

**Environment and Natural Resources Trust Fund  
2018 Request for Proposals (RFP)**

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**Project Title:**

**ENRTF ID: 028-A**

Cover Crops for Wildlife Phase I

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

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**Total Project Budget:** \$ 346,720

**Proposed Project Time Period for the Funding Requested:** 3 years, July 2018 to June 2021

**Summary:**

In this proposed innovative study, we capitalize on the already known environmental and agricultural cover crop benefits and determine benefits current cover crop practices provide for wildlife habitat.

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**Name:** Tanner Bruse

**Sponsoring Organization:** Pheasants Forever Inc

**Address:** 1783 Buerkle Circle  
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**Web Address** \_\_\_\_\_

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**Location**

**Region:** Central, Southwest

**County Name:** Becker, Big Stone, Blue Earth, Brown, Cottonwood, Douglas, Jackson, Kandiyohi, Lac qui Parle, Lincoln, Lyon, McLeod, Meeker, Murray, Nobles, Pipestone, Pope, Redwood, Renville, Rock, Stearns, Stevens, Swift, Watonman, Yellow Medicine

**City / Township:**

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**Alternate Text for Visual:**

NA

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



**PROJECT TITLE:** Cover Crops for Wildlife Phase I

**I. PROJECT STATEMENT**

Cover crops, to date, have been studied for the benefits provided for multiple ecological and public benefits, such as; water quality, soil health, and agriculture production. What is debatable among some in the conservation community is if cover crops provide significant benefits for wildlife. In this proposed innovative study, we capitalize on the already known cover crop benefits and determine what, if any, benefits current cover crop practices provide for wildlife habitat. We will look at potential benefits to wildlife including: nesting cover, brood rearing habitat, and forage value for ground nesting birds, small animals, deer, and pollinators. In addition, we will be testing the viability of using cover crops as a pre-restoration planting practice that would decrease herbicide use, suppress weeds, and result in a healthier and quicker establishing native planting.

Through other studies, it has been demonstrated and documented that cover crops have beneficial outcomes for natural resources. The benefits of cover crops for agriculture producers has been documented by showing how they help increase yields, decrease fertilizer use, decrease pesticide use, which in turn provide overall cost savings to producers. Also, the benefits to soil health have been documented (e.g. building soil organic matter and structure). Livestock producers also benefit from the use of cover crops for forage production. To date, the conservation community has not identified cover crops as a benefit to all wildlife, including pollinators. By doing a study that evaluates wildlife impacts, if there is a positive correlation between cover crops and wildlife, it will increase wildlife professionals’ interest and in turn promotion and other cost share activities will be available. The end result will be more acres of cover crops on the landscape for the benefit of soil, water quality, farmers, and wildlife.

The second portion of the study will be to test the viability of using cover crops prior to native prairie plantings and restorations. By using cover crops for restoration purposes, it will allow for an alternative practice that could be beneficial to establishment, use less herbicide and transition lands more quickly into habitat. By using row crop fields treated with cover crops prior to restoration, we gain the benefits to soil health, water quality, provide year-round cover, and reduce chemical usage all while creating a better chance for the recent planting to be successful. Can cover crops increase the productivity of recently planted native grasses/forbs by suppressing weeds and building soil health?

Pheasants Forever will hire an individual with at least a Master’s Degree with past study experience to implement the project. We will coordinate with additional partners including state and federal agencies along with universities.

**II. PROJECT ACTIVITIES AND OUTCOMES**

**Activity 1: Wildlife benefits of Cover Crops**

**Budget: \$173,360**

Conduct a comprehensive study to comparing wildlife benefits provided by fields with cover crops versus fields that are not in cover crops fields to wildlife. In coordination with private landowners, Minnesota Department of Natural Resources (MN DNR) and Pheasants Forever, Inc. (PF) we will use cover crops and non-cover crop fields to determine the various impacts that cover crop use has for wildlife, including pollinators. The first phase of this project will consist of creating a study design and identifying sites that will be used. The consecutive years will be actual field seasons that include data collection, analysis, and publication of findings. PF will hire a field biologist, along with an intern, to implement the study and perform field seasons along with data analysis.

