Final Environmental Assessment
City of Albuquerque
Rio Grande Bosque Wildfire Mitigation Project
HMGP-5184-0004-NM
Bernalillo County, New Mexico
July 2022

FEMA

U.S. Department of Homeland Security
Federal Emergency Management Agency
Region 6
800 North Loop 288
Denton, TX 76209

RIO GRANDE BOSQUE WILDFIRE MITIGATION PROJECT
FINAL ENVIRONMENTAL ASSESSMENT

Prepared for

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SWCA Project No. 64870

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ACRONYMS AND ABBREVIATIONS

AQB	Air Quality Bureau
AQCR	Air Quality Control Region
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
City	City of Albuquerque
CO	carbon monoxide
CO_2	carbon dioxide
CWA	Clean Water Act
dB	Decibel
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
HMGP	Hazard Mitigation Program
MBTA	Migratory Bird Treaty Act
MRG	Middle Rio Grande
MRGCD	Middle Rio Grande Conservancy District
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMDA	New Mexico Department of Agriculture
NMDGF	New Mexico Department of Game and Fish
NMDHSEM	New Mexico Department of Homeland Security and Emergency Management
NMED	New Mexico Environment Department
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OSHA	Occupational Safety and Health Administration
$PM_{2.5}$	particulate matter smaller than 2.5 microns
PM_{10}	particulate matter smaller than 10 microns
RPM	resource protection measure

SHPO	State Historic Preservation Office
SO_2	sulfur dioxide
SWCA	SWCA Environmental Consultants
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
WOTUS	waters of the U.S.

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CHAPTER 1. INTRODUCTION

The City of Albuquerque's Open Space Division (City) is proposing the Rio Grande Bosque Wildfire Mitigation Project (project), which consists of wildfire prevention measures across 470 acres of land within the Rio Grande Valley State Park in Albuquerque, Bernalillo County, New Mexico (Figure 1-1 and Figure 1-2). The project would occur on both the west and east sides of the Rio Grande, south of Bridge Boulevard to north of Central Avenue. The intent of the project is to reduce the potential for and severity of wildfires and protect life and property.

This project is anticipated to use funding from the Federal Emergency Management Agency (FEMA) Hazard Mitigation Program (HMGP) administered by the New Mexico Department of Homeland Security and Emergency Management (NMDHSEM). The FEMA HMGP allows representatives to implement hazard mitigation measures in their communities (FEMA 2021). The program funds projects to reduce the "risk of loss of life and property from future disasters."

The project encompasses 3.1 river miles on both the west and east sides of the Middle Rio Grande (MRG). The 470-acre project area includes portions of the bosque (riparian habitat) adjacent to the Rio Grande and exists within the Rio Grande Valley State Park, a 4,027-acre Rio Grande cottonwood (*Populus deltoides wislizenii*) forest. The project area is bounded on the east and west by the levees and riverside drains managed by the Middle Rio Grande Conservancy District (MRGCD). The land within the project area is managed by the City.

Elevation in the project area varies between 4,937 and 4,959 feet above mean sea level. The climate for the area, based on the climatic records for Albuquerque Valley, New Mexico (COOP Station 290231), has an average annual maximum temperature of 72 degrees Fahrenheit (°F), with an average annual minimum temperature of 40.5°F. The average annual precipitation is 9.6 inches, with the majority occurring between July and October, while the average annual total snowfall is 6.9 inches, which largely occurs between November and April (Western Regional Climate Center 2021).

The project area is located within the Arizona/New Mexico Plateau U.S. Environmental Protection Agency (EPA) Level IV Ecoregion (Griffith et al. 2006). The one habitat type is Western Great Plains Riparian Woodland and Shrubland. Dominant trees within the project area consist of Goodding's willow (*Salix gooddingii*), Rio Grande cottonwood, five-stamen tamarisk (*Tamarix chinensis*), Russian olive (*Elaeagnus angustifolia*), and tree of heaven (*Ailanthus altissima*). Vegetative cover within the project area ranges from 10% to 70%. The project area and surrounding landscape have been previously disturbed by access roads, hiking trails, and other utility corridors.

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), the President's Council on Environmental Quality (CEQ) regulations to implement NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and FEMA's procedures for implementing NEPA (FEMA Instruction 108-1-1). FEMA is required to consider potential environmental impacts before funding or approving actions and projects. The purpose of this EA is to analyze the potential environmental impacts of the Rio Grande Bosque Wildfire Mitigation Project. FEMA will use the findings in this EA to determine whether to prepare an Environmental Impact Statement or a Finding of No Significant Impact (FONSI).

SWCA Environmental Consultants (SWCA) conducted a biological resources survey of the project area on November 16, 17, 19, and 24, 2021, to identify the potential for special-status species, habitat communities regulated by the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act (ESA), jurisdictional drainages, or sensitive aquatic habitats regulated by the U.S. Army Corps of Engineers (USACE) under the Clean Water Act (CWA), and active and inactive migratory bird nests protected by the Migratory Bird Treaty Act (MBTA). Additionally, SWCA conducted a 100% (intensive) cultural resources pedestrian inventory on January 5, 6, and 12, 2022.

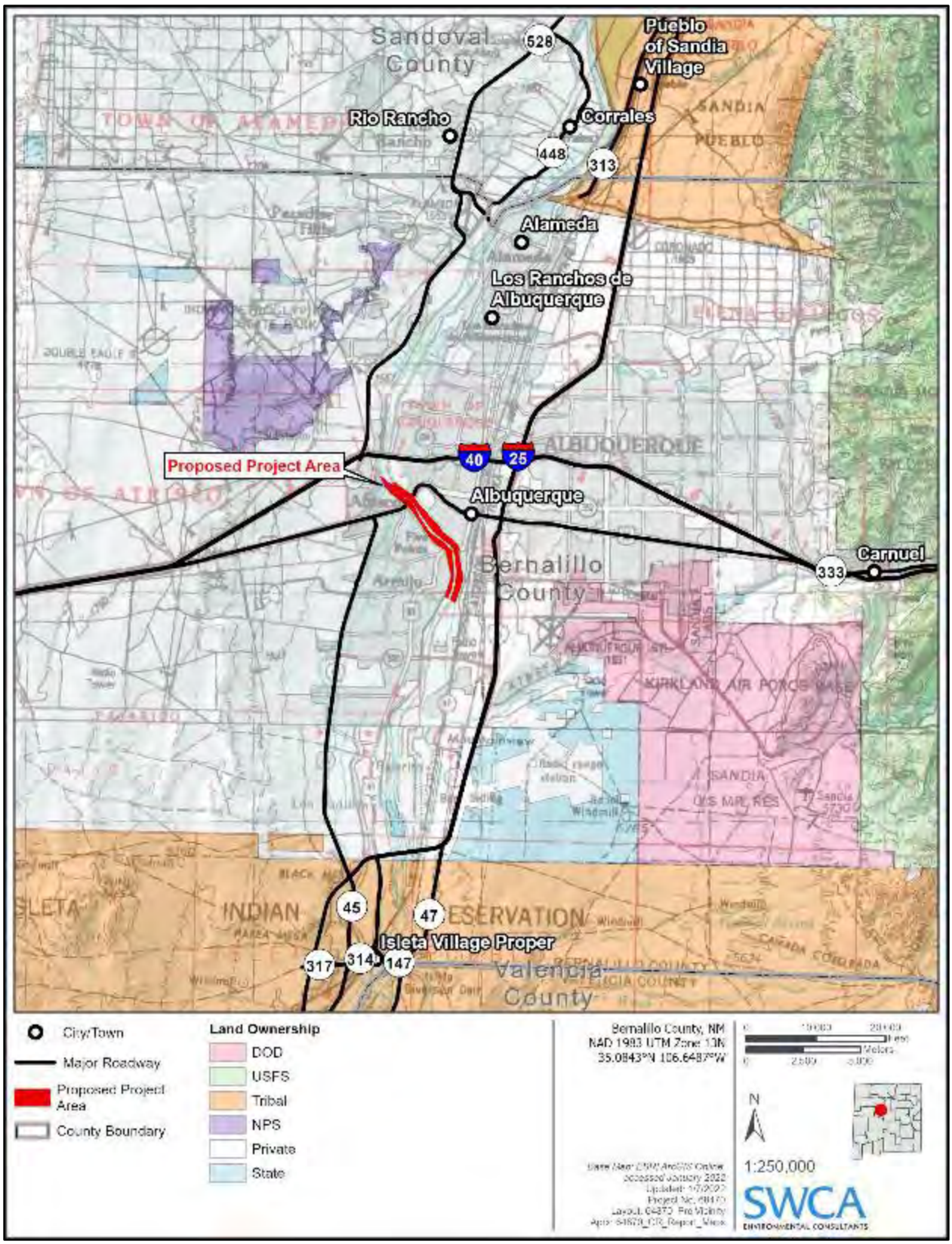

Figure 1-1. Project vicinity.

Figure 1-2. Project area.

CHAPTER 2. PURPOSE AND NEED

Through HMGP, FEMA provides grants to states and local governments to implement long-term hazard mitigation measures. The purpose of HMGP is to prevent or reduce long-term risk to life and property from natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Public Law 93-288, as amended, 42 United States Code [USC] 5121-5207) and is administered in the state of New Mexico by the NMDHSEM.

The purpose of the project is to reduce the threat of wildfires that could be ignited in the Rio Grande bosque, either through human or natural ignition sources, to protect life and property within and surrounding the Rio Grande State Park. As an ancillary benefit, the project will also protect habitat for a variety of endangered and resident species. This area of the bosque is in close proximity to the frequently visited ABQ BioPark, which includes a zoo, aquarium, Tingley Beach, and a botanical garden, as well as the nearby the National Hispanic Cultural Center. These areas draw many visitors to the bosque daily. In addition, portions of the project area are used by transient populations for establishing illegal campgrounds (Washington 2020). These human interactions within the bosque can lead to an increased risk for wildfire ignition.

Since March 2019, the Albuquerque Fire Rescue Department has responded to over 140 fire-related emergency calls within or adjacent to the project area. Furthermore, this stretch of forest has seen numerous wildfires varying in size and severity. With modifications and impoundments created on and along the Rio Grande Valley riparian ecosystem, nonnative species of plants have been able to populate large areas, adding to the overall fuel load. Currently, high levels of dead, downed, and dry vegetative material combined with nonnative vegetation within the project area create a substantial hazardous fuel load, which could result in catastrophic wildfires. The proposed project is intended to reduce hazardous fuel loading, which would protect life and property, species habitat in the Rio Grande Corridor, promote ecosystem health, and protect the urban community.

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CHAPTER 3. ALTERNATIVES

This chapter provides a detailed description of the Proposed Action and the No Action Alternative. The Proposed Action and alternatives were developed based on collaborative planning, data collection and review, and comments from the public. This section also contains a list of resource protection measures (RPMs) that the City is committed to following during project implementation.

3.1 NO ACTION ALTERNATIVE

The No Action Alternative provides a baseline for comparison in determining the environmental effects of the Proposed Action. Under the No Action Alternative, FEMA would not provide funding to reduce wildfire fuel loads in the target areas identified in the Rio Grande bosque. Fuel reduction activities would not be implemented within the bosque, and the existing fuel load within the project area would not be reduced. The current level of wildfire risk would persist. Nonnative vegetation would continue to thrive in the current condition.

3.2 PROPOSED ACTION

In response to the purpose and need, the City proposes to conduct wildfire mitigation treatments on approximately 470 acres within the 4,027-acre Rio Grande Valley State Park over the next several years to meet project objectives. Treatments would focus on clearing downed woody debris piles, hand thinning the understory, removing noxious and invasive weeds, applying herbicide, and potentially replanting native species, as conditions warrant. The treatments would be aimed at reducing hazardous fuel loads across the project area to minimize the fire hazard risk.

The Proposed Action is designed to provide a range of treatment methods (also referred to as tools) that could be used to achieve a reduction in wildfire threat in the bosque. The proposed tools may be used on any given location depending on the characteristics of the specific treatment site, such as vegetation type, topography, presence of federally listed species, etc. This approach provides flexibility and would allow implementation of specific design elements from a broader Proposed Action, where the design elements vary according to a range of on-the-ground conditions to minimize fire hazard risk.

The proposed project would include the following fuel reduction treatments:

- Removal of all downed timber greater than 6-inches in diameter that are contributing to ladder fuels
- Removal of nonnative trees and shrubs
- All stumps or stubs from the mechanized removal of shrub or tree species will be low, flat, and flush with the ground.
- No felling of any standing live/dead native trees within the project area
- Chipping and/or removal of all woody material deemed to be hazardous fuels
- Chipping and dispersal of all materials within the project boundary to the extent possible, and if necessary, removal of materials to an off-site location
- Spot spraying following initial treatment to ensure effective nonnative fuels control. The target noxious weeds for removal would include ravenna grass (*Saccharum ravennae*), Siberian elm (*Ulmus pumila*), saltcedar (*Tamarix* spp.) and tree of heaven (*Ailanthus altissima*).

The vegetation thinning component of the project could include thinning trees and understory shrubs using a variety of tools, including but not limited to chainsaws, pole saws, woodchippers, and masticators. Grazing ungulates, such as goats, could also be used to reduce the density of understory shrubs and nonnative vegetation. These treatments would be targeted outside of the dense riparian buffer directly adjacent to the Rio Grande and focus more on the continuous fuel loads on the elevated floodplain. The project would reduce the hazardous fuels by removing ladder fuels as well as large accumulations of dead, downed and dry vegetative material. These ladder fuels connect the understory vegetation to the overstory, providing a pathway for surface fires to reach the tree canopies resulting in fire transitioning into a crown fire. The vegetation treatments would reduce these ladder fuels which would help keep fire out of the tree canopies and mitigate the effects of a wildfire moving across the wildland-urban interface into developed areas.

Following hazardous fuel mitigation treatments, planting of indigenous vegetation may occur to enhance habitat value for resident and migratory wildlife and to replace nonnative trees and understory removed, depending on site conditions. Native species to be planted would include Rio Grande cottonwood, Goodding's willow (*Salix gooddingii*), narrowleaf (coyote) willow (*Salix exigua*), New Mexico olive (*Forestiera neomexicana*), pale desert-thorn (wolfberry) (*Lycium pallidum*), and other native shrubs.

Native plantings would be considered in the following situations:

1. Where understory vegetation is masticated in high priority treatment areas
2. Where plantings would not compromise visibility necessary for safe wildfire suppression
3. Where bare ground exists within treatment units
4. Where nonnative plants are removed and reseeding would create open forest habitats for foraging birds
5. Where user-defined, social trails need to be restored

This work would be conducted in 26 units defined by treatment within the project area (Table 3-1). The area covered by each treatment ranges from approximately 1 to 31 acres (Figures 3-1–3-3). High and medium priority units would be targeted for treatment outside the migratory bird nesting season (treatments would occur September 1–April 14). Low priority units could be subject to treatment during the migratory bird nesting season (April 15–September 1) due to the lack of vegetation suitable for nesting birds.

Table 3-1. Proposed Treatment Units

Unit Number	Treatment Priority	First Phase	Second Phase	Acreage	Predominant Wildfire Mitigation Tool(s)
1	High	X	X	16.0	• Thinning and cut-and-spray stump treatments (saltcedar) • Hand removal and herbicide application (ravenna grass) • Removal, chipping, and masticating of woody material
2	Medium	X	X	25.4	• Thinning and cut-and-spray stump treatment (tree of heaven) • Girdling (Siberian elm) • Removal, chipping, and masticating of woody material

Unit Number	Treatment Priority	First Phase	Second Phase	Acreage	Predominant Wildfire Mitigation Tool(s)
3	Medium	X	X	21.0	• Removal, chipping, and masticating of woody material
4	High	X	X	13.2	• Hand removal and herbicide application (ravenna grass) • Removal, chipping, and masticating of woody material
5	High	X	X	13.8	• Removal, chipping, and masticating of woody material • Debris shelter removal
6	High	X	X	11.5	• Hand removal and herbicide application (ravenna grass) • Removal, chipping, and masticating of woody material
7	Medium	X	X	26.6	• Removal, chipping, and masticating of woody material • Debris shelter removal
8	Low	X	X	10.6	• Thinning and cut-and-spray stump treatment (tree of heaven) • Hand removal and herbicide application (ravenna grass) • Removal, chipping, and masticating of woody material
9	High	X	X	19.9	• Removal, chipping, and masticating of woody material
10	Medium	X	X	9.5	• Removal, chipping, and masticating of woody material • Debris shelter removal
11	High	X	X	23.7	• Thinning and cut-and-spray stump treatments (Russian olive) • Hand removal and herbicide application (ravenna grass) • Removal, chipping, and masticating of woody material
12	Low	X	X	10.4	• Removal, chipping, and masticating of woody material
13	Medium	X	X	20.7	• Thinning and cut-and-spray stump treatment (tree of heaven) • Girdling (Siberian elm) • Removal, chipping, and masticating of woody material • Debris shelter removal
14	High	X	X	22.0	• Hand removal and herbicide application (ravenna grass) • Removal, chipping, and masticating of woody material • Debris shelter removal
15	Low	X	X	5.2	• Removal, chipping, and masticating of woody material
16	Medium	X	X	11.0	• Thinning and cut-and-spray stump treatment (tree of heaven) • Removal, chipping, and masticating of woody material • Debris shelter removal

Unit Number	Treatment Priority	First Phase	Second Phase	Acreage	Predominant Wildfire Mitigation Tool(s)
17	High	X	X	2.4	• Thinning and cut-and-spray stump treatment (tree of heaven) • Girdling (Siberian elm) • Removal, chipping, and masticating of woody material • Debris shelter removal
18	Low	X	X	12.4	• Removal, chipping, and masticating of woody material
19	Medium	X	X	15.6	• Removal, chipping, and masticating of woody material
20	Medium		X	1.2	• Removal, chipping, and masticating of woody material
21	High		X	6.7	• Removal, chipping, and masticating of woody material
22	High	X	X	31.3	• Thinning and cut-and-spray stump treatment (tree of heaven) • Girdling (Siberian elm) • Thinning and cut-and-spray stump treatments (Russian olive and saltcedar) • Removal, chipping, and masticating of woody material
23	Medium	X	X	7.1	• Removal, chipping, and masticating of woody material
24	Medium	X	X	15.6	• Girdling (Siberian elm) • Removal, chipping, and masticating of woody material
25	High	X	X	2.8	• Girdling (Siberian elm) • Removal, chipping, and masticating of woody material
26	Medium	X	X	4.7	• Girdling (Siberian elm) • Removal, chipping, and masticating of woody material

3.2.1 Implementation Schedule

The City plans to obtain FEMA funding (through NMDHSEM) for implementation by fall 2022. Under this scenario, implementation would occur between September 2022 and early March 2023 (Table 3-2). However, if permitting and/or funding causes a delay in implementation, the City would implement portions of the proposed treatments during migratory bird nesting season (April 15–September 1) with a pre-treatment nesting survey occurring up to 2 weeks prior to vegetation removal to identify active nests within the treatment unit or adjacent treatment units. High and medium priority units are those with more dense vegetation and fuel loads, and they would be targeted for treatment outside the migratory bird nesting season (treatments would occur September 1 through April 14). Low priority units could be subject to treatment during migratory bird nesting season (April 15 through September 1), due to the lack of vegetation suitable for nesting birds.

