# Environment and Natural Resources Trust Fund
# 2016 Request for Proposals (RFP)

**Project Title:** **ENRTF ID: 034-A**

Protecting Minnesotas Livestock, Wildlife and Farmers

**Category:** A. Foundational Natural Resource Data and Information

**Total Project Budget: $** 739,400

**Proposed Project Time Period for the Funding Requested:** 3 years, July 2016 to June 2019

**Summary:**

This project will provide a mechanism to educate and support farmers in using nonlethal methods for wolf-livestock conflicts. It will compare nonlethal to lethal to no interventions on wolf conflicts.

**Name:** Maureen Hackett

**Sponsoring Organization:** Howling For Wolves

**Address:** PO Box 4099

Hopkins MN 55343

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**Email** hackett@howlingforwolves.org

**Web Address** www.howlingforwolves.org

**Location**

**Region:** Statewide

**County Name:** Statewide

**City / Township:**

**Alternate Text for Visual:**

HFW Protecting Livestock Project Cycle of Activities, Persons per season

_____ Funding Priorities _____ Multiple Benefits _____ Outcomes _____ Knowledge Base

_____ Extent of Impact _____ Innovation _____ Scientific/Tech Basis _____ Urgency

_____ Capacity Readiness _____ Leverage _____ TOTAL _____%

**PROJECT TITLE:** Protecting Minnesota's livestock, wildlife, and farmers

**I. PROJECT STATEMENT**

Scientists found killing cougars or wolves in the western USA led to higher livestock losses the next year (Peebles et al., 2013; Wielgus & Peebles, 2014). However, critics point to statistical problems in these studies. Critics also claim the methods used in the Rockies are not as effective as those used in Minnesota. Nevertheless, the only study of this issue in Minnesota did not find a clear, preventive effect of live-trapping and euthanizing wolves (Harper et al. 2008). Yet this method remains in use because livestock producers demand something be done about wildlife damage. A recent review also found that non-lethal methods prevent more livestock losses and do so at a lower cost (McManus et al. 2013). Scientific evaluations of all preventive methods are needed, so we move beyond anecdote and a few experts' unpublished opinions. Little will be resolved until farmers select their preferred non-lethal methods and the results are evaluated scientifically. This proposal offers solutions to both state agencies and livestock farmers, and a scientific method of evaluating lethal and non-lethal methods in the same areas.

Our proposal will help producers and inform the state on how to protect livestock from wildlife damage more effectively while conserving native wildlife populations. Our goal is to reduce harm to both livestock and wildlife, which would aid producers while increasing the health of Minnesota's ecosystems and native habitats. Research suggests that habitats occupied by wolves for long periods experienced recovery of some understory plant species that had been over-browsed by deer (Callan et al. 2013). The role of top predators in ecosystems is being investigated energetically and the preponderance of the evidence suggests biodiversity and ecosystem processes are enriched by the presence of top predators (Ripple et al. 2014).

For the individual producers who express interest and willingness to experiment, we will offer incentives and partnership to understand the constraints inherent to their livestock operations and install non-lethal methods on their properties for a period of 1-2 years. We will adapt our interventions for year 2 based on analysis of year 1 outcomes (Figure). Our partnership with producers will have a component of prevention (installation, maintenance, support, advice) and a component of scientific evaluation and monitoring for research. We would offer producers an incentive payment for their participation as well as covering most capital costs of installation, upkeep and modification of the non-lethal interventions. We will periodically follow up with each producer on their perception of threats and verified incidents as well as any other feedback regarding efficiency, cost, effects, and implementation of such method(s). The scientific evaluation component would include research on effectiveness of these non-lethal interventions as well as producers' perception of wolves before and after the implementation of the interventions.

