Cost-Share Proposal Form for NorthWestern Energy (NWE) Project 2188 TAC Funds

Project Title: Monitoring Bird Populations and Habitat Conditions in Riparian Areas on the Madison and Missouri Rivers

Date: April 24, 2021

Applicability to Project 2188 License Article(s):

This project contributes to the wildlife monitoring plan for the Madison and Missouri as required under Project 2188 License Article 423 by inventorying two priority native bird species within floodplain habitats on the Missouri River. The monitoring plan is specifically referenced in the Five Year (2018-2022) Project 2188 Wildlife Plan, and meets the purpose and intent of Article 423 by identifying important habitat areas for wildlife, providing feedback on techniques employed to enhance wildlife populations, and actively monitoring wildlife response at restoration sites funded through the Missouri-Madison Wildlife Technical Advisory Committee (Wildlife TAC).

Priority Classification:

Proposed inventory sites are located within the 2188 license area on the main stem of the Missouri Rivers and meet the criteria for a **Priority 1** 2188 license project.

Project Sponsor (submitted by): University of Montana

Location of Proposed Project:

Floodplain riparian habitat on public and private lands on the Missouri River from Fort Benton to Fort Peck Reservoir.

Geocode: Lat: 46.797 Lon:-111.877

Total Project Cost: $7,482

TAC Funds (Cost-Share) Requested for Project: $4,002

I. Introduction

We request funding to evaluate the use of new recording technology, Automoated Recording Units (ARU's) for surveying Black-billed (*Coccyzus erythropthalmus*) and Yellow-billed (*Coccyzus americanus*) Cuckoos. Both cuckoo species are listed as Montana Species of Concern (S3B) and are of high inventory need in Montana due to limited information on their distributions[1]. The western distinct population (WDP) segment of the Yellow-billed cuckoo is federally listed as Threatened, and the Black-

[1] Montana Animal Species of Concern Report. Montana Natural Heritage Program and Montana Fish, Wildlife and Parks. Retrieved on 3/9/2020, from http://mtnhp.org/SpeciesOfConcern/?AorP=a

billed Cuckoos were recently added as a sensitive species on the Bureau of Land Management (BLM) Special Status Species list[2].

We will test the use of Autonomous Recording Units (ARU's) for inventorying cuckoo species in suitable riparian habitat while completing long-term bird population monitoring already funded by cost-share support from the Northwestern Energy Wildlife Technical Advisory Committee and the BLM. Cuckoos are logistically challenging to survey because much of their potential habitat along the river system is difficult to access, and low detectability necessitate multiple visits to each site to determine presence using standard methods. Previous surveys conducted by the University of Montana have yielded mixed results—in 2015 we documented Black-billed Cuckoos at five locations on the Missouri River, but we have not detected any in subsequent surveys years (2017, 2019). ARU's have the potential to reduce field effort and costs, and improve detectability because they require minimal training to set up, and increase the sampling effort from a standard survey period of several minutes to daily recordings across the entire breeding season.

The results of this project will provide information on breeding distribution of the black billed and yellow billed cuckoos. This information is expected to benefit the public and our partners through better-informed land management decisions that facilitate species and habitat conservation and support recovery efforts for the WDP of the Yellow-billed cuckoo. The results will also provide specific guidance and recommendations for using ARU's for inventorying and monitoring cuckoo species in Montana. We already have funding and partner support to deploy ARU's at 10-13 sites on the river system, and we are requesting funding to purchase more ARU's to expand our effort to 10 additional sites.

II. Objectives

1. Evaluate the use of Autonomous Recording Units (ARU's) for improving detections of cuckoo species within main stem riparian habitats and habitat enhancement projects on the Madison and Missouri Rivers in Montana.
2. Determine presence of cuckoo species at 20 locations on the Missouri River with high probability of supporting cuckoos.

III. Methods

We will place three ARU's at each selected bird monitoring site. ARU's will be set up in early June and retrieved after August 1st (the breeding period for both species), and will be set to record daily. The University of Pittsburgh has developed a computer classifier to detect cuckoo vocalizations and will analyze all recordings for species presence.

IV. Schedule

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2 Fish and Wildlife Service. 2014. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Western Distinct Population Segment of the Yellow-billed Cuckoo (*Coccyzus americanus*). Final Rule 50 CFR Part 17.

This project will begin 1 May 2021 and will run until 30 April 2022 (see table below). We will provide results of ARU surveys wi

2021	
May	Field planning hire and train field technicians
June-Aug	Deploy and retrieve ARU's
Sep-Oct	Recording data processing and analyses
Dec	Present field effort and results to Wild TAC
2022	
April	Submit final report to Wild TAC

V. Personnel

Erick Greene (Faculty, University of Montana Wildlife Program) and Anna Noson (Program Director, University of Montana Bird Ecology Lab) will serve as co-Principal Investigators of the project. Erick Greene will administer the project within UM. Anna Noson will supervise field data collection, conduct analyses, and complete reporting and dissemination of findings. The two temporary technicians already funded for bird surveys from May-August 2021 will deploy and retrieve ARU units.. The Division of Biological Sciences will provide facilities and equipment at the University of Montana.

VI. Project budget

	TAC Funds Requested	**Total Project Cost**
Direct Labor	$0	$
Travel and Living	$0	$
Materials and supplies	$3480	$6,960
Other Direct Expenses:		
Direct Overhead	$522 (15%)	$
Total	$4,002	$7,482

Cost-share funding sources and amounts for this project:

- Montana Fish, Wildlife, and Parks is lending 10 ARU units to the project.

- Smithsonian Conservation Biology Institute is lending 30 ARU units to the project, and is partnering with the University of Pittsburgh to provide computer processing and analysis of recordings.
- Montana Audubon will provide staff time and travel to help deploy and retrieve units.

VII. Deliverables

ARU results will be included in the Final Report submitted on bird population status and trends for the Madison and Misouri Rivers;

VIII. Cultural Resources.

N/A- no land-disturbing activity or building modification will occur as a result of this project.

IX. Water Rights.

N/A- no development, restoration, or enhancement of wetlands will occur as a result of this project.