

Draft Tiered Site-Specific Environmental Assessment

NM Historic Sites, Department of Cultural Affairs
Los Luceros, New Mexico Fire Mitigation Project
Alcalde, Rio Arriba County, New Mexico

LPDM-PJ-06-NM-2023-001 (1)

April 2024



FEMA

Federal Emergency Management Agency
Department of Homeland Security
800 N. Loop 288
Denton, TX 76209

I. Introduction

In accordance with the Federal Emergency Management Agency’s (FEMA) Instruction 108-1-1, a Programmatic Environmental Assessment for The State of New Mexico Watershed Resiliency and Post-Wildfire Treatment Projects (NM PEA, FEMA 2022) was prepared and a Finding of No Significant Impact (FONSI) was issued on October 4, 2022 (Appendix A), pursuant to Section 102 of the National Environmental Policy Act (NEPA) of 1969, as implemented by the regulations promulgated by the President’s Council on Environmental Quality (CEQ; 40 CFR Parts 1500-1508). The purpose of this Tiered Site-Specific Environmental Assessment (SEA) is to analyze the potential environmental impacts of the proposed Los Luceros New Mexico Fire Mitigation Project and to determine whether to prepare an Environmental Impact Statement or a Finding of No Significant Impact (Appendix E). This SEA is being prepared in accordance with the October 2022 NM PEA. The focus of this Tiered SEA is on those areas of concern requiring additional discussion or analysis that are beyond the scope of the NM PEA as identified in Section 10: Thresholds for Preparing a Tiered EA. Those areas of concern include impacts to protected species and habitat.

II. Purpose and Need

The NM Historic Sites, Department of Cultural Affairs (sub-applicant) has applied for Legislative Pre-Disaster Mitigation (LPDM) funding through the New Mexico Department of Homeland Security and Emergency Management (NMDHSEM) under application number LPDM-PJ-06-NM-2023-001 to mitigate wildfire risk at the Los Luceros Historic Site. As a designated New Mexico Historic Site, the Los Luceros Historic Site is not only a historic resource but also a scenic, educational, and economic resource within the Los Luceros community and Rio Arriba County. Rio Arriba County is considered to be at a relatively moderate risk to wildfire, and the community's vulnerability to wildfire is very high while its resilience to wildfire is very low (FEMA 2023). Should a wildfire occur in the area, dead and down trees and vegetation in the project area would contribute to the quick expansion of the wildfire to the historic structures and possibly into the neighboring properties/residences and bosque habitat. In recent years, the project area has experienced one fire that burned down one structure but was controlled before it expanded to other structures, vegetation, and neighboring residential properties. Therefore, there is a need to reduce the risk of wildfire within and surrounding the property.

The LPDM grant program provides federal funding to state, local, tribal, and territorial governments to plan for and implement sustainable cost-effective measures. These mitigation efforts are designed to reduce the risk to individuals and property from future natural hazards, while also reducing reliance on federal funding from future disasters. LPDM is authorized under Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

III. Alternatives

Two project alternatives are proposed in this SEA: 1) No Action Alternative and 2) Proposed Action Alternative—Conduct wildfire mitigation activities at the Los Luceros Historic Site. The sub-applicant also considered prescribed burn to reduce fuel load on the property, but dismissed

this as a viable alternative given the risk of a breakout fire and because a prescribed burn is not eligible for FEMA LPDM funding.

No Action Alternative

Under the No Action Alternative, nothing would be done to address the risk of wildfire in the project area. This alternative would contribute to the risk of catastrophic wildfires spreading and causing damage in the project area. The historic site would remain at risk of destruction from wildfire, and surrounding community resources such as farmland and agricultural land for livestock would also remain at risk.

Proposed Action Alternative

The Proposed Action Alternative would include conducting defensible space, hazardous fuels reduction, and ignition-resistant retrofitting measures at the Los Luceros Historic Site in Rio Arriba County, New Mexico. The Los Luceros Historic Site encompasses approximately 148 acres, approximately 50 of which comprise bosque habitat (riparian forest), which is currently characterized by vegetation overgrowth and an abundance of dead and down trees. Project activities would only occur within approximately 95.7 of these acres. The Proposed Action would reduce the risk of wildfire within and around the project area by conducting defensible space activities around structures and roadways on the property, thinning vegetation and removing hazardous fuels in the bosque, and applying a fire-retardant treatment to one structure. Project work is expected to be completed within 2 years, with subsequent maintenance activities being implemented over the following 20 years. Details on each scope component are provided below and Figure 1 provides a layout of the proposed project area.

The sub-applicant proposes to conduct hazardous fuels reduction at Los Luceros throughout the “Apple Orchard” (36.1154556, -106.0382396) and “Bosque” (36.118367; -106.044991) portions of the property. The applicant will thin vegetation to reduce fuel load. Dead standing/danger trees and dying cottonwood trees along with down branches will be cleared and immature invasive species will be removed. Roots of dead trees and invasives will be removed. Invasive removal will also include work in the fields (36.116909, -106.04280). Trees along walking paths will be trimmed. Trees in the orchard will be trimmed to maintain healthy trees free of disease and dead wood which would contribute to fuel in the event of a fire. Portions of a downed cottonwood in the Apple Orchard would be preserved to create an interpretive tool in the form of a large timeline via tree rings that will help tell the story of Los Luceros. No herbicides or chemical treatments will be used in the removal process. All removal will be done with hand tools and mechanical equipment and chipping and mulching will be done on site. Some of the material will be reused in the Los Luceros Gardens and excess will be offered to the community for free pick up. Trees needed to sustain the local biodiversity and prevent excessive runoff into the Rio Grande will remain. Existing dirt road access into the site that extends almost all the way into the Bosque will aid in retrieval and removal of vegetative fuel loads.

The sub-applicant will also create defensive space/buffer areas around the buildings by removal of vegetation around 9 buildings, 5 of which are historic (Hacienda, Chapel, Alcemon, Victorian Cottage, Guest House, Bath House) and the others are the Visitors Center (which is actually multiple structures around a courtyard), River House, and Staff Offices. Two mulberry trees by the historic Storehouse will be removed. Removal of two dead catalpas. Trimming of two

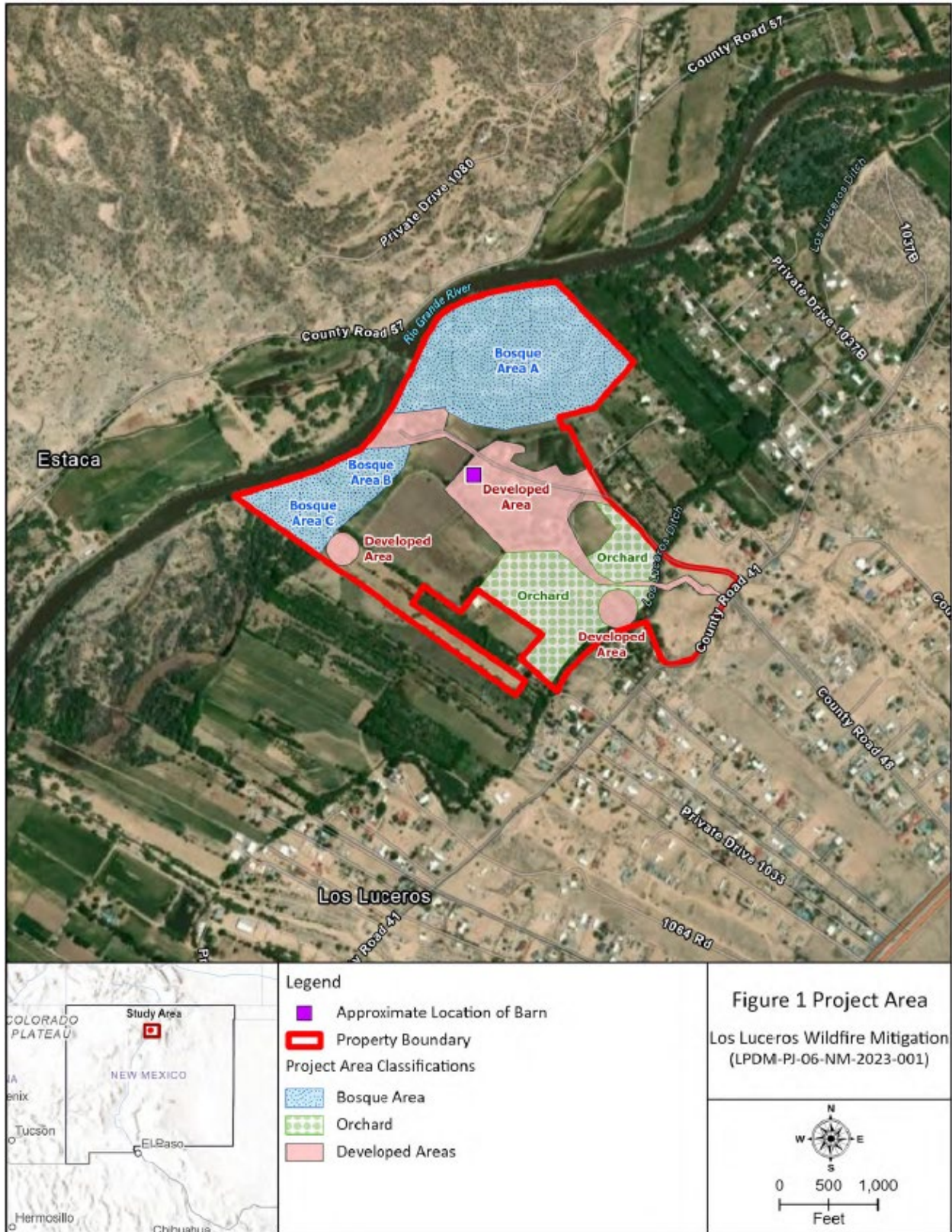


Figure 1. Los Luceros Project Area. CDM Smith, 2023.

historic willows which are close to the Hacienda and will be trimmed to aid in creating a defensible space around the historic structure.

Graveling of the existing parking lot (36.117146, -106.0387029) and approximately 1 mile of non-historic roadways (36.11825, -106.04032971 to 36.11556, -106.034907) will be conducted to establish additional defensible space. Gravel will be placed on top of existing surfaces and subsurface grading will not be required. The parking lot is currently compact dirt with weeds and grass that come up on their own. The parking lot has never been improved. Graveling will aid in preventing fires from starting due to mufflers and dry grass.

The sub-applicant will apply a fire-retardant treatment/fireguard coating to the non-historic barn that is currently being constructed (36.11697, -106.04041).

IV. Environmental Impacts

Discussion of the environmental impacts associated with the No Action Alternative is included in the October 2022 NM PEA. This document incorporates the NM PEA by reference.

FEMA’s environmental planning and historic preservation review reveals that all environmental areas of concern are appropriately accounted for in the NM PEA with the exception of impacts to protected species and habitat. Those impacts under the No Action and Proposed Action Alternatives are analyzed below. Table 1 provides a summary of the findings for the other environmental areas of concern that FEMA typically reviews.

Table 1: Summary of Impacts Under Laws/Regulations Identified in the NM PEA

Resource Area	No Action Impacts	Proposed Action Impacts
Air Quality	Implementation of the No Action Alternative increases the risk of wildfire, which could have short-term significant impacts to air quality.	A Proposed Action Alternative project tiered from this PEA results in negligible or short-term and minor adverse effects to air quality that will not result in a change in attainment status for any NAAQS. Significant adverse effects to air quality are not identified based on the Proposed Action Alternative project.
Geological and Soil Resources	No effect.	Minor short-term effects to soil resources will result from ground disturbing activities. No effect to geological resources.
Water Resources	No effect.	No effect to water resources. No Section 404 permits required from USACE. The applicant shall ensure that best management practices are implemented to prevent erosion and sedimentation to surrounding, nearby or adjacent wetlands. This includes equipment storage and staging of construction to prevent erosion and sedimentation to ensure that wetlands are not adversely impacted per the Clean Water Act and Executive Order 11990. Portions of the project are located within an AE zone, area of 100-yr flooding, per Flood Insurance Rate Map (FIRM) panel

		35039C2875D, dated 3/15/2012. The proposed action is not likely to result in any potential direct impacts that will adversely affect the natural values and function of floodplains, nor is it likely to increase the risk of flood loss. 8-step review attached.
Cultural Resources	No effect. Potential risks to cultural and historic resources from a wildfire event would remain.	FEMA has determined that there will be No Adverse Effect to historic properties. SHPO concurrence with this determination was received, dated 8/21/2023. Consultation with the Comanche Nation, Hopi Tribe of Arizona, Jicarilla Apache Nation, Kiowa Tribe, Navajo Nation, Ohkay Owingeh, Pueblo of Picuris, Pueblo of Pojoaque, Pueblo of San Idelfonso, Pueblo of Santa Clara, Pueblo of Taos, Pueblo of Tesuque, and Pueblo of Zia was conducted per 36 CFR §800.2(c)(2)(i)(B), dated 7/27/2023. Response from Comanche Nation, 8/29/23 and Pueblo of Pojoaque (7/27/23) state that the proposed project will not adversely affect traditional, religious, or culturally significant sites. The remaining Tribes did not provide comments within 30 days or declined to comment. FEMA has determined that the proposed project will not adversely affect traditional, religious, or culturally significant sites.
Transportation Infrastructure and Traffic	No effect.	Minor, short-term effects to transportation infrastructure and/or traffic. Significant adverse effects to transportation infrastructure and/or traffic are not identified for the Proposed Action Alternative.
Hazardous Substances	No effect.	No effect. See pollution control mitigation measures in Section V.
Human Health and Safety	Potential risks from a wildfire event would remain. Risks that could result from a wildfire event include damage or loss of roads, utilities, and homes, as well as injury and even death to citizens. Wildfires can generate substantial amounts of fine particulate matter, which can affect the health of people breathing the smoke-laden air. The health of people downwind from a wildfire, especially young children and people with lung disease or asthma, could be adversely affected. At close range, wildfires can generate substantial	Beneficial effect to human health and safety by reducing wildfire risk. No disproportionate adverse health or safety effects to workers or children have been identified.

	amounts of carbon monoxide, which can pose a health concern for frontline firefighters. Additionally, post-fire flooding events resulting from wildfires could endanger lives, structures, roads, bridges, water intakes, and water treatment facilities.	
Environmental Justice and Climate Effects	No effect. Potential risks to cultural and historic resources from a wildfire event would also remain.	Minority or low-income populations were identified through submitted project documentation, public involvement, state EJ community lists or maps, or EJSscreen reports for the project area. Review of the project scope of work revealed no disproportionate adverse effects on these populations. All populations in the project area would benefit as wildfire risk would be reduced as a result of the Proposed Action.

Protected Species and Habitat

An SEA tiered from the NM PEA was required because the Proposed Action Alternative exceeded the threshold of a “May Affect, Not Likely to Adversely Affect” determination for a species listed as federally threatened or endangered. Section 7 of the Endangered Species Act (ESA) of 1973 (16 USC § 1536) requires federal agencies to ensure that actions authorized, funded, or carried out by them are not likely to jeopardize the continued existence of threatened, endangered, or proposed species or cause destruction or adverse modification of their critical habitats.

FEMA retained CDM Smith (2023), a consulting firm with expertise in federal environmental compliance, to prepare a Biological Assessment of the project area to determine potential for presence of listed species, their habitat, and their critical habitat within the project area and to inform FEMA’s determination of effect for listed species and designated habitat.

Based on a review of U.S. Fish and Wildlife Service (USFWS) databases such as IPAC, a reconnaissance-level site survey, and available orthophotography, three federally listed species are expected to occur within the action area (which is slightly larger than the project area and includes the area that may incur potential direct and indirect effects on federally listed and proposed species): the New Mexico meadow jumping mouse (NMMJM; *Zapus hudsonius luteus*), southwestern willow flycatcher (SWWF; *Empidonax traillii extimus*), and western distinct population segment (DPS) of the yellow-billed cuckoo (YBC; *Coccyzus americanus*). Additionally, the action area overlaps approximately 102.4 acres of designated critical habitat for the SWWF and 71.9 acres of designated critical habitat for the YBC.

New Mexico Meadow Jumping Mouse

The NMMJM was listed as endangered on July 10, 2014 (USFWS 2014a). At the time of listing, the species’ decline was largely attributed to habitat loss, degradation, and fragmentation due to factors including grazing, construction of dams and other water diversions that alter water flow

through waterways, and climate change-induced droughts that impact riparian vegetation and water flow (USFWS 2014a). Another factor that impacts the availability and quality of NMMJM habitat is severe wildland fire, which has replaced natural floods as the primary disturbance event in many southwestern riparian ecosystems (USFWS 2020a).

Portions of the riparian area immediately adjacent to the Rio Grande River in bosque areas A and B are composed of dense riparian herbaceous vegetation, while other portions are densely vegetated by willows with an understory of forbs. However, the channel bank in bosque area C is not densely vegetated and has patches of bare ground. As such, suitable habitat for the NMMJM occurs along the Rio Grande River in bosque areas A and B, but not in area C. Additionally, suitable habitat for the NMMJM occurs along the perennial stream that flows through bosque area A and discharges into the Rio Grande River and along the banks of the Los Luceros Ditch. The bosque areas also provide suitable riparian woodland habitat for the NMMJM to construct maternal nests. Therefore, the NMMJM is assumed to be present in these portions of the action area and in the upland areas up to 360 feet from stream banks.

Southwestern Willow Flycatcher

The SWWF was listed as endangered on February 27, 1995). At the time of listing, the main factors attributing to the species' decline included nest depredation and brood parasitism by the brown-headed cowbird (*Molothrus ater*). While these factors still threaten the species, the loss of southwestern wetlands and in particular cottonwood-willow riparian habitat now pose additional significant threats to the species (USFWS 2017).

Suitable riparian breeding habitat occurs within the bosque areas of the project. Additionally, the SWWF is known to currently occupy riparian habitats along the upper, middle, and lower Rio Grande River (USFWS 2014b). Although not recorded in citizen science databases such as eBird or iNaturalist, NMDCA indicated that visitors of the Los Luceros Historic Site have reported observing the SWWF within the action area. SWWFs have potential to occur within the action area.

The action area overlaps approximately 71.9 acres of critical habitat within Unit 27, Upper Rio Grande, Rio Grande subunit. Of this area, project work is expected to occur directly within approximately 43.7 acres of critical habitat.

Yellow-Billed Cuckoo

The western DPS of the YBC was listed as threatened on October 3, 2014. At the time of listing, the primary factor causing the decline of the western DPS of the YBC was the loss and degradation of riparian habitat. The loss of riparian habitat has been driven by the alteration of hydrology due to dams, water diversions, the management of river flows that result in the alteration of historical hydrological patterns, and similar anthropological activities (USFWS 2014c). Habitat loss and degradation from these processes continues to be the primary threat to the species (USFWS 2020b).

Suitable riparian breeding habitat occurs within the bosque areas in the action area. Additionally, YBCs have been observed multiple times within the action area, the most recent of which was recorded in 2019 (Cornell Lab of Ornithology 2023). Therefore, YBCs have potential to occur within the action area wherever suitable habitat is present.

The action area overlaps approximately 102.4 acres of critical habitat within Unit NM 4, Upper Rio Grande 1. Of this area, project work is expected to occur directly within approximately 53.6 acres of critical habitat.