As stated above, only those lower-priority treatment areas, which have lower vegetation density that do not provide suitable habitat for southwestern willow flycatcher (*Empidonax traillii extimus*) or yellow-billed cuckoo (*Coccyzus americanus*) would be treated between April 15 and September 1.

Table 3-2. Schedule of Major Activities

Time Frame	Management Prescription
January 1–December 31	Hand removal of ravenna grass
January 1–April 14	Girdling of Siberian elms
August 1–April 14	Cut and spray (initial treatment) for tree of heaven
August 1–September 30	Additional herbicide treatment for tree of heaven
September 1–April 14	Thinning of high and medium priority units (hand or mechanized)
Year-round	Thinning of low priority units (hand or mechanized)
February 1–June 15	Cut and spray treatment for saltcedar

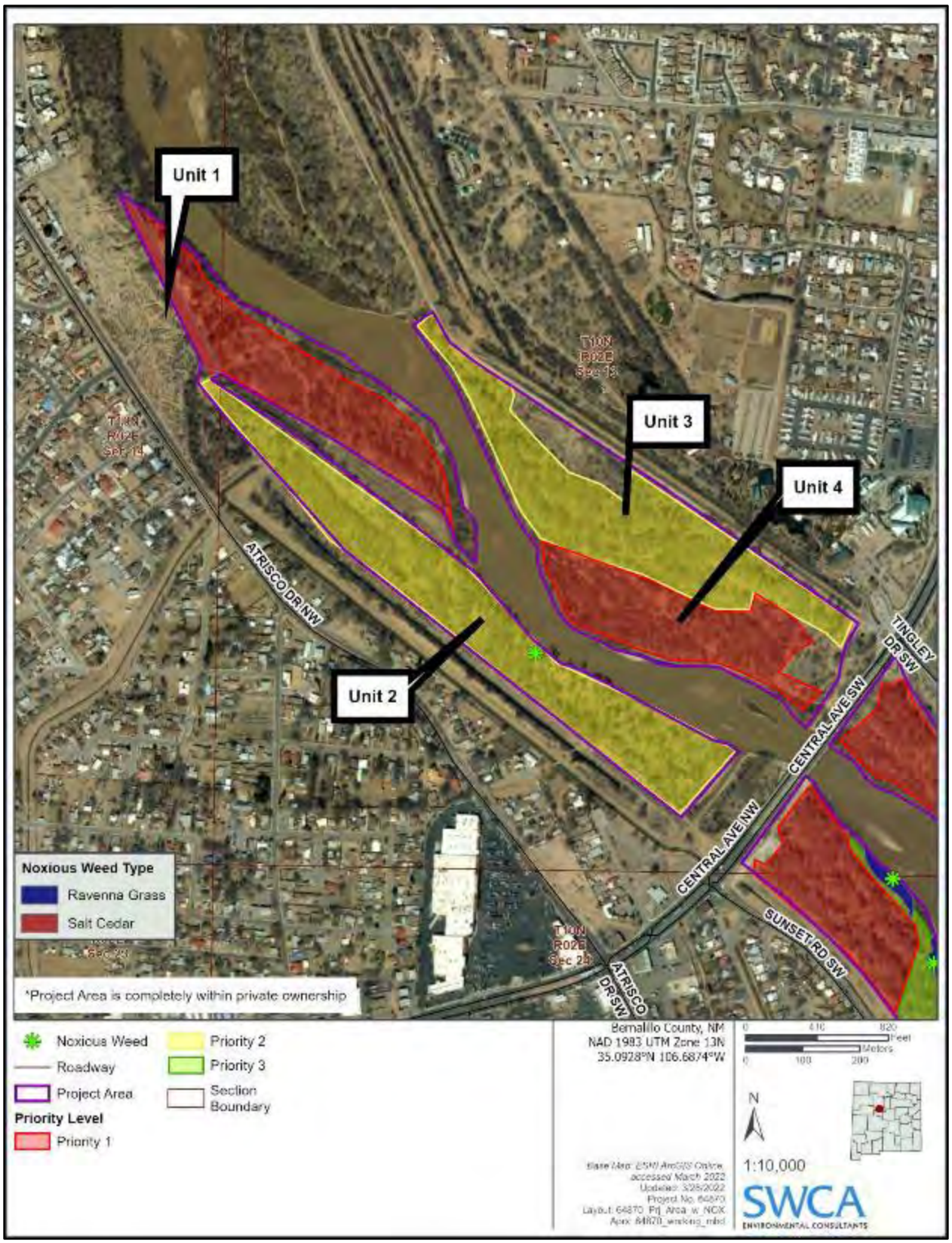

Figure 3-1. Project area with treatment units (map 1 of 3).

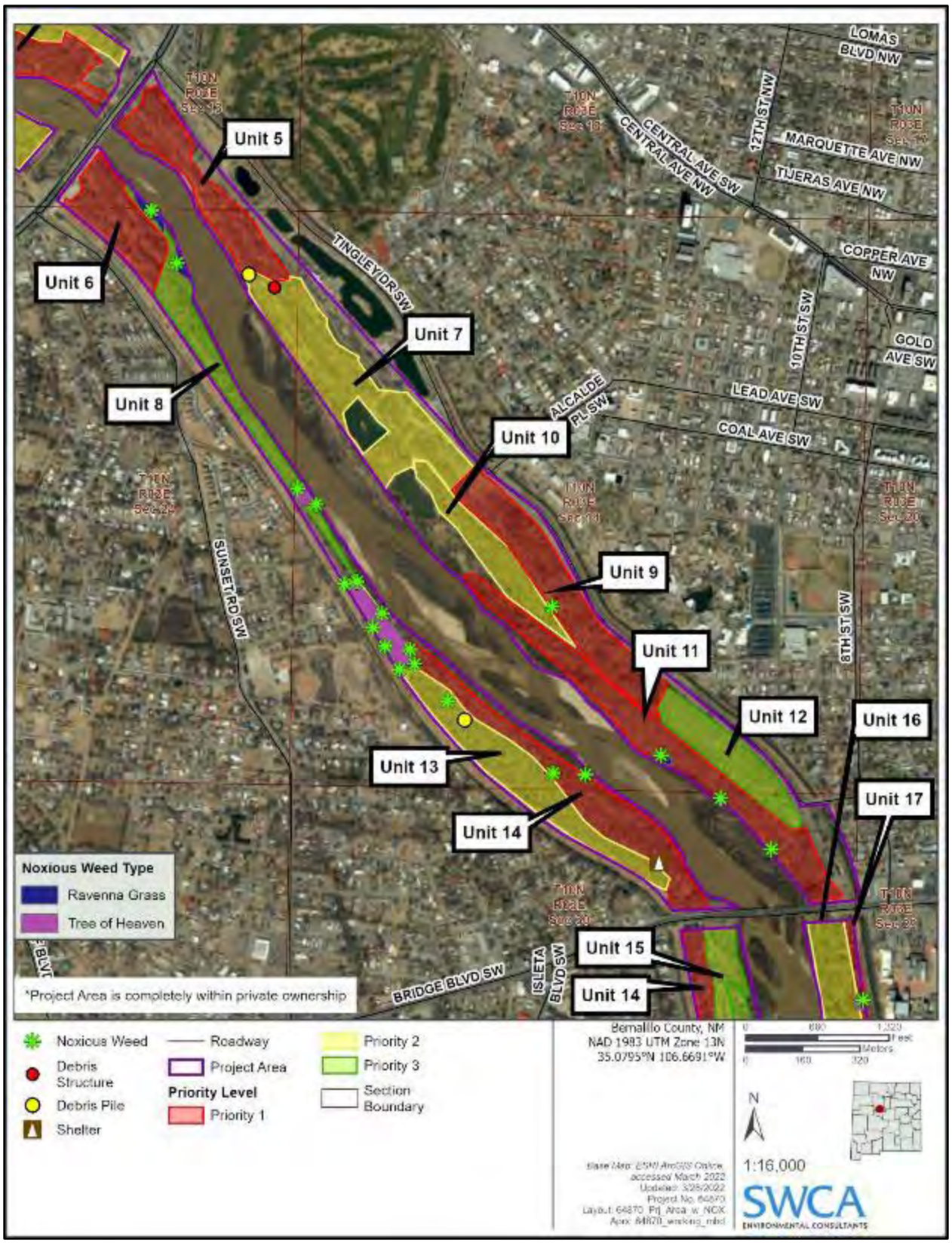

Figure 3-2. Project area with treatment units (map 2 of 3).

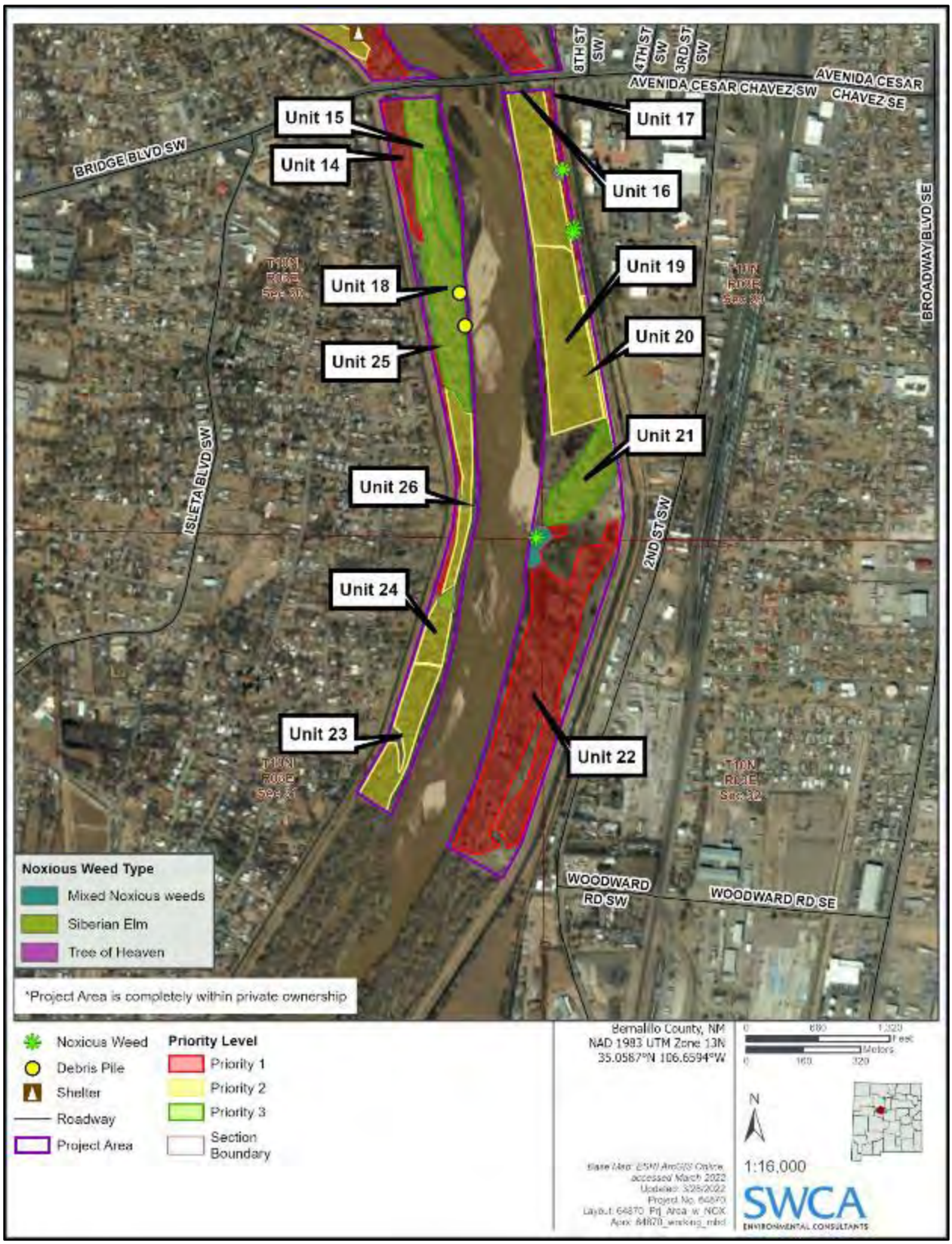

Figure 3-3. Project area with treatment units (map 3 of 3).

3.2.2 Resource Protection Measures

The following Resource Protection Measures (RMP) would be applied to the project to avoid, minimize, or mitigate impacts to sensitive resources.

3.2.2.1 Soils, Water, and Vegetation Resources

Soil-1: Off-road use of wheeled equipment will occur only during times when soils are dry to minimize soil compaction, soil displacement, and rutting and erosion.

Soil-2: Non-City vehicles and equipment will be cleaned of soil and debris capable of transporting weed seed prior to beginning work in the bosque to prevent the spread of noxious weeds.

Water-1: No chipped materials will be dispersed into water bodies, and no trees will be felled into water bodies.

Water-2: Work conducted within 200 feet of potential waters of the U.S. (WOTUS) will be restricted to hand cutting and hand hauling debris. No mulch will be placed in WOTUS.

Water-3: No wheeled equipment will be allowed within a 100-foot buffer zone of potential WOTUS, including the Rio Grande, to mitigate disturbance of riparian and wetland vegetation, protect soils from compaction and other disturbances, and protect water quality.

Water-4: To avoid any potential impacts to aquatic habitats, all fuels, hydraulic fluids, and other hazardous materials will be stored outside the normal floodplain. No equipment refueling will take place within 100 feet of any water feature, wetted or dried. Equipment will be parked at predetermined locations on high ground overnight. If a spill occurs during implementation activities, the City and USFWS will be immediately notified.

Water-5: Spill kits will be on hand at all times to manage unanticipated spills of materials from equipment. Designated personnel will be trained in spill prevention, and spill cleanup will be on-site during all implementation activities. A spill kit will be maintained on-site with spill pans, containment diapers, oil booms, absorbent pads, oil mats, plastic bags, gloves, and goggles.

Water-6: Prior to leaving contractor facilities, all equipment will be thoroughly inspected, and any leaky or damaged hydraulic hoses will be replaced. At the project area, crews will inspect equipment for leaks regularly and make repairs immediately if leaks are detected.

Water-7: The contractor and their personnel will be briefed and a responsible party will sign off on local environmental considerations specific to the Proposed Project tasks.

Water-8: Local fire hydrants will be sourced for dust suppression water. Native water will not be taken from the river or irrigation drains.

Veg-1: The accumulation of chipped materials will be limited to an average maximum of 2 inches deep and no greater than 4 inches deep in any one spot and spread evenly throughout the treatment area. This will allow for grasses and other ground vegetation to grow up through the shredded woody mulch and help retain ground moisture.

Herbicide-1: Herbicides will be applied with prescribed environmental conditions stated on the herbicide label. This includes label instructions required by the EPA pertaining to wind speed, relative humidity,

water, air temperature, chemical persistence, and time since last rainfall when determining timing of application in relation to drift reduction.

Herbicide-2: Herbicide use will be restricted to EPA- and New Mexico Department of Agriculture (NMDA)-registered application rates (usually in terms of pound of active ingredient applied per acre) and conditions listed on the label. Follow-up application of a second herbicide to an area will be conducted only after reviewing best available information on compatibility with the previous application's formulation.

Herbicide-3: Areas used for mixing herbicides and cleaning equipment will be located where spillage will not run into surface waters or result in groundwater contamination and will adhere to the other RMPs listed in the spill prevention, control, and containment plan.

