PMC-ND

(1.08.09.13)

U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION

RECIPIENT: NREL **STATE:** CO

PROJECT TITLE:
NREL-24-008 Migratory Bat Behavior and Sensory Underpinnings – Humboldt County, CA

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
FOA 2828		GFO-NREL-24-008	GO28308

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:
Description:

A9 Information gathering, analysis, and dissemination	Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)
B3.3 Research related to conservation of fish, wildlife, and cultural resources	Field and laboratory research, inventory, and information collection activities that are directly related to the conservation of fish and wildlife resources or to the protection of cultural resources, provided that such activities would not have the potential to cause significant impacts on fish and wildlife habitat or populations or to cultural resources.

Rationale for determination:

The U.S. Department of Energy's (DOE) is proposing to provide funding to the U.S. Department of Agriculture Humbolt County Forest Service (Forest Service), University of Colorado, Colorado Springs (UCCS) and the National Renewable Energy Laboratory (NREL) to conduct targeted bat behavioral research studying deterrent stimuli to wind turbine locations.

The purpose of this project is to advance the understanding of the sensory foundations of bat attraction to wind turbines as a part of DOE-FOA-0002828, Topic Area 4: Bat Deterrent Technology Development.

The proposed project would involve two primary objectives: (1) testing bat behavioral responses to aviation lighting; and (2) testing bat behavioral responses to controlled visual stimuli (lighting methods, wind turbine reflectance, etc.) to investigate deterrence methods of bat attraction to wind farms.

The project would involve the capture, study, and release of the Hoary bat species. Project activities would occur on private farms within the same site over a 5-week field season, starting late summer and running into the fall. Bats would be captured using mist nests within Humboldt Redwoods State Park along Bull Creek by Forest Service personnel. The mist nets would be on poles roughly 5-10 meters high and setup along the sides of the creek. Once captured, bats would be fit with a passive integrated transponder (PIT) tag. Bats would be captured and safely transported in cloth capture bags approximately 25 kilometers away to a private farm in Petrolia, California.

Bat research equipment would be set up and taken down each day. Research activities and experiments would occur in four phases as a part of a multi-year effort.

Phase one would see bats released into a 4.25-meter-tall tube shaped in a "Y" design equipped with cameras to record bat movement. Wind turbine stimuli beacons would be placed inside of the maze to mimic the look of wind turbines. Each bat would be placed into the maze and be given an opportunity to orient itself before proceeding through the maze. Up to 10 bats per night would be tested, and all bats would be released on the same night they were captured.

Phase two would repeat the phase one experiment but with a different structure. A large outdoor flight cage (60 meters long x 30 meters wide x 10 meters high) would be used that allows bats to express natural flight maneuvers. The flight cage would be constructed of lightweight plastic netting with small openings. The enclosure would be empty except for two beacons mounted on approximately 2-4-meter-high masts and placed on either side.

Phase three would repeat the phase two experiment, but more than one bat would be released into the enclosure simultaneously to determine how social behaviors impact response to sensory stimuli.

Phase four would release bats free into the open-air environment. Beacons would be placed in the same locations as previous experiments to simulate the same sensory conditions.

All bats would be released at the site they were captured after the flight cage experiments have concluded. Tests would not occur during periods of heavy mist or precipitation.

The above project activities would occur during the late summer and fall months of 2024 through 2027. An additional field season may occur in 2028, if needed.

Impacts
All waste generated during the project would be reused, recycled, or disposed of in accordance with applicable regulations and NREL's policies and procedures. Local travel for research activities would result in de minimis air emissions.

Individuals working on this project could be exposed to various hazards. Existing corporate health and safety policies and procedures would be followed including employee training, work/worker authorization, proper protective equipment, engineering controls, and monitoring, as well as obtaining a Safe Work Permit. The project team members would be handling wild bats capable of spreading disease. Team members would have current rabies vaccinations. Additional policies and procedures would be implemented as necessary if new health and safety risks are identified

Project activities would occur in the Bull Creek River corridor. Although birds move through this area, no adverse effects are likely as bat captures would be performed at night when most threatened and endangered species would not be present. DOE discussed the project with USFWS and determined that it is not anticipated that owls such as the Northern Spotted Owl or other species of birds would be caught in mist-nets. Should any of these species be captured, the USFWS personnel conducting capture activities would safely release them.

USFWS personnel involved in the project have been capturing bats for research since 2013 and this project would continue USFWS's work on overall bat sensory modalities. All work would be conducted in accordance with the USDA Forest Service Institutional Animal Care and Use Committee Animal Welfare Permit, and USFWS personnel conducting the bat capture and experiment activities are approved and included on this permit.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

All required permits, procedures and permissions shall be obtained as required prior to commencing project activities.

Project activities shall comply with all permit requirements.

Notes:

NREL
Brandon Bammel, 8/26/2024

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such

that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Nicole Serio Date: 8/27/2024

NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

- [x] Field Office Manager review not required
- [ ] Field Office Manager review required

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____

Field Office Manager