NO ACTION ALTERNATIVE

Under the No Action Alternative, FEMA would not provide funding to reduce fuel loads and conduct wildfire mitigation measures in the project area, and therefore, there would be no direct impacts to federally listed species or their critical habitat because the project would not be implemented. However, the No Action Alternative would result in an increased risk for wildfire within the project area, which could adversely affect species and their habitat should it burn.

PROPOSED ACTION ALTERNATIVE

FEMA has determined that the Proposed Action will have No Effect on: Tricolored Bat (*Perimyotis subflavus*), Spotted Owl (*Strix occidentalis lucida*), and Silverspot (*Speyeria nokomis Nokomis*), which are species that are listed in Rio Arriba County, but that are not expected to be present in the project area. Based on the Biological Assessment (CDM Smith 2023), which includes implementation of avoidance and minimization measures to reduce adverse impacts, and in consultation with USFWS, FEMA has determined the Proposed Action “May affect, but is not likely to adversely affect” the endangered SWWF or its critical habitat; “May affect, but is not likely to adversely affect” the threatened YBC; and “May affect, and is likely to adversely affect” the NMMJM. USFWS concurred with FEMA’s determinations of effect in a Biological Opinion issued March 13, 2024. USFWS determined that the Proposed Action will not jeopardize the continued existence of threatened, endangered, or proposed species or cause destruction or adverse modification of their critical habitats (Appendix B).

The sub-applicant must comply with the conditions below in Section V. Mitigation and Grant Conditions that resulted from FEMA’s consultation with USFWS.

V. Mitigation and Grant Conditions

- Any change to the approved scope of work will require re-evaluation for compliance with NEPA and other Laws and Executive Orders.
- This review does not address all federal, state and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize federal funding.
- If ground disturbing activities occur during construction, applicant will monitor ground disturbance and if any potential archeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA.
- Sub-applicant must coordinate with the local floodplain administrator, obtain required permits prior to initiating work, and comply with any conditions of the permit to ensure harm to and from the floodplain is minimized. All coordination pertaining to these

activities should be retained as part of the project file in accordance with the respective grant program instructions.

- **GEN-1 Erosion and Sediment Control Measures:** Best management practices will be implemented to prevent erosion and sedimentation into nearby waterways. These will include equipment storage and staging practices to minimize erosion and sedimentation and avoiding soil or water contamination. Disturbed soils at the site will undergo erosion control treatment before the rainy season starts and after project activities are terminated. Treatment may include temporary seeding and sterile straw mulch.
- **GEN-2 Equipment and Staging:** Equipment will be inspected daily for spillage. Equipment will be cleaned daily to reduce the risk of spreading disease or invasive plant material. Staging areas will be located at least 100 feet from any surface waters. Staging sites will be flagged appropriately and the contractors will develop written protocols to address spills or possible contamination of soils.
- **GEN-3 Equipment Operation and Maintenance:** To the extent practicable, equipment will be operated in previously cleared areas or where vegetation is sparse, and all efforts will be made to minimize damage to native riparian vegetation. Well-maintained equipment will be used to perform the work and, except in the case of a failure or breakdown, equipment maintenance will be performed off-site. Equipment will be inspected daily by the operator for leaks or spills. If leaks or spills are encountered, the source of the leak will be identified, leaked material will be cleaned up, and the cleaning materials will be collected and disposed of properly.

Vehicles and equipment that are used during the course of a project will be fueled and serviced in a “safe” area (i.e., outside of riparian areas), at least 200 feet from waterbodies, in a manner that will not affect federally listed species or their habitats. Spills, leaks, and other problems of a similar nature will be resolved immediately to prevent unnecessary effects on federally listed species and their habitats. A plan for the emergency cleanup of any spills of fuel or other material will be available on-site, and adequate materials for spill cleanup will be maintained on-site.

- **GEN-4 Environmental Awareness Training:** Employees and contractors will be provided with environmental awareness training by a qualified biologist. This training will familiarize personnel with the species that may occur on-site and their habitats, AMMs to be implemented to protect these species, and project boundaries. This training will be provided within 3 days of the arrival of any new worker. As part of the environmental awareness training, construction personnel will be notified that no dogs or other pets under control of construction personnel will be allowed in the construction area, and that no firearms will be permitted in the construction area, unless carried by authorized security personnel or law enforcement.
- **GEN-5 Debris Piling:** Any temporary piles of downed vegetation and debris shall be located at least 900 feet from the center of the river channel, or at least 66 feet from the edge of rivers or streams, whichever is farther.

- **GEN-6 Waste Management:** Work areas will be kept free of loose trash. All food waste will be removed from the site daily. All wastes, debris, rubbish, vegetation, and trash will be removed from the site once the project is completed, and will be transported to an authorized disposal area, as appropriate, according to all federal, state, and local laws and regulations.
- **GEN-7 Dust Control:** To reduce dust, all traffic associated with the Proposed Action will be restricted to a speed limit of 20 miles per hour when traveling off highways or county roads. During project activities, water will be applied to disturbed ground that may become windborne.
- **GEN-8 Spill Prevention and Pollution Control Measures:** The sub-applicant will exercise every reasonable precaution to protect federally listed species and their habitats from pollution due to fuels, oils, lubricants, and pollutants such as construction chemicals. Water containing mud, silt, or other byproducts or pollutants from project activities will be treated by filtration, retention in a settling pond, or similar measures. Pollutants will be collected and transported to an authorized disposal area, as appropriate, per all federal, state, and local laws and regulations.

No petroleum product chemicals, silt, fine soils, or any substance or material deleterious to federally listed species will be allowed to pass into or be placed where it can pass into a stream channel. There will be no side-casting of material into any waterway.

The sub-applicant will store all hazardous materials in properly designated containers in a storage area with an impermeable membrane between the ground and the hazardous materials. The storage area will be encircled by a berm to prevent the discharge of pollutants to ground water or runoff into the habitats of federally listed species. A plan for the emergency cleanup of any hazardous material will be available on-site, and adequate materials for spill cleanup will be maintained on-site.

- **NMMJM-1 Biological Monitor:** A USFWS-approved biologist who is familiar with the NMMJM and its associated habitat will be responsible for ensuring compliance with the project description (including conservation measures) to minimize and avoid impacts on the federally endangered NMMJM. The biological monitor will have the authority to halt or suspend all activities until appropriate corrective measures have been completed and will be required to report violations immediately to the USFWS. Biological monitoring responsibilities will include the following:
 1. Advise all project-related staff (including contractors) on the appropriate implementation of the conservation measures.
 2. Define the boundaries of areas containing suitable habitat within the action area.
 3. Halt any and all activities in an area where it is determined that a potential unauthorized incidental “take” of NMMJM may occur.
 4. Inspect work areas where NMMJM habitat is present to ensure compliance with all conservation measures for the duration of the proposed action. In addition, monitor action areas, as appropriate, at the beginning and end of each day for compliance with all conservation measures. Periodically inspect access routes and stockpiling/staging area for sign of NMMJM.

5. Notify FEMA, USFWS, and NMDCA of any noncompliance with any conservation measure.
 6. Conduct an initial environmental awareness program for all project-related staff.
- **NMMJM-2 Seasonal Avoidance:** Project activities occurring within suitable NMMJM habitat, as defined by the biological monitor, will only occur between September 1 and July 1, when the NMMJM is expected to be hibernating.
 - **NMMJM-3 Work Restrictions in Suitable Habitat:** When working within suitable NMMJM habitat (i.e., riparian areas along waterways with tall herbaceous vegetation and/or scrub and herbaceous vegetative cover, up to 360 feet from the edges of waterways), workers will minimize ground disturbance by carefully walking through riparian and streamside vegetation, minimizing footsteps to avoid crushing vegetation and day nests used by mice. Where suitable NMMJM habitat is present, as defined by the biological monitor, no heavy machinery will be operated within 66 feet of the stream edge.
 - **NMMJM-4 Encounters with the Species:** Each encounter with an NMMJM will be treated on a case-by-case basis. If an NMMJM is found, the following will apply:
 - If an NMMJM is detected within the action area, work activities around the individual that have the potential to result in the harm, injury, or death to the animal will cease immediately and the on-site biological monitor will be notified. Based on the professional judgment of the biological monitor, if project activities can be conducted without harming or injuring the NMMJM, it may be left at the location of discovery and monitored by the biological monitor.
 - Contact with the individual NMMJM will be avoided and it will be allowed to move out of the area of its own volition.
 - **NMMJM-5 Riparian Herbaceous Vegetation Remains in Place:** To the greatest extent practicable, tall herbaceous vegetation along waterways within the project area shall remain un-mowed and undisturbed.
 - **NMMJM-6 Daily Work Hours:** Work activities will occur during daytime hours only. No nighttime lighting will be used.
 - **SWWF-YBC-1 Seasonal Avoidance:** Vegetation management activities in the bosque areas and other areas within designated critical habitat for the SWWF and/or YBC will take place outside of nesting season (i.e., work will occur between September 15 and March 15).
 - **SWWF-YBC-2 Biological Monitor:** A USFWS-approved biologist who is familiar with both the SWWF and the YBC and their associated habitats will be on-site during all vegetation management activities within the bosque areas and any other work areas within 500 feet of critical habitat to ensure that appropriately sized patches of dense shrub/lower canopy vegetation that provide suitable nesting habitat for the SWWF and YBC are retained.

- **SWWF-YBC-3 Native Vegetation Remains in Place:** Native riparian vegetation will be left in place to the maximum extent practicable; willows and cottonwoods with a diameter at breast height (DBH) of 12 inches or greater may be trimmed but shall be left in place when possible and not posing a hazard.
- The Department of Cultural Affairs will contact FEMA to coordinate with the USFWS New Mexico Ecological Services Field Office prior to implementation if bosque vegetation and hazardous fuels management activities must be conducted during the active season of the New Mexico meadow jumping mouse.
 - If work is conducted during the active season of the New Mexico meadow jumping mouse, Department of Cultural Affairs will increase the distance from the rivers edge such that heavy equipment would be prohibited from entering from 66 ft (20 m) to 100 ft (30 m).
 - Crews conducting hand treatments of vegetation within the bosque areas A and B will avoid modifying willow galleries to retain habitat elements associated with New Mexico meadow jumping mouse day-nests.
- Department of Cultural Affairs must report any detections and/or mortalities of New Mexico meadow jumping mice to FEMA and the USFWS New Mexico Ecological Services Field Office within 48 hours of discovery.
 - If mortality of New Mexico meadow jumping mice occurs, photos of the specimen should be taken, and the specimen should be immediately preserved by freezing or placing in 95% ethanol and retained until disposition of the specimen is directed by the USFWS New Mexico Ecological Services Field Office.
- Upon locating a dead, injured, or sick listed species, initial notification must be made to USFWS Law Enforcement Office, 4901 Paseo del Norte NE, Suite D, Albuquerque, NM 87113; 505-248-7889) within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph if possible, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to the New Mexico Ecological Services Field Office (2105 Osuna Road NE, Albuquerque, New Mexico 87113, Telephone 505-346-2525 Fax 505-346-2542 www.fws.gov/southwest/es/newmexico/). Care must be taken in handling sick or injured animals to ensure effective treatment and care and in handling dead specimens to preserve the biological material in the best possible state.

VI. **Agencies Consulted** (see Appendix B)

State Historic Preservation Office
 U.S. Fish and Wildlife Service
 Comanche Nation
 Hopi Tribe of Arizona
 Jicarilla Apache Nation
 Kiowa Tribe
 Navajo Nation
 Ohkay Owingeh
 Pueblo of Picuris

Pueblo of Pojoaque
Pueblo of San Idelfonso
Pueblo of Santa Clara
Pueblo of Taos
Pueblo of Tesuque
Pueblo of Zia

VII. Public Comment

A public notice advertising the availability of this Draft SEA for public review and comment will be posted in the local newspaper of record and on the FEMA website at <https://www.fema.gov/emergency-managers/practitioners/environmental-historic/nepa-repository> (Appendix D). The Draft SEA will be available at a local repository and at <https://www.fema.gov/emergency-managers/practitioners/environmental-historic/nepa-repository>. A 15-day public comment period will commence on the initial date of the public notice. FEMA will consider and respond to all public comments in a Final SEA. If no substantive comments are received, the Draft SEA will become final and a Finding of No Significant Impact (FONSI) will be issued for the project.

VIII. List of Preparers/Reviewers

Dorothy Cook, Preparer, Supervisory Environmental Protection Specialist, FEMA Region 6
LaToya Leger, Reviewer, Regional Environmental Officer, FEMA Region 6
Angela McComb, Reviewer, Archeologist, FEMA Region 6

IX. References

CDM Smith. 2023. Biological Assessment Los Luceros Fire Mitigation Project. September 2023, Denton, TX.

FEMA. 2022. Programmatic Environmental Assessment for The State of New Mexico Watershed Resiliency and Post-Wildfire Treatment Projects. Available on-line at <https://www.fema.gov/emergency-managers/practitioners/environmental-historic/nepa/programmatic-environmental-20>. Accessed February 14, 2024.

FEMA. 2023. National Risk Index: Rio Arriba County, New Mexico. Updated August 7, 2023. Available on-line at <https://hazards.fema.gov/nri/report/viewer?dataLOD=Counties&dataIDs=C35039>. Accessed August 7, 2023.

USFWS. 2014a. "Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the New Mexico Meadow Jumping Mouse Throughout its Range." 79 FR 33119-33137.

USFWS. 2014b. Southwestern Willow Flycatcher (*Empidonax traillii extimus*) 5-Year Review: Summary and Evaluation. August 2014. Phoenix, Arizona.

USFWS. 2014c. “Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Western Distinct Population Segment of the Yellow-billed Cuckoo (*Coccyzus americanus*).” 79 FR 59991-60038.

USFWS. 2017. Notice of 12-month Petition Finding and 5-Year Review for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*).

USFWS. 2020a. Species Status Assessment Report for the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*). First Revision. Albuquerque, New Mexico. January 2020.

USFWS. 2020b. “Endangered and Threatened Wildlife and Plants; Findings on a Petition to Delist the Distinct Population Segment of the Western, Yellow-Billed Cuckoo and a Petition to List the U.S. Population of Northwestern Moose.” 85 FR 57816-57818.

USFWS. 2024. Consultation No. 2023-0115: Southwestern Willow Flycatcher, Yellow-billed Cuckoo, and their Critical Habitats and New Mexico Meadow Jumping Mouse. March 2014, Albuquerque, NM.

Appendix A

Finding of No Significant Impact (FONSI)

Programmatic Environmental Assessment for the State of New Mexico Watershed Resiliency and Post-Wildfire Treatment Projects

FEMA
FINDING OF NO SIGNIFICANT IMPACT
The State of New Mexico Watershed Resiliency and Post-Wildfire Treatment Projects

BACKGROUND

The Federal Emergency Management Agency (FEMA) makes federal assistance available to state, local, tribal, and territorial governments and certain private nonprofit entities under the Public Assistance and Hazard Mitigation Assistance Programs. These non-Federal entities are the recipients and subrecipients of FEMA's grant programs. FEMA's grant programs foster the protection of health, safety, and welfare of citizens, assist communities in recovering from damages caused by disasters and reduce future losses resulting from natural disasters. Public Assistance grants are used to repair or restore disaster-damaged facilities or make other site improvements and may include mitigation measures along with repair in accordance with Section 406 of the Stafford Act. Hazard Mitigation Assistance encompasses several pre-disaster grant programs that support action that reduces or eliminates long-term risk to people and property from future disasters.

FEMA is required during decision making to evaluate and consider the environmental consequences of its federal actions, in accordance with The National Environmental Policy Act of 1969 (NEPA); the Council on Environmental Quality regulations implementing NEPA; the Department of Homeland Security (DHS) Directive 023-01, Revision 01 and DHS Instruction 023-01-001-01, Revision 01; and FEMA Directive 108-1 and FEMA Instruction 108-1-1. The purpose of the Programmatic Environmental Assessment (PEA) was to provide the basis for decisions to approve a broad range of actions related to watershed resiliency and post-wildfire treatments in the State of New Mexico (NM), that can be applied to subsequent tiered reviews. The PEA also includes a discussion of the Federal decision-making process, agency coordination, and public participation in determining whether to revise the PEA, withdraw the PEA, prepare this Finding of No Significant Impact (FONSI), or initiate an Environmental Impact Statement. This PEA facilitates compliance with NEPA for a range of proposed actions that promote watershed resiliency and post-wildfire actions in NM, regardless of FEMA funding source.

If a future project is consistent with the scope and effects described in the PEA, then FEMA will prepare a Record of Environmental of Consideration (REC). The REC will refer to the PEA in its analysis, address site-specific conditions, evaluate effects relating to other project elements, list any mitigation measures, and document compliance with applicable environmental and historic preservation laws. FEMA will prepare an Environmental Assessment tiered from the PEA if a future project is consistent with the scope described in the PEA, but creates effects not described herein; creates effects greater in magnitude, extent, or duration than described herein; or requires mitigation measures to minimize effects that have not been described in the PEA.

FEMA
FINDING OF NO SIGNIFICANT IMPACT
The State of New Mexico Watershed Resiliency and Post-Wildfire Treatment Projects

PROJECT DESCRIPTION

FEMA evaluated two scenarios in the PEA; a no action alternative as a benchmark, and the proposed action alternative, a range of collectively evaluated potential actions that improve watershed functioning and reduce the risk of loss of life, protect infrastructure, and increase resiliency to future wildfires in NM. Under the no action alternative, FEMA would continue to rely on the allowances provided in the FEMA and DHS categorical exclusions (CATEX) categories to evaluate watershed resiliency and post-wildfire treatment projects. The range of potential actions collectively identified as the proposed action alternative broadly includes: vegetative thinning, hazardous tree removal, and noxious weed abatement; restoration and reforestation of fire-adapted vegetation types; restoration of riparian areas; post-wildfire hillslope stabilization treatments; post-wildfire channel treatments; post-wildfire road, culvert, and trail flow diversion treatments; post-wildfire ash, sediment, and debris removal and infrastructure repairs; structure demolition, relocation, or alteration; and hydraulic capacity improvements and protection of water infrastructure. The spatial and temporal scope for the PEA includes a total project footprint not to exceed 500 acres per project and are initiated within a five year period. For the purposes of FEMA environmental compliance review, project initiation begins when the Office of Environmental Compliance and Historic Preservation has received the project for review.

SUMMARY OF POTENTIAL EFFECTS

Section 6.0 of the PEA includes a summary of effects to resource areas evaluated under the PEA. The proposed action alternative has short-term, mostly minor but in some cases up to moderate effects to resources, primarily relating to construction disturbances for post-wildfire treatments. Moderate effects are measurable locally or regionally, positive, or negative, and where negative, effects would be limited with conformance with applicable permits and project conditions, discussed in Section 7.0 of the PEA. FEMA anticipates that the proposed action alternative will have positive and long-term effects on watersheds in NM, based on a potential for increased resiliency of watersheds to mitigate the primary effects of wildfire and secondary effects experienced during monsoon rains, such as flooding, erosion, and debris flows. Permit and project conditions are included in Section 7.0 of the PEA and include measured such as using erosion and sedimentation controls, and re-seeding using native species.

PERMITS & PROJECT CONDITIONS

A summary of permits and project conditions are discussed in Section 7.0 of the PEA. FEMA's grant subrecipients are responsible for obtaining all applicable Federal, state, and local permits and other authorizations and adhering to permit conditions for project implementation prior to construction. Subrecipients are responsible for providing copies of permits to the recipients and FEMA prior to project closeout and should do so upon obtaining them. Any substantive change

FEMA
FINDING OF NO SIGNIFICANT IMPACT

The State of New Mexico Watershed Resiliency and Post-Wildfire Treatment Projects

to the approved scope of work will require re-evaluation by FEMA for compliance with NEPA, other laws, and Executive Orders. The subrecipients must not exceed the thresholds described in Section 10 of the PEA during project implementation without notifying FEMA in advance.