Herbicide-4: A pesticide application record will be completed on a daily basis for each treatment area detailing the herbicide application, treatment area, target species distribution and density, weather conditions, and recommendations for follow-up treatments or rehabilitation.

3.2.2.2 Air Resources

Air-1: Vehicle speed on levee roads will be limited to 15 mph, which will also minimize dust.

Air-2: All vehicles involved in implementation will be required to have passed a current New Mexico emissions test and have required emission control equipment.

3.2.2.3 Wildlife Resources

Bird-1: For those treatments implemented between April 15 and September 1, FEMA and the City commit to conducting protocol surveys for southwestern willow flycatcher (and yellow-billed cuckoo, if work extends past June 1). Should an active flycatcher or cuckoo nest be found within the project area, construction will cease within a 1-mile buffer of the active nest until the nest is no longer active. If an active nest is observed during work activities, the USFWS biologist must be contacted immediately.

Bird-2: No burning of piles of removed vegetation will be conducted.

Bird-3: To prevent impacts to migratory bird species, any vegetation removal during the breeding season (April 15– September 1) would be preceded by a pre-treatment nesting survey up to 2 weeks prior to vegetation removal to identify active nests within the treatment unit or adjacent treatment units. An avoidance buffer around each active nest would be implemented until the end of the nesting season or until the nestlings have fledged. The buffer size may vary by species but would be no less than 100 feet.

3.2.2.4 Cultural and Historic Resources

Cultural-1: For cultural resource sites LA 127144, LA 138859, and LA 145193, the boundaries of the site plus a 25-foot buffer will be subjected to hand and mechanical treatments only, with no use of heavy equipment. Woody material will be hand removed and treated outside the boundary. The City of Albuquerque will ensure the treatment crews were briefed on the specific treatment measures allowed within the site boundary.

Cultural-2: For cultural resource sites LA 159913, HCPI 31263, and HCPI 43875, no wildfire mitigation treatments will occur in the banks or within the irrigation drain.

Cultural-3: If intact, buried cultural deposits are discovered during project construction activities, the following requirements will apply:

a. Upon notification by a subrecipient of an unexpected discovery, or if it appears that an undertaking has affected a previously unidentified property or affected a known historic property in an unanticipated manner, in accordance with Stipulation I.B.3(e), Recipient(s) Roles and Responsibilities, the recipient(s) will immediately notify FEMA and require the subrecipient to:
    i. Stop construction activities in the vicinity of the discovery.
    ii. Take all reasonable measures to avoid or minimize harm to the property until FEMA has completed consultation with the State Historic Preservation Office (SHPO), appropriate tribe(s), and any other consulting parties. Upon notification by the recipient of a discovery, FEMA must immediately notify the SHPO, appropriate tribe(s), and other consulting parties that may have an interest in the discovery, previously unidentified property, or unexpected effects, and consult to evaluate the discovery for National Register of Historic Places (NRHP) eligibility and/or the effects of the undertaking on historic properties.

3.2.2.5 Public Health and Safety

Public-1: Personnel and public safety will be the highest priority when implementing thinning activities.

Public-2: To minimize potential occupational safety and health risks, the treatment crew members will be required to wear appropriate personal protective equipment and be properly trained for the work being performed, including applicable forest safety certification(s) or forest safety training(s).

Public-3: Temporary signage, press releases, and online public notices will be used to notify the public of trail closure during treatment implementation.

Public-4: The homeless encampments will be removed by the City prior to treatment implementation. According to the City's *Policy for responding to encampments on public property* (Appendix E), the City will be required to engage with its residents, provide notice of removal, and offer assistance prior to initiating encampment removal.

Public-5: All waste material associated with the project must be disposed of properly and not placed in identified floodway or wetland areas or in habitat for species listed under the Endangered Species Act.

Public-6: The public will be notified of upcoming thinning projects through press releases, signs posted in the area, and updates posted on the City's website.

Public-7: To minimize noise disturbance impacts, implementation activities will be limited to occur between the hours of 7 a.m. to 6 p.m., and all equipment and machinery used will meet all applicable local, state, and federal noise control regulations.

Public-8: All Occupational Safety and Health Administration (OSHA) and local municipality noise control ordinance requirements (as described in Section 4.9.3) will be adhered to.

Public-9: Vehicle and equipment running times will be minimized, and engines will be properly maintained.

3.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

The use of prescribed fire within the Rio Grande bosque was discussed during the agency scoping meeting held on December 3, 2021. The use of prescribed fire can be an effective tool for removing understory brush and burning piles resulting from vegetation thinning activities. The use of prescribed fire was dismissed as an alternative due to concerns about the health and safety risk posed by applying prescribed fire in the City's urban environment. Although unlikely, prescribed fire could escape into neighboring areas. In addition, prescribed fire can also cause smoke, which is a public health concern for densely populated areas. Therefore, the use of prescribed fire has been dismissed and is not considered further in the analysis below.

CHAPTER 4. AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS

This section contains the evaluation of potential effects of the No Action Alternative and the Proposed Action on the human and natural environments.

For the purposes of this analysis, short-term or temporary impacts are defined as those that cease after implementation of the wildfire mitigation activities are complete (estimated at 2 years); long-term or permanent impacts are defined as those remaining on the landscape after the short-term (temporary) time period.

4.1 RESOURCES NOT AFFECTED AND NOT CONSIDERED FURTHER

Table 4-1 provides an overview of the environmental resources that have been determined to not be affected by the No Action Alternative or Proposed Action. These resources have been eliminated from further analysis in this EA.

Table 4-1. Environmental Resources Not Affected

Resource	Rationale for Dismissal
Seismicity	The nature of the proposed vegetation treatments would not impact seismicity or contribute to potential seismic events. Therefore, it is not considered for further analysis.
Wild and Scenic Rivers	The National Wild and Scenic Rivers System (Public Law 90-542; 16 USC 1271 et seq.) was created in 1968 to preserve rivers with outstanding natural, cultural, and recreational value in a free-flowing condition. There are no designated wild and scenic river segments within or near the project area; therefore, they are not considered for further analysis.
Coastal Resources	Because the project area is in New Mexico, which is not a coastal state, coastal resources are not considered for analysis in this EA.
Prime and Unique Farmland	The project area is not under agricultural cultivation, and the proposed project would not convert agricultural land to non-agricultural purposes.
Hazardous Waste	Review of the EPA's Environmental Justice Screening and Mapping Tool (EPA 2021a) and of the NEPAssist tool (EPA 2022) showed that there are no hazardous, toxic, or radiological sites within the project area. Within 0.5 mile of the project area, there are two hazardous site, one brownfield site and one water discharge site (EPA 2022). The nearest mapped hazardous waste management facility is located approximately 1.5 miles east of the project area and the nearest toxic release inventory is approximately 1.2 mile east of the project area (EPA 2021a, 2022). There are no underground storage tanks (USTs) or leaking USTs within the project area (EPA 2021b). There is one open UST within less than 1 mile of the project area, but it is not within a source water protection area (EPA 2021b).

4.2 PHYSIOGRAPHY, GEOLOGY, AND SOILS

The project area is located in the Albuquerque Basin of the Rio Grande Rift Valley (Crawford et al. 1993). Fault-bordered valleys in the Rio Grande Rift were created by crustal tension in the Tertiary Period (ca. 35 million years ago). The Rio Grande Rift Valley is characterized by the accumulation of alluvial sediments, lava and ash from surrounding upland areas as a result of volcanism and erosion (Chronic 1987). Elevation in the project area ranges from 4,950 feet to 5,050 feet above mean sea level.

The current floodplain of the Rio Grande consists of fine-grained alluvial silts, sands, and gravels. A recent field survey within the project area reported little variation in soil texture across the site and characterized the soils as sandy loams (GeoSystems Analysis 2016). Soils derived from these deposits in

the project area are primarily Brazito, Vinton, and Torrifluvents soil units, which typically develop on floodplains, low terraces, and alluvial fans (Table 4-2) (Natural Resources Conservation Service [NRCS] 2021a). According to the NRCS (2021a), eight mapped soil units are present within the project area, and three of the soils have a hydric component. Brazito and Vinton soil units are deep, well-drained soils that are formed from mixed alluvium and prone to occasional flooding. Torrifluvents are soils that are prone to frequent flooding but that have poorer drainage. No soils identified at the project area are prime farmland (NRCS 2021a).

Table 4-2. Soils in the Proposed Project Area

Soil Type Name	Soil Type Symbol	Hydric Soil	Acres in Project Footprint	Percent of Project Area
Agua loam	Af	No	0.9	0.
Brazito fine sandy loam	Br	No	1.6	0.3
Brazito silty clay loam	Bs	No	4.6	1.0
Brazito complex	Bt	No, minor component yes	0.1	0.0
Glendale clay loam, 0 to 1 percent slopes	Gm	No	0.02	0.0
Torrifluvents, frequently flooded	TP	Yes	204.7	43.6
Vinton sandy loam, 0 to 1 percent slopes	VbA	No	2.4	0.5
Vinton and Brazito soils, occasionally flooded	VF	No and yes	255.8	54.4
Total			**470.12**	**100**

Source: NRCS (2021a)

4.2.1 No Action Alternative

There would be no change to physiography, geology, or soils under the No Action Alterative because the project would not be implemented.

4.2.2 Proposed Action

There would be no change to physiography or geology under the Proposed Action. There would be temporary disturbance of up to 470 acres of soils under the Proposed Action. Short-term adverse effects on soils are expected to occur due to ground disturbance during project implementation. No long-term impacts to soils are expected as a result of the Proposed Action.

The working crews would be walking within the bosque to reach treatment units and implement treatments. This foot traffic throughout the project area and the use of heavy equipment where applicable would contribute to soil compaction and displacement. The Proposed Action would thin vegetation by cutting trees and removing the understory brush, but the areas would not be entirely cleared of vegetation down to mineral soil. Disturbance of ground-covering vegetation and invasive species removal would be minimal but may temporarily expose the soil and increase the risk of erosion. However, soils would be expected to return to their current state or be improved after herbaceous vegetation becomes established following the Proposed Action. RPMs described in Section 3.2.2 (Soil-1 and Soil-2) would be implemented to prevent erosion and sedimentation.

4.3 CLIMATE CHANGE

Climate in the project area is defined as cold semi-arid climate (type "BSk") under the Köppen-Geiger climate classification, consisting of cold, semi-arid steppe climate conditions (Rubel and Kottek 2010). The average annual high temperature is 72.0°F (22.2°C), and the average annual minimum temperature is 40.5°F (4.7°C) (Station 290231) (Western Regional Climate Center 2021). Average annual precipitation is 9.6 inches (244 mm), with the majority of the precipitation occurring during monsoon summer rainfall events.

The North American monsoon is associated with moist air transported from the Pacific Ocean, the Gulf of California, and the Gulf of Mexico into the southwestern United States, generally resulting in brief and torrential precipitation events during the summer months (National Weather Service 2021). The summer monsoon contributes a large proportion of annual precipitation. Secondary precipitation accumulations occur during winter when moisture from the Pacific Ocean moves eastward and brings frontal storms.

Warming temperatures have already produced observable changes in the hydrologic cycle and sea level. Climate change models predict a general warming and drying over the southwestern United States (Maurer et al. 2007). Increased temperatures have been associated with reduced snowpack and increased snowline elevation, as well as higher proportion of rainfall to snowfall (U.S. Bureau of Reclamation 2016). Regional trends indicate changes in temperature and precipitation patterns, with a trend toward the southwestern United States becoming drier. Precipitation events are anticipated to be more torrential, with precipitation converting to less frequent but more intense events (Karl 2009), which would increase the potential and severity of flooding events.

Increased temperatures with decreased precipitation within the Rio Grande basin are expected to exacerbate water supply constraints and shortages, and to increase the potential for severe droughts (U.S. Bureau of Reclamation 2011). Declines in snowpack, runoff, and recharge are expected to decrease surface-water quality (Dunbar et al. 2021). Higher temperatures and greater aridity are likely to stress plant communities, which may increase erosion and the frequency of more extreme wildfires. Warming could also increase reservoir and stream evaporation, and indirectly increase runoff effects from ecosystem changes (e.g., pine beetle infestation). These changes in water supply and precipitation patterns are expected to alter species distribution by reducing the extent of suitable habitat or shifting habitat distributions north or to higher elevation (Friggens and Finch 2015).

4.3.1 No Action Alternative

Under the No Action Alternative, an increase in fire risk is expected. Catastrophic fires release carbon dioxide (CO_2) to the atmosphere, which is known to be a greenhouse gas that would in turn contribute to global warming. The loss of the forested habitat would also result in the loss of a potential carbon sink. Current climate change projections indicate increasing aridity in the southwestern United States. With decreased runoff and river flows, the river and the bosque are expected to remain disconnected, thus promoting nonnative vegetation. Because climate change is unpredictable with unknown direct effects, no evidence currently exists to suggest a change in the current trend toward a bosque of declining quality. The No Action Alternative would likely result in long-term adverse effects to climate.

4.3.2 Proposed Action

The Proposed Action is not anticipated to affect global climate change. CO_2 emissions from equipment and vehicles necessary to implement the wildfire mitigation activities would contribute very small, insignificant temporary contributions to climate change. The Proposed Action would be expected to have a beneficial long-term impact on climate change by reducing the potential emission of greenhouse gases associated with a major wildfire. Restoration activities under the Proposed Action would improve

ecosystem function by creating a more natural vegetation composition and reduce the risk of fire. Intact forests can serve as carbon sinks removing CO_2, a greenhouse gas, from the atmosphere (Bellassen and Luyssaert 2014; Ryan et al. 2012). RPMs described in Section 3.2.2 (Air-2) would be implemented to minimize contributions of greenhouse gas emissions.

4.4 AIR QUALITY

The Clean Air Act of 1970 authorized the development of comprehensive federal and state regulations to limit emissions from both stationary (industrial) sources and mobile sources. The New Mexico Environment Department (NMED) Air Quality Bureau (AQB) and the EPA enforce air quality standards. The City of Albuquerque's Environmental Health Department is responsible for regulating all sources of ambient air pollution in Bernalillo County. The Proposed Action is located in New Mexico's Air Quality Control Region (AQCR) No. 152, which encompasses about 5,000 square miles, including all of Bernalillo County and portions of Sandoval County lying east of the Continental Divide (40 CFR 81.83).

The AQCR No. 152 is currently designated as a "maintenance" area for carbon monoxide (CO) and "in attainment" (i.e., do not exceed state and federal EPA air quality standards) for all other criteria pollutants (EPA 2015). Standards for CO were violated repeatedly within the Albuquerque metropolitan area prior to 1992, which resulted in the maintenance designation. These violations were the result of mobile sources, including vehicle exhaust, and residential wood burning. Since 1991, national and local air improvement strategies have contributed to reducing CO concentrations in the area.

Another potential pollutant of concern in Bernalillo County is particulate matter, which includes particulate matter smaller than 10 microns (PM_{10}). According to the City's Environmental Health Department, the County has historically recorded exceeding the federal 24-hour standard for PM_{10}, and in 2002, the County came close to exceeding the annual threshold for PM_{10}. PM_{10} issues in the area are generally attributed to windblown dust arising from land disturbed by human activities. To address the potential concerns associated with PM_{10}, the City and County have adopted a fugitive dust control ordinance that requires construction activities disturbing more than 0.75 acre to obtain a fugitive dust control permit and prepare a dust control plan as part of the project. Bernalillo County is in attainment for particulate matter smaller than 2.5 microns ($PM_{2.5}$), sulfur dioxide (SO_2), nitrogen oxide, and lead. Levels of SO_2 and lead are so low that they are not monitored by the County.

4.4.1 No Action Alternative

There would be no permanent changes to air quality under the No Action Alternative because the project would not be implemented. However, there would be an increased risk of fire. In the event of fire, there would be a temporary decrease in air quality in the vicinity of an active fire due to the presence of smoke.

4.4.2 Proposed Action

There would be a temporary increase in the emission of nitrogen dioxide, SO_2, $PM_{2.5}$, and CO_2, but these impacts would be minimal. These adverse impacts to air quality are anticipated to be temporary and occur only during implementation of the Proposed Action. No long-term adverse impacts are anticipated, but the Proposed Action would result in long-term beneficial impacts. Emissions of other criteria pollutants resulting from the Proposed Action are not expected to exceed state or federal air quality standards.

Air quality impacts under the Proposed Action would be localized and temporary and would only occur during thinning activities. During project implementation, the equipment used would include chainsaws, woodchippers, and trucks with trailers to haul equipment and debris. This equipment would burn hydrocarbon fuels, including nitrogen dioxide and SO_2, which are criteria pollutants, and would result in a

temporary incremental increase in greenhouse gas emissions. These emissions would be intermittent and temporary, lasting for the duration of equipment use. Ground disturbance during project implementation may also cause fugitive dust.

Emissions from the use of mechanical equipment would be small relative to the emissions generated by wildfire events. By implementing the Proposed Action, hazardous fuel loading in the project area would be mitigated, reducing the potential for a large catastrophic wildfire. Long-term benefits of the Proposed Action therefore include reduced pollutant emissions, including emissions of $PM_{2.5}$ and CO_2, compared with the No Action Alternative. The Proposed Action would also result in reduced risk of wildfire-related smoke impacts on air quality for nearby communities.

