech Basis | _____ | Urgency   |
|  |       | Capacity           | Readiness | Leverage          | Employment | TOTAL                 |       |           |



## PROJECT TITLE: Achieve Conservation Objectives through Grazing - Monitor Response

### I. PROJECT STATEMENT

This proposal addresses LCCMR funding priorities “A” and “F”. The three historical drivers of native grassland systems are precipitation, fire and grazing. Fire works well but is weather dependent, seasonal, non-selective and somewhat expensive. We will continue to use fire, but we would like to add another management strategy, conservation grazing, into our rotation. To do so, on a landscape scale, requires substantial up-front investment in necessary materials. We are asking for help in implementing this important grassland management strategy. Data acquisition, information management, research and analysis are needed to develop foundation natural resource and wildlife information on conservation grazing.

Grazing is clearly an important tool to achieve conservation objectives: the “Minnesota Prairie Conservation Plan” and the “Five-Year Prairie Implementation Plan” call for grassland enhancement on public land through prescribed fire, grazing, woody removal, and invasive species control. The “DNR’s Priority Four-Year Strategy” 3.1 promotes grazing.

Conservation grazing increases plant diversity and structural diversity of the vegetation. This will increase the niches for grassland nesting birds and other wildlife. While some wildlife prefers dense nesting cover, many species prefer nesting in shorter cover. Our goal is to enhance populations of all wildlife on the prairie, not just those that prefer the tallest grasses. Increased plant diversity will also increase insect diversity and productivity of the land for wildlife. Grazing plans will maximize benefits & minimize potential detriments.

While there are numerous studies on the benefits of conservation grazing, most studies have been done in the southern tallgrass or western shortgrass. There is a need for conservation grazing research in the northern tallgrass region. To refine conservation grazing, as well as test different grazing methods, we need to closely monitor the plant community and wildlife responses to the structural changes created by grazing.

### GOALS and OUTCOMES

- a) This project will provide needed grazing plans, solar powered water pumps, recreation access and fencing to implement conservation grazing on about 10,000 acres of targeted Wildlife Management Areas (WMAs). Our long-term goal is to have conservation grazing on 50,000 acres.
- b) Improve habitat quality; replicate natural processes/disturbances to increase natural diversity through the careful and well-timed placement of livestock on WMAs. Minimize the potential for invasive species.
- c) Provide economic benefits to local grass-based livestock operators and beginning/sustainable farmers.
- d) Provide private jobs through contracts for installing the fencing, solar panels, and water systems.
- e) Measure the changes in bird diversity and abundance under conservation grazing.
- f) Monitor and relate these changes to vegetation structure (plant height and density) and diversity.
- g) Develop monitoring protocols both for research staff as well as developing ‘trigger points’ for managers to determine when cattle should be added, removed, or the management altered at a site.
- h) The direct outcome of this research will be to provide best management practices (BMPs) to agency wildlife managers and interested private producers for different types of conservation grazing practices.

**HOW the project will achieve those goals:** Target areas will be based on the MN Prairie Conservation Plan, Working Lands Initiative areas, and other areas with grazing opportunities. Grazing will occur on non-native grasslands, restored grasslands, or degraded native prairie. This project will combine 1) measurements of plant diversity structure, 2) songbird and waterfowl diversity and abundance, 3) remote sensing and GIS analysis. We will combine field data with GIS analyses to measure grazing intensity and patterns from satellite imagery, which will enable us to examine Minnesota’s grasslands and refine wildlife population models in cooperation with current USGS and USFWS efforts.