The subrecipients must also adhere to project-specific conditions as documented in the REC during project implementation. FEMA expects the following conditions are applicable to all project scopes of work covered by the PEA. Failure to comply with grant conditions may jeopardize Federal funds:

1. The subrecipients are responsible for completing state and local environmental and land use reviews in accordance with federal, state, and local regulations.
2. The subrecipients may be required to obtain an air permit based on the size and duration of construction projects or operation of supplemental power generation. Best Management Practices applicable to minimizing effects to air quality shall be incorporated, including limiting vehicle idling, utilizing fugitive dust suppression techniques, such as those outlined in the New Mexico Administrative Code for fugitive dust control.
3. The actions covered by the PEA may require authorization from the United States Army Corps of Engineers prior to conducting work. The subrecipients are responsible for obtaining all necessary federal permits and complying with all conditions of the permit including but not limited to notification and signature requirements to insure validation of permits.
4. The subrecipients may be required to obtain National Pollution Discharge Elimination System permits prior to construction, if applicable to the project.
5. Subrecipients must comply with any requirements and avoidance measures pursuant to Section 7 of the Endangered Species Act. If protected species are observed during construction, activities that could result in harm or disturbance must stop immediately and the subrecipient must notify the recipient and FEMA. The United States Fish and Wildlife Service may require FEMA to conduct additional consultation. Subrecipients must minimize the introduction or spread of invasive species, including decontamination procedures on vehicles and equipment, and using weed-free products.
6. The subrecipients must follow the conditions resulting from consultation with the NM State Historic Preservation Office (SHPO) and Tribal Nations, where appropriate. If unexpected archaeological resources are encountered during construction, the subrecipient must stop work and notify the recipient and FEMA. FEMA will determine what additional consultation with the SHPO, and the Tribal Nations are required, and what additional conditions or avoidance measures may apply.

FEMA

FINDING OF NO SIGNIFICANT IMPACT

The State of New Mexico Watershed Resiliency and Post-Wildfire Treatment Projects

7. The subrecipient must follow the conditions and requirements of the New Mexico Department of Transportation (NMDOT) or federal agency with respect to appropriate seed selection revegetation zones and temporary road closures permits and requirements, where project sites intersect with NMDOT jurisdiction.
8. The subrecipients must follow all permit conditions and manufacture guidelines applicable to the handling and application of any hazardous substances used in connection with actions evaluated in the PEA.
9. The subrecipients must incorporate all health and safety conditions applicable to minimizing effects to health and safety in site-specific health and safety plan.

PUBLIC INVOLVEMENT

The PEA was made available for agency and public review and comment for a period of 30 days, concluding on September 29, 2022. The public Notice of Availability for review of the PEA was published by FEMA in the Albuquerque Journal and Santa Fe New Mexican, on August 29, 2022. The PEA and Spanish translation of the public notice were also available on the following platforms:

The PEA reflects the evaluation and assessment of the federal government, the decision maker for the federal actions, taking into consideration any substantive comments received during the public review period to inform the final decision regarding grant approval and project implementation. The public was invited to submit written comments by email or by mail. Comments on the PEA could be emailed to FEMA-R6-EHP@fema.dhs.gov noted with the subject line, "New Mexico PEA 2022", or mailed to FEMA Region 6, 800 North Loop 288, Denton, Texas 76209 Attn: Environmental Planning and Historic Preservation - REO.

FEMA
FINDING OF NO SIGNIFICANT IMPACT
The State of New Mexico Watershed Resiliency and Post-Wildfire Treatment Projects

FINDINGS

FEMA did not receive any comments from the public on the PEA during the 30-day comment period. FEMA did receive comments on the PEA from two agency partners, the New Mexico Environment Department, Surface Water Quality Bureau, and the United States Agriculture Department, Farm Service Agency. The comments received from the two agencies were posed to clarify the PEA text and did not result in FEMA making substantive changes to the PEA.

Therefore, in accordance with NEPA and the FEMA Directive and Instruction, FEMA has determined that the evaluated actions will have no significant adverse impact on the quality of the human environment. As a result of this FONSI, an Environmental Impact Statement will not be prepared, and the actions as described in the PEA may proceed. This FONSI serves as the final public notice for the PEA.

APPROVED AND ENDORSEMENT:

Kevin Jaynes
Environmental Officer
FEMA Region 6

Brianne Schmidtke
Hazard Mitigation Assistance Branch Chief
FEMA Region 6

Donald Simko
Public Assistance Branch Chief
FEMA Region 6

Appendix B
Agency Consultation



FEMA

July 26, 2023

Jeff Pappas, PhD
State Historic Preservation Officer
Attention: Michelle Ensey, Deputy SHPO
Department of Cultural Affairs
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe, New Mexico 87501

Received 7/26/2023
HPD Log#120234

RE: Section 106 Review Consultation,
LPDM NM #1 Los Luceros Fire Mitigation Project
Rancho Los Luceros, Rio Arriba County, New Mexico 87566
(Lat.: 36.115819, Long.: -106.035709),
UTM: 13 N 406789E 3997291N

Dear Dr. Pappas:

The Federal Emergency Management Agency (FEMA) is providing grant funding through the Pre-Disaster Mitigation grant program to the New Mexico Historic Sites Department of Cultural Affairs (Applicant) for fuels reduction and wildfire mitigation at the Los Luceros Historic Site (Undertaking). FEMA is initiating Section 106 review for the above referenced properties in accordance with the Programmatic Agreement among FEMA, the New Mexico State Historic Preservation Officer (SHPO), and the New Mexico Department of Homeland Security and Emergency Management (DHSEM), dated May 23, 2016, as amended (2016 Statewide PA).

The Applicant proposes to mitigate against future wildfire events by conducting hazardous fuels reduction at the Rancho de Los Luceros Historic Site (Los Luceros) by removing invasive trees, including root balls, throughout the treatment area; removal of vegetation and trimming of trees within 8 ft. of structures in the Los Luceros Hacienda complex; graveling of non-historic roads and parking lot; and application of fire-retardant coating to a non-historic barn.

Defensible space will be created around 8 total buildings by the removal of trees and other vegetation within 8 ft. of the following buildings: Hacienda, Chapel, Storehouse, Victorian Cottage, Guest House, Visitor's Center, River House, and Staff Offices. Thinning of vegetative fuels and removal of invasive trees will be performed by an arborist. Two historic willows are located next to the Hacienda and will be trimmed; these willows are not included in the NR nomination. Additionally, two mulberries next to the historic storehouse and two catalpas will be removed. Arborist work within the Bosque will consist of mastication and grubbing and removal of dead cottonwoods; all trees along the bosque walking path will be trimmed. In the Apple Orchard, the Applicant will trim approximately 1,500 apple trees and remove invasive species. The Applicant will cut down a large cottonwood in the Apple Orchard, part of which will then be preserved and used as an interpretive tool to educate visitors on the deep history of

the site. Removed vegetation will be chipped and distributed on-site or bagged and given to community members for private residential use.

Roads will be graveled but will not be graded first as an active archaeological avoidance measure. Hardening of roads will provide a firebreak and reduce the risk of fire from vehicle exhausts coming in contact with dry grasses in these areas.

The Applicant will apply fireguard coating to the exterior of a new construction barn. Construction of the barn itself is not included in this project. The new construction barn replaces a previous barn structure lost to wildfire.

FEMA has determined that the Area of Potential Effect (APE) for the proposed Undertaking shall include the footprint of the project based on the scale and nature of the undertaking, as well as the area reasonably required to stage materials. The APE consists of the property boundaries of the Los Luceros Historic Site, and area of approximately 144 acres.

On April 3, 2023, FEMA historic preservation staff Angela McComb performed a cultural records search using SHPO’s NMCRIS system and associated site files, photographs, and maps to identify historic properties and districts in the area. According to the databases listed above, Rancho Los Luceros is a listed property on the National Register of Historic Places (NRHP). The hacienda complex is noted as one of the most complete of 19th century haciendas in northern New Mexico. Contributing elements to the NRHD include the Hacienda, chapel, jail (now storehouse), Victorian Cottage and Guest House (now Staff Housing). These properties are clustered to the center portion of the rancho. Additionally, the archaeology of the rancho demonstrates inhabitation of the area dating to c. 1350. Rancho Los Luceros is listed on the NRHP under Criterion D for its ability to inform our understanding of prehistoric and early Spanish Colonial settlement patterns.

Table 1: Structures located with the APE

Name	Date of Construction	NRHD Status	Lat/Long	Work Proposed
Visitor Center	2006	Non-contributing	36.117293, -106.03957	8 ft. defensible space
Staff Offices	1980	Non-contributing	36.118438, -106.03869	8 ft. defensible space
Victorian Cottage - commercial/Business/Museum	1902	Contributing	36.118202; -106.03883	8 ft. defensible space
Chapel	Late 19 th cent.	Contributing		None
River House	1992	Non-contributing	36.119492, -106.04411	8 ft. defensible space
Storehouse/Alamacen (Alcemon)/"Jail"	1808	Contributing	36.118496, -106.04131	8 ft. defensible space
Hacienda/Casa Grande	Historic building and on the National register. It is now a museum space for interpreting the previous use of the property. Built 1775	Contributing	36.118154, -106.04081	8 ft. defensible space
Proposed Barn	New Build	Non-contributing	36.11697, -106.04041	Fireguard coating
Staff Housing/Guest House	Southern apartment was constructed in	Contributing	36.118719, -106.04101	8 ft. defensible space

	1900, add on of northern apartment in 1982			
Manager's Residence	2006	Non-contributing	36.1177, -106.03926	
Video Room	2006	Non-contributing	36.117122, -106.03975	
Community Room/Gallery	2005	Non-contributing	36.117251, -106.03981	
Bathhouse	2010	Non-contributing	36.1178486, -106.04026	
Commercial Kitchen	2009	Non-contributing	36.1170177, -106.03969	
Chabot Shed/Carport	1940; converted 1982	Non-contributing	36.118842, -106.04141	8 ft. defensible space
West Garden Storage	1995	Non-contributing	36.118271, -106.04114	
West Garden Storage Garage with Carports	1999	Non-contributing	36.1184987, -106.04151	
Restrooms	2006	Non-contributing	36.117232, -106.03942	

Historic Structures and Landscapes

The Rancho Los Luceros Historic District includes five contributing buildings, as described by the 1970 NR Nomination form, “a large, two-storied, double-galleried house in the American plantation style, a Late Victorian Cottage, a chapel, a flat-roofed building said to have been used for a time as a jail, and a guest house... The buildings feature the architectural style of the Territorial Period of the second half of the 19th century. Mary Cabot Wheelwright, an important collector and founder of the Wheelwright Museum of the American Indian in 1937, had remodeled some of the properties in the 1920s in the Spanish/Colonial-Pueblo Revival Style. The National Register Nomination form also calls out a single building as explicitly not-contributing to the historic district: an adobe machine shop converted into an office building in 1982. Rancho Los Luceros was also known by the name Morning Star Ranch. The Hacienda area may have been occupied as early as 1350 A.D., though the current structures on site date to 1775 at the earliest.

Damages sustained to the Rancho as a result of the wildfire include the burning of vegetative fuels in and around the Rancho, as well as the destruction of a non-historic barn. The integrity of the historic properties within the Rancho was fortunately not seriously impacted by the fire and the site retains its eligibility for listing in the National Register. The building descriptions below are taken from the 1970 NR Nomination Form.

Hacienda/Casa Grande/Los Luceros Ranch House

The NR Nomination describes the Los Luceros Ranch House as “one of the best preserved 19th century haciendas in northern New Mexico. The house is a nearly square, two-level, flat-roofed, adobe building surrounded by a two-level gallery...The present form of the Ranch House is of the Greek Revival Style, but its thick adobe walls apparently incorporate portions of the walls of an 18th century Spanish rancho which had been erected on the ruins of a prehistoric Indian dwelling site. The original Spanish Rancho was a fortress-like Indian outpost of solid adobe walls that enclosed living quarters, storerooms and stables in one structure. Only a chapel, preceding the Capilla described below, was a separate building... The earlier Spanish rancho is said to have been built by Captain Sebastian Martin Serrano on his extensive land grant obtained in 1703.”

Abel Lucero Late Victorian Cottage/Museum

The Abel Lucero Cottage is a late Victorian farmhouse, constructed in 1902, which “combines New Mexico building materials and techniques with design and decorative detailing derived from the architectural styles of ‘The States’.” The cottage is described in the NR Nomination as a “one-and-a-half story cottage has shingled, cross-gabled roofs with boxed eaves. The plan is L-shaped on two sides, with hip-roofed porches supported by decorative turned posts in each L... The principal door had double-arched glazed openings. The interior woodwork has fluted moldings and incised decoration. The traditional arched adobe fireplaces are boxed with wooden mantels decorated with Classical Style pilasters. A lean-to addition was made to the rear (north) side of the house not long after the house was built.”

Storehouse/Alamacen/”Jail”

The Storehouse, (or Alamacen, and sometimes referred to as the “Jail”) is “[b]uilt of adobe, it is narrow and rectangular. The flat roof is supported by *vigas* that project from the wall on the west side. The building was modified in the 20th century to serve as a cold storage unit and a garage. A cement cold storage area was built in portion of the interior. A large opening was made in the narrow north end of the building and double garage doors were installed. This north end originally had no openings, on a *canale* projecting below the roofing... Old photographs have not been found that show the original fenestration, but Spanish Colonial Revival Style windows were given to the building during the Wheelwright renovations of the 1920s. Mary Wheelwright obtained a fine Folk Territorial door from the Chimayo area and placed it in the east facade of the building, facing the main house. This door is an outstanding example, comparable to the work of Gregorio Ortega of Truchas who did the doors now in place at the Chapel. The door is unusually intricate, with cross designs in the lower panels, star-shaped panels composed of eight pieces of diamond-shaped wood in the upper panels, and a double row of dentils on the corniced lintel... The new owners ...have more closely restored the original appearance of the building by removing the cement cold storage area and the garage doors, closing in the north end, and placing the Territorial door, with a small window, in that end. They enclosed the opening left by the removal of the door from the east façade.”

Staff Housing/Guest House

The Guest House, now serving as staff housing, consists of a “a simple one-story, L-shaped adobe building with a recent addition at the rear incorporating a former carriage house. The addition and alterations to the exterior of the carriage house are in the architectural style of the guest house, do not detract from the appearance of the guest house, and are not visible from the road.” The guest house’s southern apartment was constructed in 1900, with the addition of the northern apartment in 1982.

Chabot Shed/Carport

Built in the 1940s and converted to office space in 1982, this property is non-contributing to the Historic District.

Chapel/Capilla de Nuestra Senora de Guadalupe

Although a part of the National Register Historic District, the Chapel is independently owned and operated as an active religious facility. The present Chapel, Capilla de Nuestra Senora de Guadalupe, was preceded by an earlier chapel, Nuestra Senora de la Soledad, constructed in the 18th century. The current Chapel “retains its original appearance and is in good condition.... It is a typical example of northern New Mexico chapels of the second half of the 19th century, with gabled façade, polygonal apse, and small sacristy projecting at one side. The walls are adobe, and a wooden belfry surmounts the shingled roof... An unusual feature of this chapel is the stepped-up roof at the apse end rather than clerestory window.” Renovations to the chapel include the installation of double doors in 1964. The

doors were salvaged from the house of Policarpio Romeo in Panasco, and “are typical of the traditional folk art that once flourished in New Mexico and the finest of their type to survive. They were made in the 1870s by Gregorio Ortega... the two-ply construction is decorated with green-painted shapes of crosses, diamonds and squares, all compiled with mitred sections of one type of planed moulding.”

Los Luceros Ditch

The NR Nomination claims that the present “Los Luceros Ditch”, also called Acequia Madre (mother ditch) or Alcalde Ditch, was commissioned by Sebastian Martin Serrano in the 1700s. The ditch is 14 feet wide and runs approximately 8 miles, cutting through the Apple Orchard in the southwestern portion of the APE. The irrigation ditch allowed for the planting of the Apple Orchard, a cornfield, and a small garden of chile and onions and allowed for the ranching of sheep, cattle and horses. The ditch was dug using the labor of the people of Okhay Owingeh, which was compensated for with the return of lands usurped by Sebastian Martin Serrano, the original land grant owner. Current research being conducted indicates that the ditch may pre-date Spanish settlement.

The Los Luceros Ditch is a recorded archaeological site (LA122393) and is Eligible for Listing in the National Register of Historic Places under Criteria A and D, according to a 1998 site form for LA122393.

Apple Orchard

The establishment of the Los Luceros ditch allowed for the planting of the Apple Orchard, which is still cultivated to today. The Apple Orchard is not listed as a contributing element of the Historic District but should be considered an active and important part of the cultivated landscape surrounding the Rancho.

Bosque

Similar to the Apple Orchard, recorded management of the large bosque of cottonwood trees dates back to the Spanish settlement in the 1700s. The bosque is still actively managed today.

Archaeology

Human occupation of the Los Luceros Historic site likely dates to at least c.1350-1550, according to the dating of Biscuit A & B ceramics on site. Late prehistoric occupation is likely associated with the ancestral Tewa people of Phiogeh (LA #144), which is located immediately southwest of the APE. The site may have served as a seasonal fishing and farming settlement. Historic ceramics collected at the site date from c. 1625 through the early 1900s and consist of diverse types produced by various pueblos throughout the region and indicate continuous occupation by the Spanish. Local tradition indicates the Rancho may have been the location of a small fortified Spanish outpost before the land grant to Captain Sebastian Martin Serrano (in joint ownership with Felipe Antonio Sisneros and later contested by Sisneros’s heirs) in 1703. The land grant originally contained more than 50,000 acres.

In addition to the archaeological aspects of Rancho Los Luceros itself, the area has a dense scatter of archaeological sites. Three sites overlap the APE and numerous additional sites are located on either side of the Rio Grande River.

Table 2: Archaeological sites within the APE

Site	Description	NR Eligible	Location
LA122393	Los Luceros Acequia	Eligible, Criterion A	Overlaps APE
LA37549	Rancho Los Luceros	Eligible, Criterion D	Overlaps APE
LA144	Phiogeh	Potentially Eligible, Criterion D	Overlaps APE

Site LA122393 is the Los Luceros Ditch, which is described fully in the Historic Structures and Landscapes section, above. Impacts to the ditch are anticipated to be minimal, as the majority of potentially ground disturbing tree removal will occur within the Bosque, in the northern portion of the APE while the ditch runs through the southern portion.

Site LA37549 is the archaeological designation for Rancho Los Luceros, which is has been Listed on the NRHP under Criterion D and is substantially described above. While the Applicant proposes to perform ground disturbing work in the form of tree and rootball removal, the overall impact of the work will be to remove flammable fuels from the site and protecting the historic properties contained within. Additionally, the removal of invasive species introduced to the site will help to enhance the integrity of the site by returning the landscape to a more historically accurate condition. The arborist will evaluate individual trees within the Historic District for their safety and health, prioritizing the conservation of ornamental trees dating to 100 years ago and particularly the Siberian elms planted in the 1930s, in order to retain the feeling of these periods of significance.