RPMs described in Section 3.2.2 (Air-1 and Air-2) would be implemented to minimize air quality degradation.

4.5 WATER RESOURCES

4.5.1 Water Quality

Regulatory agencies that control impacts to U.S. and New Mexico water resources include the USACE, USFWS, EPA, NMED, and Office of the State Engineer/Interstate Stream Commission. Section 402(p) of the CWA regulates point source discharges of pollutants into WOTUS and specifies that stormwater discharges associated with construction activity be conducted under National Pollutant Discharge Elimination System guidance. Designated uses for the Rio Grande in the project area are irrigation, limited warm water fishery, wildlife habitat, and secondary contact (20.6.4.105 New Mexico Administrative Code [NMAC]). If applicable, general criteria set out in Subsections A, B, C, D, E, G, H, and J of 20.6.4.13 NMAC and the provision set out in Subsection E of 20.6.4.14 NMAC would be adhered to. All federal, state, and local regulations would apply.

Water quality within the project area reach of the Rio Grande is characterized by relatively high turbidity and slight to moderate alkalinity. Water quality in the Rio Grande through the project area is impacted by fecal coliform contamination, municipal point sources, urban runoff, and storm sewers (NMED Surface Water Quality Bureau 2002). There are three major storm sewer outfalls to the Rio Grande in the project area and vicinity. Two of these outfalls are located on the east side of the river between the Bridge Boulevard and Central Avenue crossings. The third outfall is located near the old Atrisco Diversion on the west side of the river between the Central Avenue and Interstate 40 crossings. Contaminants introduced to the Rio Grande from these outfalls include solid waste, oils, pesticide and herbicide residues, phosphorous, nitrogen, and fecal coliform (Tague and Drypolcher 1979).

4.5.1.1 No Action Alternative

Under the No Action Alternative, there would be no impacts to water resources because the project would not be implemented. However, there would be an increased risk of wildfire. If a wildfire within the bosque were to occur, ash and sediment runoff into the Rio Grande would have the potential to decrease water quality.

4.5.1.2 Proposed Action

The Proposed Action would not directly affect surface waters, and there is very little risk or potential for tree thinning actions to impact water quality. The Proposed Action could cause temporary localized, adverse impacts to Rio Grande surface waters from potential erosion and sedimentation over the project implementation period, and from herbicide applications. The operation of equipment during the Proposed

Action would disturb soils, which could increase erosion potential during heavy rains. The proposed use of herbicides to control invasive plant species (Russian olive, saltcedar, tree of heaven) stump sprouts growth and to eradicate ravenna grass is expected to have a negligible impact to water quality. Herbicide treatments would be applied directly to sprouts or leaf tissue using a sprayer backpack as opposed to broadcast treatments. Other potential impacts could result from contaminants spilled or drained into water bodies (e.g., an accidental spill when fueling chainsaws or fuel leaking from the chipper). The Proposed Action would reduce the risk of a severe wildfire event and post-fire impacts such as soil contaminants draining into water bodies and impacting the water quality.

RPMs described in Section 3.2.2 (Soil-1, Water-1 through Water-8, and Herbicide-1 through Herbicide-4) would be implemented to minimize impacts to water quality.

According to Section 402(l)(3) of the CWA, silvicultural activities, such as thinning, site preparation, reforestation, or pest and fire control, do not require a permit. Therefore, a stormwater pollution prevention plan is not required for project implementation.

4.5.2 Hydrology and Water Depletions

Historic information indicates that the riparian corridor of the entire MRG was much broader and variable than it is currently (Cartron et al. 2008; Crawford et al. 1993; Scurlock 1998). The meandering channels of the historic Rio Grande resulted in broad floodplains without the well-defined riparian zones found today. Frequent flooding caused changes in the position and structure of riparian environments. Riparian vegetation developed and changed in response to floods, sediment deposition, and low flow periods (Crawford et al. 1993).

Channel width of the Albuquerque Reach has noticeably decreased since the 1900s. Much of this narrowing has resulted from reduction in peak flows due to drought, upstream flow regulation, channel degradation, increased amounts of riparian vegetation, and mid-channel bar stabilization (Leon et al. 2003). The natural flows of the Rio Grande are controlled by the climatic, geologic, and physical characteristics (Lee et al. 2004) derived largely from snowmelt (predominantly upstream) and summer thunderstorms often localized at lower elevations.

The dams constructed on the Rio Grande and its tributaries alter magnitude, timing, and duration of peak flows. Dams also capture and store sediment over time in reservoirs, reducing the supply to downstream reaches of the MRG (Lagasse 1981). Cochiti Dam releases are restricted to the maximum non-damaging downstream channel capacity, which is typically estimated to be 7,000 cubic feet per second at the Albuquerque gage.

The Rio Grande in the project area is characterized by warm summer water temperature, low velocity, high turbidity, more pools than riffles, and a lack of shade and cover over water, and therefore is classified as a warm water ecosystem (Crawford et al. 1993; Platania 1993). The proposed project area crosses one watershed, the City of Albuquerque-Rio Grande (Hydrologic Unit Code 1302020303) (NRCS 2021c).

The Rio Grande Compact of 1939 limits the amount of surface water that can be depleted (utilized for all purposes) annually in the MRG based on the flow of the river measured at the Otowi Gage near Los Alamos. The New Mexico State Engineer has also determined that the MRG is fully appropriated. Therefore, any increase in water use by one user (also known as a depletion) must be offset by a reduction by another use or user, so that senior water rights and New Mexico’s ability to meet downstream delivery obligations are not threatened.

4.5.2.1 No Action Alternative

Under the No Action Alternative, there would be no impacts to hydrology or water depletions within the MRG because the project would not be implemented

4.5.2.2 Proposed Action

The Proposed Action would not modify main channel flows, the river hydrograph, or morphology of the river channel. Therefore, there would be no change to hydrology as a result of the Proposed Action.

All of the work described in the Proposed Action would be within the riparian floodplain. Vegetation restoration performed under the Proposed Action would result in a more natural plant community, and the removal of dense stands of nonnative vegetation could increase groundwater infiltration and help to attenuate stormwater flows. No new water depletions are anticipated from the Proposed Action because 1) the project would not change the functionality of the floodway and 2) vegetation within the 470-acre project area would be reduced overall.

4.5.3 Wetlands and Floodplains

Jurisdictional WOTUS, including wetlands, are protected under several rules and regulations including federal guidelines outlined by CWA Sections 401 and 404, Executive Order (EO) 11988 (Floodplain Management), EO 11990 (Protection of Wetlands) and by the review process of the NMED Surface Water Quality Bureau.

The CWA, as amended, is the primary federal law in the United States regulating water pollution (Public Law 92-500, 33 USC 1251). The CWA regulates the quality of water discharged into "waters of the United States." Section 404 of the CWA regulates the discharge of dredged or fill material in navigable waters, including wetlands.

EO 11990 requires federal agencies "to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative."

EO 11988 (Floodplain Management) requires federal agencies "to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of the floodplain and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative." The majority of the Proposed Action would be conducted within the 100-year floodplain of the Rio Grande according to the Flood Insurance Rate Maps (panel numbers 35053C1050C, 35053C1410C, 35053C1430C, 35053C1440C, and 35053C1825C, dated May 02, 2016). FEMA's implementing regulations for EO 11988 and 11990 are codified under 44 CFR 9, which includes an eight-step decision making process for compliance with this part. The eight-step decision making process for the Proposed Action is documented in Appendix B.

Wetland areas occur where the water table is at or near the surface or where land is covered by water at least part of the year. According to National Wetlands Inventory (NWI) data (USFWS 2021a), approximately 60 acres of NWI wetland features, including eight riverine wetland features, one freshwater emergent wetland, three freshwater forested/shrub wetland features, and one freshwater pond, occur in the project area. Based on review of the National Hydrologic Dataset, 15 potentially jurisdictional WOTUS were identified that intersect the project area (U.S. Geological Survey 2021). These features include canals, streams, artificial paths, and ditches.

4.5.3.1 No Action Alternative

Under the No Action Alternative, there would be no impacts to wetlands and floodplains because the project would not be implemented. However, the existing conditions and potential risks from a wildfire event would remain. A wildfire could damage the wetlands within the project area by destroying vegetation and drying the water source. Additionally, there could be post-fire impacts, such as channel bank erosion, accumulation of sediment in wetlands, and flooding. Sediment loading in water bodies can change the hydrologic function of wetlands and compromise their ability to support aquatic vegetation. Post-fire impacts could also cause channel bank erosion and an accumulation of sediment and debris in the floodplain, which could alter the floodplain by impeding or redirecting flood flows.

4.5.3.2 Proposed Action

See Appendix B for FEMA's eight-step process for evaluating floodplain and wetland impacts. This section provides a summary of the analysis presented in Appendix B.

All of the work described in the Proposed Action would be within the riparian floodplain and areas adjacent to wetlands. Under the Proposed Action, there would be temporary disturbance of up to 60 acres of wetlands and up to 470 acres of floodplains (see Appendix B). The proposed methods for implementation include thinning woody vegetation using hand tools, mulching dead woody debris, and removing exotic plant species, which would cause temporary disturbance to vegetation communities and soils within the wetlands and floodplains. Within wetlands, some vegetation would be removed, but the overall function of soils and hydrology would remain unaltered. No root balls would be removed, and stumps would be cut down to ground level, which would minimize impact to soils and the potential for erosion. RPMs described in Section 3.2.2 (Soil-1, Soil-2, Water-1 through Water-8, Veg-1, Herbicide-1 through Herbicide-4) would be implemented to minimize impacts to wetlands and floodplains.
The Proposed Action would not result in the discharge of dredged or fill material into wetlands; therefore, the project would not require a CWA Section 404 permit. The City will 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.

The wildfire mitigation treatments performed under the Proposed Action is expected to result in long-term beneficial effects to wetland and floodplain function through the development of a more natural plant communities, increased habitat quality for wildlife, and decreased fire risks within wetlands and floodplains.

4.6 BIOLOGICAL RESOURCES

SWCA conducted a 100% pedestrian natural resources survey of the project area from November 17 to 29, 2021, to identify the potential for special-status species and habitat communities regulated by the USFWS under Section 7 of the ESA, active and inactive migratory bird nests protected by the MBTA, and general biological conditions of the project area. This section summarizes the results of the desktop research and fieldwork compiled to characterize biological resources.

4.6.1 Vegetation Communities

Historically, the Rio Grande supported a diversity of plant communities including large wetlands and an extensive cottonwood gallery forest with interspersed shrublands. These plant communities occupied the floodplains of the Rio Grande within the project area before the ecosystem was altered by anthropogenic

disturbance. The creation of the cottonwood communities depends on stream movement, and sand bars formed by the meandering river provide the conditions necessary for cottonwood establishment (Crawford et al. 1993). Cottonwoods grow well only when roots can reach moisture provided by underground water and where seeds can germinate in bare, moist soil. Therefore, cottonwoods are limited to areas with a permanent water supply. New seedlings cannot grow in a forest with a closed canopy that prevents adequate sunlight from reaching the forest floor. However, as the river meanders, sections of the mature forest die, thus providing space to establish a new stand of cottonwoods. The result is a variety of patches, or mosaics, ranging from newly established seedlings to old, mature stands of huge trees to open areas with few trees. Overbank flooding historically supported this native plant community by providing water and nutrients to the riparian vegetation communities and limiting the accumulation of leaf litter and woody debris, thus decreasing conditions that promote fire.

The cottonwood forests that border the Rio Grande in central New Mexico are remnants of the bosque, a Spanish word for forest. Regulation of water in the Rio Grande and changes to channel geometry have reduced overbank flooding and floodplain connectivity, limiting regeneration of riparian habitat. Many cottonwood forests have also been cleared for farming, flood risk management projects, and urban development. Nonnative plants and animals have spread throughout the valley, often displacing the population of native species.

The proposed project area is located within the Arizona/New Mexico Plateau EPA Level IV Ecoregion (Griffith et al. 2006). During the biological survey, the SWCA biologist determined there was one habitat type: Western Great Plains Riparian Woodland and Shrubland. This habitat type is characterized by streamside deciduous vegetation and a mosaic of vegetation communities ranging from trees, shrubs, herbaceous wetlands and tallgrass or mixed grass wet meadows. Tree and shrub species typically include a canopy of cottonwood and willow with an understory of native shrub species and a variable herbaceous stratum.

The dominant species in the project area are denoted in Table 4-3. These dominant species are typical of current conditions of the ecoregion. Of the 47 species that were observed during the biological survey, 11 are nonnative (exotic) to the project area. Vegetative cover within the project area ranges from 10% to 70%. The project area and surrounding landscape have been previously disturbed by access roads, hiking trails, and other utility corridors. New Mexico plant species of concern are discussed below.

Vegetation is dense in the majority of the project area, including trees and the understory brush that enable fires to spread quickly and serve as ladder fuels, moving the fire from the ground into the crowns of forest stands. Crown fires often burn hotter and faster and have widespread mortality. Mitigating the wildfire risk of these woodland and shrublands is especially needed because they are a threat to adjacent residential areas and population centers.

Table 4-3. Plant Species Observed during the Biological Survey

Common Name	Scientific Name	Growth Form	Duration	Native/Exotic
Annual ragweed	*Ambrosia artemisiifolia*	Forb	Annual	N
Blue grama	*Bouteloua gracilis*	Graminoid	Perennial	N
Broom snakeweed	*Gutierrezia sarothrae*	Subshrub, shrub, forb	Perennial	N
Canada wildrye	*Elymus canadensis*	Graminoid	Perennial	N
Colorado bedstraw	*Galium coloradoense*	Subshrub, forb	Perennial	N
Copper globemallow	*Sphaeralcea angustifolia*	Subshrub, forb	Perennial	N
False indigo bush*	*Amorpha fruticosa*	Shrub	Perennial	N

Common Name	Scientific Name	Growth Form	Duration	Native/Exotic
Field bindweed	*Convolvulus arvensis*	Vine, forb	Perennial	E
Five-stamen tamarisk*	*Tamarix chinensis*	Tree, shrub	Perennial	E
Fourwing saltbush*	*Atriplex canescens*	Shrub	Perennial	N
Foxtail barley	*Hordeum jubatum*	Graminoid	Perennial	N
Giant dropseed	*Sporobolus giganteus*	Graminoid	Perennial	N
Golden currant	*Ribes aureum*	Shrub	Perennial	N
Goodding's willow*	*Salix gooddingii*	Tree, shrub	Perennial	N
Indian ricegrass	*Achnatherum hymenoides*	Graminoid	Perennial	N
James' galleta	*Pleuraphis jamesii*	Graminoid	Perennial	N
Kochia (burningbush)	*Bassia (Kochia) scoparius*	Forb	Annual	E
Narrowleaf (coyote) willow	*Salix exigua*	Tree, shrub	Perennial	N
Pale desert-thorn (wolfberry)	*Lycium pallidum*	Shrub	Perennial	N
Pigweed	*Amaranthus* sp.	Forb	Annual	E
Prickly Russian thistle	*Salsola tragus*	Forb	Annual	E
Prostrate sandmat	*Chamaesyce prostrata*	Forb	Annual, perennial	N
PunctureVine	*Tribulus terrestris*	Forb	Annual	E
Purple threeawn	*Aristida purpurea*	Graminoid	Annual, perennial	N
Ravennagrass*	*Saccharum ravennae*	Graminoid	Perennial	E
Riddell's ragwort	*Senecio riddellii*	Subshrub, forb	Perennial	N
Rio Grande cottonwood*	*Populus deltoides wislizenii*	Tree	Perennial	N
Rubber rabbitbrush	*Ericameria nauseosa*	Shrub, subshrub	Perennial	N
Russian olive*	*Elaeagnus angustifolia*	Tree, shrub	Perennial	E
Sand dropseed*	*Sporobolus cryptandrus*	Graminoid	Perennial	N
Scarlet beeblossom	*Oenothera suffrutescens*	Forb	Perennial	N
Siberian elm*	*Ulmus pumila*	Tree, shrub	Perennial	E
Silverleaf nightshade	*Solanum elaeagnifolium*	Subshrub, forb	Perennial	N
Spike dropseed	*Sporobolus contractus*	Graminoid	Perennial	N
Spreading dogbane	*Apocynum androsaemifolium*	Forb	Perennial	N
Squirreltail	*Elymus elymoides*	Graminoid	Perennial	N
Stretchberry (New Mexico olive)	*Forestiera pubescens*	Shrub	Perennial	N
Sweetclover	*Melilotus officinalis*	Forb	Annual, perennial	E
Thymeleaf sandmat	*Chamaesyce serpyllifolia*	Forb	Annual	N
Touristplant	*Dimorphocarpa wislizeni*	Forb	Annual	N
Tree of heaven*	*Ailanthus altissima*	Tree, shrub	Perennial	E
Tufted evening primrose	*Oenothera caespitosa*	Forb, subshrub	Perennial	N
Vine mesquite*	*Panicum obtusum*	Graminoid	Perennial	N
White heath aster	*Symphyotrichum ericoides*	Forb	Perennial	N
White mulberry	*Morus alba*	Tree, shrub	Perennial	E

Common Name	Scientific Name	Growth Form	Duration	Native/Exotic
White prairie clover	*Dalea candida*	Subshrub, forb	Perennial	N
Woodbine*	*Parthenocissus vitacea*	Vine	Perennial	N

Note: Nomenclature follows the PLANTS Database (NRCS 2021b).