**Environment and Natural Resources Trust Fund (ENRTF)**

**2015 Main Proposal**

**Project Title: Achieve Conservation Objectives through Grazing – Monitor Response**

**II. DESCRIPTION OF PROJECT ACTIVITIES**

**Activity 1: Field Assessment of Grazing**

**Budget: \$ 116,000**

| <b>Outcome</b>  | <b>Completion Date</b> |
|---|------------------------|
| 1. Existing habitat condition, as measured by the diversity and abundance of native plants and wildlife, is maintained or improved.   | July 2017              |
| 2. The heterogeneity in the targeted prairie supports a broad base of grassland birds and wildlife as a result of the grazing.  | July 2017              |
| 3. The barriers and benefits livestock producers encounter when grazing public land are well understood.  | July 2017              |
| 4. Local resource managers and habitat assessment staff are equipped to measure if conservation objectives have been met and make adjustments as needed to meet objectives. | July 2017              |

**Activity 2: Use satellite remote sensing to measure grazing intensity and pattern and develop long-term monitoring protocols.**

**Budget: 15,480**

| <b>Outcome</b>  | <b>Completion Date</b> |
|---|------------------------|
| 1. Develop remote sensing protocols using Landsat and other imagery platforms for measuring the intensity of grazing and grazing patterns | July 2017              |
| 2. Develop long-term monitoring protocols using satellite imagery.  | July 2017              |

**Activity 3: Private livestock producers will graze about 10,000 acres of WMA land.**

**Budget: \$1,285,000**

| <b>Outcome</b>   | <b>Completion Date</b> |
|--|------------------------|
| 1. Identify the conservation objectives (wildlife focus) and develop grazing plans.                        | March 2017             |
| 2. Grazing supplies will be installed. Fencing 120mi @ \$1.60/ft. +gates +solar and watering systems       | July 2017              |
| 3. Grazing agreements will be executed with private livestock producers (mainly beef cattle and cow/calf). | July 2017              |
| 1. Approximately 10,000 acres of public land will be grazed to enhance habitat.                            | July 2017              |

**III. PROJECT STRATEGY**

**A. Project Team/Partners**

Funds for this project will go to the DNR, primarily for contracts. Project assistance will be provided by: the Minnesota Department of Agriculture (MDA), Minnesota Grazing Lands Conservation Association, Minnesota State Cattlemen’s Association, Board of Water and Soil Resources (BWSR), Natural Resource Conservation Service (NRCS), U.S. Fish and Wildlife Service (USFWS), Soil and Water Conservation Service (SWCD), The Nature Conservancy, and the Land Stewardship Project in helping locate prospective grazing partners. Pheasants Forever, Ducks Unlimited, Minnesota Prairie Chicken Society, and other conservation groups have offered to help educate our interest groups about this new management practice and the resource benefits.

**B. Timeline Requirements**

This project will be completed in 36 months.

**C. Long-Term Strategy and Future Funding Needs**

Funds appropriated for the 2012-2013 Conservation Grazing to Improve Wildlife Habitat on WMAs targeted 5,000 acres in the prairie core and corridor areas. This proposal will expand out into the agricultural matrix of the Prairie Plan. Conservation grazing and adaptive management will continue on all these sites and protocols will be applied to additional sites.