Site LA144 is Phiogeh (also called Pfiogeh, Piogeh, Popobi), the location of an ancestral Tewa settlement associated with the Pueblo of Ohkay Owingeh and containing numerous domestic features and including human burials. The archaeological record of this site is poorly documented, and research is currently ongoing. The eligibility for listing for this site has apparently not been determined; however, the close association with the indigenous settlement of the area and condition of the site indicate that it is potentially Eligible for Listing under Criterion D for the potential to yield information regarding the earliest settlement of the area. Impacts to this site are anticipated to be minimal as the site is located in the southern portion of the APE, away from the vegetative removal occurring mainly in the Bosque.

Soils within the APE consist of a band of riparian riverine soils bordering the river to the north, and silty loams to the south. Rancho Los Luceros has seen some recent development in the construction of the Visitor's Center (which houses the majority of the site's newer amenities). Soils throughout the APE are generally superficially disturbed through the historic and modern management of the Apple Orchard and Bosque and may contain unrecorded deposits or features.

The Applicant is a subdivision of the New Mexico Department of Cultural Affairs, Historic Sites program and can provide SOI-qualified archaeological staff in-house to monitor any work, if required. The Applicant has constructed the scope of work to be maximally sympathetic to the historic properties on the site, including not grading modern roads before hardening and limiting vegetation removal to invasive trees and fuels. The overall impact of the project will be to protect the affected historic properties from the catastrophic damages resulting from potential future wildfire.

Based on the information provided, FEMA has determined that there will be **No Adverse Effects** as a result of the proposed Undertaking.

We respectfully request concurrence with this determination. An aerial map and photos showing the project location and proposed work, as prepared by the Applicant, are attached. Your prompt review of this project is greatly appreciated. Should you need additional information please contact Angela A. McComb, Historic Preservation Specialist at angela.mccomb@fema.dhs.gov or (202) 717-1443.

Sincerely,


**DOROTHY K
COOK**

 Digitally signed by DOROTHY K
COOK
Date: 2023.07.26 11:05:41 -05'00'

Dorothy Cook
Acting Regional Environmental Officer
FEMA Region 6

Concur, No Adverse Effect

**Michelle
Ensey**

 Digitally signed by
Michelle Ensey
Date: 2023.08.21
15:27:08 -06'00'

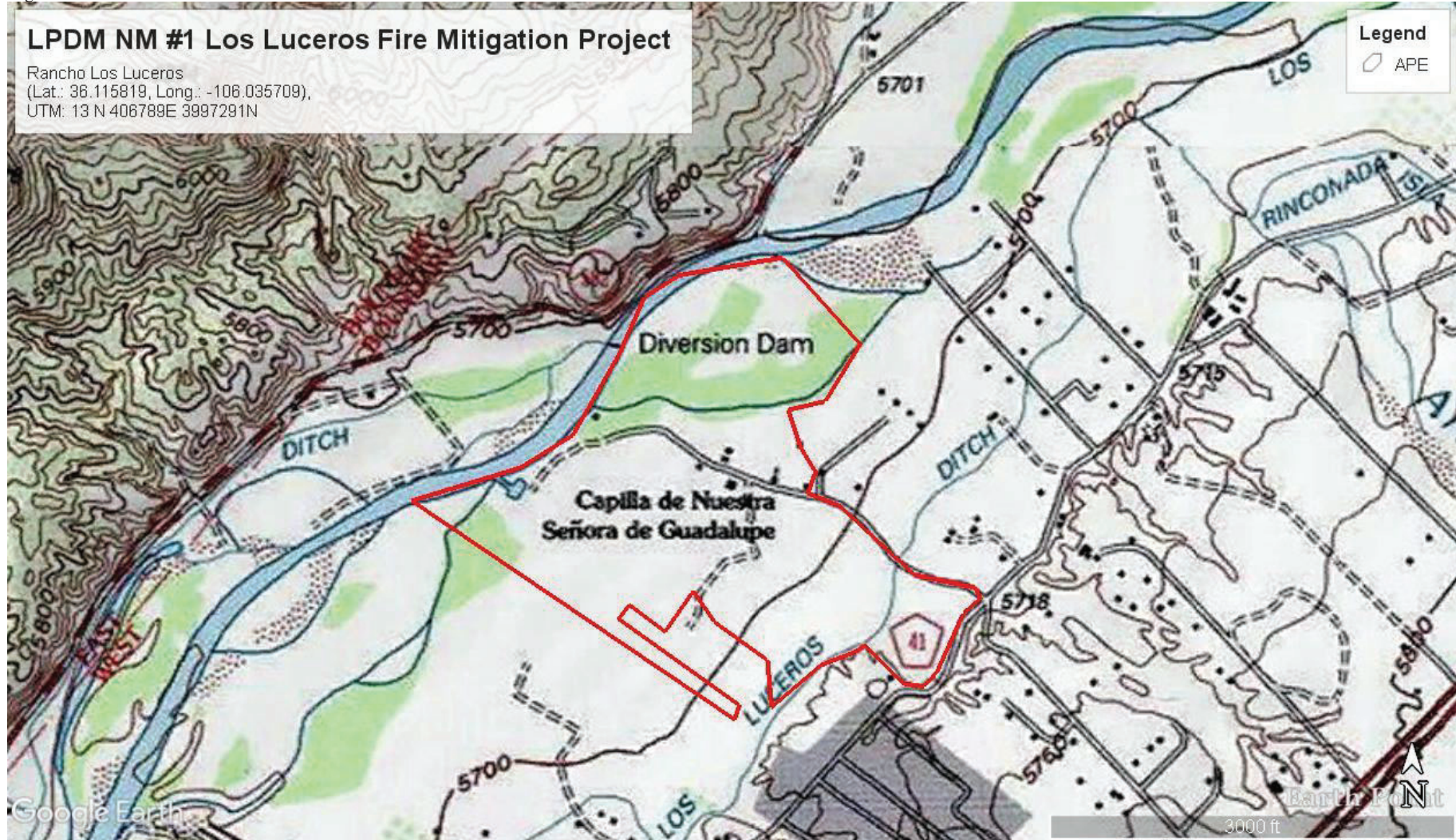


Figure 1: Topographic map showing APE (red boundary). Image via Google Earth, 2023.



Figure 2: Aerial image showing APE (red boundary). Image via Google Earth 2023.



Figure 3: Aerial image showing locations of buildings within the APE (red boundary). Image via Google Earth, 2023.

REDACTED

Figure 4: Topographic map showing APE (red boundary) and nearby archaeological sites. Image via NM CRIS, 2023.



Figure 5: Aerial image showing property boundary (yellow) and historic district (red box). Image via Applicant, 2023.



Figure 6: Aerial image showing APE (red boundary) and soils (yellow). 18 is Abiquiu Peralta, 0-3 percent slopes, sandstone derived alluvium associated with toeslopes in floodplains. 11 is Fruitland sandy loam, 0-3 percent slopes, sandstone-derived alluvium, associated with stream terraces and alluvial fans in uplands. 151 is Rizito-Fruitland complex, 1-5 percent slopes, sandstone derived aeolian deposits associated with dunes in uplands. Image via Google Earth, 2023.

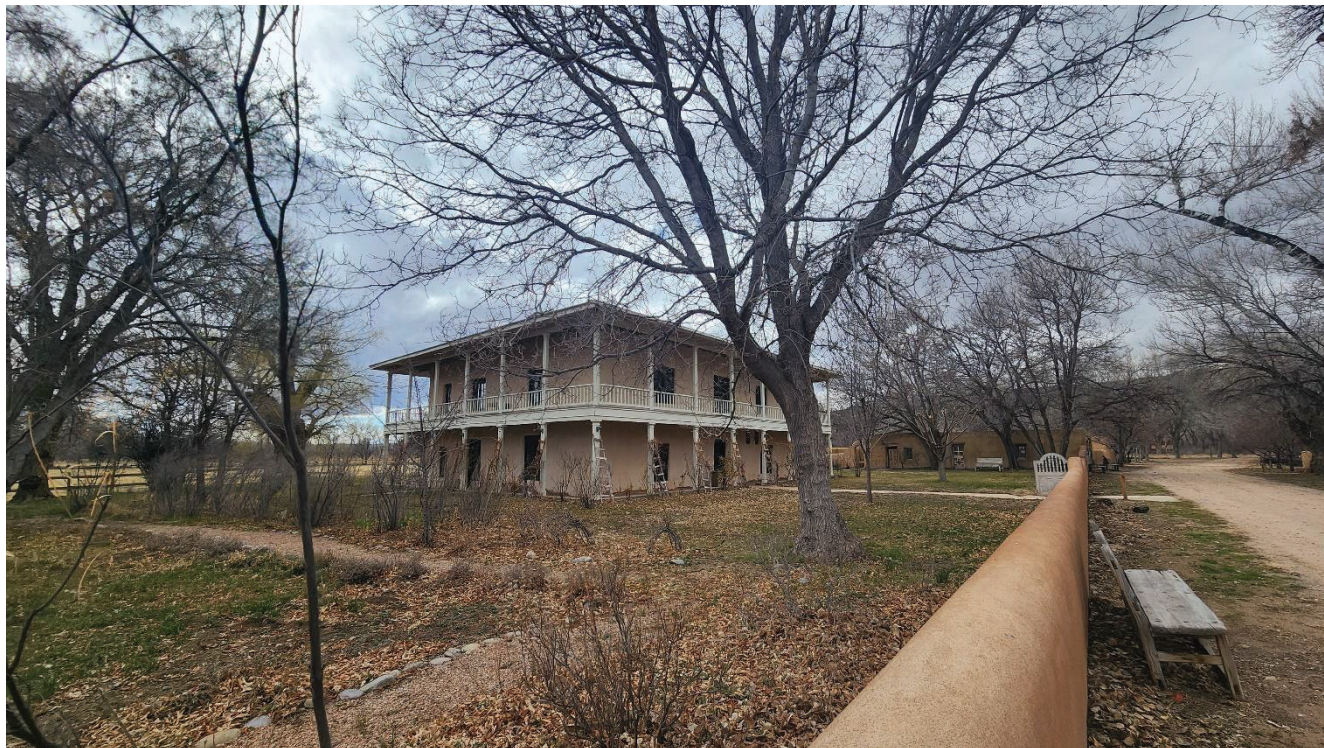


Figure 7: View southwest of Hacienda. Image via Applicant, 2023.



Figure 8: View northeast of Hacienda. Image via Applicant, 2023.



Figure 9: View north of Victorian Cottage. Image via Applicant, 2023.



Figure 10: View south-southeast of Victorian Cottage. Image via Applicant, 2023.



Figure 11: View northwest of Storehouse. Image via Applicant, 2023.



Figure 12: View east of Storehouse. Image via Applicant, 2023.



Figure 13: View east of Staff Housing and Chabot shed (left). Image via Applicant, 2023.



Figure 14: View southwest of Staff Housing. Image via Applicant, 2023.



Figure 15: View east of Chapel. Image via Applicant 2023.



Figure 16: View north of Chapel. Image via Applicant, 2023.



Figure 17: View north of non-contributing shed. Image via Applicant, 2023.



Figure 18: View north-northeast of River House and Bosque. Image via Applicant, 2023.

From: [Bernstein, Bruce](#)
To: [Scoggin, Robert](#)
Subject: RE: FEMA_Sec 106_LPDM NM-1_Los Luceros Fire Mitigation - Pueblo of Pojoaque
Date: Thursday, July 27, 2023 12:44:23 PM
Attachments: [image002.png](#)
[image003.png](#)

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Please select the Phish Alert Report button on the top right of your screen to report this email if it is unsolicited or suspicious in nature.

Dear Mr. Scoggin,

The Pueblo of Pojoaque appreciates the careful in document prepared for the Los Luceros property and concurs with your findings.

There is one aspect of your findings that may be interesting to pursue a bit further, the large cottonwood in the apple orchard. As you are aware Maria Chabot planted and cared for the orchard, as well as served as mayordorma. Perhaps the cottonwood tree has some significance to her role as the Los Luceros caretaker? Just a thought.

Bruce Bernstein, PhD
Tribal Historic Preservation Officer
P'osuwaegeh Owingeh - Pueblo of Pojoaque
O: 505-455-5505
C: 505-795-6152



This message is intended only for the use of the individual or entity to which it is addressed and may contain legally privileged and/or confidential information. If you are not the intended recipient(s), or the employee or agent responsible for delivery of this message to the intended recipient(s), you are hereby notified that any dissemination, distribution or copying of this message is strictly prohibited. If you received this message in error, please immediately notify the sender by return e-mail or by telephone and delete this message from your computer.

From: Scoggin, Robert <robert.w.scoggin@fema.dhs.gov>
Sent: Thursday, July 27, 2023 7:56 AM
To: Bernstein, Bruce <bbernstein@pojoaque.org>
Subject: FEMA_Sec 106_LPDM NM-1_Los Luceros Fire Mitigation - Pueblo of Pojoaque

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

COMANCHE NATION



U.S. Department of Homeland Security-FEMA Region 6
Attn: Mr. Robert W. Scoggin
800 N. Loop 288
Texas 76209

August 29, 2023

Re: Section 106 Review Consultation,
LPDM NM #1 Los Luceros Fire Mitigation Project
Rancho Los Luceros, Rio Arriba County, New Mexico 87566
(Lat.: 365.115819, Long.: -106.035709)

Dear Mr. Scoggin:

In response to your request, the above reference project has been reviewed by staff of this office to identify areas that may potentially contain prehistoric or historic archeological materials. The location of your project has been cross referenced with the Comanche Nation site files, where an indication of "**No Properties**" have been identified. (IAW 36 CFR 800.4(d)(1)).

Please contact this office at (580) 492-1153) if you require additional information on this project.

This review is performed in order to identify and preserve the Comanche Nation and State cultural heritage, in conjunction with the State Historic Preservation Office.

Regards

Comanche Nation Historic Preservation Office
Theodore E. Villicana , Technician
#6 SW "D" Avenue, Suite C
Lawton, OK. 73502



United States Department of the Interior



FISH AND WILDLIFE SERVICE

New Mexico Ecological Services Field Office
2105 Osuna Road NE
Albuquerque, New Mexico 87113
Telephone 505-346-2525 Fax 505-346-2542
www.fws.gov/southwest/es/newmexico/

March 13, 2024

Consultation No. 2023-0115709

Christopher Dooley, Acting Regional Environmental Officer
FEMA Region 6
800 North Loop 288
Denton, TX 76209-3698

Dear Mr. Dooley,

Thank you for your September 21, 2023, letter requesting formal consultation with the U.S. Fish and Wildlife Service (Service) pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act), for the Los Luceros Fire Mitigation Project funded by the Federal Emergency Management Agency (FEMA) with project implementation overseen by the New Mexico Department of Cultural Affairs. The proposed action would conduct defensible space actions, hazardous fuels reduction, and ignition-resistant retrofitting measures at the Los Luceros Historic Site in Rio Arriba County, New Mexico. Your letter included a biological assessment, dated September 2023, which analyzed the effects of the proposed action to the endangered New Mexico meadow jumping mouse (*Zapus hudsonius luteus*, “jumping mouse”), endangered southwestern willow flycatcher (*Empidonax traillii extimus*, “flycatcher”), the threatened yellow-billed cuckoo (*Coccyzus americanus*, “cuckoo”), and critical habitat for the flycatcher and cuckoo. No designated critical habitat for the jumping mouse occurs within the project area, therefore none will be affected as part of the proposed action.

Southwestern Willow Flycatcher, Yellow-billed Cuckoo, and their Critical Habitats

FEMA determined that the Los Luceros Fire Mitigation Project “*may affect, is not likely to adversely affect*” the flycatcher, the cuckoo, and their designated critical habitats. Critical habitat for the flycatcher occurs on approximately 72 acres (29 hectares (ha)) and critical habitat for the cuckoo occurs on approximately 102 acres (41 ha) within the riparian bosque portion of the project area. Both flycatchers and cuckoos have been observed within the project area.

Flycatchers breeding territories are known to occur along portions of the Rio Grande River south of the project area but have not been observed within the project area. Physical and biological features (PBFs) of flycatcher critical habitat occur within cottonwood and willow-dominated riparian areas found selectively along the Rio Grande River and adjacent bosque and include a diversity of insect prey species which are present within portions of the project. The proposed project would occur directly in approximately 44 acres (18 ah) of designated critical habitat. The primary disturbance from the proposed project to the flycatcher and its critical habitat is expected to be in the form of changes to foraging and nesting habitat.

PBFs of cuckoo critical habitat occur within the project area and include riparian woodlands within broad floodplains and open riverine valleys with dense vegetative cover. While breeding has not been formally documented for the cuckoo within the proposed project area, suitable breeding habitat does exist. The proposed project would occur directly in approximately 54 acres (22 ha) of designated critical habitat. The primary disturbance from the proposed project to the cuckoo and its critical habitat is expected to be in the form of changes to foraging and nesting habitat.

Portions of the project will be conducted in riparian areas, resulting in the temporary loss of foraging and nesting habitats for the flycatcher and cuckoo and disruption to the vegetative successional process due to trampling and disturbance of riparian plants. Additional disturbance to these two species will be in the form of increased human presence and the use of heavy machinery in upland areas adjacent to flycatcher and cuckoo critical habitats during the breeding season. Noise disturbance occurring in these upland areas during early morning and late afternoon hours can disrupt flycatcher and cuckoo nesting activities. However, multiple conservation measures have been identified to minimize or eliminate effects to these species and their critical habitats (SWWF-YBC 1-3).

We concur with the determination that the proposed project “*may affect, is not likely to adversely affect*” the flycatcher, the cuckoo, and their designated critical habitats based on the following project features: the proposed action will only temporarily degrade existing suitable riparian habitat and all work within riparian habitats will be conducted outside of the breeding season when the species are not present. In addition, vegetation management actions will strive to leave native riparian vegetation in place, removing only dead or downed materials and non-native or invasive vegetative species that pose a fire hazard to the historic properties. A biological monitor will also be present when work is conducted in or within 500 feet of designated critical habitat to ensure that appropriately sized patches of dense shrub/lower canopy vegetation that provide suitable nesting habitat for the flycatcher and cuckoo are retained.

Our concurrence for the above species for the Los Luceros Fire Mitigation Project remains valid until the project is complete or if: 1) new information reveals changes to the action that may affect listed species or critical habitat in a manner or to an extent not previously considered, 2) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not previously considered, or 3) a new species is listed or critical habitat designated that may be affected by the action.

New Mexico Meadow Jumping Mouse

FEMA determined that the project “*may affect, is likely to adversely affect*” the New Mexico meadow jumping mouse. The attached biological opinion is based on our review of the proposed action and its effects on the jumping mouse in accordance with section 7 of the Act. The biological opinion is based on information provided in the biological assessment, correspondence with your staff, data in our files, a literature review, and other sources of information, including the final rule to list the jumping mouse as endangered (Service 2014a). Literature cited in the attached biological opinion is not a complete bibliography of all literature available on the species of concern, the project and its effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at the New Mexico Ecological Services Field Office.

In the biological assessment, FEMA also included a determination of “*no effect*” for the threatened Mexican spotted owl (*Strix occidentalis lucida*) and candidate Silverspot butterfly (*Speyeria nokomis nokomis*) that may occur within the action area. These determinations were made because the project area does not contain suitable habitat for these species and these species are not known to occur at the historic site. Although the Act does not require Federal agencies to consult if the action agency determines their action will have “no effect” on threatened or endangered species or designated critical habitat (50 CFR 402.12), we appreciate your consideration for the conservation of these species and notification of your “*no effect*” determinations.