* Denotes dominant species

EO 13112, Invasive Species, requires federal agencies to identify actions that could affect the status of invasive species and prevent the introduction of invasive species. It also requires federal agencies to not authorize, fund, or carry out actions likely to cause or promote the introduction or spread of invasive species in the United States.

The State of New Mexico, under the administration of the NMDA, lists certain weed species as noxious (NMDA 2020). "Noxious" in this context refers to plants that are not native to New Mexico, that are targeted for management and control, and that have a negative impact on the economy or the environment. Class C listed weeds are common, widespread species that are well established in the state; Class B weeds are considered fairly common but are not yet widespread in certain regions of the state; and Class A weeds have limited or no distribution in the state. Preventing new infestations of Class A species and eradicating their infestations is the highest priority. Class B species are found in limited portions of the state. In severe infestation areas, containing infestation and stopping further spreading is the management goal. Class C species are widespread in the state, and their management decisions are determined at the local level, based on feasibility of control and infestation level.

During the biological survey conducted November 17 through 29, 2021, no U.S. Department of Agriculture–listed noxious weed species were observed; however, the following six NMDA-listed species were found within the proposed project area (NMDA 2020):

- Five-stamen tamarisk (*Tamarisk chinensis*) – Class C
- Giant cane (*Arundo donax*) – Class C
- Ravenna grass (*Saccharum ravennae*) – Class A
- Russian olive (*Elaeagnus angustifolia*) – Class C
- Siberian elm (*Ulmus pumila*) – Class C
- Tree of heaven (*Ailanthus altissima*) – Class B

4.6.1.1 No Action Alternative

Under the No Action Alternative, there would be no change to existing vegetation communities because the project would not be implemented. Therefore, invasive vegetation would continue to exist in large stands, invade into adjacent areas, and cause a high fire danger.

4.6.1.2 Proposed Action

There would be temporary disturbance up to 470 acres of native vegetation communities under the Proposed Action. Vegetation thinning to reduce ladder fuels would involve thinning small-diameter trees and bushes from under the dripline of larger canopied trees. All slash and ladder fuels would be removed, directionally piled, chipped, and dispersed or transported off-site. Table 2-1 lists the potential acreage disturbed by the Proposed Action for each treatment unit and the treatment tools to be used for implementation within each treatment unit. Short term adverse effects resulting from vegetation removal

under the Proposed Action includes the loss of small-diameter trees, underbrush, and ground disturbance that could disturb established grasses and forbs.

Methods to eradicate invasive plant communities identified within the project area would include herbicide applications, hand removal, cut-and-spray stump treatment, and girdling. Preferred vegetation removal methods for each targeted species are described in the implementation plan (SWCA 2022a). Herbicide treatments would be applied directly to invasive plant sprouts or leaf tissue using a sprayer backpack as opposed to broadcast treatments, thus minimizing potential impacts to adjacent native vegetation communities. RPMs described in Section 3.2.2 (Soil-1, Soil-2, Veg-1, and Herbicide-1 through Herbicide-4) would be implemented to minimize impacts to native vegetation communities.

Long-term beneficial impacts to vegetation communities could occur as a result of reseeding or replanting native vegetation in areas where vegetation removal occurs. The reduction in fuel loads and ladder fuels within the bosque would reduce the risk of a catastrophic wildland fire in the project, which is expected to have long-term benefits to native vegetation.

4.6.2 Fish and Wildlife

Riparian areas constitute less than 1% of the land area in the Arid Southwest yet provide habitat to a greater number of wildlife species than any other ecological community in the region. These riparian communities provide habitat for a wide variety of plants and animals. At least 80% of vertebrate wildlife occurring in New Mexico use riparian areas at some stage of their lives and 50% are permanent residents (New Mexico Department of Game and Fish [NMDGF] 2004). Riparian areas support a greater diversity of breeding birds than all other habitats in the state combined. In addition, the MRG riparian corridor is a critical travel corridor for migrating birds connecting Central and South America to North America along the Rio Grande Flyway (Yong and Finch 2002).

The ecoregion identified within the proposed project area provides habitat for a variety of wildlife species. The SWCA biologist detected 36 bird species and five mammal species during the biological survey of the project area (Table 4-4). None of the species detected are listed as special-status species, except for the bald eagle (*Haliaeetus leucocephalus*), which is protected under the Bald and Golden Eagle Protection Act. Designated critical habitat for the Rio Grande silvery minnow (*Hybognathus amarus*) occurs throughout the project area (Section 4.6.3).

Table 4-4. Wildlife Detected during Biological Survey

Common Name	Scientific Name
Birds	
American coot	*Fulica americana*
American crow	*Corvus brachyrhynchos*
American goldfinch	*Spinus tristis*
American robin	*Turdus migratorius*
American wigeon	*Mareca americana*
Bald eagle	*Haliaeetus leucocephalus*
Belted kingfisher	*Megaceryle alcyon*
Bewick's wren	*Thryomanes bewickii*
Brown creeper	*Certhia americana*
Canada goose	*Branta canadensis*
Common raven	*Corvus corax*

Common Name	Scientific Name
Cooper's hawk	*Accipiter cooperii*
Dark-eyed junco	*Junco hyemalis*
Downy woodpecker	*Picoides pubescens*
Eastern bluebird	*Sialia sialis*
Gadwall	*Mareca strepera*
Great blue heron	*Ardea herodias*
Greater roadrunner	*Geococcyx californianus*
Green-winged teal	*Anas carolinensis*
Hermit thrush	*Catharus guttatus*
House finch	*Haemorhous mexicanus*
Lesser goldfinch	*Spinus psaltria*
Lincoln's sparrow	*Melospiza lincolnii*
Mallard	*Anas platyrhynchos*
Mourning dove	*Zenaida macroura*
Northern flicker	*Colaptes auratus*
Northern shoveler	*Spatula clypeata*
Ret-tailed hawk	*Buteo jamaicensis*
Rock pigeon	*Columba livia*
Sandhill crane	*Antigone canadensis*
Song sparrow	*Melospiza melodia*
Spotted towhee	*Pipilo maculatus*
White-breasted nuthatch	*Sitta carolinensis*
White-crowned sparrow	*Zonotrichia leucophrys*
Wood duck	*Aix sponsa*
Yellow-rumped warbler	*Setophaga coronata*
Mammals	
American beaver (tracks)	*Castor canadensis*
American porcupine	*Erethizon dorsatum*
Coyote (tracks)	*Canis latrans*
Domestic cat	*Felis catus*
Domestic dog	*Canis lupus familiaris*

Note: Individuals of each species were observed unless otherwise noted.

Common small mammals detected in the project area are American beaver (*Castor canadensis*), American porcupine (*Erethizon dorsatum*), and coyote (*Canis latrans*). Small mammals are more abundant in moister and densely vegetated habitats and those with dense narrowleaf (coyote) willow than in drier areas. Other mammals likely to occur in the project area include white-footed mouse (*Peromyscus leucopus*), western harvest mouse (*Reithrodontomys megalotis*), house mouse (*Mus musculus*), tawny- bellied cotton rat (*Sigmodon fulviventer*), and rock squirrel (*Spermophilus variegatus*). Raccoon (*Procyon lotor*) and muskrat (*Ondatra zibethicus*) are likely to occur in wetland and riparian habitats, and long-tailed weasel (*Mustela frenata*), striped skunk (Mephitis), and Botta's pocket gopher (*Thomomys bottae*), in riparian woodlands.

Generally, the abundance of breeding birds increases with the complexity and density of vegetation structure, which is thought to be related to the increased food, cover, or nest substrate it provides (Crawford et al. 1996). Along the Rio Grande, the highest breeding densities typically have been found in marshes, cottonwood stands with a well-developed shrub understory, and in tall shrub stands (Hink and Ohmart 1984; Hoffman 1990; Thompson et al. 1994; Stahlecker and Cox 1997). Bosque stands with a sparse understory generally support fewer breeding birds.

Bird species observed in the project area during the November 17 through 29, 2021, biological survey include American coot (*Fulica americana)*, American crow (*Corvus brachyrhynchos*), American goldfinch (*Spinus tristis*), American robin (*Turdus migratorius*), American wigeon (*Mareca americana*), bald eagle, belted kingfisher (*Megaceryle alcyon*), Bewick's wren (*Thryomanes bewickii*), brown creeper (*Certhia americana)*, Canada goose (*Branta canadensis)*, common raven (*Corvus corax)*, Cooper's hawk (*Accipiter cooperii*), dark-eyed junco (*Junco hyemalis*), downy woodpecker (*Picoides pubescens*), eastern bluebird (*Sialia sialis*), gadwall (*Mareca strepera*), great blue heron (*Ardea herodias*), greater roadrunner (*Geococcyx californianus*), green-winged teal (*Anas carolinensis*), hermit thrush (*Catharus guttatus*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), Lincoln's sparrow (*Melospiza lincolnii*), mallard (*Anas platyrhynchos*), mourning dove (*Zenaida macroura*), northern flicker (*Colaptes auratus*), northern shoveler (*Spatula clypeata*), red-tailed hawk (*Buteo jamaicensis*), rock pigeon (*Columba livia*), sandhill crane (*Antigone canadensis*), song sparrow (*Melospiza melodia*), spotted towhee (*Pipilo maculatus*), white-breasted nuthatch (*Sitta carolinensis*), white-crowned sparrow (*Zonotrichia leucophrys*), wood duck (*Aix sponsa*), and yellow-rumped warbler (*Setophaga coronata*).

4.6.2.1 No Action Alternative

The No Action Alternative would have no change to the current state of declining habitat value to fish and wildlife because the project would not be implemented. However, the risk for wildfire would remain high, which could result in adverse effects to fish and wildlife species in the project area.

4.6.2.2 Proposed Action

The Proposed Action would have no effect on fish species other than potential long-term benefits to water quality in the Rio Grande. There would be temporary disturbance up to 470 acres of wildlife habitat under the Proposed Action. Therefore, there would be minor short-term adverse effects to wildlife during construction, with potential long-term benefits.

Temporary impacts to wildlife would result from actions that alter wildlife habitats, including changes to vegetation. Altering wildlife habitat in ways that would be considered adverse may occur directly (through habitat loss) or indirectly (through the reduction in habitat quality caused by increased noise levels and increased human activity). The proposed use of herbicides to control invasive plant species (Russian olive, saltcedar, tree of heaven) stump sprouts growth and to eradicate ravenna grass is expected to have negligible impacts to water quality and temporary impacts to wildlife by reducing available habitat. Herbicide treatments would be applied directly to sprouts or leaf tissue using a sprayer backpack as opposed to broadcast treatments, thus minimizing impacts to water quality and to nearby native vegetation communities used by wildlife.

Additional potential indirect impacts could include temporary disruption or displacement of species from nesting/breeding and foraging areas, changes in activity patterns due to increased human activity, and noise disturbance. Noise disturbance could impact wildlife by interfering with animals' abilities to detect important sounds or by posing an artificial threat to animals (Clinton and Barber 2013). Chainsaws, masticators, and other equipment associated with the project would contribute the highest noise levels. Impacts to wildlife during implementation due to noise is expected to be temporary.

RPMs described in Section 3.2.2 (Soil-1, Soil-2, Water-1 through Water-8, Veg-1, and Herbicide-1 through Herbicide-4) would be implemented to minimize impacts to wildlife species and their habitats.

The long-term effects of the Proposed Action would be reduced fire risks and enhancement of native plant communities and, therefore, enhanced habitat for wildlife. Overall, the proposed project would not cause undue degradation to general wildlife and vegetation as this habitat type is readily available on land within and adjacent to the project area. Moreover, impacts to wildlife habitat could be mitigated by reseeding or replanting native vegetation in areas where vegetation removal occurs. The proposed project is not expected to unduly impair important environmental values regarding biological resources.

Threatened and Endangered Species and Critical Habitat

Section 7 of the 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. Based on a review of the Information for Planning and Consultation system and the Biota Information System of New Mexico (BISON-M), there are eight federally listed species and 12 state special-status species that have the potential to occur in the project area, and one species with designated critical habitat (BISON-M 2021; New Mexico Energy, Minerals and Natural Resources Department 2020; USFWS 2021b, 2021c).

After evaluating habitat characteristics in the project area, it was determined that nine federally listed or state-listed species have potential habitat and thus may occur in the project area. These include six bird species: bald eagle (*Haliaeetus leucocephalus*), Bell's vireo (*Vireo bellii*), common blackhawk (*Buteogallus anthracinus*), neotropic cormorant (*Phalacrocorax brasilianus*), southwestern willow flycatcher, yellow-billed cuckoo; one fish species: Rio Grande silvery minnow; one insect species: monarch butterfly (*Danaus plexippus*); and one plant: Great Plains lady's tresses (*Spiranthes magnicamporum*).

The Rio Grande channel within the project area is designated as critical habitat for the Rio Grande silvery minnow. The USFWS has determined that this habitat is critical to the continued existence and recovery of this species. However, no work would occur in the Rio Grande, backwaters, canals, or stream bank corridors, and therefore the critical habitat for the silvery minnow has not been evaluated.

Table 4-5 provides an evaluation for all 20 federally and state-listed species for Bernalillo County, New Mexico, including the rationale for whether the species would or would not likely occupy the project area. One special-status species, the bald eagle, was observed during the biological survey conducted in November 2021.

Table 4-5. Federally and State-Listed Threatened, Endangered, and Candidate Species for Bernalillo County, New Mexico

Common Name	Status	Range or Habitat Requirement	Potential for Occurrence in Proposed Project Area	Determination of Effect
Birds				
Baird's sparrow (*Ammodramus bairdii*)	NM T	A winter resident in New Mexico, Baird's sparrow has been found on Otero Mesa and in the Animas Valley and may occur in other areas of suitable winter habitat, particularly in the southern portion of state. Generally, prefers dense, extensive grasslands with few shrubs. Avoids heavily grazed areas.	**Unlikely to occur** due to lack of extensive grasslands.	No effect

Common Name	Status	Range or Habitat Requirement	Potential for Occurrence in Proposed Project Area	Determination of Effect
Bald eagle (*Haliaeetus leucocephalus)*	NM T	Occurs in New Mexico year-round. Breeding is restricted to a few areas mainly in the northern part of the state along or near lakes. In migration and during winter months, the species is found chiefly along or near rivers and streams and in grasslands associated with large prairie dog (*Cynomys* sp.) colonies. Typically perches in trees.	**Known to occur**.	See Section 4.6.5.
Bell's vireo (*Vireo bellii)*	NM T	This species breeds in dense, lowland shrub and understory vegetation, including riparian areas, second-growth forests and mesquite brushlands (Brown 1993). In New Mexico, Bell's vireos are locally distributed across the southern third of the state during the breeding season (New Mexico Avian Conservation Partners 2017a).	**May occur**.	See Section 4.6.3.2.1
Northern aplomado falcon (*Falco femoralis septentrionalis*)	USFWS ENEP NM E	Associated with semi-desert grasslands with scattered yuccas, mesquite, and cacti. Naturally occurring populations are essentially restricted to the southern tier of New Mexico. Species has been observed in south Texas and west of the Trans Pecos region.	**Unlikely to occur** within the proposed project area due to the lack of semi-desert grassland habitat.	No effect
Broad-billed hummingbird (*Cynanthus latirostris magicus*)	NM T	Migratory species. Breeds in Guadalupe Canyon in southwestern New Mexico. Occupies desert riparian deciduous woodland (especially of cottonwoods) and marshes. Occurs where desert streams provide sufficient moisture for a narrow band of trees and shrubs along the margins.	**Unlikely to occur** because the project area is outside the species' known range in New Mexico.	No effect
Brown pelican (*Pelecanus occidentalis carolinensis*)	NM E	The brown pelican is usually found in marine habitats in warmer waters in North America, except for the lower Colorado Basin and vicinity. Rare visitors to New Mexico; found in large lakes and along major rivers. This species feeds exclusively on fish.	**Unlikely to occur** in the proposed project area. Marine habitats do not occur in the project area.	No effect
Common blackhawk (*Buteogallus anthracinus)*	NM T	Occupies mature, well-developed riparian gallery forests located near permanent streams where principal aquatic prey species (e.g., frogs and crayfish) are available. In New Mexico, this species is found along the Gila, San Francisco, and Mimbres Rivers in the southwest quadrant of the state, as well as along the Rio Hondo in the southeast. It occasionally nests along the Rio Grande as far north as Albuquerque, and in the Canadian River and Upper Pecos drainages (Hubbard 1978; Parmeter et al. 2002; Williams 1999).	**May occur.**	See EA Section 4.6.3.2.2.