**II. PROJECT ACTIVITIES AND OUTCOMES**

**Activity 1:** Recruit farmers- Fall, Staff: PL, FM **Budget: $130,250**

Develop accessible informational material about the latest methods of protecting livestock. Meet with producers to describe the merits and drawbacks of each method. Recruit participants.

| Outcome | Completion Date |
|---|---|
| 1. Develop accessible informational materials about pros and cons of different methods to prevent predation on livestock. | July |
| 2. Attend livestock producer meetings, advertise in newsletters, local media, etc. | Sep.-Nov. |
| 3. Schedule meetings with farmers | November |

**Activity 2:** Farmers select among options for non-lethal prevention- Winter; Staff: FM **Budget: $84,000**

Produce tailored plans for implementing non-lethal prevention methods for each property. Establish schedule for installation, maintenance, routine communications, and review.

| Outcome | Completion Date |
|---|---|
| 2. Meetings with producers to inform them about options for non-lethal methods. | December 2016 |

| | |
|---|---|
| 3. Participating farmers and team partner to plan and design installation at their farms. | January 2017 |
| 4. Establish schedule for installation, maintenance, routine communications, and review | Jan-Feb 2017 |

**Activity 3:** Assist farmers to adapt install, and maintain preventive methods- Jan-Apr, Staff: FM **Budget: $404,900**

Implement non-lethal interventions in cooperation with participants. Perform regular maintenance as needed.

| Outcome | Completion Date |
|---|---|
| 1. Meetings with farmers to assess and review installation | March–May 2017 |
| 2. Regular on-site maintenance, adaptation | March–May 2017 |

**Activity 4:** Monitor effectiveness- May-Oct, Staff: FM, DC **Budget: $51,000**

Begin monitoring and data collection protocols. Conduct pre-post study period surveys on interventions.

| Outcome | Completion Date |
|---|---|
| 1. Regular monitoring and data collection | March–May 2017 |

**Activity 5:** Interpret results- Oct–Nov 2017, Staff: FM, DC **Budget: $28,000**

Analyze effectiveness of interventions at the end of each year, focusing on a comparison with lethal methods for reducing predation on livestock over time, cost-effectiveness, implementation and maintenance issues, and perception. Conduct an analysis of perceptions of wolves by producers before and after the study period.

| Outcome | Completion Date |
|---|---|
| 1. Data compilation and analysis of interventions | November |
| 2. Meet as a project team to interpret results and decide on next year's approach | December |
| 3. Recruit ten more farmers and repeat activities above. | November_January |

**Activity 6:** Adapt and revise- Dec–Jan, Staff: PL, DC, FM **Budget: $41,250**

Adapt and revise non-lethal methods based on 1st year results on effectiveness and maintenance issues.

| Outcome | Completion Date |
|---|---|
| 1. Discuss results with farmers, review and revise methods | December |
| 1. Adapt and revise non-lethal methods on each participating farm. | January |

**III. PROJECT STRATEGY**

**A. Project Team/Partners**

HFW is the liaison to public, state decision-makers and agencies. They will supervise and oversee progress, and adaptation of findings. The field manager and the contract consultants will work on research design, implementation design, and interpretation of monitoring data. They will work with HfW to achieve the long-term goals of the project.

**B. Project Impact and Long-Term Strategy**

The long-term impact of this project will be to test and evaluate a set of farmer-selected non-lethal prevention methods. The use of non-lethals has the potential to protect native MN wildlife and habitats. Widespread adoption of the successful methods can also save the state money in lethal control contracts and the agriculture sector in lost livelihoods.

**C. Timeline Requirements**

We need 3 years to scale up the project to 20 farms total for two years each.