<b>Outcome</b>	<b>Completion Date</b>
1. Develop study design and identify study sites	June, 2019
2. Conduct year one and pilot field season and perform data analysis	June, 2020
3. Conduct year two field season and perform data analysis	June, 2021



**Activity 2: Restoration benefits of Cover Crops**

**Budget: \$173,360**

Can the use of cover crops be a viable practice that improves establishment while providing benefits to water quality, soil, and wildlife? MN DNR and PF fee-title acquisitions that are to be restored will be used to plant cover crops prior to native plant seedings. Fields to be restored to diverse, native plantings will be planted to soybeans; half of the field will be treated with cover crops while the other half will not receive the cover crop treatment. With this study we will determine if cover crop use can decrease herbicide application, suppress weeds, and create a healthier/quicker establishing native planting. We will try to answer the question if cover crop practices can reduce management activities in the first three years of native plantings?

Outcome	Completion Date
1. Develop study design and identify restoration projects	June 2019
2. Plant cover crops	September, 2019
3. Plant cover crops	September, 2020
4. Plant diverse, native plantings	June, 2021

**III. PROJECT STRATEGY**

**A. Project Team/Partners**

This project will be led by PF, in collaboration with the MN DNR, universities and private landowners. Study sites will include private lands, MN DNR public lands and PF acquisition sites. Collaboration with other organizations within the conservation community will occur to confirm a sound approach and ensure that all pertinent information is collected during the field seasons. Cover crop seed vendors will be identified for potential collaboration and lower seed cost.

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

If significant benefits are derived for wildlife from cover crop practices, it will provide further credence and support for widespread adoption of this agricultural practice for Minnesota natural resources. Increased support for cover crop practices will further increase adoption rates which will in turn provide added benefits to soil health, water quality, and reduce farm operation costs. Utilizing cover crops as a viable option prior to grassland restorations will put more habitat on the ground while reducing the amount of time needed for establishing native plantings. Phase II of this study will be for an additional field season, data collection and analysis, and publication of findings.

**C. Timeline Requirements**

The tasks and activities outlined in this proposal will be completed in two phases over the course of six years.

<p><b>Activity 1:</b>  <u>Phase 1</u>            July 2018 – June 2019 – Develop study design and identify study sites            July 2019 – June 2020 – Complete pilot/year one of study and perform data analysis            July 2020 – June 2021 – Complete year two of study and perform data analysis on year one data  <u>Phase 2</u>            July 2021 – June 2022 – Complete year three of study and perform data analysis on year two data            July 2022 – June 2023 – Complete data analysis on entire dataset            July 2023 – June 2024 – Publication of findings</p>	<p><b>Activity 2:</b>  <u>Phase 1</u>            July 2018 – June 2019 - Develop study design and identify restoration projects            July 2019 – June 2020 – Plant cover crops            July 2020 – June 2021 – Plant cover crops and diverse, native plantings  <u>Phase 2</u>            July 2021 – June 2022 – Monitor diverse, native plantings            July 2022 – June 2023 – Monitor diverse, native plantings            July 2023 – June 2024 – Complete data analysis on entire dataset and publication of findings</p>
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## 2018 Detailed Project Budget

**Project Title:** *Cover Crops for Wildlife Phase I*

### IV. TOTAL ENRTF REQUEST BUDGET 3 years

<b>BUDGET ITEM</b> (See "Guidance on Allowable Expenses", p. 13)	<b>AMOUNT</b>
<b>Personnel:</b>	
Project Manager 15% FTE - 3 years (70% Salary, 30% benefits)	\$ 29,250
MN Field Technician/Intern 25% FTE - 3 years (100% wage @ \$12/hr)	\$ 18,720
PF MN Field Biologist 100% FTE-3 years (70% Salary, 30% benefits)	\$ 200,000
<b>Professional/Technical/Service Contracts:</b> Assistance with study design and data analysis.	\$ 30,000
<b>Equipment/Tools/Supplies:</b> Equipment needed to conduct study.	\$ 5,000
<b>Travel:</b> 15,000 miles/year x 3 years = 45,000 miles @ \$0.50 per mile x 2 Specialists = \$22,500; meals and lodging for in-state travel \$5,000 per year per specialist = \$15,000, 5,000 miles/year for project manager x \$0.50 = \$2,500/yr x 3 years = \$7,500	\$ 45,000
<b>Additional Budget Items:</b> Cover crop seed for use on test sites for Pheasants Forever, MNDNR and private lands. 250 acres x \$25/acre over three years = \$18,750	\$ 18,750
<b>TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =</b>	<b>\$ 346,720</b>

### V. OTHER FUNDS (This entire section must be filled out. Do not delete rows. Indicate "N/A" if row is not applicable.)