Common Name	Status	Range or Habitat Requirement	Potential for Occurrence in Proposed Project Area	Determination of Effect
Gray vireo (*Vireo vicinior*)	NM T	Strongly associated with pinyon-juniper and scrub oak habitats. Distributed mainly across the western two-thirds of the state. Prefers gently sloped canyons, rock outcrops, ridge tops, and moderate scrub cover.	**Unlikely to occur** in the proposed project area due to the lack of juniper savanna habitat.	No effect
Interior least tern (*Sterna antillarum athalassos)*	USFWS E; NM E	Migratory species that occurs in North America during the breeding season, when it is associated with water (e.g., lakes, reservoirs, and rivers). In New Mexico, breeding is restricted to the Pecos River basin. It is known to breed primarily at Bitter Lake National Wildlife Refuge in nearby Chaves County.	**Unlikely to occur** because the project area is outside the species' typical geographic range in New Mexico.	No effect
Mexican spotted owl (*Strix occidentalis lucida)*	USFWS T	This species occupies mountainous areas and deep canyons incised within flat plateaus. Habitat consists typically of mixed-conifer, ponderosa pine, or ponderosa pine–Gambel oak forest. Prefers mesic, shaded environments such as canyon bottoms and mountainous riparian areas.	**Unlikely to occur** because no mountainous forests, canyons, or rocky cliffs exist in the area.	No effect
Neotropic cormorant (*Phalacrocorax brasilianus)*	NM T	The neotropic cormorant occurs in a variety of wetland habitats and climatic conditions. This species occupies wetlands in fresh, brackish, or salt water, both in coastal and inland areas. Key habitat requirements include deep water for diving and elevated perches in trees, shrubs, and other structures for nesting, roosting, and drying plumage after feeding (Telfair and Morrison 1995).	**May occur**.	See Section 4.6.3.2.3
Peregrine falcon (*Falco peregrinus*)	NM T	Found in New Mexico year-round. All nests in New Mexico are found on cliffs. In migration and during winter months, New Mexico's peregrine falcons are typically associated with water and large wetlands.	**Unlikely to occur.** There are no large cliffs for nesting near the project area.	No effect
Southwestern willow flycatcher (*Empidonax traillii extimus)*	USFWS E; NM E	In New Mexico, is known to breed only along the Gila River and the Rio Grande. Associated with moist riparian areas throughout the year. Breeding habitat requirements vary by region. In migration, may be associated with willows (*Salix* sp.) along ditches, cottonwood (*Populus* sp.) woodland, and saltcedar (*Tamarix* sp.) stands.	**May occur.** The project area contains riparian habitat and dense vegetation.	May affect, not likely to adversely affect
White-eared hummingbird (*Hylocharis leucotis*)	NM T	Typically occurs in montane habitats in Mexico, and in the United States it has been found in similar types, including pine (*Pinus* sp.) forest and in oak and pine-oak woodlands and adjacent riparian sites.	**Unlikely to occur.** The project area does not contain pine forest or oak and pine-oak woodlands with adjacent riparian sites.	No effect
Yellow-billed cuckoo (*Coccyzus americanus)*	USFWS T	Uses wooded habitat with dense cover and water nearby, including woodlands with low, scrubby vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes	**May occur.** The project area contains riparian habitat and dense vegetation.	May affect, not likely to adversely affect

Common Name	Status	Range or Habitat Requirement	Potential for Occurrence in Proposed Project Area	Determination of Effect
Fishes				
Rio Grande silvery minnow (*Hybognathus amarus)*	USFWS E; NM E	The species prefers large streams with slow to moderate current over a mud, sand, or gravel bottom. This species is endemic to the Rio Grande drainage in New Mexico and occurs within perennial reaches of the Rio Grande from Santo Domingo Pueblo (Sandoval County) southward to Socorro, which constitutes the key habitat for the species.	**May occur.** However, no work would be occurring in the Rio Grande, backwaters, canals, or stream bank corridors.	No effect
Insects				
Monarch butterfly (*Danaus plexippus)*	USFWS C	This species is a seasonal resident occurring in all counties in New Mexico. The species' migration route is influenced by the presence of milkweed (*Asclepias* sp.) habitat.	**May occur** in the proposed project area during migration from April through October.	No effect
Mammals				
New Mexico meadow jumping mouse (*Zapus hudsonius luteus)*	USFWS E	Occupies mesic habitats in lowland valleys and along montane streams and in riparian zones along permanent waterways. It is also found along irrigation ditches and in wet meadow areas within some river floodplains.	**Unlikely to occur** because the project area is outside of species documented range.	No effect
Spotted bat (*Euderma maculatum*)	NM T	In New Mexico, spotted bats have been taken in areas near cliffs, including areas with pinyon-juniper woodlands, and from streams or water holes within ponderosa pine or mixed coniferous forest. The spotted bat is usually captured around a water source, including desert pools or cattle tanks. It also may use rivers or desert washes as travel corridors.	**Unlikely to occur** in the project area due to lack of limestone cliffs and outcroppings for roosting.	No effect
Plants				
Great Plains lady's tresses (*Spiranthes magnicamporum*)	NM E	This plant is widely distributed in the Great Plains and Great Lakes regions north to Ontario, Canada. Rare in New Mexico. Occurs near wetlands, cienegas, and stream sides in New Mexico from 4,560 to 6,500 feet above mean sea level.	**May occur.**	See EA Section 4.6.3.2.6.

E = Endangered; T = Threatened; C = Candidate. ENEP = Experimental Non-Essential Population. Source: USFWS (2021b, 2021c).

State E = Endangered. State T = Threatened. Except where otherwise noted, range or habitat information for wildlife species is taken from the BISON-M website (BISON-M 2021).

4.6.2.3 No Action Alternative

Although the No Action Alternative would not directly affect special-status species because the project would not be implemented, the current trend of declining habitat value would continue to have an adverse effect on all species. Under this alternative, there would be a higher risk for a catastrophic wildfire in the project area with adverse effects to federally and state-listed species and critical habitat that may be present.

4.6.2.4 Proposed Action

No impacts to special-status fish species (Rio Grande silvery minnow) or their habitat are expected under the Proposed Action since treatments would not occur within or along the bank of the Rio Grande. Up to 470 acres of special-status species habitat would be temporarily disturbed under the Proposed Action. The Proposed Action would have short-term, adverse effects but long-term beneficial effects on the habitat for special-status species.

The Proposed Action includes removal of nonnative vegetation in the area that may be currently contributing to potential habitat for special-status species. Vegetation removal would incur short-term adverse impacts to special-status species that use these habitats. However, phasing of the vegetation treatments, as described in Section 3.2, would minimize impacts to special-status species' habitats. Furthermore, FEMA consulted with USFWS regarding effects to species listed under the ESA. See Appendix C for detailed consultation documentation, including the biological assessment submitted by FEMA to USFWS (SWCA 2022b).

Thinning and other fire reduction methods would be avoided along the banks of the Rio Grande to reduce potential effects to riparian species, including the Great Plains lady's tresses and the New Mexico meadow jumping mouse. The species that may be affected by the Proposed Action are analyzed below: Bell's vireo, common blackhawk, neotropic cormorant, southwestern willow flycatcher, yellow-billed cuckoo, monarch butterfly, and Great Plains lady's tresses. Impacts to bald eagle are analyzed in Section 4.6.5. The other species either overwinter in the bosque or would occur incidentally, or as migrants (Section 4.6.4).

4.6.2.4.1 BELL'S VIREO

Vegetation removal to reduce wildfire risk within the bosque could impact the Bell's vireo. Bell's vireos prefer to nest in thick, shrubby understory vegetation, which is the type of vegetation being targeted for removal. However, the Proposed Action would involve replanting with native vegetation that would provide long-term suitable habitat for these species. The Proposed Action involves phasing the proposed vegetation treatments to avoid treatments in areas with dense vegetation likely to support active migratory bird nests between April 15 and September 1. RPMs described in EA Section 3.2.2 (Soil-1, Soil-2, Water-1 through Water-8, Veg-1, Herbicide-1 through Herbicide-4, and Bird-1 through Bird-3) would be implemented to minimize impacts to Bell's vireo and its habitat. Therefore, minimal and temporary impacts to Bell's vireo are anticipated, but the Proposed Action is not likely to result in a trend toward loss of viability.

4.6.2.4.2 COMMON BLACKHAWK

The proposed project aims to remove dense understory vegetation and would not target large, well-developed trees, the type of trees this species utilizes for nesting. Therefore, the only impacts to common blackhawks occurring in the project area would be in the form of disturbance due to noise and increased human activity. The Proposed Action involves phasing the proposed vegetation treatments to avoid treatments in areas with dense vegetation likely to support active migratory bird nests between April 15 and September 1. RPMs described in EA Section 3.2.2 (Soil-1, Soil-2, Water-1 through Water-8, Veg-1, Herbicide-1 through Herbicide-4, and Bird-1 through Bird-3) would be implemented to minimize impacts to common blackhawk and its habitat. Therefore, minimal and temporary impacts to common blackhawk are anticipated, but the Proposed Action is not likely to result in a trend toward loss of viability.

4.6.2.4.3 NEOTROPIC CORMORANT

Suitable habitat consisting of freshwater ponds and the Rio Grande exists within and adjacent to the project area. However, the proposed fire prevention measures do not involve activities that would modify or degrade the preferred aquatic habitat of the neotropical cormorant. Thinning, mulching, and removal of large woody debris would be conducted away from the banks of the Rio Grande and other surface water features where the species could potentially occur. The Proposed Action involves phasing the proposed vegetation treatments to avoid treatments in areas with dense vegetation likely to support active migratory bird nests between April 15 and September 1. RPMs described in EA Section 3.2.2 (Soil-1, Soil-2, Water-1 through Water-8, Veg-1, Herbicide-1 through Herbicide-4, and Bird-1 through Bird-3) would be implemented to minimize impacts to neotropic cormorant and its habitat. Therefore, minimal and temporary impacts to breeding neotropic cormorant are anticipated, but the Proposed Action is not likely to result in a trend toward loss of viability.

4.6.2.4.4 SOUTHWESTERN WILLOW FLYCATCHER

Suitable migratory habitat for the southwestern willow flycatcher occurs in the project area along the banks of the Rio Grande. Under the Proposed Action, the vegetation along the banks of the Rio Grande would be preserved to provide shelter and foraging nesting habitat for wildlife, including the southwestern willow flycatcher.

The Proposed Action involves phasing the proposed vegetation treatments to avoid treatments in areas with dense vegetation likely to support active migratory bird nests between April 15 and September 1. RPMs described in EA Section 3.2.2 (Soil-1, Soil-2, Water-1 through Water-8, Veg-1, Herbicide-1 through Herbicide-4, and Bird-1 through Bird-3) would be implemented to minimize impacts to southwestern willow flycatcher and its habitat. Per RPM Bird-1, should an active flycatcher nest be found within the project area, construction would cease within a 1-mile buffer of the active nest until the nest is no longer active. If an active nest is observed during work activities, the USFWS biologist must be contacted immediately. FEMA and the USFWS concur that the Proposed Action would result in a “may affect, not likely to adversely affect” determination for the southwestern willow flycatcher (Appendix C) (SWCA 2022b).

4.6.2.4.5 YELLOW-BILLED CUCKOO

Suitable migratory habitat for the yellow-billed cuckoo exists throughout the project area in the form of deciduous woodlands with thickets of willows, small trees, and other shrubby species. In some cases, broad-scale clearing of exotic vegetation along waterways is thought to contribute to cuckoo population declines (New Mexico Avian Conservation Partners [NMACP] 2017b). The banks of the Rio Grande provide suitable migratory habitat for the cuckoo throughout the project area.

Under the Proposed Action, dense vegetation along the Rio Grande would remain intact to prevent impacts to migrating yellow-billed cuckoos. The Proposed Action involves phasing the proposed vegetation treatments to avoid treatments in areas with dense vegetation likely to support active migratory bird nests between April 15 and September 1. RPMs described in EA Section 3.2.2 (Soil-1, Soil-2, Water-1 through Water-8, Veg-1, Herbicide-1 through Herbicide-4, and Bird-1 through Bird-3) would be implemented to minimize impacts to yellow-billed cuckoo and its habitat. Per RPM Bird-1, should an active cuckoo nest be found within the project area, construction would cease within a 1-mile buffer of the active nest until the nest is no longer active. If an active nest is observed during work activities, the USFWS biologist must be contacted immediately. FEMA and the USFWS concur that the Proposed Action would result in a “may affect, not likely to adversely affect” determination for the yellow-billed cuckoo (Appendix C; SWCA 2022b).

4.6.2.4.6 MONARCH BUTTERFLY

Although no milkweed plant species necessary for breeding were found during the November 2021 biological survey, abundant flowering plants that could provide forage for migrating monarch butterflies occur within the project area. Vegetation removal involved with the project is not anticipated to cause mortality or other indirect impacts to monarch butterflies since many of the plant species being targeted for removal are trees and do not provide forage or breeding substrate for monarch butterfly adults and caterpillars. Potential impacts to the milkweed species include trampling or mortality due to fugitive herbicide administered to noxious weeds. RPMs described in Section 3.2.2 (Veg-1 and Herbicide-1 through Herbicide-4) would be implemented to minimize impacts to monarch butterfly and its habitat. Therefore, minimal and temporary impacts to monarch butterfly habitat are anticipated, but the Proposed Action is not likely to result in a trend toward loss of viability.

4.6.2.4.7 GREAT PLAINS LADY'S TRESSES

Potential impacts to the Great Plains lady's tresses include trampling and mortality due to fugitive herbicide administered to noxious weeds. This species inhabits streamsides and wetland areas, which are abundant along the banks of the Rio Grande. Under the Proposed Action, no thinning and other fire reduction methods would be implemented along the banks of the Rio Grande. RPMs described in Section 3.2.2 (Veg-1, Water-2, Water-3, and Herbicide-1 through Herbicide-4) would be implemented to minimize impacts to Great Plains lady's tresses and its habitat Therefore, minimal and temporary impacts to Great Plains lady's tresses are anticipated, but the Proposed Action is not likely to result in a trend toward loss of viability.

4.6.3 Migratory Birds

Most bird species are protected by the MBTA, which implements various treaties and conventions between the United States and other countries for the protection of migratory birds. Under the MBTA, unless permitted by regulations, it is unlawful to 1) pursue, hunt, take, capture, or kill; 2) attempt to take, capture, or kill; and 3) possess, offer to sell, barter, purchase, deliver, or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product, manufactured or not. USFWS regulations broadly define "take" under the MBTA to mean "pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect." Under the MBTA, take does not include habitat loss or alteration.

Suitable nesting habitat for migratory birds is present throughout the project area. During the biological survey, one inactive stick nest in fair condition was observed (Appendix C). The peak nesting season for birds is May 1 through August 15 (through September 1 where yellow-billed cuckoo is present).

4.6.3.1 No Action Alternative

The No Action Alternative would have no change to the current state of declining habitat value to migratory birds because the project would not be implemented. However, the risk for wildfire would remain high, which could result in adverse effects to migratory bird species and their habitat in the project area.

4.6.3.2 Proposed Action

There would be temporary disturbance up to 470 acres of migratory bird nesting habitat under the Proposed Action. Vegetation removal activities would cause temporary disturbance to birds, such as occasional noise disturbances, that would temporarily displace migratory birds in the project area and vicinity. Due to the abundance of similar habitat in the surrounding area, the impacts on bird populations

that use this habitat type within the project area would be low. Adult migratory birds would not likely be directly harmed by the proposed project because of their mobility and ability to avoid areas of human activity. No major or long-term effects on migratory birds are anticipated from the proposed project.

The Proposed Action involves phasing the proposed vegetation treatments to avoid treatments in areas with dense vegetation likely to support active migratory bird nests between April 15 and September 1. RPMs described in Section 3.2.2 (Soil-1, Water-1 through Water-8, Veg-1, Herbicide-1 through Herbicide-4, and Bird-1 through Bird-3) would be implemented to minimize impacts to migratory birds.

4.6.4 Bald and Golden Eagles

Bald eagles and golden eagles (*Aquila chrysaetos*) are protected under the MBTA and the Bald and Golden Eagle Protection Act. Additionally, the bald eagle is listed as threatened by the state of New Mexico. Bald eagles are found typically in association with water and tall trees for nesting, perching, and roosting. Most of the populations occurring in New Mexico are found near streams and lakes. There are some "dry land" areas where these eagles occur regularly, most notably in the region between the Pecos Valley and the Sandia, Manzano, Capitan, and Sacramento Mountains, as well as on the Mogollon Plateau. The birds typically night-roost in groups in trees, usually in protected sites such as canyons (NMDGF 1988). In New Mexico, which is near the southern periphery of the breeding range, localized nesting has increased in recent decades. The state population remains small, and breeding birds are sensitive to disturbance (NMACP 2017c).

Golden eagles are typically found in mountainous regions in a variety of vegetation types including open country, prairie, arctic and alpine tundra, open wooded areas, and barren areas. In New Mexico, this raptor species nests along steep-walled mountain canyons. During the winter, golden eagles forage in open or shrubland habitats. Agricultural areas are often avoided by golden eagles (NMACP 2017d). This species is often associated with the presence of prairie dog (*Cynomys* spp.) colonies.

One bald eagle was observed during the 2021 biological survey. Bald eagles are unlikely to utilize the proposed project area for breeding and nesting; however, they are known to overwinter along the MRG (eBird 2021).

No golden eagles were observed during the 2021 biological survey. The habitat within the project area lacks suitable foraging habitat due to the presence of dense stands of cottonwood trees and riverine habitat. Golden eagles may inhabit the vicinity of the project area for foraging; however, due to the existing disturbance within and adjacent to the project area, the project is not likely to impact available habitat for golden eagles.

4.6.4.1 No Action Alternative

The No Action Alternative would have no change to the current state of declining habitat value to bald eagle because the project would not be implemented. However, the risk for wildfire would remain high, which could result in adverse effects to bald eagle and its habitat in the project area.