We appreciate your efforts to identify and minimize effects to listed species from implementing fire mitigation activities at the Los Luceros Historic Site. For further information, please contact Janelle Alleman of my staff at 505-527-0046 or janelle_alleman@fws.gov. Please refer to consultation number 2023-0115709 in future correspondence concerning this project.

Sincerely,

JODIE
MAMUSCIA

Digitally signed by
JODIE MAMUSCIA
Date: 2024.03.13
15:15:17 -06'00'

Shawn Sartorius
Field Supervisor

cc: (electronic)

Senior Environmental Specialist, Federal Emergency Management Agency, Region 6 Mitigation
Division, Denton, Texas

Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico

Director, New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division,
Santa Fe, New Mexico

Regional Species Lead Biologist (New Mexico Meadow Jumping Mouse), Fish and Wildlife
Biologist, U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office,
Albuquerque, New Mexico

**BIOLOGICAL OPINION FOR THE
LOS LUCEROS FIRE MITIGATION PROJECT**

**Los Luceros Historic Site
Rio Arriba County
New Mexico**

2023-0115709

March 2024

**JODIE
MAMUSCIA**

Digitally signed by
JODIE MAMUSCIA
Date: 2024.03.13
15:16:42 -06'00'

Shawn Sartorius
Field Supervisor
New Mexico Ecological Services Field Office

Date

BIOLOGICAL OPINION

INTRODUCTION

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion concerning the effects of fire mitigation activities on the federally-listed endangered New Mexico meadow jumping mouse (*Zapus hudsonius luteus*, "jumping mouse") resulting from the Low Luceros Fire Mitigation Project within the Los Luceros Historic Site funded by the Federal Emergency Management Agency (FEMA) with implementation overseen by the New Mexico Department of Cultural Affairs (a.k.a. subapplicant), in accordance with section 7 of the Endangered Species Act of 1973 (16 USC 1531-1544), as amended (Act).

A biological opinion is a document that states the Service's opinion as to whether a federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of designated critical habitat. "Jeopardize the continued existence of" means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR § 402.02). "Destruction or adverse modification" is defined as a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species (50 CFR § 402.02; 84 FR 44976-45018).

On September 21, 2023, we received FEMA's letter (dated the same day) requesting formal consultation. The letter included a biological assessment dated September 2023 that analyzed effects to listed species from implementing fire mitigation activities at the Los Luceros Historic Site (proposed action). FEMA determined that the proposed action "*may affect, is likely to adversely affect*" the jumping mouse. Critical habitat for the jumping mouse does not occur within the action area, thus none will be affected by the proposed action and will not be analyzed in this opinion.

This biological opinion is based on information provided in the biological assessment, correspondence with your staff, data in our files, a literature review, and other sources of information, including the final rule to list the jumping mouse as endangered (Service 2014a). Literature cited in the biological opinion is not a complete bibliography of all literature available on the species of concern, the project and its effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at the New Mexico Ecological Services Field Office.

CONSULTATION HISTORY

The consultation history for the proposed action is summarized in Table 1.

Table 1. Consultation history for the Los Luceros Fire Mitigation Project.

<u>Date</u>	<u>Event</u>
August 10, 2023	A species list generated from the Information for Planning and Consultation website by (consultation code 2023-0115709).
September 21, 2023	FEMA submitted a letter and biological assessment (BA) requesting consultation with the Service.
October 23, 2023	The Service requested shapefiles of the project and an appendix referenced in the BA.
October 25, 2023	FEMA emailed the project shapefiles and appendix to the Service for inclusion into the consultation request.
March 13, 2024	The final biological opinion was e-mailed to FEMA by the Service.

DESCRIPTION OF THE PROPOSED ACTION

A grant application from the New Mexico Department of Cultural Affairs to conduct fire mitigation projects at the Los Luceros Historic Site in Rio Arriba County, New Mexico, was submitted to FEMA. FEMA proposes to fund the grant to implement the proposed action with implementation being overseen by the New Mexico Department of Cultural Affairs (subapplicant). The proposed action consists of multiple activities to develop defensible space around multiple structures at the Los Luceros Historic Site, implement vegetation management and hazardous fuels reduction across the property, and retrofit a structure with ignition-resistant measures.

Developed Areas and Orchards

Defensible space activities would occur around 9 structures within the project area, one of which is the Visitor's Center which comprises multiple small buildings clustered together. All structures that would receive defensible space treatments are situated within the Developed Areas, as indicated on Figure 1. Defensible space work will vary based on distance from the structure being protected. Near structure (0-5 feet (ft); 1.5 meters (m)) activities may include, but are not limited to, clearing litter and removing flammable materials. Within 30 ft (9 m) of a structure, activities may include, but are not limited to, removing ladder fuels, trimming trees, thinning trees and shrubs to increase distance between clusters, and replacing gravel on surface areas to reduce weeds. Activities that may be implemented for areas 30-200 ft (9-61 m) from a structure include, but are not limited to, removing litter from around outbuildings, removing trees or shrubs growing in between desired clusters of trees and shrubs, trimming trees, and thinning trees and shrubs. The distance between and the tree and shrub clusters will increase, and the size of clusters will decrease as the distance to a structure decreases to further reduce the potential for fire to spread among and between tree/shrub clusters. Invasive or non-native species may be

removed throughout the developed areas and orchards. Orchards would also be trimmed, and ladder fuels removed to increase space between tree canopies.

Within the Developed Areas, a new barn will be built to replace a barn that was lost to the Hermits Peak Calf Canyon Fire. The building of the barn is not part of this proposed action; however, once the barn is rebuilt it will have a fire-retardant sealant applied to the outside to inhibit future fire risk. The barn location has not been established but will be rebuilt in one of the Developed Areas (Figure 1).

Bosque Vegetation and Hazardous Fuels Management

Vegetation treatments within Bosque Areas (Areas A-C; Figure 1) may include, but is not limited to, thinning from below, selective removal of vegetation including trees that are contributing to ladder fuels, removal of invasive or non-native vegetation species such as Russian olive (*Elaeagnus angustifolia*), tamarisk (*Tamarix* spp.), Siberian elm (*Ulmus pumila*), and white mulberry (*Morus alba*), and thinning treatments of trees that are small in diameter (less than 12 inches (30 centimeters (cm)) diameter at breast height (dbh)), have disease or insect damage, or have poor growth characteristics that may weaken the tree. Some trees larger than 12 inches (30 cm) dbh may be removed if they exhibit damage from insect, disease, or have poor growth characteristics but the removal of large trees would occur infrequently.

Work would be performed using mechanical mulching equipment or heavy equipment equipped for grubbing or grinding, chainsaws, and smaller hand tools. Heavy equipment would not be used near waterways, rather chainsaws and hand tools would remove target vegetation that may then be masticated. Native woody species would be cut to ground level and retained to prevent soil erosion, but invasive or non-native woody species would be cut to ground level and the stump either ground or grubbed (pulled from the ground) to prevent resprouting. No herbicide would be used.

Project Implementation and Maintenance

The proposed action will be implemented over an approximately 11-month timeframe, although seasonal work restrictions are expected to increase the total duration of project implementation to just under 2 years. Activities conducted in the developed areas and orchard are expected to take about 6 months to complete, with long term maintenance occurring annually after initial treatments are completed. Work in the bosque will take approximately 4 months with maintenance occurring as needed after the initial treatments are completed. FEMA has incorporated avoidance and minimization measures (a.k.a. conservation measures) into the proposed action that includes seasonal work restrictions when listed species may occur within the action area. Thus, although the proposed action is expected to be implemented consecutively, there may be breaks in the work schedule to accommodate seasonal restrictions.

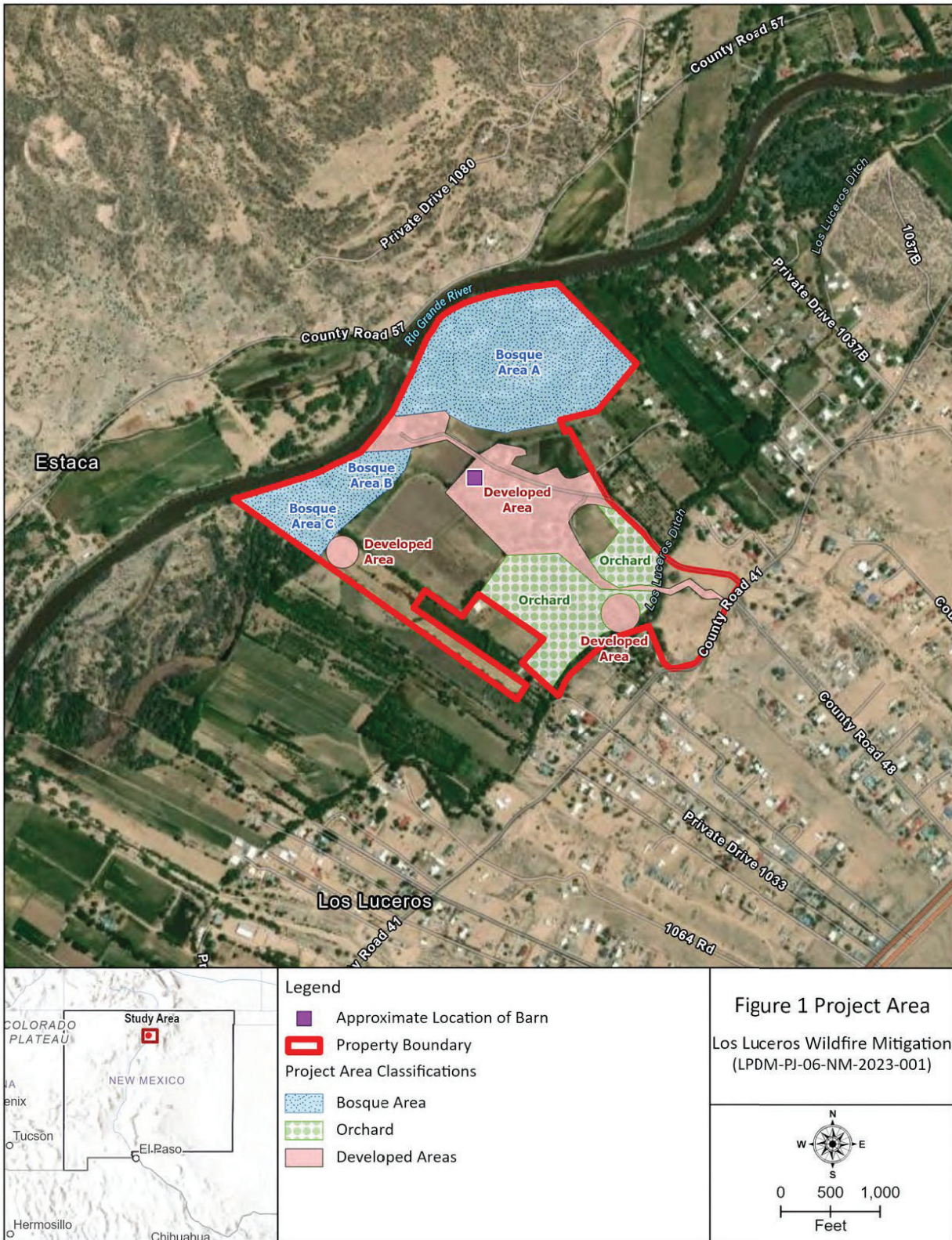


Figure 1. Project area for the Los Luceros Historic Site. The site has been divided into treatment areas with developed areas having a higher priority than other areas at the site.

*Conservation Measures**General Avoidance and Minimization Measures*

GEN-1 Erosion and Sediment Control Measures: Best management practices will be implemented to prevent erosion and sedimentation into nearby waterways. These will include equipment storage and staging practices to minimize erosion and sedimentation and avoiding soil or water contamination. Disturbed soils at the site will undergo erosion control treatment before the rainy season starts and after project activities are terminated. Treatment may include temporary seeding and sterile straw mulch.

GEN-2 Equipment and Staging: Equipment will be inspected daily for spillage. Equipment will be cleaned daily to reduce the risk of spreading disease or invasive plant material. Staging areas will be located at least 100 ft (30 m) from any surface waters. Staging sites will be flagged appropriately, and the contractors will develop written protocols to address spills or possible contamination of soils.

GEN-3 Equipment Operation and Maintenance: To the extent practicable, equipment will be operated in previously cleared areas or where vegetation is sparse, and all efforts will be made to minimize damage to native riparian vegetation. Well-maintained equipment will be used to perform the work and, except in the case of a failure or breakdown, equipment maintenance will be performed off-site. Equipment will be inspected daily by the operator for leaks or spills. If leaks or spills are encountered, the source of the leak will be identified, leaked material will be cleaned up, and the cleaning materials will be collected and disposed of properly.

Vehicles and equipment that are used during the course of a project will be fueled and serviced in a “safe” area (i.e., outside of riparian areas), at least 200 ft (61 m) from waterbodies, in a manner that will not affect federally listed species or their habitats. Spills, leaks, and other problems of a similar nature will be resolved immediately to prevent unnecessary effects on federally listed species and their habitats. A plan for the emergency cleanup of any spills of fuel or other material will be available on-site, and adequate materials for spill cleanup will be maintained on-site.

GEN-4 Environmental Awareness Training: Employees and contractors will be provided with environmental awareness training by a qualified biologist. This training will familiarize personnel with the species that may occur on-site and their habitats, AMMs to be implemented to protect these species, and project boundaries. This training will be provided within 3 days of the arrival of any new worker. As part of the environmental awareness training, construction personnel will be notified that no dogs or other pets under control of construction personnel will be allowed in the construction area, and that no firearms will be permitted in the construction area, unless carried by authorized security personnel or law enforcement.

GEN-5 Debris Piling: Any temporary piles of downed vegetation and debris shall be located at least 900 ft (274 m) from the center of the river channel, or at least 66 ft (20 m) from the edge of rivers or streams, whichever is farther.

GEN-6 Waste Management: Work areas will be kept free of loose trash. All food waste will be removed from the site daily. All wastes, debris, rubbish, vegetation, and trash will be removed

from the site once the project is completed, and will be transported to an authorized disposal area, as appropriate, according to all federal, state, and local laws and regulations.

GEN-7 Dust Control: To reduce dust, all traffic associated with the Proposed Action will be restricted to a speed limit of 20 miles (32 kilometers (km)) per hour when traveling off highways or county roads. During project activities, water will be applied to disturbed ground that may become windborne.

GEN-8 Spill Prevention and Pollution Control Measures: The subapplicant will exercise every reasonable precaution to protect federally listed species and their habitats from pollution due to fuels, oils, lubricants, and pollutants such as construction chemicals. Water containing mud, silt, or other byproducts or pollutants from project activities will be treated by filtration, retention in a settling pond, or similar measures. Pollutants will be collected and transported to an authorized disposal area, as appropriate, per all federal, state, and local laws and regulations.

No petroleum product chemicals, silt, fine soils, or any substance or material deleterious to federally listed species will be allowed to pass into or be placed where it can pass into a stream channel. There will be no side-casting of material into any waterway.

The subapplicant will store all hazardous materials in properly designated containers in a storage area with an impermeable membrane between the ground and the hazardous materials. The storage area will be encircled by a berm to prevent the discharge of pollutants to ground water or runoff into the habitats of federally listed species. A plan for the emergency cleanup of any hazardous material will be available on-site, and adequate materials for spill cleanup will be maintained on-site.

New Mexico Meadow Jumping Mouse (NMMJM)

NMMJM-1 Biological Monitor: A Service-approved biologist who is familiar with the jumping mouse and its associated habitat will be responsible for ensuring compliance with the project description (including conservation measures) to minimize and avoid impacts to the federally endangered jumping mouse. The biological monitor will have the authority to halt or suspend all activities until appropriate corrective measures have been completed and will be required to report violations immediately to the Service. Biological monitoring responsibilities will include the following:

1. Advise all project-related staff (including contractors) on the appropriate implementation of the conservation measures.
2. Define the boundaries of areas containing suitable habitat within the action area.
3. Halt any and all activities in an area where it is determined that a potential unauthorized incidental “take” of jumping mice may occur.
4. Inspect work areas where jumping mouse habitat is present to ensure compliance with all conservation measures for the duration of the proposed action. In addition, monitor action areas, as appropriate, at the beginning and end of each day for compliance with all conservation measures. Periodically inspect access routes and stockpiling/staging areas for sign of jumping mice.

5. Notify FEMA, the Service, and subapplicant of any noncompliance with any conservation measure.
6. Conduct an initial environmental awareness program for all project-related staff.

NMMJM-2 Seasonal Avoidance: Project activities occurring within suitable jumping mouse habitat, as defined by the biological monitor, will only occur between September 1 and July 1, when the jumping mouse is expected to be hibernating.

NMMJM-3 Work Restrictions in Suitable Habitat: When working within suitable jumping mouse habitat (i.e., riparian areas along waterways with tall herbaceous vegetation and/or scrub and herbaceous vegetative cover, up to 360 ft (110 m) from the edges of waterways), workers will minimize ground disturbance by carefully walking through riparian and streamside vegetation, minimizing footsteps to avoid crushing vegetation and day nests used by mice. Where suitable jumping mouse habitat is present, as defined by the biological monitor, no heavy machinery will be operated within 66 ft (20 m) of the stream edge.

NMMJM-4 Encounters with the Species: Each encounter with a jumping mouse will be treated on a case-by-case basis. If a jumping mouse is found, the following will apply:

1. If a jumping mouse is detected within the action area, work activities around the individual that have the potential to result in the harm, injury, or death to the animal will cease immediately and the on-site biological monitor will be notified. Based on the professional judgment of the biological monitor, if project activities can be conducted without harming or injuring the jumping mouse, it may be left at the location of discovery and monitored by the biological monitor.
2. Contact with the individual jumping mouse will be avoided and it will be allowed to move out of the area of its own volition.

NMMJM-5 Riparian Herbaceous Vegetation Remains in Place: To the greatest extent practicable, tall herbaceous vegetation along waterways within the project area shall remain unmowed and undisturbed.

NMMJM-6 Daily Work Hours: Work activities will occur during daytime hours only. No nighttime lighting will be used.

DESCRIPTION OF ACTION AREA

The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR § 402.02). In delineating the action area, we evaluated the action's farthest-reaching physical, chemical, and biotic effects on the environment. The action area is typically more extensive than the area directly affected by the action. In this context, the action area for this consultation will include the portions of the Los Luceros Historic Site as described in the submitted biological assessment, including approximately 500 ft (152 m) from the exterior boundary of the historic property to account for noise generated during implementation of the proposed action.

The action area is situated east of the Rio Grande River and west of Country Road 41 in Los Luceros in Rio Arriba County, New Mexico. The proposed action would occur on the Los Luceros Historic Site property, which is approximately 148 acres (60 ha); however, because the proposed activities would be focused in the bosque areas, along roadways, and around structures, the proposed activities would only occur within approximately 95.7 of these acres (39 ha), which comprise the action area (Figure 1). The project area is entirely within the San Juan Pueblo 7.5-minute U.S. Geological Survey quadrangle.

