UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
National Centers for Coastal Ocean Science
Silver Spring, Maryland 20910

MEMORANDUM FOR: The Record

FROM: Lauren Latchford
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SUBJECT: Categorical Exclusion for RESTORE Act Science Program Project #3123203, "Fire Effects in Coastal High Marshes: Microtopography, Management, and Monitoring of Mottled Ducks

ENCLOSURES: USFWS Florida Letter of Concurrence
USFWS Texas Letter of Concurrence

NOAA Administrative Order (NAO) 216-6A, Environmental Review Procedures, requires all proposed projects be reviewed with respect to environmental consequences on the human environment. This memorandum addresses the determination that the activities described below for the RESTORE Science Program Project "Fire Effects in Coastal High Marshes: Microtopography, Management, and Monitoring of Mottled Ducks and Black Rails" qualifies to be categorically excluded from further National Environmental Policy Act (NEPA) review.

Categorical Exclusion Determination

The Program Office has determined that the project activities described above are covered by the Categorical Exclusion E5. As defined in the NAO 216-6A Companion Manual, the E5 categorical exclusion are activities involving invasive techniques or methods that are conducted for scientific purposes, when such activities are conducted in accordance with all applicable provisions of the Endangered Species Act, Marine Mammal Protection Act, Migratory Bird Treaty Act, and Magnuson-Stevens Fishery Conservation and Management Act. Such activities will be limited to impacting living resources on a small scale relative to the size of their populations, and limited to methodologies and locations to ensure that there are no long-term adverse ecosystem impacts. NEPA analysis for the project activities conducted in the 2019 award stands, and this memo considers new project activities for the 2026 renewal.

Uncrewed aerial system (UAS) flights are an addition to the scope of this project and were not assessed in the original 2019 project, requiring new Endangered Species Act Section 7 Informal Consultations with the USFWS offices in Florida and Texas. Florida and Texas sent NOAA Letters of Concurrence on December 11, and December 23, 2025, respectively, concurring with NOAA's determination that project activities *may affect but are not likely to adversely affect* ESA-listed species in the project area. Avoidance measures and best management practices requested by the Service will be incorporated into project activities.

Purpose and Need

This project was awarded in 2019 and NEPA analysis was completed. In 2026 the project was renewed for 2026-2030. Project activities include: 1. Surveys on foot of mottled duck and black rail populations and vegetation and 2. Airborne LIDAR collection using an uncrewed aerial system (UAS) at sites in

Florida and Texas. The project scope has changed with the addition of the UAS surveys, removal of banding black rails, and removing project sites in Alabama and Mississippi. UAS surveys qualify to be categorically excludable under NOAA's E5 CE for activities involving invasive techniques or methods that are conducted for scientific purposes. The protocol and action for the bird and vegetation surveys has not changed, and no newly designated ESA-listed species or critical habitat has been designated in the project action area. Analysis of the effects of the bird and vegetation surveys in the 2019 CE memo and ESA Section 7 Informal Consultation stand, completing the NEPA analysis requirement for bird and vegetation surveys between 2026 and 2030. Analysis of impacts from UAS surveys and Best Management Practices incorporated into the action are described below.

2026-2030 Activities

Project activities will build upon the existing work to 1. Identify prescribed fire practices that support breeding mottled duck and black rail populations through an adaptive resource management process and 2. Determine the impact of microtopography on high marsh vegetation and black rail and mottled duck occupancy and the interactions of fire and marsh microtopography. PIs will continue bird and vegetation surveys across existing study sites in Texas, Louisiana, and Florida during March-July in 2026-2029. Data collection in Mississippi and Alabama will be discontinued.

Mottled duck and black rail surveys will be conducted in six repeat visits during the breeding season, each at least two weeks apart. Black rail surveys include a passive listening period and a series of broadcast black rail calls. Mottled duck point counts are done directly before or after a black rail survey. Targeted nest searching will be conducted by walking on foot in a slow and careful spiral out from the location where the mottled duck was observed entering/leaving the wetland during point counts. Vegetation surveys will be undertaken at each bird survey plot following existing protocols outlined in the 2019 CE memo.

High-resolution LiDAR will be collected using a YellowScan Voyager sensor mounted on a multi-rotor small UAS and a series of ground control points to measure the microtopography of sites in Florida and Texas. Together, this work will reduce key uncertainties and improve prescribed fire guidance for high marsh systems, supporting conservation and resilience of coastal wetlands and their dependent wildlife.