# 2016 Detailed Project Budget

**Project Title:** Protectng Minnesota's livestock, wildlife and farmers

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

| BUDGET ITEM | AMOUNT |
|---|---|
| **Personnel:**<br>Project Leader, Jul 2017 - Jun 2019 (years 2 and 3 only) - $150K<br>Field Manager, full-time, employ or contract, Jul 2016 - Jun 2019 - $180K<br>Design Consultant, part time contract role, Jul 2016 - Jun 2019 (1 person) - $37.5K | $ 367,500 |
| **Equipment/Tools/Supplies:**<br>Work vehicle used for turbo-fladry installation, maintenance and wolf monitoring, 4mo/yr, 2 yrs - $7.5K<br>Transportation vehicle for personnel/equipment (rental as needed basis), 3 yrs - $6K<br>Guard dogs and their maintenance and materials (fladdery, fencing, posts, deterrents, batteries, among others) - up to $12k per farm, with a maximum of 20 farms over 3 years ($240K max). | $ 253,500 |
| **Acquisition (Fee Title or Permanent Easements):** N/A | N/A |
| **Travel:**<br>Mileage, ~3,000 miles per year @ $0.55/mile - $5K<br>Lodging and food, Field Manager and Design Consultant for 90 days each @ $85/day - $45.9K | $ 50,900 |
| **Additional Budget Items:**<br>Incentives to meet producers, $100 per recruit per year for 20 producers - $6K<br>Meetings with producers (conference room rental, coffee, among other minor items), - $1.5K<br>Communications, media, public relations, bookkeeping/accounting, insurance, payroll fees - $60k | $ 67,500 |
| **TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND $ REQUEST =** | $ 739,400 |

**V. OTHER FUNDS**

| SOURCE OF FUNDS | AMOUNT | Status |
|---|---|---|
| **Other Non-State $ To Be Applied To Project During Project Period:**<br>Grant proposal submitted to the Animal Welfare Institute (Christine Stevens Award) to help with planning and implementation travel expenses | $ 10,000 | Pending |
| **In-kind Services To Be Applied To Project During Project Period:**<br>UW Prof. Adrian Treves has agreed to match with equal support if this project is funded and gear from the Carnivore Coexistence Lab.<br>HFW will provide additional administrative support as an in kind contribution ($22.5K).<br>HFW will provide 100% of Project Leader services for year 1 ($75K) | $ 97,500 | Secured |
| | N/A | N/A |
| **Funding History:** N/A | N/A | N/A |
| **Remaining $ From Current ENRTF Appropriation:** N/A | N/A | N/A |