The action area sits at approximately 5,740 ft (1,750 m) in elevation and the topography is relatively flat, consistent with a historic farm and associated orchard. The historic site is situated in a rural area surrounded by a mix of residential and agricultural land uses interspersed with patches of bosque. The Los Luceros Historic Site occurs along approximately 0.8 miles (1.2 km) of the Rio Grande River where natural vegetation occurs along both sides of the riverbanks. The bosque areas are comprised almost entirely of Fremont cottonwood (*Populus fremontii*) with some scattered white poplar (*Populus alba*). The shrub layer in the bosque areas is dominated by Russian olive; other shrub species include chamiso (*Atriplex canescens*), tamarisk, birchleaf mountain mahogany (*Cercocarpus montanus* var. *glaber*), and scattered tulip prickly pear (*Opuntia phaeacantha*). The associated herbaceous layer comprises annual grasses such as brome (*Bromus* spp.), alfalfa (*Medicago sativa*), sedges (*Carex* spp.), and various forbs. The banks of the Rio Grande River in bosque areas A and B, the Los Luceros Ditch, and along the stream/oxbow that runs through the bosque area A (Figure 1) are densely vegetated by narrowleaf willow (*Salix exigua*), reed canary grass (*Phalaris arudinacea*), sedges, and/or other herbaceous plants.

Vegetation composition around each structure within the developed portions of the action area is highly variable; however, the species present are similar to those occurring in the bosque areas. Additional tree species that occur with higher frequency around the structures include white mulberry (*Morus alba*), Siberian elm (*Ulmus pumila*), ponderosa pine (*Pinus ponderosa*), and apple (*Malus pumila*).

ANALYTICAL FRAMEWORK FOR THE JEOPARDY DETERMINATIONS

Jeopardy Determination

In accordance with policy and regulation, the jeopardy analysis in this biological opinion relies on four components in our evaluation for each species: (1) the *Status of the Species*, which evaluates the species' range-wide condition, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which evaluates the condition of the species in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the *Effects of the Action*, which determines the consequences of the proposed Federal action on the species that are reasonably certain to occur as a result of the proposed action; and, (4) *Cumulative Effects*, which evaluates the effects of future, non-Federal activities in the action area on the species.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed Federal action in the context of the species' current status, taking into account any cumulative effects, to determine if the implementation of the proposed action is

likely to cause an appreciable reduction in the likelihood of both the survival and recovery of the species in the wild.

The jeopardy analysis places emphasis on consideration of the range-wide survival and recovery needs of the species and the role of the action area in the survival and recovery of the species as the context for evaluating the significance of the effects of the proposed Federal action taken together with cumulative effects, for purposes of making the jeopardy determination.

STATUS OF SPECIES

New Mexico Meadow Jumping Mouse

The New Mexico meadow jumping mouse was listed as endangered on June 10, 2014 (Service 2014a). A Recovery Outline was completed concurrent with the final listing rule (Service 2014b). Final critical habitat was designated on March 16, 2016 (Service 2016). We published a Species Status Assessment (SSA) for the jumping mouse on May 27, 2014 (Service 2014c), which was updated on January 30, 2020 (Service 2020), and finalized the Recovery Plan on January 30, 2023.

Description and Life History

The New Mexico meadow jumping mouse is a subspecies of the meadow jumping mouse (*Zapus hudsonius*) with morphologically distinct pelage described as dark yellowish-brown, dark brown, and grayish-brown on the back, yellowish-brown on the sides, and white underneath (Miller 1911, Bailey 1913) with an absence of white ear fringe (Frey 2008). The jumping mouse is approximately 7.1 to 9.2 in. (181 to 233 mm) in total length, with elongated feet (1.2 in. (29.9 mm)) and an extremely long, bicolored tail (4.9 in. (125.1 mm)) (Miller 1911, Hafner et al. 1981, Frey 2008).

Jumping mice are habitat specialists requiring dense riparian herbaceous vegetation associated with seasonally available or perennial flowing water and adjacent uplands that can support vegetation characteristics needed for foraging, breeding, and hibernating. Suitable jumping mouse habitat can occur in association with various stream channel types but most commonly cooccurs with stream gradients less than two percent (Chambers 2018a). Suitable habitat is characterized by tall (average height of ≥ 24 in. (≥ 61 cm)) and dense riparian herbaceous vegetation including grasses, forbs, and sedges. The jumping mouse appears to only utilize two riparian community types: 1) persistent emergent herbaceous wetlands (i.e., beaked sedge and reed canary grass alliances); and 2) scrub-shrub wetlands (i.e., riparian areas along perennial streams that are composed of willow and alder) (Frey 2005). Adjacent upland habitats are regularly used for dispersal, day nesting, and hibernating (Chambers 2018b, Frey 2017). The subspecies occurs within elevations of approximately 4,500-9,500 ft. (1,372-2,896 m) (Service 2020).

The jumping mouse has a limited active period from about late May or early June to late September or early October at high elevation montane areas (Frey 2015, Morrison 1987, Zahratka 2016a, 2016b, 2019) and mid-May to late October at lower elevations (Najera 1994, Wright & Frey 2011). The subspecies is a true hibernator cued to emerge by rising soil

temperatures (Munchlinski 1988, Frey 2015, Zahratka 2016a). Little research has been conducted on the subspecies' underground hibernacula, but it is assumed that they are similar to other subspecies of meadow jumping mouse that build hibernacula in upland areas adjacent to riparian habitats or on the slopes of floodplain ridges (Service, 2020). However, four New Mexico meadow jumping mouse hibernacula have been reported under vegetation upslope from flowing water on a bench above the ordinary high-water mark ranging from about 3.3 to 33 ft. (1 to 10 m) from perennial flowing water demonstrating uncertainty regarding the proximity of hibernacula to riparian areas (Service, 2020).

Upon emergence from hibernation, the diet of jumping mice consists mainly of grass and forb seeds with seeds of sedges, bulrush, and cattail infrequently eaten (Chambers 2018a, Morrison 1990). Day nests are constructed from riparian or adjacent upland plants and used for one to three weeks at a time (Chambers 2018b, Ryon 2001). The subspecies exhibits extreme site fidelity during daily activities (Service 2020). Breeding occurs primarily in July or August (Chambers 2018a, Frey 2015, Morrison 1987, 1989) and, after an average 18- to 21-day gestation period, females give birth to two to seven young that are weaned after four weeks (Frey 2015, Morrison 1987). Maternal nests are located outside moist riparian areas. It is likely that the jumping mouse has a lifespan of one to two years and has only one breeding season during its lifetime. Hibernation is cued in the fall by the shortening photoperiod (Munchlinski 1988) before which time individuals must accumulate sufficient fat storage to survive the following eight to nine months of hibernation.

The jumping mouse has exhibited varied vagility and dispersal capabilities with one study finding typical daily movement distances of only 984 ft. (300 m) (Frey and Wright 2012) while another study found a female capable of moving approximately 1,640 ft. (500 m) over 25 minutes (Chambers 2018a). It is unclear how frequently jumping mice undergo long distance movements (>3,281 ft. (>1 km)) though most studies have reported low dispersal ability. Reports of home range size vary from 0.45 ac. (0.18 ha) (Morrison 1987) to 10.25 ac. (4.15 ha) (Frey & Wright 2012).

Distribution and Status

Disjunct jumping mouse populations occur from southern Colorado and central New Mexico to eastern Arizona. The subspecies' historical range likely included riparian areas and wetlands along streams in the Sangre de Cristo and San Juan Mountains from southern Colorado to central New Mexico, in the Jemez and Sacramento Mountains, in the Rio Grande Valley from Espanola to Bosque del Apache National Wildlife Refuge, and in parts of the White Mountains of eastern Arizona. In New Mexico, the subspecies occurs sympatrically with the western jumping mouse (*Zapus princeps*) in areas throughout the state, excluding the Jemez and Sacramento Mountains and the mainstem of the Rio Grande.

Jumping mouse life history traits (e.g., short active period, short life span, low fecundity, specific habitat needs, and low dispersal ability) make populations highly vulnerable to extirpation when habitat is lost and fragmented. Based on historical (1980s and 1990s) and current (from 2005 to 2018) data, the distribution and abundance of the jumping mouse has declined significantly range-wide. Most extirpations have occurred since the late 1980s to early 1990s, as about 70 historically occupied locations are now considered extirpated.

The jumping mouse occurs within eight geographic management areas that are defined by critical habitat units and the distribution of 77 current populations (18 in Colorado, 22 in New Mexico, and 37 in Arizona). All populations likely occur within patches of suitable habitat too small to support adequate resiliency and nearly all existing populations are isolated and widely separated. Many of these populations have been substantially compromised in recent years from water shortages, grazing, or wildfire and post-fire flooding. Some populations may already be extirpated (see Service 2020 for a detailed discussion).

Threats

Past and current habitat loss has resulted in the extirpation of historical populations, reduced the size of existing populations, and isolated existing small populations. Ongoing and future habitat loss is expected to result in additional extirpations of more populations. The primary sources of past and future habitat losses are from grazing pressure (which removes the needed vegetation), water management and use (which causes vegetation loss from mowing and drying of soils), lack of water due to drought (exacerbated by climate change), and wildfires (also exacerbated by climate change). Additional sources of habitat loss are likely to occur as a result of scouring floods, loss of beaver ponds, highway reconstruction, residential and commercial development, coalbed methane development, and unregulated recreation (Service 2020).

Riparian habitat has been, and continues to be, negatively affected by domestic livestock, elk, and feral horse grazing that is incompatible with local ecosystem conditions (Beschta 2012). Disproportionate use of riparian areas can occur in the southwest due to their productivity and sources of perennial water (Service 2020). Livestock (Kauffman and Krueger 1984, Small 2016), elk (Kay 1994), and feral horse (Chambers 2018c) use of riparian communities, which are also used by jumping mice, can adversely impact jumping mouse habitat by reducing or eliminating tall, herbaceous vegetation stature and density (Belsky et al. 1999, Fleischer 1994) and impairing stream channels or riparian areas from meeting proper functioning condition (USDOI 2015). Specific impacts to jumping mouse habitat from grazing pressure includes, but are not limited to, destabilization of streambanks, burrow collapse, modification of riparian characteristics and plant communities, and disconnection of riparian areas from water sources (Belsky et al. 1999).

Water use within jumping mouse habitat varies significantly by location and infrastructure needs. Water diversions used to support anthropogenic needs can directly alter hydrologic regimes through reduced perennial water flow, dewatering of stream channels, and preventing channel recharging. On a smaller scale, local water use can include small scale diversions or pipeline infrastructure used to support small scale irrigation needs or offsite water sources for livestock grazing, respectively. Water removal from instream habitat and riparian areas (seeps and springs) can reduce or eliminate the moist soil conditions that sustain suitable jumping mouse habitat (Frey 2005).

Drought influences the extent and timing of perennial flows within streams or riparian areas which can cause a reduction in the size of available riparian habitat. Reduced precipitation across the uplands reduces soil moisture along riparian area margins causing these areas to transition to upland habitats. Drying conditions across the landscape can limit upland areas from reaching their full growth potential, further reducing habitat and forage for jumping mouse use.

Jumping mouse riparian habitat is known to be favored by campers and anglers, where erect riparian vegetation can be readily damaged by these activities (Frey 2005, USFS 2005). This can reduce functional habitat for the jumping mouse by reducing or eliminating cover and available food. Unregulated recreation within riparian and wet meadow habitat can directly impact jumping mice by disturbing day or nursery nests. Recreationalists have been observed driving vehicles through exclosures containing jumping mouse habitat typically fenced to exclude livestock from riparian habitat.

ENVIRONMENTAL BASELINE

Under section 7(a)(2) of the Act, when considering the effects of the action on Federally listed species, we are required to take into consideration the environmental baseline. Regulations implementing the Act (50 CFR 402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed Federal actions in the action area that have undergone formal or early section 7 consultation, and the impacts of State and private actions that are contemporaneous with the consultation in progress. This section will discuss the condition of the species and designated critical habitat, if applicable, in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species.

The majority of the action area has historically been used as an active farm and heavily modified to support the farm/ranch lifestyle. Modifications include irrigated pasture areas, orchards, manmade structures including houses, barns, and driving surfaces, irrigation canals, and utilities. In these developed areas (Figure 1), suitable habitat for the jumping mouse is not likely to be present; however, some portions of the bosque areas may contain suitable habitat.

Status of the Species within the Action Area

New Mexico Meadow Jumping Mouse

The New Mexico Meadow Jumping Mouse SSA (Service 2020) includes information on the status of the species in the Rio Grande Valley, from the Colorado border to Bosque del Apache National Wildlife Refuge. Based on the SSA, the last detections of jumping mice along the Rio Grande near Espanola occurred in the 1990s, with no recent detections occurring since then even though surveys for jumping mice increased on federal lands. Survey efforts focused on federal lands where access and permission were provided to conduct surveys rather than on private and state lands that characterize the landownership around the action area. As such, jumping mice may continue to persist in areas along the Rio Grande River on non-federal lands but we lack the survey information necessary to confirm their presence. Based on the description of the vegetative components within the action area, suitable habitat for jumping mice exists in bosque areas A and B (Figure 1) within the action area.

EFFECTS OF THE ACTION

Effects of the action refers to the consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the

proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (84 FR 44976-45018).

New Mexico Meadow Jumping Mouse

Implementation of the proposed action may result in direct effects to jumping mice where activities would occur within suitable habitat. Vegetation thinning activities may lead to direct harm or mortality in instances where vehicles, equipment, or workers crush individuals, destroy occupied nests or hibernacula, or where individuals are exposed to hazardous substances associated with work equipment or become trapped in portions of the ground that have been disturbed by the operation or staging of heavy equipment. However, implementing conservation measures identified in the general avoidance and minimization measures section would reduce the risk of hazardous material spills and would require heavy equipment to be operated in areas clear of dense herbaceous vegetation to the greatest extent practicable, reducing the potential for ground disturbance in suitable habitat and minimizing the potential impacts to jumping mice. The implementation of conservation measure NMMJM-3 would require workers to proceed with care when working in suitable jumping mouse habitat and would restrict the usage of heavy machinery along streams and rivers, thereby reducing the risk of direct harm to individuals. However, individuals are expected to be hibernating or inactive during project implementation and would therefore be unlikely to evacuate hibernacula or day nests in response to potentially dangerous ground-disturbing activities.

Habitat modification may occur through the reduction, degradation, or pollution of suitable habitat via soil compaction, loss of herbaceous riparian vegetative cover, or destruction of nests or hibernacula. However, the implementation of conservation measure NMMJM-5 would require that important habitat features, including tall, dense riparian vegetation, would remain undisturbed to the greatest extent practicable. Additionally, the vegetation management activities described in the proposed action would result in a healthier ecosystem dominated by native vegetation. Therefore, although the proposed action could result in temporary impacts on suitable jumping mouse habitat within the bosque areas, these impacts would likely be ameliorated during the next growing season. Hazardous fuels reduction and defensible space creation around nearby structures could reduce the frequency and/or intensity of future wildfire in suitable jumping mouse habitat within the action area, and therefore reduce the associated risk of significant or complete loss of riparian and floodplain habitat and fire-induced mortality of individuals occupying these areas during a fire. Additionally, vegetation management activities in and around suitable jumping mouse habitat would be conducted in a manner aimed at creating a mosaic of diverse native vegetation/habitat types within the action area, improving the quality of the habitat overall. Given that high severity wildland fire has been identified as a cause for the overall reduction in jumping mouse numbers and distribution, implementation of the proposed action would likely have moderate benefits to the jumping mouse in the long term through the expected reduction of wildfire risk in suitable jumping mouse habitat.

The use of vehicles and equipment within the action area could result in non-native, invasive plant species being introduced or spread to riparian habitats within the bosque. The spread of invasive plant species could displace existing native species, diminishing the capacity of existing

riparian habitats to support jumping mice breeding, feeding, and sheltering needs. However, the implementation of conservation measure GEN-2 would require equipment to be cleaned daily to reduce the risk of spreading disease or invasive plant material. Therefore, the potential for the proposed action to affect jumping mice by introducing non-native, invasive plant material would be likely low and undetectable considering the current presence of non-native or invasive plants in the action area.

Should any jumping mouse individuals emerge from hibernation prior to the completion of project activities, their breeding, feeding, and/or sheltering behaviors may be affected by noise and other disturbances caused by proposed action. Disruptions in breeding or feeding behavior could result in reduced fecundity, and disruptions in sheltering behaviors could expose individuals to an increased risk of predation. However, implementation of conservation measure NMMJM-2 would reduce the likelihood that proposed action would occur during the jumping mouse active/breeding season and the implementation of conservation measure NMMJM-6 would require project activities to occur during the daytime, when any non-hibernating individuals are expected to be inactive in their nests, further reducing the risk to jumping mice.

Additional conservation measures have been proposed as part of the proposed action that will provide a benefit to jumping mice that may occur in the action area. These include conservation measures NMMJM-1 that provides for a biological monitor to identify areas within the action area that contain suitable jumping mouse habitat, inspect project implementation to ensure compliance with the conservation measures, and educate project staff on jumping mice and their habitats, among other duties and conservation measure NMMJM-4 that provides for work to be stopped should a jumping mouse be detected and the biological monitor consulted to determine if work can be continued without causing harm or injury to the species. Collectively, these conservation measures will ensure that jumping mice, if detected, are protected from harm that may occur as a result of the proposed action, and the proposed action including the conservation measures should provide a benefit to the species within the action area.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, Tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Recreational activities at the Los Luceros Historic Site will continue to be managed by the New Mexico Department of Cultural Affairs including providing for visitor use and managing the landscape in line with its historic uses (irrigated lands, farming) regardless of implementation of the proposed action. Routine maintenance of existing facilities involving the use of vehicles along access roads will also continue to occur.

Jumping mice and their habitats will likely be negatively affected by climate change now and into the future. The U.S. Fourth National Climate Assessment suggests that warming temperatures will lead to decreasing snowpack and increasing frequency and severity of droughts, and these in turn will result in reduced streamflows (Gonzales et al. 2018, Overpeck and Bonar 2021). According to the Intergovernmental Panel on Climate Change (2021) in

“Western North America, future aridification will far exceed the magnitude of change seen in the last millennium”. The Intergovernmental Panel on Climate Change (2021) predicts with high confidence that drought conditions in the Southwest will increase in duration and severity with the predicted magnitude changing depending on the emissions scenario considered. The National Oceanic and Atmospheric Administration expressed that warming trends in New Mexico are reasonably certain to continue while future summer monsoon rainfall patterns are anticipated to remain highly uncertain and drought intensity is projected to increase within the state (Frankson et al. 2022). An increase in prolonged droughts associated with changing climatic patterns is likely to adversely affect jumping mice and their habitats by reducing surface and sub-surface water flow required by the subspecies and potentially shrinking the amount of herbaceous riparian vegetation required by the jumping mouse. Riparian and wetland species generally exhibit high vulnerability to climate change due to factors including expected habitat loss and alterations of specific habitat (Friggens et al. 2013).

CONCLUSION

Jeopardize the continued existence of is defined as to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR 402.02). *Recovery* is defined as the improvement in the status of listed species to the point at which listing is no longer appropriate under the criteria set out in section 4(a)(1) of the Act (50 CFR 402.02).

