

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



RECIPIENT: **NREL**

STATE: **CO**

PROJECT TITLE : **NREL-23-010 UAS Flights Mt. Elbert Hydropower - Twin Lakes, Colorado**

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	GFO-NREL-23-010	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 photos at the U.S. Bureau of Reclamation's Mt. Elbert Pumped Storage Hydropower Facility (MEPSHF) and supporting infrastructure, which is located near Twin Lakes, Colorado. Flights would occur over multiple days between May and June of 2023.

The UAS that would be used is a Parrot ANAFI and a Parrot Ai, which are owned by DOE. The minimum essential flight crew would consist of a Pilot in Command (PIC) and one visual observer. Flights would consist of ascending and descending vertical maneuvers as well as level flight from ground level to 399 feet above ground level. All flights would maintain a speed of less than 20 mph and a minimum horizontal or vertical distance of 25 feet from structures. Flights would occur in the immediate area surrounding the MEPSHF. Visual markings for the take-off and landing area with items such as cones, caution tape, or signage would be implemented. Launch and landing areas would be determined by the PIC prior to each flight.

Flights at the powerplant structure would launch from the jetty, orbit the facility, and move out over the lake to show the setting of the structure. Flights at the Mt. Elbert Forebay would orbit the dam and water outflow structure and would move over the Forebay reservoir toward the dam. Flights would occur from the Mt. Elbert Forebay to the powerplant and would follow the path of the underground outflow pipes; they would be conducted only as far as the visual line of sight and flight path encroachment monitoring can be maintained.

Flights would not be conducted over adjacent residential housing or property, pedestrians, and open vehicles. Flights are prohibited from flying directly over the transformer deck and powerplant structure. Flights would be conducted during daylight hours only and all workers would maintain a minimum of 6 feet of separation from the UAS when powered on. The UAS would be landed when large birds or flocks of birds are present.

Flights would be conducted in Class G airspace (surface to 1,200 feet AGL) with Class E airspace above. No notifications, authorizations, or permits are required.

Flight activities would be conducted by NREL staff as authorized in accordance with OPP 650-7, "Unmanned Aircraft Systems" and under FAA Part 107 regulations. Flights would be conducted in accordance with NREL policies, procedures, and safety requirements for conducting UAS missions. Based on the locations of flights and planned safety measures, no adverse impacts are expected due to the activity.

The U.S. Fish and Wildlife Service's iPac tool was used to identify species that could occur in the project area. The Canada Lynx, Gray Wolf, Mexican Spotted Owl, Greenback Cutthroat Trout, and Monarch Butterfly could encounter the project; there is no critical habitat designated at the project location. Impacts to the Canada Lynx, Gray Wolf, and Monarch Butterfly are not anticipated as the area is actively used for camping, recreation, and travel on nearby Highway 82. Impacts to the Mexican Spotted Owl are not anticipated due to the measures required by the flight, including a visual observer monitoring the airspace, watching for birds, and grounding of the flight if birds are observed. The project would not effect the Greenback Cutthroat Trout.

A risk assessment has been completed for flight activities. Operational parameters, hazards, and controls are

identified and defined 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.

Notes:

NREL
Nicole Serio, 5/10/2023

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: _____

 Electronically Signed By: Lisa Jorgensen

NEPA Compliance Officer

Date: 5/12/2023

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: _____