# Vision: Protect wildlife, livestock, and farmers
# Project launch July, staff: PL, DC, FM

**Recruit farmers** – Fall, staff: PL, FM

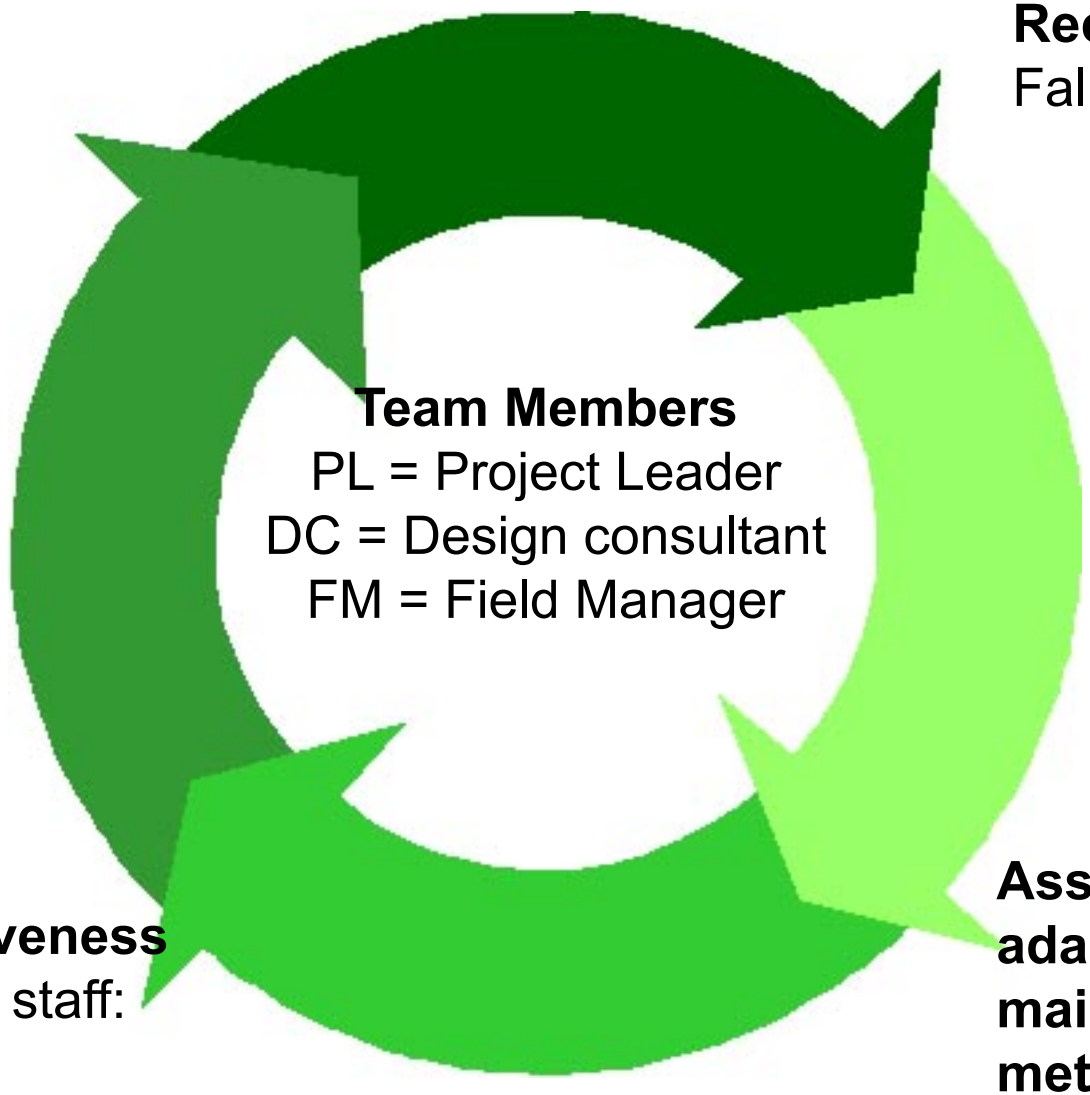
**Farmers select among options for non-lethal prevention** – Winter, staff: FM

**Assist farmers to adapt, install, and maintain preventive methods** – January–May, staff: FM, DC

**Monitor effectiveness** – May–October, staff: FM, DC

**Interpret results** – October–November, staff: FM, DC

**Adapt and revise** – December–January, staff: PL, DC, FM



**PROJECT MANAGER QUALIFICATIONS & ORGANIZATION DESCRIPTION**

Maureen Hackett, MD, is a physician and professor specializing in Psychiatry with a focus on forensics. Her professional experience includes active duty military service as a commissioned officer, clinical director appointments for the state of Minnesota Department of Human Services and the Minnesota Department of Corrections supervising physicians and staff. For this project, Dr. Hackett's responsibilities include supervising Howling For Wolves' (HFW) staff the project's staff and to serve as liaison with state officials and the general and agriculturally based public.

EDUCATION:
1983 B.A., Lake Forest College, IL, Chemistry and Biology, Magna Cum Laude
1987 M.D., Feinberg School of Medicine, Northwestern University, Chicago, IL
1991 Psychiatry Residency, Wilford Hall, USAF Medical Center, TX
1995 Fellowship, Forensic Neuropsychiatry, Tulane U Medical Center, New Orleans, LA

Howling For Wolves is a non-profit 501c3 organization whose purpose is to protect wolves by educating the public and policy-makers to foster understanding, tolerance, conflict prevention and coexistence with this species.

The project team will also include Adrian Treves, PhD. Dr. Treves has done extensive research on human-carnivore interactions in human-dominated systems. He has previously worked with farmers in Wisconsin's wolf range (Treves et al 2004) to understand the predation problems they face and his research has produced a risk map that predicts better that 91% of areas that are at high risk of wildlife-livestock conflicts (Treves et al. 2011). In addition, Treves has already tested lethal and non-lethal methods in Wisconsin as well as in Minnesota (Shivik et al. 2003; Treves et al. in review).