New Mexico Meadow Jumping Mouse

After reviewing the current status of the jumping mouse, the environmental baseline for the action area, the effects of the proposed action, and cumulative effects, it is our biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the New Mexico meadow jumping mouse. We reached this conclusion because:

1. Adverse impacts (including those that conform to incidental take) are likely to be temporary, small in magnitude, and geographically local.
2. The amount or extent of incidental take of listed species is likely to be small and is not likely to have adverse population-level impacts to the jumping mouse.
3. Conservation measures that will be implemented as part of the proposed action are anticipated to minimize effects to suitable jumping mouse habitat and retain important riparian habitat characteristics important to jumping mice.
4. The inclusion of a biological monitor as part of the proposed action (conservation measure NMMJM-1) will provide the best opportunity to identify jumping mice that may occur in the action area.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. “Harm” is further defined (50 CFR § 17.3) to include significant

habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass” is defined (50 CFR § 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary and must be undertaken by FEMA so that they become binding conditions of any grant or permit issued to an applicant/permittee, as appropriate, for the exemption in section 7(o)(2) to apply. FEMA has a continuing duty to regulate the activity covered by this incidental take statement. If FEMA (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, FEMA must report the progress of the action and its impact on the species to the New Mexico Ecological Services Field Office as specified in the incidental take statement [see 50 CFR 402.14(i)(3)].

Amount or Extent of Take Anticipated

New Mexico Meadow Jumping Mouse

Based on the best available information concerning the jumping mouse, the habitat needs of the subspecies, the project description, and information furnished by FEMA, take may occur because suitable habitat for jumping mice exists within the action area and the action area has not been sufficiently surveyed to determine that the species does not occur. Therefore, we consider it likely that jumping mice occur within the action area in suitable habitat for the species. We anticipate that take as a result of the proposed action will be in the form of harm or harassment to the jumping mouse due to changes in and disturbance to riparian vegetation that may inhibit breeding, feeding, and sheltering activities of jumping mice or may lead to direct mortality. Disturbance of riparian habitats and vegetation that occurs in the bosque areas due to use of heavy machinery and presence of work crews may cause active or hibernating jumping mice to flee disturbed areas. Disturbed individuals will be at greater risk of harm or injury as they will be exposed to predators while fleeing and will burn important fat reserves necessary for surviving long hibernation periods. Though less likely, it is possible that take may be in the form of direct mortality due to the use of heavy machinery within suitable jumping mouse habitats. Heavy machinery use within riparian areas during the jumping mouse inactive season may crush hibernacula and individuals within.

Incidental take of the jumping mouse will be difficult to detect because the subspecies has a small body size and detection of an injured or killed individual will be extremely difficult. As a result, we are using suitable jumping mouse habitat within the bosque portions of the action area as a surrogate for determining when the authorized take has been exceeded. This is an appropriate metric as suitable jumping mouse habitat is composed of dense herbaceous riparian

vegetation, which are elements of habitat anticipated to be altered or disturbed during project implementation. Because the jumping mouse is intimately tied to its habitat, take may occur in areas that currently contain suitable jumping mouse habitat that may be changed by the proposed action. We assume that jumping mice are found throughout all suitable habitat within the action area and, due to their small size and secretive nature, may not be avoided.

We calculated acreage of suitable jumping mouse habitat that may be impacted by the proposed action based on information provided in the biological assessment and maps of the action area. The action area encompasses approximately 0.8 miles (1.8 km) or approximately 4224 linear ft (1288 linear m) of the Rio Grande River. Jumping mice are known to use suitable habitat extending approximately 330 ft (110 m) from stream banks, which equates to approximately 32 acres of suitable habitat within the action area $((4224 \text{ ft} \times 330 \text{ ft})/43560)$. However, as noted in the status of the species in the action area, not all parts of the bosque, specifically bosque area C (Figure 1), contain suitable habitat for jumping mice. Unsuitable habitat in bosque area C contains approximately a quarter of the bosque, thus we reduced the total acres of suitable habitat by one quarter, leaving approximately 24 acres (9.7 ha) of suitable jumping mouse habitat within the project area. Of the 24 acres (9 ha) of suitable jumping mouse habitat, approximately 6 acres (2.4 ha) will not be altered by the proposed action because heavy equipment is restricted from being used within 66 ft (20 m) of the riverbank (NMMJM-3) leaving about 18 acres (7 ha) of suitable habitat that may be temporarily impacted by the proposed action. Therefore, if more than 18 acres (7 ha) of suitable jumping mouse habitat is temporarily disturbed or if any acreage of suitable habitat is permanently impacted during the implementation of the proposed action, incidental take will be considered exceeded. Then, as provided in 50 CFR § 402.16, reinitiation of formal consultation would be required.

Effects of the Take

In this biological opinion, we have determined that the level of anticipated take is not likely to result in jeopardy to the jumping mouse. The likelihood of some incidental take to occur to jumping mice in the action area is low and the incidental take of jumping mice is not expected to occur equally across the action area. Rather, small areas of vegetation management actions may affect local jumping mice, but additional suitable habitat will continue to persist in adjacent areas, including neighboring properties. Incidental take as a result of the proposed action may cause a temporary reduction in the population of jumping mice within the local area. However, as described above, suitable jumping mouse habitat will continue to exist within the action area and both upstream and downstream of the action area on neighboring properties that could provide habitat for jumping mouse individuals that may leave the action area during project implementation. Consequently, jumping mice are expected to continue to occupy the action area after the project is complete and a long-term reduction in the local population due to incidental take is not anticipated.

REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS

We identify the following reasonable and prudent measures (RPM) as being necessary and appropriate to minimize impacts of incidental take for the jumping mouse. In order to be exempt from the prohibitions of section 9 of the Act, FEMA must comply with the RPMs and their

associated terms and conditions, which implement the reasonable and prudent measures described here. These terms and conditions (T&C) are non-discretionary.

RPM 1. FEMA will contact the New Mexico Ecological Services Field Office prior to implementation if bosque vegetation and hazardous fuels management activities must be conducted during the active season of the New Mexico meadow jumping mouse.

T&C 1.1. If work is conducted during the active season of the New Mexico meadow jumping mouse, FEMA will increase the distance from the rivers edge that heavy equipment would be prohibited from entering from 66 ft (20 m) to 100 ft (30 m).

T&C 1.2. Crews conducting hand treatments of vegetation within the bosque areas A and B will avoid modifying willow galleries to retain habitat elements associated with New Mexico meadow jumping mouse day-nests.

RPM 2. FEMA must report any detections and/or mortalities of New Mexico meadow jumping mice to the New Mexico Ecological Services Field Office within 48 hours of discovery.

T&C 2.1. If mortality of New Mexico meadow jumping mice occurs, photos of the specimen should be taken, and the specimen should be immediately preserved by freezing or placing in 95% ethanol and retained until disposition of the specimen is directed by the New Mexico Ecological Services Field Office.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. The term “conservation recommendations” has been defined as our suggestions regarding discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information. The recommendations provided here relate only to the proposed action and do not necessarily represent complete fulfillment of the agency’s section 7(a)(1) responsibility. To keep us informed of activities that either minimize or avoid adverse effects or that benefit listed species or their habitats, we request notification of the implementation of the conservation recommendations. We recommend the following measures:

1. We recommend that surveys for the New Mexico jumping mouse be conducted within the Los Luceros Historic Site.
2. If any listed species are incidentally detected and killed or injured (injured to the extent of imminent death, or tail severed), FEMA should preserve the specimen or severed parts in 95% ethanol or freeze them (also see Disposition of Dead or Injured Listed Species section below).

Disposition of Dead or Injured Listed Species

Upon locating a dead, injured, or sick listed species, initial notification must be made to our Law Enforcement Office, 4901 Paseo del Norte NE, Suite D, Albuquerque, NM 87113; 505-248-7889) within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph if possible, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to the New Mexico Ecological Services Field Office (see contact information on Biological Opinion cover letter). Care must be taken in handling sick or injured animals to ensure effective treatment and care and in handling dead specimens to preserve the biological material in the best possible state.

REINITIATION NOTICE

This concludes formal consultation on FEMA's proposal to fund a grant to the New Mexico Department of Cultural Affairs to implement the Los Luceros Fire Mitigation Project. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

LITERATURE CITED

- Bailey, V. 1913. Ten new mammals from New Mexico. Proceedings of the Biological Society of Washington 26: 129-134.
- Belsky, A. J., A. Matzke, and S. Uselman. 1999. Survey of livestock influences on stream and riparian ecosystems in the Western United States. Journal of Soil and Water Conservation 54:419-431.
- Beschta, R.L., D.L. Donahue, D.A. DellaSala, J.J. Rhodes, J.R. Karr, M.H. O'Brien, T.L. Fleischner, and C.D. Williams. 2012. Published online: November 15, 2012. Adapting to Climate Change on Western Public Lands: Addressing the Ecological Effects of Domestic, Wild, and Feral Ungulates. Environmental Management.
- Chambers, C.L. 2018a. New Mexico meadow jumping mouse Project Report for 2015-2017. FWS Permit No.: TE63202B-1. School of Forestry, Northern Arizona University, Flagstaff, Arizona. 60 pp.
- Chambers, C.L. 2018b. Apache-Sitgreaves and Santa Fe National Forests small mammal project annual report for 2018. FS Agreement 14-CR-11030121-024. School of Forestry, Northern Arizona University, Flagstaff, Arizona. 31 pp.
- Chambers, C.L. 2018c. Apache-Sitgreaves and Santa Fe National Forests small mammal project annual report for 2018. FS Agreement 14-CR-11030121-024. School of Forestry, Northern Arizona University, Flagstaff, AZ.
- Fleischner, T.L. 1994. Ecological costs of livestock grazing in Western North America. Conservation Biology 8:629-622.
- Frankson, R., K.E. Kunkel, L.E. Stevens, and D.R. Easterling. 2022. New Mexico State Climate Summary. NOAA Technical Report NESDIS 150-NM, NOAA/NESDIS, Silver Spring, MD. 5 pp.
- Frey, J.K. 2005. Status assessment of montane populations of the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) in New Mexico. Professional Services Contract No. 05-516.57. Submitted to Conservation Services Division, New Mexico Department of Game and Fish, Santa Fe, New Mexico. 74 pp.
- Frey, J.K. 2008. Morphology and genetics of the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*). Final Report Professional Services Contract number 07-516-0000-03593, submitted to Conservation Services Division, New Mexico Department of Game and Fish, Santa Fe, New Mexico. 78 pp.
- Frey, J.K. 2015. Variation in phenology of hibernation and reproduction in the endangered New Mexico meadow jumping mouse (*Zapus hudsonius luteus*). PeerJ, DOI 10.7717/peerj.1138. 27 pp.

- Frey, J.K. 2017. Landscape scale and microhabitat of the endangered New Mexico meadow jumping mouse in the White Mountains, Arizona. *Journal of Fish and Wildlife Management* 8(1): 39-58.
- Frey, J.K., and G.D. Wright. 2012. Multiple scale habitat selection by a small mammal habitat specialist (*Zapus hudsonius luteus*) in a managed floodplain landscape. Department of Fish Wildlife and Conservation Ecology, New Mexico State University, Las Cruces, New Mexico. 122 pp.
- Friggens, M. M., D. M. Finch, K. E. Bagne, S. J. Coe, and D. L. Hawksworth. 2013. Vulnerability of species to climate change in the Southwest: terrestrial species of the Middle Rio Grande. Gen. Tech. Rep. RMRS-GTR-306. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- Gonzales, P., G.M. Garfin, D.D. Breshears, K.M. Brooks, H.E. Brown, E.H. Elias, A. Gunasekara, N. Huntly, J.K. Maldonado, N.J. Mantua, H.G. Margolis, S. McAfee, B.R. Middleton, and B.H. Udall. 2018. Southwest. Pages 1101–1184 in D.R. Reidmiller, C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart, editors. Impacts, risks, and adaptation in the United States: Fourth National Climate Assessment, Volume II. U.S. Global Research Program, Washington, D.C.
- Hafner, D.J., K.E. Peterson, and T.L. Yates. 1981. Evolutionary relationships of jumping mice (Genus *Zapus*) of the Southwestern United States. *Journal of Mammalogy* 62: 501-512.
- Intergovernmental Panel on Climate Change (IPCC). 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2391 pp.
- Kauffman, J. B., and W.C. Krueger. 1984. Livestock impacts on riparian ecosystems and streamside management implications: a review. *Journal of Range Management* 37(5).
- Kay, C.E. 1994. The impact of native ungulates and beaver on riparian communities in the Intermountain West. *Natural Resources and Environmental Issues* 1(1).
- Miller, G.S. 1911. A new jumping mouse from New Mexico. *Proceedings of The Biological Society of Washington* 24: 253-254.
- Morrison, J.L. 1987. A study of the active season ecology, population dynamics and habitat affinities of a known population of the meadow jumping mouse, *Zapus hudsonius luteus*, in northern New Mexico. Report submitted to the New Mexico Department of Game and Fish. 53 pp.
- Morrison, J.L. 1990. The meadow jumping mouse in New Mexico: habitat preferences and management recommendations. Pp. 136-141 in *Proceedings of the symposium on*

- managing wildlife in the Southwest (P.R. Krausman and N.S. Smith eds.). Arizona Chapter of the Wildlife Society, Phoenix.
- Muchlinski, A.E. 1988. Population attributes related to the life-history strategy of hibernating *Zapus hudsonius*. *Journal of Mammalogy* 69(4): 860-865.
- Najera, S.R. 1994. Meadow jumping mice habitat affinities and capture success in two trap types at Bosque del Apache National Wildlife Refuge. Master's Thesis, New Mexico State University, Las Cruces, New Mexico. 86 pp.
- Overpeck, J. T., and S. A. Bonar. 2021. Southwestern fish and aquatic systems: the climate challenge. Pages 137– 152 in D. L. Propst, J. E. Williams, K. R. Bestgen, and C. W. Hoagstrom, editors. *Standing between life and extinction*. University of Chicago Press, Chicago, Illinois.
- Ryon, T.R. 2001. The day nests of Preble's meadow jumping mouse. *The Southwestern Naturalist* 46: 376-378.
- Small, B.A., J.K. Frey, and C.C. Gard. 2016. Livestock grazing limits beaver restoration in northern New Mexico. *Restoration Ecology* 24(5):646-655.
- U.S. Department of the Interior (USDOI). 2015. Riparian area management: Proper functioning condition assessment for lotic areas. Technical Reference 1737-15. Bureau of Land Management, National Operations Center, Denver Colorado.
- U.S. Fish and Wildlife Service (Service). 2014a. Determination of Endangered Status for the New Mexico Meadow Jumping Mouse Throughout Its Range. *Federal Register* 79(111): 33119-33137.
- U.S. Fish and Wildlife (Service). 2014b. Recovery Outline New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*). New Mexico Ecological Services Field Office. Albuquerque, New Mexico. 14 pp.
- U.S. Fish and Wildlife (Service). 2014c. Species Status Assessment Report New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*). U.S. Fish and Wildlife Service. Albuquerque, New Mexico. 149 pp.
- U.S. Fish and Wildlife Service (Service). 2016. Endangered and threatened wildlife and plants' designation of critical habitat for the New Mexico meadow jumping mouse. Final Rule. *Federal Register* 81(51): 14263-14325.
- U.S. Fish and Wildlife Service (Service). 2020. Species Status Assessment Report for the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) 1st Revision. <https://ecos.fws.gov/ecp/species/7965>
- USDA Forest Service (USFS). 2005. Respect the Rio Annual Report 2004 Dispersed Recreation Component. Santa Fe National Forest, Sandoval County, New Mexico. April 2005.

- Wright, G., and J.K. Frey. 2011. Cool season activity of the meadow jumping mouse in the middle Rio Grande, 1020. Share with Wildlife Grant, T-32-P-2. 18 pp.
- Zahratka, J.L. 2016a. New Mexico meadow jumping mouse surveys. Sambrito Wetland Area and Sambrito Creek. Prepared for Colorado Parks and Wildlife. Report dated May 10, 2016. 29 pp.
- Zahratka, J.L. 2016b. Timing of hibernation emergence and physical characteristics of hibernacula of New Mexico meadow jumping mice at Sambrito Wetlands Area. Fall 2016. Unpublished Report. Draft Report Submitted to Scott Wait, Senior Wildlife Biologist, Southwest Region. Colorado Parks and Wildlife. Durango, Colorado. December 2016.
- Zahratka, J.L. 2019. New Mexico meadow jumping mice (*Zapus hudsonius luteus*) surveys on the Southern Ute Indian Reservation 2017 – 2018. Unpublished Report. Prepared for Division of Wildlife Resources Management Southern Ute Indian Tribe. January 10, 2019. 33 pp.

Appendix C

8-Step Review for EO 11988

EXECUTIVE ORDER 11988/11990

FLOODPLAIN MANAGEMENT/WETLANDS – CHECKLIST (44 CFR Part 9)

APPLICANT:	NM Historic Sites Department of Cultural Affairs
COUNTY/STATE:	Rio Arriba County, New Mexico
COORDINATES:	36.1154556, -106.038239 36.118367; -106.044991 36.116909, -106.04280 36.117146, -106.0387029 36.11825, -106.04032971 36.11697, -106.04041
PROPOSED ACTION:	<ul style="list-style-type: none">• defensible space around structures and roadways on the property,• thinning vegetation and removing hazardous fuels in the bosque,• applying a fire-retardant treatment to one structure.

ACTION: Review against 100 Year floodplain

STEP NO. 1 Determine whether the proposed action is located in the 100-year floodplain (500-year floodplain for critical actions) and/or wetland; (44 CFR §9.7).

Portions of the project are located within an AE zone, area of 100-yr flooding, per Flood Insurance Rate Map (FIRM) panel 35039C2875D, dated 3/15/2012.

STEP NO. 2 Notify the public at the earliest possible time of the intent to carry out an action in a floodplain/wetland, and involve the affected and interested public in the decision-making process; (44 CFR §9.8)

Notice was provided as part of a disaster cumulative notice: FEMA FY2023 LPDM Notice of Funding Opportunity, 3/1/2023

STEP NO. 3 Identify and evaluate practicable alternatives to locating the proposed action in a floodplain/wetland (including alternatives sites, actions and the "no action" option). (44 CFR §9.9)

There are no practicable alternative site locations or actions outside of the floodplain/wetland and the no action alternative is not practicable for meeting the purpose and need.

STEP NO. 4

Identify the potential direct and indirect impacts associated with the occupancy or modification of floodplains/wetlands and the potential direct and indirect support of floodplain/wetlands development that could result from the proposed action; (44 CFR §9.10)

The proposed action is in compliance with the NFIP (see 44 CFR Part 59 seq.) It does not increase the risk of flood loss; result in an increased base discharge or increase the flood hazard potential to other properties or structures; induce future growth and development, which will potentially adversely affect the floodplain/wetland; result in the discharge of pollutants into the floodplain/wetlands; forego an opportunity to restore the natural and beneficial values served by floodplains/wetlands; The project does avoid long and short-term adverse impacts associated with the occupancy and modification of floodplains/wetlands; result in an increase to the useful life of a structure or facility; and restores and/or preserve the natural and beneficial values served by floodplains/wetlands

STEP NO. 5

Minimize the potential adverse impacts and support to or within floodplains/wetlands to be identified under Step 4, restore and preserve the natural and beneficial values served by floodplains/wetlands; (44 CFR §9.11)

Flood hazard reduction techniques were applied to the proposed action to minimize the flood impacts if site location is in the 100-floodplain/wetlands

Avoidance and minimization measures were applied to the proposed action to minimize the short- and long- term impacts on the 100-Year floodplain/wetlands

Measures were implemented to restore and preserve the natural and beneficial values of the floodplain/wetlands.