4.6.4.2 Proposed Action

No impacts to golden eagle and its habitat are expected under the Proposed Action as no golden eagles were observed during the biological survey, and there is a lack of suitable nesting and foraging habitat for golden eagles in and surrounding the project area.

Suitable wintering habitat for the bald eagle occurs throughout the project area in the form of riparian habitat with large trees. Potential impacts to bald eagles occurring within the project area during

implementation would be expected in the form of noise and increased human activity. Due to the mobility of adult birds, it is unlikely that bald eagles would be directly harmed by the proposed project. Noise and visual disturbances associated with project implementation could temporarily deter this species from utilizing the project area and immediately adjacent land. Once implementation has been completed, the temporary disturbance would abate. Therefore, no long-term impacts to the bald eagle are anticipated.

4.7 CULTURAL RESOURCES

This section provides an overview of the affected area and potential environmental effects of the No Action Alternative and Proposed Action on historic properties and American Indian/Native resources.

4.7.1 Historic Properties

Section 106 of the National Historic Preservation Act (NHPA) requires that activities occurring on federal land, or those actions that require federal permits or use federal funds, undergo a review process to consider cultural resources that are or may be eligible for listing in the NRHP. A records search indicated 32 previous cultural resources surveys have been conducted within 500 m (0.3 mile) of the project area, resulting in 218 previously recorded sites.

SWCA was contracted by the City of Albuquerque to complete a cultural resources investigation of the proposed project area. SWCA completed consultation with SHPO to determine the level of effort for this undertaking, and it was determined that portions of the project area that were previously surveyed did not require new survey during the current investigation. All previously recorded sites within the project area were visited and recorded. SWCA archaeologists surveyed all areas not previously covered by survey, encompassing an area of 83.37 acres (33.68 hectares) (SWCA 2022c).

SWCA conducted a 100% (intensive) cultural resources pedestrian inventory on January 5, 6, and 12, 2022. Nine previously recorded cultural resources were visited and updated during the current investigation. No newly recorded sites or isolated occurrences were observed (SWCA 2022c). Table 4-6 summarizes the sites and eligibility status for the resources recorded during the current investigation.

Table 4-6. Summary of NRHP Eligibility

Resource No.	Resource Type	Previous Eligibility Determination/ Recommendation	Current NRHP Eligibility Status
Resources Not Relocated			
LA 138857	Historic bridge	Not eligible by SHPO (3/29/2004 HPD Log No. 70294)	Not eligible
Previously Recorded Resources			
LA 127144	Historic artifact scatter	No formal eligibility determination on file	Undetermined eligibility
LA 138856	Historic bridge	Not eligible by SHPO (3/29/2004 HPD Log No. 70294)	Not eligible
LA 138858	Old Atrisco Ditch Irrigation Diversion	Not eligible by SHPO (3/29/2004 HPD Log No. 70294)	Not eligible
LA 138859	Historic Arenal Main Canal irrigation ditch	No formal eligibility determination on file	Undetermined eligibility
LA 145193	Historic artifact scatter and three water control features	Eligible under Criteria A and D (11/28/2005 HPD Log No. 76136)	Eligible, Criteria A and D

Resource No.	Resource Type	Previous Eligibility Determination/ Recommendation	Current NRHP Eligibility Status
LA 159913	Abandoned segment of the Atrisco Riverside Drain	No formal eligibility determination on file	Undetermined eligibility
HCPI 31263	Atrisco Riverside Drain	Eligible by SHPO under Criterion A	Eligible, Criterion A
HCPI 43875	Albuquerque Riverside Drain	No formal eligibility determination on file	Eligible

4.7.2 American Indian/Native

The NHPA requires that federal agencies consult with tribal groups with a designated interest in their actions as consulting parties to the Section 106 process, whether or not the undertakings are on tribal land. The Proposed Action would not be implemented on any tribal land; however, the following tribes have a designated interest in the project area and thus were consulted within the formal government-to-government consultation process:

- Hopi Tribe of Arizona
- Navajo Nation
- Ohkay Owingeh
- Pueblo of Isleta
- Pueblo of Laguna
- Pueblo of Pojoaque
- Pueblo of Sandia
- Ysleta del Sur

4.7.2.1 No Action Alternative

Under the No Action Alternative, no actions would be taken to reduce wildfire fuel loads in the target areas identified in the Rio Grande bosque. Therefore, there would be no impacts to cultural resources. Because no federal activity would occur, no requirement for compliance with NHPA Section 106 would be necessary. The potential risks to cultural resources from a wildfire would remain.

4.7.2.2 Proposed Action

As part of the Section 106 formal government-to-government consultation process, FEMA submitted the cultural resources survey report (SWCA 2022c) to the New Mexico SHPO on February 9, 2022, and eight tribes listed above on February 22, 2022. See Appendix D for detailed consultation correspondence with tribes and the New Mexico SHPO.

During the 30-day formal comment period, FEMA received a response from SHPO, dated March 3, 2022, that indicated a lack of SHPO concurrence for the determinations of eligibility for three historic properties. FEMA sent a follow-up letter to SHPO explaining the avoidance and mitigation measures that would be taken to avoid adverse effects to historic properties on March 17, 2022. SHPO then issued their concurrence for the project on March 25, 2022. Subject to agency consultation and comment, FEMA has determined that the proposed undertaking would have no adverse effect to historic properties. RPMs described in Section 3.2.2 (Cultural-1 through Cultural-3) would be implemented to avoid impacts to cultural resources.

To date, no responses from tribes have been received for the proposed project. No impacts to tribal resources have been identified.

4.8 LAND USE AND RECREATION

The project area occurs along the Rio Grande on land managed by the City. Central Avenue NW/Route 66 and Bridge Blvd SW intersect the project area but are located outside of the project area where treatment would be implemented. The areas surrounding the project area on the east and west side of the Rio Grande are primarily recreational areas and residential neighborhoods.

The project area is within the Rio Grande Valley State Park. This 4,300-acre park is managed by the City's Open Space Division and the MRGCD and extends beyond the project area from Sandia Pueblo in the north through Albuquerque and south to Isleta Pueblo. It is located along the east and west sides of the Rio Grande, where the bosque provides shade and recreational opportunities under a cover of large cottonwood, narrowleaf (coyote) willow, and New Mexico olive. The forest is also a uniquely cool and shady habitat for beaver, birds, turtles and snakes within otherwise arid Albuquerque.

The bosque is used primarily for recreation and educational uses and offers a number of attractions for visitors and tourists. The Paseo del Bosque trail is an urban paved path for hiking, running, bicycling, in-line skating, boating, horseback riding, and mountain biking that runs along the east side of the Rio Grande and loops through the bosque under a canopy of cottonwoods in the northeastern portion of the project area. A portion of the trail beneath the cottonwood trees is unpaved and allows users to experience the shade of cottonwood trees on a natural surface trail. The Paseo del Bosque trail is also a popular location to enjoy watching wildlife, including ducks, geese and sandhill cranes, as well as views of the river. Since 2009, several art installations border the trail near the Open Space Visitor Center, most of which were designed to integrate a natural component of the bosque. The public can access the trail via several access points, including one immediately adjacent to the project area north of Central Avenue. This access point also connects to the Rio del Norte Picnic Area.

The project area located on the east side of the Rio Grande is adjacent (across the levees) to a number of recreational sites including the Albuquerque Biological Park (Zoo, Botanical Garden, and Aquarium) and Tingley Beach, which are managed by the City's Open Space Division. Tingley Beach provides public access to fishing ponds, walking or running paths, wildlife watching, and model boating. Other recreational sites include the Albuquerque Country Club, the Kit Carson Park, and the South Second Softball field. The land across the riverside levees on the west side of the Rio Grande is primarily residential, with the exception of the Valle del Bosque Open Space located near Sunset Gardens SW, which is used for recreation and provides access to the riverside trail.

The bosque has also been used as a place of dwelling for homeless people. As of the time of the natural resources survey conducted in November 2021, there were numerous encampments, most of which were located on the eastern side of the Rio Grande. These ranged from very temporary accommodations to semipermanent wood and plastic structures build out of woody debris found on-site and of plastic. These are discussed in more detail in Section 4.9.1.1.2.

4.8.1 No Action Alternative

Land use and recreation would not be changed by the No Action Alternative because the project would not be implemented. The increased risk of fire and continued overgrowth of nonnative vegetation could potentially contribute to a declined quality of recreational land use resulting if a wildfire was to occur in the bosque.

4.8.2 Proposed Action

Up to 470 acres of recreational areas would be temporarily disturbed under the Proposed Action. The Proposed Action would have short-term adverse impacts on recreational access to the bosque but beneficial long-term impacts to land use and recreation of the project area and surrounding areas.

Short-term adverse impacts would occur due to temporary closures during project implementation, including temporary closures of portions of the Paseo del Bosque. However, the Proposed Action would have beneficial long-term impacts by enhancing and protecting the project area and the surrounding residential areas from fire and increasing aesthetic and recreational value. The reduced risk of fire to recreational areas and wildlife habitat would help to ensure that recreational land use would continue. The reduced threat of fire could protect natural gas, electric, or fiber-optics lines, bridges, state highways, and the Rio Grande that traverses the project area.

The Proposed Action would remove dense overgrowth of nonnative plant species. The proposed wildfire mitigation treatments would improve access through the bosque and to the Rio Grande, which would enhance walking/hiking and activities such as fishing on the river. Wildlife habitat and line of sight would also be improved, thus improving wildlife viewing.

RPMs described in EA Section 3.2.2 (Public-3 through Public-9) would be implemented to minimize impacts to land use and recreation. See Section 4.9.3 for a discussion of potential noise impacts during project implementation.

4.9 SOCIOECONOMICS RESOURCES

This section provides an overview of the affected area and potential environmental effects of the No Action Alternative and Proposed Action on environmental justice, visual resources, traffic and noise, and public health and safety.

Socioeconomics is the relationship between economics and social elements, such as population levels and economic activity. Factors that describe the socioeconomic environment represent a composite of several interrelated and non-related attributes. There are several factors that can be used as indicators of economic conditions for a geographic area, such as demographics, median household income, unemployment rates, percentage of families living below the poverty level, employment, and housing data. This information is presented below to support the identifying of potential socioeconomic impacts.

4.9.1 Environmental Justice

Environmental justice is defined by EO 12898 (59 Federal Register 7629) and CEQ guidance (CEQ 1997) and states that demographic information should be used to determine whether minority and/or low-income populations that are present within the project area could be potentially affected by the Proposed Action. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action. Fair treatment means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, tribal, and local programs, and policies.

Environmental justice considerations addressed in this assessment involve both population demographics, including ethnic, racial, or national origin characteristics, and persons in poverty, including children under age 18. In order to determine whether environmental impacts affect minority or low-income populations, it is necessary to establish a basis of comparison, referred to as the “region of comparison.” This area

consists of the geopolitical units that include the Proposed Action. Most environmental effects from the Proposed Action in this instance would be expected to occur in the project area and in Albuquerque, New Mexico.

4.9.1.1.1 DEMOGRAPHICS

Based on the U.S. Census Bureau's estimates, the total average population in the project analysis area for the 2015–2019 period was 32,611 (Table 4-7). The analysis area is defined as the area covered by U.S. Census Bureau census tracts overlapped by the project area and includes eight census tracts covering an area of approximately 28,870 acres of land and 935 acres of water. The total population in Albuquerque metropolitan area in 2020 was 916,528, representing 43.3% of total New Mexico state population. Table 4-8 compares the analysis area, Albuquerque metropolitan area, New Mexico, and United States population and income statistics.

Based on 2010 and 2020 U.S. Census data, the population of the analysis area decreased 1% from 2010 to 2020. The growth rate in the Albuquerque metropolitan area from 2010 to 2020 (3.3%) was greater than the growth rate of the state of New Mexico (2.8%) but less than that of the United States (7.5%) over the same time period. See Table 4-8 for 2010 and 2020 population data (U.S. Census Bureau 2010, 2020a).

The U.S. Census Bureau poverty threshold for a family of four (two adults and two children) in 2020 was $26,246 (U.S. Census Bureau 2020a). The median household income in Albuquerque Metropolitan Area in 2020 was $58,512, which is lower than the United States average estimated at $67,521. The median household income was $49,754 for the 2015–2019 period in the state of New Mexico, compared with $52,911 in Albuquerque and $31,603 within the analysis area for the same period.

CEQ (1997) defines the term "minority" as persons from any of the following groups: black, Asian or Pacific Islander, American Indian or Alaskan Native, and Hispanic. Table 4-9 provides the racial composition in Bernalillo County and in the analysis area, which is predominantly Hispanic and Latino, and white.

Table 4-7. Population, Median Household Income, and Poverty Percentage for Project Analysis Area, Albuquerque Metropolitan Area, New Mexico, and United States

Statistic		Project Analysis Area (Census Tracts)	Albuquerque Metropolitan Area	New Mexico	United States
Population		32,611	916,528	2,117,522	331,449,281
Gender (%)	Female	49.7	50.8	50.6	50.8
	Male	50.3	49.2	49.4	49.2
Age	Under 18 years	7,710 (23.6%)	197,754 (21.6%)	276,041 (13.0%)	81,872,275 (24.7%)
	18 to 34 years	5,739	209,912	211,339	67,047,155
	35 to 64 years	12,211	348,284	376,822	125,246,065
	65 years and over	5,155 (15.8%)	158,530 (17.3%)	172,506 (8.15%)	54,074,028 (16.3%)
Median household income ($) (2015–2019 period average)	2015–2019 period average	31,603	52,911	51,945	65,712
	2020	--	58,512	50,822	67,521
Poverty threshold (family of four – two adults and two children)		--	--	--	26,246

Statistic	Project Analysis Area (Census Tracts)	Albuquerque Metropolitan Area	New Mexico	United States
Persons in poverty (%)	23.8	15.5	13.7	12.3

*Sources: U.S. Census Bureau, 2010, 2020a, 2020b.

Population of Project Analysis Area Compared with Albuquerque Metropolitan Area, New Mexico, and United States

Location	2010	2020	Percent Change
Project analysis area	32,928	32,611	-1.0
Albuquerque metropolitan area	887,077	916,528	3.3
New Mexico	2,059,179	2,117,522	2.8
United States	308,345,764	331,449,281	7.5

Source: U.S. Census Bureau 2010, 2020a.

Table 4-9. Race and Ethnicity for the Project Analysis Area, Albuquerque Metropolitan Area, New Mexico, and United States

Statistics		Analysis Area (Census Tracts)	Albuquerque Metropolitan Area	New Mexico	United States
Hispanic or Latino (any race)	Total	24,463	439,138	1,032,950	60,481,746
	Percent	72.8	47.9	49.3	18.4
White alone		6,162	483,912	1,078,937	204,277,273
Black or African American alone		116	25,777	45,904	41,104,200
American Indian and Alaska Native alone		814	60,151	212,241	3,727,135
Asian alone		--	23,298	37,469	19,886,049
Native Hawaiian and other Pacific Islander		--	1,128	2,093	689,966
Other race alone		9,711	133,032	318,632	27,915,715
Two or more races		1,358	189,230	422,246	33,848,943

Sources: U.S. Census Bureau 2010, 2020a, 2020b

For the purpose of this analysis, demographic information from the analysis area was compared with demographic information from Albuquerque and the state of New Mexico, which were evaluated to identify minority and low-income populations. The Hispanic population in the analysis area is 72.8 percent, which is significantly higher than the Albuquerque (47.9%), state (49.3%) and national (18.4%) averages.

The percentage of families living below the poverty line in the analysis area is 23.8%, which is higher than the Albuquerque (15.5%), state (13.7%) and national (12.3%) averages. The proportion of people above the age of 65 in the analysis area is 15.8%, which is slightly lower than in the Albuquerque metropolitan area (17.3%). Children under the age of 18 comprise 23.6% of the population, which is higher than in the Albuquerque metropolitan area (21.6%).

The population in the project analysis area constitutes an environmental justice population due to lower median income, a higher percentage of the population living in poverty, and a higher proportion of Hispanic or Latino populations compared with those of the city and state.

4.9.1.1.2 HOMELESS ENCAMPMENTS

The bosque within the project area is also a place of dwelling for homeless populations. The homeless population lives in semipermanent structures built from woody debris and plastic, referred to as encampments (Figure 4-1). As of April 2022, the City is aware of 6 to 10 homeless encampments within the project area, which can provide shelter for multiple individuals. Often, the encampments in the bosque are semipermanent structures built against mature trees, creating ladder fuels that contribute to the hazardous fuel conditions within the bosque.

These encampments highlight structural and racial inequalities that have created the conditions where thousands of people are without housing each year in Albuquerque. Homelessness impacts people from many walks of life, but there are particularly high rates among Native Americans, Black and Hispanic or Latino populations, people with disabilities, and people with mental health or substance use disorders (City of Albuquerque 2021).

The City's *Policy for responding to encampments on public property* describes the policies in place regulating homeless presence within the area (City of Albuquerque 2021). The policy outlines the City's guiding principles to ensure that the rights of people who are unsheltered are given equal protection under the law. The policy also describes the risk assessment analysis and prioritization response process to follow when encampments are found on public property.

Figure 4-1. View of a debris shelter within the project area.

