

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



RECIPIENT: NREL

STATE: CO

PROJECT TITLE : NREL-24-013 UAS Flights at Alaska Campus - Fairbanks, AK

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	GFO-NREL-24-013	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:

B3.2 Aviation activities	Aviation activities for survey, monitoring, or security purposes that comply with Federal Aviation Administration regulations.
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Rationale for determination:

The U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) is proposing to use uncrewed aircraft systems (UAS) to capture high-definition video and photographs of the Alaska Campus Cold Climate Housing Research Center (CCHRC) located in Fairbanks, Alaska.

The purpose of the proposed project is to obtain high-definition videography and photography of NRELs CCHRC.

The UAS that would be used for aerial survey is a Department of Energy (DOE) owned Parrot Ai. Flights would be conducted with a minimum flight crew of two. The minimum essential flight crew is the pilot in command (PIC) and one visual observer.

Following a set flight plan, the UAS would be deployed in the immediate area surrounding the Alaska Campus building. Flights would consist of ascents, descents, hovering, and horizontal travel. The launch and landing areas would be determined by the PIC prior to each flight. Flights would be conducted only as far as the visual line of sight and monitoring if anything encroaches on the flight path can be maintained. A visual observer would be present to assist the pilot to identify air traffic, ground hazards, birds, and situational awareness.

All flights would be conducted during daylight hours only. Flights would take place within an estimated maximum distance of 80 yards from the building and adjacent parking areas. The UAS would maintain a speed of less than 20 mph and a minimum horizontal or vertical distance of 25 feet from structures. Flights would not occur over people or moving vehicles. Workers are required to maintain a minimum of 10 feet of separation from the UAS when it is powered on. After completion of each day's activities, the UAS system and any associated equipment would be removed.

The proposed project would be performed over multiple days during the summer of 2024.

At the CCHRC, there are no endangered species or critical habitats listed by the United States Fish and Wildlife Service (USFWS). Bald and Golden Eagles are listed as Migratory Birds that are possible in the proposed project location with Bald Eagles likely present. Both species are protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Additionally, USFWS Birds of Conservation Concern that could occur in the project area include the American Golden-plover, Hudsonian Godwit, Lesser Yellowlegs, and the Olive-sided Flycatcher. The proposed project timeline occurs during the breeding season for all listed species, with the Lesser Yellowlegs having the highest probability of presence at the site during the proposed project timeframe. While it is possible that these species could encounter the project, the potential for adverse impacts to them from project activities is not likely for reasons described below.

A visual observer would be present during all flights to ensure there are no collisions with birds they might encounter on the campus. If birds or flocks of birds enter the takeoff area prior to deployment of the UAS, the flight would not occur. The UAS would be moved away and landed if large birds or flocks of birds enter the area during the flight. Any birds moving into the landing zone after takeoff would be monitored and an alternate landing location would be selected. If active nests of birds of conservation concern are located in the takeoff or landing areas, an alternate location would be selected. The UAS may emit low levels of noise but, due short duration of the flights and the

ambient noise generated by the close proximity to the Fairbanks International Airport, noise impacts are not anticipated. Due to the short duration of the flights, the presence of a visual observer before and during each flight to monitor for these species, and flights occurring during daylight hours, DOE has determined there would be no effect to special status species as a result of project activities. No impacts to critical habitat would occur.

Flight activities would be conducted by NREL staff as authorized in accordance with NREL policies, procedures, and safety requirements under FAA Part 107 regulations. The FAA Low Altitude Authorization and Notification Capability (LAANC) process provides authorization to conduct UAS flights within an airport's controlled airspace. This proposed flight resides within the Class D airspace of Fairbanks International Airport. LAANC authorization is available with a maximum altitude of 100 feet above the ground. Flights would only be conducted with daily LAANC authorization. Based on the location of the flights and planned safety measures, no adverse impacts are expected.

A risk assessment has been completed for flights at CCHRC. Operational parameters, hazards, and controls are identified in an Aviation Safety Plan that was prepared in consultation with NREL Environment, Safety, and Health staff and the UAS Steering Committee. The Flight Plan for this project has been submitted and approved by the Golden Field Office's Aviation Manager and Office Director. The Aviation Manager determined that the identified flight risks for the project "have been adequately identified and mitigated to low risk per the DOE Risk Assessment. If flight conditions change or the documented mitigation factors are unable to be implemented the mission will need to be paused so a reevaluation of hazards can occur."

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

Migratory bird nesting monitoring shall be completed by the visual observer prior to project activities commencing.

All required permits and permissions shall be obtained as required prior to conducting flight activity.

Notes:

NREL
Brandon Bammel, 6/18/2024

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**

NEPA Compliance Officer

Date: 6/18/2024

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: _____