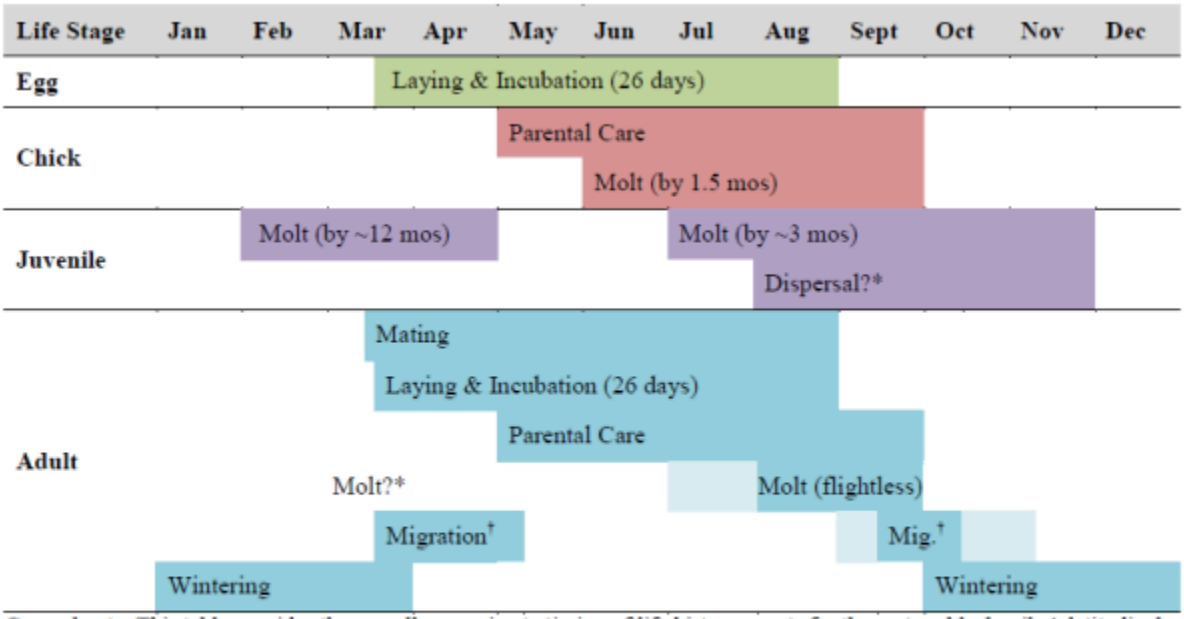
Required Permits

- Texas
    - NWR Complex Special Use Permits
    - USFWS - Federal scientific collection permit
    - TPWD Scientific Permit for Research
- Louisiana
    - LDWF - Louisiana scientific collecting and research permit
    - LDWF - WMA research permit
    - USFWS - Federal scientific collection permit
    - Sabine NWR access / research permit
- Florida
    - St. Marks National Wildlife Refuge Special Use Permit
    - St. Vincent National Wildlife Refuge Special Use Permit
    - Big Bend WMA Special Use Permit per unit (Jena; Tide Swamp; Hickory Mound)
    - USGS Banding Permit
        - A Co-PI on the project, Dr. Erik I. Johnson, is a North American Banding Council (NABC) Certified Trainer, operating under USGS BBL permit #23805

Protective Measures and Best Management Practices (BMPs) Incorporated into the Action
In 2019, USFWS state offices concurred with NCCOS' determination that bird and vegetation surveys are not likely to adversely affect ESA-listed species or adversely modify critical habitat. Because modifications to activities have not been proposed, there is no need to initiate an ESA Section 7 consultation for bird detection and vegetation surveys. Avoidance measures and Best Management Practices for surveys and UAS flights are described below and will be incorporated into the flight operations to reduce the likelihood of adverse effects to ESA-listed birds.

Detection - Survey points will be placed at least 400m apart and transects of three to five points will be randomly placed across wetland units. Points will be visited five times per season, to maximize the chance of detection, given an individual is present. Researchers will use the call broadcast sequence used previously by black rail survey teams in Texas, or use a modified sequence for standardized surveying in conjunction with partners across the Atlantic Coast, Florida Gulf Coast and Louisiana. The Black Rail Working Group is currently working on improvements to black rail survey design and standardizing survey protocols, which may influence the survey design for this project (e.g., survey points may be placed closer than 400m and transects may include more than three to five survey points).

1. Researchers will perform detection surveys in the early breeding season, in late winter to early spring (see Figure 1 adapted from U.S. Fish and Wildlife Service. 2018. Species status assessment report for the eastern black rail (Laterallus jamaicensis jamaicensis), Version 1.2. June 2018. Atlanta, GA). In the early breeding season the Eastern Black Rails are vocalizing and setting up territories, therefore researchers will perform call-broadcast detection surveys during the breeding and wintering seasons and will follow the National Marsh Bird Monitoring Protocol or a similar protocol that has been adapted for black rails by the black rail research community.