<b>SOURCE OF FUNDS</b>	<b>AMOUNT</b>	<b>Status</b>
<b>Other Non-State \$ To Be Applied To Project During Project Period:</b> Pheasants Forever, Indirect costs for specialist = 21.07% rate x \$135,000 in direct salaries = \$28,444	\$ 28,444	<i>Pledged</i>
<b>Other State \$ To Be Applied To Project During Project Period:</b> While we will coordinate with appropriate state agencies, we do not anticipate the use or need for other state funding to complete this project at this time.	\$ -	NA
<b>Funding History: ML 2014, Minnesota Pollinator Partnership</b> Originally allocated \$100,000, and \$38,143 remain that will be fully expended by grant end of June 30, 2017.	\$ 38,143	<i>Completed and spent by 6/30/2017</i>
<b>Past and Current ENRTF Appropriation:</b> ML 2017, Economic Assessment of Precision Conservation and Agriculture (\$400,000) and ML 2017, Honey Bee and Monarch Butterfly Partnership (\$732,162)	\$ 1,132,162	Pending Legislation
<b>Other Funding History:</b> <i>National Wildlife Federation Cover Crop Champion grant, \$10,000 for basic present absence of wildlife in cover crop fields</i>	\$ 10,000	<i>Secured</i>

**Project Manager Qualifications:**

Tanner Bruse, MN Farm Bill Biologist Manager

**Pheasants Forever, Inc.**

A.A. General Education – South Central College, Mankato, MN. 2007

B.S. Wildlife & Fisheries Science - South Dakota State University, Brookings, SD. 2012

Tanner has experience working directly with landowners, as a Farm Bill Biologist, helping them with habitat management and enrolling them in voluntary conservation programs. As the project manager (activity 1) Tanner will be tasked with working directly with the field biologist in tracking daily activities, BMP's for working with landowners, identifying potential partners, and helping track outcomes. Tanner will be responsible for all required reports for LCCMR.

**Organization Description:**

**Pheasants Forever** (PF) is a non-profit 501(c)3 conservation Pheasants Forever is dedicated to the conservation of pheasants, quail and other wildlife through habitat improvements, public awareness, education and land management policies and programs. Pheasants Forever has over 145,000 members and 700 chapters nationwide doing grassroots conservation. Historically PF has impacted 14 million acres, completed 502,000 habitat projects and acquired 183,675 acres with 1,474 land acquisitions since 1982. PF has invested \$634 million dollars on habitat projects and education programs.



NATIONAL HEADQUARTERS  
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[www.PheasantsForever.org](http://www.PheasantsForever.org)

May 15, 2017

Legislative-Citizens Commission on Minnesota Resources  
Room 65 State Office Bldg.  
100 Rev. Dr. Martin Luther King Jr. Blvd.  
St. Paul, MN 55155

Dear LCCMR,

As Chief Executive Officer, I authorize the submission of the proposal entitled "Cover Crops for Wildlife Phase I" to the Legislative-Citizen Commission on Minnesota Resources. Pheasants Forever, Inc. is requesting \$346,720 from the Minnesota Environment and Natural Resources Trust fund to analyze the benefits of cover crop practices to wildlife. Tanner Bruse, Minnesota Farm Bill Manager, is the proposal lead and has been coordinating with professionals at the Minnesota DNR, landowners and local resource staff.

We are pleased to offer a proposal that aims to work with Minnesota farmers who are interested in working with us to uncover the wildlife values of cover crop practices currently being implemented across Minnesota. This proposal will add to our resource knowledge base and we look forward to the opportunity to partner with the Legislative-Citizen Commission on Minnesota Resources.

Sincerely,

Howard K. Vincent, CEO  
Pheasants Forever, Inc.

Cc: Tanner Bruse & Matt Holland, PF