## 2014 Detailed Project Budget

### Achieve Conservation Objectives through Grazing - Monitor Response

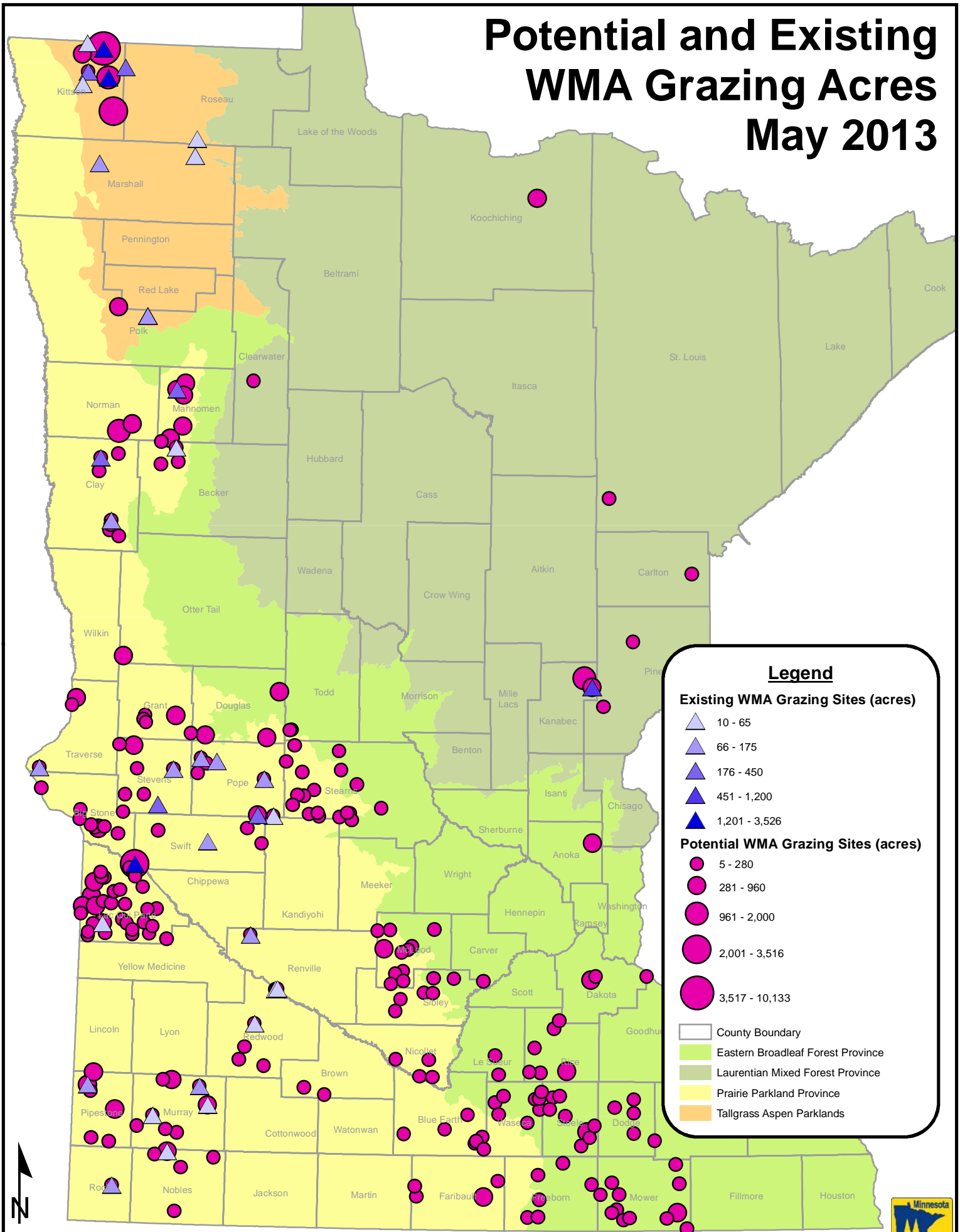
#### IV. TOTAL ENRTF REQUEST BUDGET 3-years

| <u>BUDGET ITEM</u>   | <u>AMOUNT</u>       |
|--|---------------------|
| <b>Personnel:</b> 0.50- FTE project coordinator/ contractor administrator @ \$30,000 salary and fringe/year for 3 years=\$90,000).   | \$ 90,000           |
| <b>Contracts:</b> Contract for brush clearing w/ dozer for 10 miles @ \$1,900/mile=\$19,000; Fencing contracts for purchase & installation of 114 miles of fence @ 1.60/ft x5280ft/mi=\$965,000(includes grass mowing and small brush clearing with an ASV with mowing head and grinding head), Installation of approx 120 gates16-ft & hunter access gates @ \$300 for both=\$36,000; Installation of electric hookup or solar energizers & solar panels (\$850ea/40=\$34,000).Two Ecologist Teams for 2 years = \$80,000 | \$ 1,134,000        |
| <b>Professional Services:</b> Direct and Necessary Services required to support this appropriation.  | 116,480             |
| <b>Equipment/Tools/Supplies:</b> At least 160 Aluminum Grazing notification signs required by law @ \$15/ea=\$2,400; \$6,000/yr for 3 yrs for coordinator communications, supplies, computer services, etc=\$18,000. GIS work station & satellite imagery = \$15,600   | \$ 36,000           |
| <b>Travel:</b> For habitat monitoring for 3 years \$30,000; For Project coordinator 3 years \$10,000 travel – fleet and other travel expenses.   | \$ 40,000           |
| <b>TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =</b>   | <b>\$ 1,416,480</b> |