STEP NO. 6

Reevaluate the proposed action to determine first, if it is still practicable in light of its exposure to flood hazards, the extent to which it will aggravate the hazards to others, and its potential to disrupt floodplain/wetlands values and second, if alternatives preliminarily rejected at Step 3 are practicable in light of the information gained in Steps 4 and 5. (44 CFR §9.9)

The action is still practicable at a floodplain/wetland site in light of the exposure to flood risk and ensuing disruption of natural values; The floodplain/wetlands site is the only practicable alternative; There is no potential for limiting the action to increase the practicability of previously rejected non-floodplain/wetlands sites and alternative actions; Minimization of harm to or within the floodplain/wetlands can be achieved

using all practicable means; action in a floodplain/wetland clearly outweighs the requirement of E.O. 11988/11990.

STEP NO. 7 Prepare and provide the public with a finding and public explanation of any final decision that the floodplain/wetland is the only practicable alternative; and (44 CFR §9.12)

The Public Notice for the SEA serves as the Final Public Notice for EO 11988

STEP NO. 8 Review the implementation and post - implementation phases of the proposed action to ensure that the requirements stated in Section 9.11 are fully implemented. Oversight responsibility shall be integrated into existing processes. (44 CFR §9.11)

Grant conditioned on review of implementation and post-implementation phases to ensure compliance of EO 11988

Failure to comply with conditions enumerated in the Record of Environmental Consideration may jeopardize federal funding.

Appendix D

Draft SEA Public Notice

**FEMA PUBLIC NOTICE OF AVAILABILITY
DRAFT TIERED SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (SEA)
NEW MEXICO HISTORIC SITES, DEPARTMENT OF CULTURAL AFFAIRS
LOS LUCEROS, NEW MEXICO FIRE MITIGATION PROJECT
ALCALDE, RIO ARRIBA COUNTY, NEW MEXICO
LPDM-PJ-06-NM-2023-001 (1)**

Interested persons are hereby notified that New Mexico Historic Sites, Department of Cultural Affairs has applied to the Federal Emergency Management Agency (FEMA), for Legislative Pre-Disaster Mitigation (LPDM) funding through the New Mexico Department of Homeland Security and Emergency Management (NMDHSEM). The LPDM grant program makes federal funds available to state, local, tribal, and territorial governments to plan for and implement sustainable cost-effective measures designed to reduce the risk to individuals and property from future natural hazards, while also reducing reliance on federal funding from future disasters. LPDM is authorized under Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. This notice also serves as FEMA's final notice in compliance with Executive Order 11988 for Floodplain Management (44 CFR Part 9).

FEMA proposes to provide funding to New Mexico Historic Sites, Department of Cultural Affairs to mitigate wildfire risk at the Los Luceros Historic Site. As a designated New Mexico Historic Site, the Los Luceros Historic Site is not only a historic resource but also a scenic, educational, and economic resource within the Los Luceros community and Rio Arriba County. Rio Arriba County is considered to be at a relatively moderate risk to wildfire, and the community's vulnerability to wildfire is very high while its resilience to wildfire is very low. Should a wildfire occur in the area, dead and down trees and vegetation in the project area would contribute to the quick expansion of the wildfire to the historic structures and possibly into the neighboring properties/residences and bosque habitat.

The Proposed Action Alternative would include conducting defensible space, hazardous fuels reduction, and ignition-resistant retrofitting measures at the Los Luceros Historic Site. The site encompasses approximately 148 acres, approximately 50 of which comprise bosque habitat (riparian forest), which is currently characterized by vegetation overgrowth and an abundance of dead and down trees. Project activities would only occur within approximately 95.7 of these acres. Portions of the project are located within the 100-year floodplain special flood hazard area. The Proposed Action would reduce the risk of wildfire within and around the project area by conducting defensible space activities around structures and roadways on the property, thinning vegetation and removing hazardous fuels in the bosque, and applying a fire-retardant treatment to one structure. Project work is expected to be completed within 2 years, with subsequent maintenance activities being implemented over the following 20 years.

In accordance with FEMA's Instruction 108-1-1, a Programmatic Environmental Assessment (PEA) for the State of New Mexico Watershed Resiliency and Post-Wildfire Treatment Projects was prepared and a Finding of No Significant Impact (FONSI) was issued on October 4, 2022. A draft tiered Site-Specific Environmental Assessment (SEA) has been prepared to assess the potential impacts of the proposed action and alternatives on the human and natural environment. The draft SEA evaluates alternatives that provide for compliance with applicable environmental laws. The alternatives evaluated include (1) no action; (2) the proposed action described above.

The draft SEA is available for review and comment at the DCA Central Office, (725 Camino Lejo, Santa Fe, NM 87504), open 8am-5pm Monday through Friday, and at Los Luceros, 253 Co Rd 41, Alcalde, NM 87511, open Wednesday through Sunday 10am-4pm. An electronic version of the draft EA can be requested from Dorothy Cook, FEMA Region 6, at dorothy.cook@fema.dhs.gov or viewed on FEMA's website at <https://www.fema.gov/emergency-managers/practitioners/environmental-historic/nepa-repository>.

The comment period will end 15 days from the initial notice publication date of **April X**, 2024. Written comments on the draft SEA can be mailed or emailed to Dorothy Cook, Supervisory Environmental protection Specialist, FEMA Region 6, 800 N Loop 288, Denton, TX 76209; Email: dorothy.cook@fema.dhs.gov. If no substantive comments are received, the draft SEA will become final and a Finding of No Significant Impact (FONSI) will be issued for the project. Substantive comments will be addressed as appropriate in the final documents.

All other questions regarding disaster assistance should be directed to FEMA's Helpline at 1-800-621-3362 or visit www.DisasterAssistance.gov.

Appendix E

Finding of No Significant Impact (FONSI)

SEA for Los Luceros New Mexico Fire Mitigation Project



FEMA

**FINDING OF NO SIGNIFICANT IMPACT
NEW MEXICO HISTORIC SITES, DEPARTMENT OF CULTURAL AFFAIRS
LOS LUCEROS, NEW MEXICO FIRE MITIGATION PROJECT
ALCALDE, RIO ARRIBA COUNTY, NEW MEXICO
LPDM-PJ-06-NM-2023-001 (1)**

BACKGROUND

In accordance with the National Environmental Policy Act (NEPA) of 1969; the Federal Emergency Management Agency's (FEMA) Instruction 108-1-1 for implementing NEPA; and the President's Council on Environmental Quality NEPA implementing regulations at 40 CFR Parts 1500-1508; FEMA prepared a Tiered Site-Specific Environmental Assessment (SEA) to assess the environmental impacts that might result from the implementation of defensible space, hazardous fuels reduction, and ignition resistant construction activities at Los Luceros Historic Site in Alcalde, Rio Arriba County, NM. New Mexico Historic Sites, Department of Cultural Affairs has applied for Legislative Pre-Disaster Mitigation (LPDM) funding through the New Mexico Department of Homeland Security and Emergency Management (NMDHSEM) under application number LPDM-PJ-06-NM-2023-001. The LPDM grant program makes federal funds available to state, local, tribal, and territorial governments to plan for and implement sustainable cost-effective measures designed to reduce the risk to individuals and property from future natural hazards, while also reducing reliance on federal funding from future disasters. LPDM is authorized under Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act

This SEA was tiered from, and incorporates by reference, the findings of the Programmatic Environmental Assessment (PEA) for the State of New Mexico Watershed Resiliency and Post-Wildfire Treatment Projects, including the Finding of No Significant Impact (FONSI) for the PEA which was issued on October 4, 2022. FEMA found that all environmental areas of concern for the proposed project are accounted for in the PEA with the exception of impacts to protected species and habitat. This SEA informed FEMA's decision on whether to prepare an Environmental Impact Statement (EIS) or a FONSI.

Two project alternatives were considered in the SEA: 1) No Action Alternative; and 2) Proposed Action Alternative— Conduct wildfire mitigation activities at the Los Luceros Historic Site, Alcalde, Rio Arriba County, New Mexico.

Under the No Action Alternative, nothing would be done to address the risk of wildfire in the project area. This alternative would contribute to risk of catastrophic wildfire spread and damage in the project area. The historic site would remain at risk of destruction from wildfire, and surrounding community resources such as farmland and agricultural land for livestock would also remain at risk.

The Proposed Action Alternative would include conducting defensible space, hazardous fuels reduction, and ignition-resistant retrofitting measures at the Los Luceros Historic Site. The site encompasses approximately 148 acres, approximately 50 of which comprise bosque habitat (riparian forest), which is currently characterized by vegetation overgrowth and an abundance of dead and down trees. Project activities would only occur within approximately 95.7 of these acres. Portions of the project are located within the 100-year floodplain special flood hazard area. The Proposed Action would reduce the risk of wildfire within and around the project area by conducting defensible space activities around structures and roadways on the property, thinning vegetation and removing hazardous fuels in the bosque, and applying a fire-retardant treatment to one structure. Project work is expected to be completed within 2 years, with subsequent maintenance activities being implemented over the following 20 years.

A public notice was posted in a local newspaper and the SEA was made available for a 15-day public comment period at a local repository and on FEMA's website. No comments on the SEA were received from the public during the 15-day comment period.

CONDITIONS

Actions under this SEA and FONSI must meet the following conditions. Failure to comply with these conditions would make the FONSI determinations inapplicable for the project and could jeopardize the receipt of FEMA funding.

- Any change to the approved scope of work will require re-evaluation for compliance with NEPA and other Laws and Executive Orders.
- This review does not address all federal, state and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize federal funding.
- If ground disturbing activities occur during construction, applicant will monitor ground disturbance and if any potential archeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA.
- Sub-applicant must coordinate with the local floodplain administrator, obtain required permits prior to initiating work, and comply with any conditions of the permit to ensure harm to and from the floodplain is minimized. All coordination pertaining to these activities should be retained as part of the project file in accordance with the respective grant program instructions.
- **GEN-1 Erosion and Sediment Control Measures:** Best management practices will be implemented to prevent erosion and sedimentation into nearby waterways. These will include equipment storage and staging practices to minimize erosion and sedimentation and avoiding soil or water contamination. Disturbed soils at the site will undergo erosion

control treatment before the rainy season starts and after project activities are terminated. Treatment may include temporary seeding and sterile straw mulch.

- **GEN-2 Equipment and Staging:** Equipment will be inspected daily for spillage. Equipment will be cleaned daily to reduce the risk of spreading disease or invasive plant material. Staging areas will be located at least 100 feet from any surface waters. Staging sites will be flagged appropriately and the contractors will develop written protocols to address spills or possible contamination of soils.
- **GEN-3 Equipment Operation and Maintenance:** To the extent practicable, equipment will be operated in previously cleared areas or where vegetation is sparse, and all efforts will be made to minimize damage to native riparian vegetation. Well-maintained equipment will be used to perform the work and, except in the case of a failure or breakdown, equipment maintenance will be performed off-site. Equipment will be inspected daily by the operator for leaks or spills. If leaks or spills are encountered, the source of the leak will be identified, leaked material will be cleaned up, and the cleaning materials will be collected and disposed of properly.

Vehicles and equipment that are used during the course of a project will be fueled and serviced in a “safe” area (i.e., outside of riparian areas), at least 200 feet from waterbodies, in a manner that will not affect federally listed species or their habitats. Spills, leaks, and other problems of a similar nature will be resolved immediately to prevent unnecessary effects on federally listed species and their habitats. A plan for the emergency cleanup of any spills of fuel or other material will be available on-site, and adequate materials for spill cleanup will be maintained on-site.

- **GEN-4 Environmental Awareness Training:** Employees and contractors will be provided with environmental awareness training by a qualified biologist. This training will familiarize personnel with the species that may occur on-site and their habitats, AMMs to be implemented to protect these species, and project boundaries. This training will be provided within 3 days of the arrival of any new worker. As part of the environmental awareness training, construction personnel will be notified that no dogs or other pets under control of construction personnel will be allowed in the construction area, and that no firearms will be permitted in the construction area, unless carried by authorized security personnel or law enforcement.
- **GEN-5 Debris Piling:** Any temporary piles of downed vegetation and debris shall be located at least 900 feet from the center of the river channel, or at least 66 feet from the edge of rivers or streams, whichever is farther.
- **GEN-6 Waste Management:** Work areas will be kept free of loose trash. All food waste will be removed from the site daily. All wastes, debris, rubbish, vegetation, and trash will be removed from the site once the project is completed, and will be transported to an authorized disposal area, as appropriate, according to all federal, state, and local laws and regulations.

- **GEN-7 Dust Control:** To reduce dust, all traffic associated with the Proposed Action will be restricted to a speed limit of 20 miles per hour when traveling off highways or county roads. During project activities, water will be applied to disturbed ground that may become windborne.
- **GEN-8 Spill Prevention and Pollution Control Measures:** The sub-applicant will exercise every reasonable precaution to protect federally listed species and their habitats from pollution due to fuels, oils, lubricants, and pollutants such as construction chemicals. Water containing mud, silt, or other byproducts or pollutants from project activities will be treated by filtration, retention in a settling pond, or similar measures. Pollutants will be collected and transported to an authorized disposal area, as appropriate, per all federal, state, and local laws and regulations.

No petroleum product chemicals, silt, fine soils, or any substance or material deleterious to federally listed species will be allowed to pass into or be placed where it can pass into a stream channel. There will be no side-casting of material into any waterway.

The sub-applicant will store all hazardous materials in properly designated containers in a storage area with an impermeable membrane between the ground and the hazardous materials. The storage area will be encircled by a berm to prevent the discharge of pollutants to ground water or runoff into the habitats of federally listed species. A plan for the emergency cleanup of any hazardous material will be available on-site, and adequate materials for spill cleanup will be maintained on-site.

- **NMMJM-1 Biological Monitor:** A USFWS-approved biologist who is familiar with the NMMJM and its associated habitat will be responsible for ensuring compliance with the project description (including conservation measures) to minimize and avoid impacts on the federally endangered NMMJM. The biological monitor will have the authority to halt or suspend all activities until appropriate corrective measures have been completed and will be required to report violations immediately to the USFWS. Biological monitoring responsibilities will include the following:
 1. Advise all project-related staff (including contractors) on the appropriate implementation of the conservation measures.
 2. Define the boundaries of areas containing suitable habitat within the action area.
 3. Halt any and all activities in an area where it is determined that a potential unauthorized incidental “take” of NMMJM may occur.
 4. Inspect work areas where NMMJM habitat is present to ensure compliance with all conservation measures for the duration of the proposed action. In addition, monitor action areas, as appropriate, at the beginning and end of each day for compliance with all conservation measures. Periodically inspect access routes and stockpiling/staging area for sign of NMMJM.
 5. Notify FEMA, USFWS, and NMDCA of any noncompliance with any conservation measure.
 6. Conduct an initial environmental awareness program for all project-related staff.

- **NMMJM-2 Seasonal Avoidance:** Project activities occurring within suitable NMMJM habitat, as defined by the biological monitor, will only occur between September 1 and July 1, when the NMMJM is expected to be hibernating.
- **NMMJM-3 Work Restrictions in Suitable Habitat:** When working within suitable NMMJM habitat (i.e., riparian areas along waterways with tall herbaceous vegetation and/or scrub and herbaceous vegetative cover, up to 360 feet from the edges of waterways), workers will minimize ground disturbance by carefully walking through riparian and streamside vegetation, minimizing footsteps to avoid crushing vegetation and day nests used by mice. Where suitable NMMJM habitat is present, as defined by the biological monitor, no heavy machinery will be operated within 66 feet of the stream edge.
- **NMMJM-4 Encounters with the Species:** Each encounter with an NMMJM will be treated on a case-by-case basis. If an NMMJM is found, the following will apply:
 - If an NMMJM is detected within the action area, work activities around the individual that have the potential to result in the harm, injury, or death to the animal will cease immediately and the on-site biological monitor will be notified. Based on the professional judgment of the biological monitor, if project activities can be conducted without harming or injuring the NMMJM, it may be left at the location of discovery and monitored by the biological monitor.
 - Contact with the individual NMMJM will be avoided and it will be allowed to move out of the area of its own volition.
- **NMMJM-5 Riparian Herbaceous Vegetation Remains in Place:** To the greatest extent practicable, tall herbaceous vegetation along waterways within the project area shall remain un-mowed and undisturbed.
- **NMMJM-6 Daily Work Hours:** Work activities will occur during daytime hours only. No nighttime lighting will be used.
- **SWWF-YBC-1 Seasonal Avoidance:** Vegetation management activities in the bosque areas and other areas within designated critical habitat for the SWWF and/or YBC will take place outside of nesting season (i.e., work will occur between September 15 and March 15).
- **SWWF-YBC-2 Biological Monitor:** A USFWS-approved biologist who is familiar with both the SWWF and the YBC and their associated habitats will be on-site during all vegetation management activities within the bosque areas and any other work areas within 500 feet of critical habitat to ensure that appropriately sized patches of dense shrub/lower canopy vegetation that provide suitable nesting habitat for the SWWF and YBC are retained.

- **SWWF-YBC-3 Native Vegetation Remains in Place:** Native riparian vegetation will be left in place to the maximum extent practicable; willows and cottonwoods with a DBH of 12 inches or greater may be trimmed but shall be left in place when possible and not posing a hazard.
- The Department of Cultural Affairs will contact FEMA to coordinate with the USFWS New Mexico Ecological Services Field Office prior to implementation if bosque vegetation and hazardous fuels management activities must be conducted during the active season of the New Mexico meadow jumping mouse.
 - If work is conducted during the active season of the New Mexico meadow jumping mouse, Department of Cultural Affairs will increase the distance from the rivers edge that heavy equipment would be prohibited from entering from 66 ft (20 m) to 100 ft (30 m).
 - Crews conducting hand treatments of vegetation within the bosque areas A and B will avoid modifying willow galleries to retain habitat elements associated with New Mexico meadow jumping mouse day-nests.
- The Department of Cultural Affairs must report any detections and/or mortalities of New Mexico meadow jumping mice to FEMA and the USFWS New Mexico Ecological Services Field Office within 48 hours of discovery.
 - If mortality of New Mexico meadow jumping mice occurs, photos of the specimen should be taken, and the specimen should be immediately preserved by freezing or placing in 95% ethanol and retained until disposition of the specimen is directed by the USFWS New Mexico Ecological Services Field Office.
- Upon locating a dead, injured, or sick listed species, initial notification must be made to USFWS Law Enforcement Office, 4901 Paseo del Norte NE, Suite D, Albuquerque, NM 87113; 505-248-7889) within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph if possible, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to the New Mexico Ecological Services Field Office (2105 Osuna Road NE, Albuquerque, New Mexico 87113, Telephone 505-346-2525 Fax 505-346-2542 www.fws.gov/southwest/es/newmexico/). Care must be taken in handling sick or injured animals to ensure effective treatment and care and in handling dead specimens to preserve the biological material in the best possible state.

CONCLUSIONS

Based on the findings of the SEA, coordination with the appropriate agencies, and adherence to the project conditions set forth in this FONSI, FEMA has determined that the proposed project qualifies as a major federal action that will not significantly affect the quality of the natural and human environment, nor does it have the potential for significant cumulative effects. As a result of this FONSI, an EIS will not be prepared (FEMA Instruction 108-1-1) and the proposed project as described in the attached SEA may proceed.

APPROVAL AND ENDORSEMENT

La Toya Leger-Taylor
Regional Environmental Officer
FEMA Region 6

Brianne Schmidtke
Hazard Mitigation Assistance Branch Chief
FEMA Region 6