General note: This table provides the overall approximate timing of life history events for the eastern black rail. A latitudinal gradient exists regarding the timing of events given the large geographic range of the subspecies, but is not detailed here.
*Dispersal: specific timing of juvenile dispersal is unknown. Molt: it is unknown if eastern black rails undergo a partial pre-breeding molt in the spring; this molt is observed in the California black rail subspecies.
†Not all individuals migrate.

Figure 1: Annual life cycle of the eastern Black Rail by life stage. Lighter colored shading indicates off peak times.

Microtopography - Project staff will conduct a series of fine-scale LiDAR-based assessments of marsh microtopography in occupied and unoccupied black rail/mottled duck sites in Florida and Texas. High fidelity airborne LiDAR collected via the YellowScan Voyager (system precision 0.5cm, system accuracy 1 cm, 2.4 million pulses per second) sensor mounted on a multi-rotor small uncrewed aerial system (Freefly AltaX, NDAA compliant, estimated 25 minute flight time with LiDAR payload, Figure 2) and a series of ground control points (GCPs) will be used to measure the microtopography of sites in Florida and Texas. These collections will be at locations that have known occurrences and absences of black rail and/or mottled duck before and after a burn occurs during the growing and dormant seasons of 2026 (Florida) and 2027 (Texas). Approved Certificates of Authorization for small UAS operations on state and federal properties will be obtained prior to survey initiation.

Figure 2: Freefly AltaX uncrewed aerial system will include a YellowScan voyager used for airborne LIDAR surveys

Best Management Practices (BMPs) are required to be incorporated within project instructions and NEPA documentation including financial assistance awards and environmental review memoranda. All BMPs must be communicated to the principal investigators and field staff in order to explain responsibilities, communication procedures, and operational procedures.

1. Habitat Protection

    1. Avoid all bird nests, tortoise burrows, and snake dens.
    2. Utilize a plant identification card to ID threatened or endangered plants.
2. Transit
    1. Access field sites (all terrestrial) using existing roadways and paths.
3. Protected Area and State Collecting Permits
    1. Required protected area access and state collecting permits for each state will be maintained and provided to the Federal Program Officer before field work starts and annually thereafter (as needed) before out-year funds are released.
4. UAS flights
    1. Maximum flight times: 25 minutes
    2. Height: 30-400 ft
    3. Speed: approximately 12 mph
    4. Ground control points (GCPs) can be placed on the sediment surface to facilitate ground-truthing of the acquired imagery. GCPs can be 1-2" flat squares of wood or plastic painted black and white checkerboard pattern. The total number and placement of GCPs are determined in the field. GCPs are separated to encompass the full range of the targeted study area. GCPs must be placed in unvegetated patches. The specific location and elevation of each GCP placement site will be determined with RTK-GPS. GCPs will be placed in a manner that does not disturb any inherent features to the landscape. GCPs are temporary (unanchored) and will be removed at the end of each flight day.
    5. USFWS-recommended flight restrictions and conditions:
        i. UAS operations will occur in locations and during times when migratory birds are not gathered or anticipated to be concentrating in the action area. Prior to UAS deployment, the awardee must evaluate migratory bird areas of concentration (utilizing knowledgeable resources for the specific area, such as Federal, state, or local park or wildlife management resources) and migratory movement for the specific area via the online Birdcast website (https://birdcast.info/). If UAS operations are expected to co-occur with high levels of migratory bird intensity or in areas of high bird nesting, foraging, or breeding concentrations, then the action must be either rescheduled to another time or the USFWS Migratory Bird and Ecological Services Divisions contacted to discuss the action and potential need for additional environmental compliance.
        ii. An onsite observer trained in recognizing ESA-listed birds will be present for the duration of the proposed activity.
        iii. Observers have the authority to halt project activities if an ESA-listed species is seen in or near the action area and until the ESA-listed species departs the area under its own volition.
        iv. Perform a pre-flight check for ESA-listed birds immediately before drone takeoff to determine the location of any nearby birds.
        v. Avoid launching the drone directly at birds. Launch and land the drone away from birds and preferably out of their sight.
        vi. Avoid changing drone direction, speed, or altitude in the vicinity of birds.
        vii. Cease drone activity immediately if birds are observed flushing or becoming agitated.

viii. Any collision with or should an injured, sick, or dead ESA-listed bird be located this shall be reported immediately to the FWC Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service Florida Office at 352-448-9151.

ix. Deviation from these practices will also require discussion and potential consultation or permitting under the Endangered Species Act, Migratory Bird Treaty Act, Airborne Hunting Act, and/or Fish and Wildlife Coordination Act with the USFWS Migratory Bird and Ecological Services Divisions and / or NMFS Protected Resources Division prior to the action.

x. Care shall be taken in handling sick or injured individuals to ensure effective treatment or care and in handling dead specimens to preserve biological materials in the best possible state for potential analysis of cause of death or injury.