#### V. OTHER FUNDS

| <u>SOURCE OF FUNDS</u>  | <u>AMOUNT</u>    | <u>Status</u> |
|---|------------------|---------------|
| <b>Other Non-State \$ Being Applied to Project During Project Period :</b> NRCS Grazing Specialists to write Grazing Plans at approximately \$30/acre for 10,000 acres=\$300,000. This includes writing, travel, time spent meeting with representatives of DNR, etc.   | <b>\$300,000</b> | secure        |
| <b>Other State \$ Being Applied to Project During Project Period:</b> MN Dept. of Agriculture Livestock Development Team - mapping, promotions and outreach to livestock producers to find cooperators at 40 locations x 10 hrs ea. x \$35/hr = \$14,000. Field demonstration days, conservation walks, and workshops to train partners on livestock and conservation grazing 4 programs in 2 yrs x 40 hrs x \$35 = \$11,200.   | \$ 25,200        | secure        |
| <b>In-kind Services During Project Period:</b> Livestock cooperators will provide temporary interior fencing and installation at 40 sites for \$1/ft 5,280ft/mi of approximately 100 miles=\$528,000 and water tanks(40 @ \$100 ea) \$4,000 and approx. 3,000 ft of water lines @ \$0.75/ft x 40 sites = \$90,000. The cooperator will maintain fences, gates, and provide needed mowing. The cooperator's labor will be subtracted from his services due. DNR Staff will provide approximately 50 hrs/yr x 40sites x 3 years x \$35/hr=\$210,000 | \$ 832,000       | pending       |
| <b>Remaining \$ from Current ENRTF Appropriation:</b> ML 2013 Chp xx sec xx Conservation Grazing to Improve Wildlife Habitat on Wildlife Management Areas project will receive funding beginning FY14. This is a 3 year project to implement conservation grazing in targeted Prairie Core and Corridor WMAs. The 2014-2015 proposal moves out to the Agricultural Matrix of the Prairie Plan.  | \$ 600,000       | secure        |

# Potential and Existing WMA Grazing Acres May 2013



**Legend**

**Existing WMA Grazing Sites (acres)**

- ▲ 10 - 65
- ▲ 66 - 175
- ▲ 176 - 450
- ▲ 451 - 1,200
- ▲ 1,201 - 3,526

**Potential WMA Grazing Sites (acres)**

- 5 - 280
- 281 - 960
- 961 - 2,000
- 2,001 - 3,516
- 3,517 - 10,133

County Boundary  
 Eastern Broadleaf Forest Province  
 Laurentian Mixed Forest Province  
 Prairie Parkland Province  
 Tallgrass Aspen Parklands



**Project Manager**

Mike Tenney

Prairie Habitat Team Supervisor

DNR Division of Fish and Wildlife

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Mike Tenney is the Acting Prairie Habitat Team Supervisor for the Minnesota Department of Natural Resources – Section of Wildlife. He coordinates the Section’s Prairie Plan implementation, Farm Bill activities, is on the steering committee for the Farm Bill Assistance Partnership, and is the program manager on five active Lessard-Sams Outdoor Heritage Council Prairie/Grassland Habitat Improvement grants and one LCCMR grant for Conservation Grazing to Improve Wildlife Habitat on WMAs. Mike also supervises the Walk-In-Access program. He has degrees in Biology, with an ecology and wildlife management emphasis, from the St. Cloud State University.

The mission of the Minnesota Department of Natural Resources is to work with citizens to conserve and manage the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life. Within the Division of Fish and Wildlife, the Prairie Habitat Team is responsible for addressing project, policy and fiscal issues needed to manage grassland habitat for wildlife in the Prairie and Transition Zones of Minnesota. With less than 1% of native prairie remaining in Minnesota, conservation and management of grassland habitats is a priority for the Department of Natural Resources. This proposal addresses the urgent need to increase grassland management capacity using sound science and defined objectives that will benefit wildlife populations, plant diversity and lower overall management costs.