

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



RECIPIENT: University of Arkansas

STATE: AR

PROJECT TITLE : WildSNaP: Wildlife in Solar through Native Planting

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002605	DE-EE0010380	GFO-0010380-001	

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.)

A11 Technical advice and assistance to organizations

Technical advice and planning assistance to international, national, state, and local organizations.

B3.1 Site characterization and environmental monitoring

Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the University of Arkansas to conduct spatially replicated comparisons of solar sites managed with native grassland vegetation (Native Solar) to solar sites managed traditionally with mown grass, turfgrass, or gravel. Paired agricultural sites typical of pre-installation conditions would also be included. The wildlife surveys would target a wide range of different taxonomic groups in order to assess biodiversity and species richness across sites.

The proposed project would consist of three Budget Periods (BPs) with an expected duration of one year each. Each year, 30 sites would be surveyed in order to sample wildlife, including 10 Native Solar sites, 5 traditional gravel or turfgrass sites, and 15 paired agricultural control sites for comparison. All sites would be located in Kansas and Arkansas.

During Tasks 2, 5, and 8, the project team would carry out field sampling for years 1, 2, and 3, respectively. A suite of well-established field sampling techniques would be used in order to target a wide array of wildlife taxa and are

amenable to large-scale deployment across multiple sites simultaneously. Proposed sampling methods would include the following:

- Acoustic sampling of birds:
 - o Annual installation of one automatic acoustic recorder per site
 - o Each year, the recorder will record 15 minutes after sunrise 3x a week for 3 weeks in meteorological summer
- Acoustic sampling of frogs:
 - o Annual installation of one automatic acoustic recorder per site
 - o Each year, the recorder will record for two hours at sunset each day for one week in three different months throughout meteorological spring and summer
- Acoustic sampling of bats:
 - o Annual installation of one ultrasonic acoustic recorder per site
 - o Each year, the recorder will record for thirty minutes before sunrise and thirty minutes after sunset for three weeks in meteorological summer
- Wildlife camera sampling of mammals:
 - o Annual installation of motion-triggered infrared game cameras at each site
 - o Cameras would be spaced approximately 100 meters apart, and the number of cameras would be scaled to the size of the site, with at least two cameras in use
 - o Each year, cameras would be deployed for six weeks during meteorological summer
- Drift fence and visual encounter surveys (VES) of amphibians and reptiles:
 - o Annual installation of a drift fence with a camera trap at each site, consisting of a 10-meter silt fence, staked tight to the ground, with a camera trap positioned within an inverted 5-gallon bucket above a central gap in the fence
 - o The bucket would have holes cut into it so that animals can pass through, and there is no risk of entrapment
 - o Each fence would be deployed for six months with the camera trap
 - o Each year, a two person-hour visual survey with observer recording all reptiles, amphibians, and microhabitats
 - o Amphibians and reptiles would be identified and then released
- VES of pollinators and other arthropods:
 - o Each year, three VES surveys would be conducted at each site, with one survey taking place in the meteorological spring, summer, and fall, respectively
 - o This would consist of a 100-meter transect walk, including two 30-minute time counts to identify and record all lepidopterans and bees
 - o Additionally, a 25-meter sweep net transect would be conducted with all netted arthropods preserved in ethanol and identified
- Vegetation sampling:
 - o Each year, two 100-meter transects would be established
 - o One visit per site would occur in the meteorological spring, summer, and fall
 - o The line-intercept method would be used to sample relative abundance every ten meters
 - o Species richness would be measured by identifying all plant species within one meter of the transect

After sampling, the field team would use software to identify the spectrograms and waveforms of birds and frogs, to confirm bat identification, to process images and assign species identities from camera traps, and to extract data. Data would then be processed and quality controlled. Analyses would be carried out at the end of each sampling year, and data would be used to inform models for final analysis.

Additionally, outreach and engagement would be performed to create an Advisory Group (AG) consisting of a wide variety of stakeholders. Effort would be made to connect with underserved populations, minority groups, and Tribal Nations. Findings, analyses, and models would be disseminated and presented to the AG and other relevant groups.

All sites would be located in Arkansas and Kansas. The U.S. Fish and Wildlife Service Endangered Species Program website (IPaC) identifies 24 threatened or endangered species, the Black-footed Ferret, Gray Bat, Indiana Bat, Northern Long-eared Bat, Ozark Big-eared Bat, Tricolored Bat, Eastern Black Rail, Ivory-billed woodpecker, Lesser Prairie-Chicken, Piping Plover, Red Knot, Red-cockaded Woodpecker, Whooping Crane, American Alligator, Alligator Snapping Turtle, Ozark Hellbender, American Burying Beetle, Monarch Butterfly, Geocarpon minimum, Harperella, Mead's Milkweed, Missouri Bladderpod, Pondberry, and Western Prairie Fringed Orchid believed to occur in the project area. Migratory bird species of conservation concern may be present seasonally within the project areas. However, because equipment installations would be temporary, limited to standard types of noninvasive surveying tools, and result in negligible ground disturbance. DOE has determined that no adverse impacts to species of concern are to be expected as a result of the proposed activities at this location.

Additional care would be taken when sampling for insects in general, more specifically for arthropods, and for vegetation. Sampling staff would be well trained in identifying species of concern, so all federally listed insect species would be immediately released if caught, and none would be taken in ethanol. Vegetation surveyors would work carefully to avoid any plant species of concern. Any and all equipment would be placed carefully to avoid affecting any species of concern.

The proposed project would not involve the permanent modification of existing/planned facilities or any change in the

use, mission, or operation of these facilities. DOE also conducted a review of potential issues related to other resources of concern, including prime farmland, and found no effects that would be expected to result from the proposed project activities.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

If during project work cultural or archaeological artifacts are encountered, the recipient shall stop the site-based activities immediately and inform the DOE Project Officer of the finding. A Class III: Intensive Cultural Resources Inventory shall be required prior to re-commencing project work.

Notes:

Solar Energy Technologies Office (SETO)
NEPA review completed by Alex Colling on 3/24/2023.

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:



Andrew Montano

NEPA Compliance Officer

Date: 3/28/2023

FIELD OFFICE MANAGER DETERMINATION

- 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:

Field Office Manager

Date: