**PROJECT TITLE:** Documenting Species Response to Prairie Habitat Management

**I. PROJECT STATEMENT**

**This project seeks to fill a gap in our understanding of how successful our conservation actions are at conserving habitat for Species in Greatest Conservation Need (SGCN).** Long-term trend and status monitoring is well established by efforts such as the Minnesota Biological Survey and Breeding Bird Surveys. Yet effectiveness monitoring—documenting species responses to specifically defined conservation actions—is rare. By monitoring effectiveness of site level conservation management actions, this proposal seeks to inform adaptive management and better identify the gradient of success in our prairie conservation efforts.

We propose monitoring the responses of birds, plants and pollinators to four defined conservation management actions: prairie enhancement (converting low quality grassland to prairie), grazing only, burning only, and a combination of grazing and burning. Prairie management actions were selected because prairie conservation is prioritized in both the Minnesota Prairie Conservation Plan (2nd edition, 2015) and the Minnesota Wildlife Action Plan (MNWAP, 2015). We request a five year timeframe to allow sufficient time to detect species responses throughout various stages of management. This project will take place in three Conservation Focus Areas (CFA) identified within the MNWAP (Figure 1). CFAs are geographic areas prioritized for a partnership approach to implementing on-the-ground conservation efforts.

**II. PROJECT ACTIVITIES AND OUTCOMES**

**Activity 1 Title: Project Coordination and Implementation of Defined Conservation Actions**

**Description:**The coordinator will oversee this project including conducting meetings, managing contracts, collaborating with internal and external partners, tracking progress and expenses, compiling data and submitting reports. Regional Nongame Wildlife Program and other MNWAP staff, will also work on this project by assisting with site selection, providing SGCN technical assistance, developing survey designs and coordinating field staff.

Conservation activities in each CFA will be as follows:

Prairie Coteau CFA Objective: Provide technical assistance in conducting prairie enhancements to increase abundance or frequency of occurrence of pollinators and birds. The Prairie Coteau has approximately 1.3% of native prairie remaining and although there is active prairie habitat management occurring on prairie remnants, there is a need to create more prairie habitat in this highly fragmented landscape. We will be an advising partner on currently funded (OHF) prairie enhancement projects for at least 3 parcels (ranging from 5- 50 acres each - or up to 200 acres total).

Whitewater Valley and Root River CFA Objective: Implement bluff prairie restoration techniques for increasing abundance or frequency of occurrence of pollinators and birds. Goat grazing is an innovate technique that shows promise for controlling brush on bluff prairies, but there is little information demonstrating benefits for wildlife or showing how to maximize its effectiveness. We propose implementing a combination of conservation goat grazing and prescribed burns on at least 6 sites (approximately 90 acres) within the Root River and Whitewater Valley CFAs.

**ENTRF Budget: $250,000**

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| **Outcome** | **Completion Date** |
| *1. Select management sites and compile management histories for each site* | *2020-2022* |
| *2. Collect habitat attribute information at each site before management*  | *2020-2022* |
| *2. Conduct conservation actions on selected sites* | *2020-2024* |

**Activity 2 Title: Data Management and Monitoring SGCN Response to Conservation Management Actions**

**Description:** We will monitor responses of SGCN pollinators and birds to the habitat management actions outlined in Activity 1, in the Prairie Coteau, Root River and Whitewater Valley CFAs. We will monitor sites in each of the following four treatments: prairie enhancement, grazing only, burning only, and a combination of grazing and burning. We will collect pollinator and bird abundance or occurrence data for five years at each site. Management practices usually require two to three years to be fully implemented. In addition, habitat attributes (plant species composition and structure) will be measured at least twice in each site to account for site differences and evaluate the effectiveness of our habitat enhancement efforts. This effort will establish baseline data for future evaluations of longer-term responses. We will document how pollinator, bird, and habitat responses change through time for a given treatment and how they compare between treatments. Information gathered from this monitoring effort will be shared with prairie conservation partners. Results and recommendations will be used to guide the adaptive management process aimed at improving upon and advancing prairie conservation management techniques going forward.

For data management, we willwork to integrate the CFA data from this project into existing databases or, if needed, create an independent data management system. Data management for this project requires a spatially integrated system that can be updated with management practices and associated monitoring activities.

**ENRTF BUDGET: $ 327,000**

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| **Outcome** | **Completion Date** |
| *1. Review and select comprehensive monitoring protocols for plants, birds and pollinators* | *2020* |
| *2. Develop an integrated data structure for CFA programmatic needs* | *2020* |
| *3. Conduct prairie conservation management response monitoring surveys* | *2020-2024* |
| *4. Compile, analyze and report on effectiveness monitoring data and develop adaptive management recommendations as needed* | *2025* |

**III. PROJECT PARTNERS AND COLLABORATORS:**

Conservation Focus Areas are based on a commitment by partners to identify and accomplish agreed upon SMART (Specific, Measureable, Attainable, Relevant, Time-Oriented) objectives for a specified area. This proposal was developed in the context of the CFA partnership and is intended to take place on permanently protected lands and will be implemented by the MN DNR and/or contracted entities.

**IV. LONG-TERM IMPLEMENTATION AND FUNDING:** This proposal is building off of the results of work conducted to initiate the CFA program funded by a combination of State Wildlife Grants, Nongame Wildlife Funds and ENTRF funds. This proposal is a defined project as part of the larger CFA effort. CFAs are one tool for implementing some of the goals within the Minnesota State Wildlife Action Plan, which is an effort that will continue to be funded by a combination of donations, as well as state and federal funding opportunities aimed at supporting nongame fish, wildlife and their habitats.

**V. SEE ADDITIONAL PROPOSAL COMPONENTS:**

**A. Proposal Budget Spreadsheet** Included

**B. Visual Component or Map** Included -Figure 1

**C. through H.** N/A