4.9.1.1.3 NO ACTION ALTERNATIVE

Under the No Action Alternative, without implementation of the Proposed Action, there would be an increased risk of fire. This would result in an increased use of resources by the City of Albuquerque and Bernalillo County for fire prevention, and in the event of a fire, resources for firefighting would be needed, which increases financial burden to the local governments. There would also be an increased chance that private, or government property would be lost to wildfire, if the event spread into populated areas adjacent to the bosque. This would increase property insurance claims and increase the financial burden to property owners in this low-income area. Therefore, the No Action Alternative would have a potentially negative effect on environmental justice populations.

4.9.1.1.4 PROPOSED ACTION

There would be a temporary increase in noise disturbance and periodic interruptions to recreation activities to populations within approximately 1 mile of the Proposed Action. The Proposed Action would have short-term adverse impacts to the surrounding neighborhoods, which include low-income or minority populations. However, these impacts would not be disproportionate to any particular neighborhood or population. RPMs described in Section 3.2.2 (Public-1 through Public-9) would be implemented to minimize adverse impacts to the nearby residents and businesses.

Long-term beneficial impacts of wildland fire risk reduction would benefit the neighborhoods surrounding the project area. The Proposed Action would decrease the risk of fire, thereby reducing the costs incurred by the City of Albuquerque and Bernalillo County for fire prevention and firefighting. The Proposed Action would also provide fire threat reduction services and vegetation restoration for a low-income community.

The Proposed Action would have short-term adverse impacts on homeless communities residing in dwellings found within the 470-acre project area because encampments would be removed prior to project implementation. Encampment removal would ensure that the project can be implemented safely and would follow the City's *Policy for responding to encampments on public property* (Appendix E). The City's policy outlines the engagement process for encampments, notice requirements for encampment removal, outreach steps, and site clean-up associated with the removal process. RPMs described in Section 3.2.2 (Public-1 and Public-4) would be implemented to minimize adverse impacts to the homeless population.

4.9.2 Visual Quality and Aesthetics

The Rio Grande riparian forest, referred to as the bosque, is valued for the visual and aesthetic appeal of the mature gallery forest combined with flowing water in an arid landscape as well as the contribution of solitude and natural environment within the urban City of Albuquerque. As described in Section 4.8, the portion of the bosque that encompasses the project area is used for recreation and educational uses and offers a number of attractions for visitors and tourists.

The Rio Grande bosque is an evolving landscape. Historically, overbank floods were responsible for establishing and maintaining the bosque, including the cottonwood gallery forest that was likely established in the 1940s (Crawford and Grogan 2005). The historic flood regime has changed over time due to human influences, watershed practices, and climate change. Now, wildfires are replacing floods as the driving force behind the change to the bosque's organization and appearance (Crawford and Grogan 2005). Many of the established cottonwoods are relatively old and are stressed by low water availability (Eichhorst et al. 2002; Leffler et al. 2000) and leaf beetle outbreaks (Eichhorst 1999).

The project vicinity is characterized as high-density urban, with residential homes and commercial areas surrounding the bosque on either side of the flood control levees that are used to manage the floodplain and MRGCD infrastructure. Public access to the bosque is ubiquitous throughout the project area with trail heads and trails occurring throughout (see Section 4.8 for more information about recreation features in the area).

On both the west and east sides of the Rio Grande, residences are separated from the project area by the elevated levee and levee roads running parallel to the riverside drains and a dense stand of cottonwoods, willows, and other mature trees. Views from the adjacent residences are partially obstructed by the existing flood control levees. The bosque and river are visible to the public from the numerous trails and roadway bridges that cross the bosque.

Figures 4-2 through 4-4 provide representative views of the project area from within the bosque.

Figure 4-2. View of the of the project area, facing south.

Figure 4-3. Representative view of the of the project area with large woody debris that contributes to wildland fire hazard.

Figure 4-4. Representative view within the project area with Siberian elm (Class C noxious weed).

4.9.2.1 No Action Alternative

Under the No Action Alternative, there would be no impacts to the aesthetics in the short term because the project would not be implemented. Over the long term, the visual quality of the bosque would be expected to change as mature cottonwoods reach the end of their life and decay. Cottonwood mortality would contribute more dead woody material in the Rio Grande floodplain. This increased fuel could lead to an increase in the number of wildfires, further changing the visual aesthetics of the area.

4.9.2.2 Proposed Action

Under the Proposed Action, the proposed wildfire mitigation treatments may be visible to adjacent homeowners or to pedestrians using the trails, and the river edge during project implementation, particularly during leaf-off conditions (winter months). Portions of the treatment areas would be visible to vehicle traffic from the Central Avenue and Avenida Cesar Chavez bridges that cross the project area, but only for a brief time as vehicles pass across.

There may be some minor visual impacts to residences on either side of the river. People using the bosque for recreation or residents near the river would be able to see vegetation removal equipment through the defoliated vegetation. Equipment access during mobilization and demobilization, and presence of project-related personnel would temporarily disrupt any recreational use of the bosque. RPMs described in Section 3.2.2 (Public-1 through Public-9) would be implemented to minimize impacts to the general public and nearby residences.

The removal of upland vegetation and nonnative tree species and chipping of wood material would result in a long-term modification of the visual and aesthetic characteristics of the area. These modifications would be reflective of dynamic river and floodplain system, which could reinforce the naturalness of the area to some viewers. Other viewers may perceive the removal of vegetation, particularly in the bosque, as an adverse visual and aesthetic impact. These impacts would likely be minor due to the obstructed view, caused by the flood control levees, between the nearby residences and the project area.

4.9.3 Traffic and Noise

Thinning crews would likely travel to and from the project area in standard vehicles, such as pickup trucks. Chipping equipment would be towed on site with a truck. Access to each treatment would use existing paved roads, and no new roads would be created.

Noise is generally defined as unwanted sound and is represented on a logarithmic scale with a numeric unit called the decibel (dB). The OSHA noise standard limits noise levels to 90 dB averaged over an 8-hour day (29 CFR 1910.95), although hearing damage can begin at levels as low as 80 dB over an 8-hour day. Noise control enforcement may involve many sources of excessive noise: radios, stereos, television, live bands, machinery, equipment fans, air conditioners, construction, vehicle repairs, motor vehicles, and general noise. Sound is measured with sound level meters and monitors, similar to the radar meters police use for speed detection that, instead of detecting an object in motion, detect air pressure (sound waves) in motion and produce an output in dB.

Noise control in the City is governed by a noise control ordinance, which went into effect in June 1975 and was last amended in 2002. The Environmental Health Department's Consumer Protection Division personnel are responsible for enforcing the ordinance. The ordinance stipulates sounds from vehicular traffic shall be measured from a distance of 25 feet from the center lane of travel. The ordinance stipulates sound from a non-vehicular source shall be measured at the property line of the property where the sound is originating. The ordinance stipulates a property-line value in which the noise level emitted must not exceed 55 dB in residential areas, 65 dB in commercial areas, and 75 dB in industrial areas.

The Proposed Action is within an urban area with significant vehicle noise from Interstate 40, Central Avenue/Route 66, and Bridge Boulevard. Other sources of noise within and outside the bosque include machinery, humans, and wildlife and domestic animals. Vehicles and machinery create the loudest and most consistent sounds, which are somewhat buffered in dense areas of the bosque but may still result in loud noise within the project area.

4.9.3.1 No Action Alternative

There would be no new traffic or noise contributed to the affected environment under the No Action Alternative because the project would not be implemented.

4.9.3.2 Proposed Action

The vehicles transporting treatment crews to and from the project area would not have a measurable or noticeable effect on traffic patterns in the area. There would be a temporary increase in noise levels within treatment units while treatments are underway (Table 4-10). The noise levels would dissipate as the distance between the sensitive noise receptors (such as nearby residences or recreation trail users in the bosque) and the treatment units increase. No permanent changes to noise would occur under the Proposed Action. RPMs described in Section 3.2.2 (Public-3, Public-6 through Public-8) would be implemented to minimize noise impacts.

Table 4-10. Noise Levels from Equipment Used under the Proposed Action

Equipment	Noise Level (dB)
Chainsaws	105–110
Pole saws	90
Wood chippers	100–105
Masticator	100–105

Sources: Berger et al. (2015); Broyles et al. (2017); Koki Holdings Co, Ltd. (2021)

4.9.4 Public Health and Safety

The purpose and need for the project is to improve public health and safety by mitigating the wildfire hazard in the bosque. The project would thin vegetation to reduce the risk of wildfire and to mitigate impacts to infrastructure, utilities, residences, and life and property in general, as well as to minimize impacts to vegetation, habitat, water, and all natural and cultural resources in the area. The dense vegetation in the project area has substantially increased concerns regarding the safety of people adjacent to the project area if a wildfire were to occur.

The City of Albuquerque Fire Rescue Department responds to wildfire events within the bosque. The limited access to the bosque and naturalness of the area could hinder the ability for rapid emergency response during wildfire events.

4.9.4.1 No Action Alternative

Under the No Action Alternative, FEMA would not provide funding to reduce fuel loads in the project area; therefore, no actions would be taken that would impact public health and safety. However, the potential risks from a wildfire event would also remain. Public health and safety risks that could result from a wildfire event include damage or loss of roads, utilities, and nearby government and private infrastructure, 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. Therefore, 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 amounts of CO, 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.

4.9.4.2 Proposed Action

Use of chainsaws, hand saws, and woodchippers during project implementation could result in bodily injury to thinning crew members and hearing impairments from equipment noise at close range. However, the City and its contractors would minimize the potential for accidents and hearing impacts, as well as impacts associated with the misuse of equipment by encouraging crew members to have forest safety certification, or forest safety training. RPMs described in Section 3.2.2 (Public-1 through Public-9) would be implemented to minimize impacts to public health and safety.

Under the Proposed Action, there would be beneficial impacts to public health and safety from thinning vegetation in the project area. Thinning vegetation would create a defensible space adjacent to residential areas. The defensible space would slow the pace at which wildfires spread, limit the amount of fuels and thereby reduce the intensity of the burn, and reduce safety hazards so that wildfires are more manageable for firefighters to suppress.

The Proposed Action would reduce the level of need for emergency services within the project area and would allow emergency responders to remain available to respond to other emergencies throughout the City.

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CHAPTER 5. SUMMARY TABLE

Table 5-1 summarizes the impacts described in EA Chapter 4 and the applicable RPMs by resource. RPMs are described in Section 3.2.2.

Table 5-1. Summary of Impacts and Mitigation

Affected Environment/ Resource Area	Impacts from the Proposed Action	RPMs
Physiography, Geology, Soils	There would be temporary disturbance of up to 470 acres of soils under the Proposed Action. Short-term adverse effect on soils are expected to occur due to ground disturbance during project implementation. No long-term impacts to soils are expected.	Soil-1, Soil-2
Climate Change	CO_2 emissions from equipment and vehicles would result in very small, insignificant temporary contributions to climate change. The Proposed Action would be expected to have a beneficial long-term impact on climate change by reducing the potential emission of greenhouse gases associated with a major wildfire.	Air-2
Air Quality	There would be a temporary increase in the emission of nitrogen dioxide, SO_2, $PM_{2.5}$ and CO_2, but these adverse impacts are anticipated to be temporary and only occur during implementation of the Proposed Action. No long-term adverse impacts to air quality would occur.	Air-1, Air-2
Water Quality	The Proposed Action could cause temporary localized, adverse impacts to Rio Grande surface waters from potential erosion and sedimentation over the project implementation period, and from herbicide applications. Other potential impacts could result from contaminants spilled or drained into water bodies (e.g., an accidental spill when fueling chainsaws or fuel leaking from the chipper). The Proposed Action would reduce the risk of a severe wildfire event and post-fire impacts such as soil contaminants draining into water bodies and impacting the water quality.	Soil-1, Water-1 through Water-8, Herbicide-1 through Herbicide-4
Hydrology and Water Depletions	The Proposed Action would not modify main channel flows, the river hydrograph, or morphology of the river channel. Therefore, there would be no change to hydrology as a result of the Proposed Action. No new water depletions are anticipated from the Proposed Action because 1) the proposed project would not change the functionality of the floodway and 2) vegetation within the 470-acre project area would be reduced overall.	None
Wetlands and Floodplains	There would be temporary disturbance to up to 60 acres of wetlands and up to 470 acres of floodplains (see Appendix B). The proposed treatments would cause temporary disturbance to vegetation communities and soils within the wetlands and floodplains. Within wetlands, some vegetation would be removed, but overall function of soils and hydrology would remain unaltered.	Soil-1, Soil-2, Water-1 through Water-8, Veg-1, Herbicide-1 through Herbicide-4
Vegetation	Short-term adverse effects include the loss of small-diameter trees, underbrush, and ground disturbance within the 470-acre treatment area that could disturb established grasses and forbs. Herbicide treatments would be applied to minimize potential impacts to adjacent native vegetation communities.	Soil-1, Soil-2, Veg-1, Herbicide-1 through Herbicide-4
Fish and Wildlife	There would be temporary disturbance up to 470 acres of wildlife habitat. Temporary impacts to wildlife would include changes to vegetation. Altering wildlife habitat in ways that would be considered adverse may occur directly (through habitat loss) or indirectly (through the reduction in habitat quality caused by increased noise levels and increased human activity). The long-term effects of the Proposed Action would be reduced fire risks and enhancement of native plant communities, and therefore enhanced habitat for wildlife.	Soil-1, Soil-2, Water-1 through Water-8, Veg-1, Herbicide-1 through Herbicide-4

Affected Environment/ Resource Area	Impacts from the Proposed Action	RPMs
Threatened and Endangered Species and Critical Habitat	Minimal and temporary impacts to Bell's vireo, common blackhawk, neotropic cormorant, monarch butterfly, and Great Plains lady's tresses are anticipated, but the Proposed Action is not likely to result in a trend toward loss of viability for these species. The project may affect, but is unlikely to adversely affect, the southwestern willow flycatcher and the yellow-billed cuckoo. There would be no impacts to critical habitat.	Soil-1, Soil-2, Water-1 through Water-8, Veg-1, Herbicide-1 through Herbicide-4, Bird-1 through Bird-3
Migratory Birds	There would be temporary disturbance up to 470 acres of migratory bird nesting habitat under the Proposed Action. Vegetation removal activities would cause temporary disturbance to birds, such as occasional noise disturbances, that would temporarily displace migratory birds in the project area and vicinity.	Soil-1, Water-1 through Water-8, Veg-1, Herbicide-1 through Herbicide-4, Bird-1 through Bird-3
Bald and Golden Eagles	Potential impacts to bald eagles occurring within the project area during implementation would be expected in the form of noise and increased human activity.	None
Historic Properties	The proposed undertaking would have no adverse effect to historic properties.	Cultural-1 through Cultural-3
American Indian/Native	No impacts to tribal resources have been identified.	Cultural 3
Land Use and Recreation	Short-term adverse impacts would occur due to temporary closures during project implementation, including temporary closures of portions of the Paseo del Bosque. The proposed project would have beneficial long-term impacts by enhancing and protecting the project area and the surrounding residential areas from fire and increasing aesthetic and recreational value.	Public-3 through Public-9
Environmental Justice	The project would result in short-term adverse impacts (noise disturbance and interruptions to recreation activities) to the surrounding neighborhoods, which include low-income or minority populations. Over the long-term, the Proposed Action would decrease the risk of fire, thereby reducing the costs incurred by the City of Albuquerque and Bernalillo County for fire prevention and firefighting. The Proposed Action would also provide fire threat reduction services and vegetation restoration for a low-income community. The Proposed Action would have short-term adverse impacts on homeless communities residing in encampments found within the 470-acre project area.	Public-1 through Public-9
Visual Resources	There may be some minor visual impacts to residences on either side of the river and recreation users within the bosque. Equipment access during mobilization and demobilization, and presence of project-related personnel would temporarily disrupt any recreational use of the bosque.	Public-1 through Public-9
Traffic and Noise	There would be a temporary increase in noise levels within treatment units while treatments are underway. The noise levels would dissipate as the distance between the sensitive noise receptor and the treatment units increase.	Public-3, Public-6 through Public-8
Public Health and Safety	Use of chainsaws, hand saws, and woodchippers during project implementation could result in bodily injury to thinning crew members and hearing impairments from equipment noise at close range. The project would result in beneficial impacts by creating defensible space to slow the pace at which wildfires spread, limiting the amount of fuels and thereby reducing the intensity of the burn, and reducing safety hazards so that wildfires are more manageable for firefighters to suppress.	Public-1 through Public-9

CHAPTER 6. CUMULATIVE IMPACTS

Cumulative impacts are impacts to the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. A 1-mile buffer around the project area was chosen for the cumulative geographic scope for cumulative analysis because it is estimated that the project's impacts could extend outside of the project area by approximately 1 mile. Past, present, and foreseeable projects within the analysis area include:

- Urban development activities, such as clearing land to construct buildings for residential and commercial areas, road and bridge maintenance projects, and similar activities associated with the City's urban environment that surrounds the portion of the bosque that would be treated by the Proposed Action
- Habitat restoration activities facilitated by the MRG Endangered Species Collaborative Project to support the recovery of the silvery minnow, southwestern willow flycatcher, and other federally listed species
- Vegetation management and recreation enhancement activities, including vegetation thinning, invasive species treatments, and trail creation and improvements within the Rio Grande Valley State Park
- Ongoing recreation activities within the Rio Grande bosque, such as the running, cycling, hiking, and birdwatching along the trail network within the Rio Grande Valley State Park

The past, present, and foreseeable future activities would be required to comply with applicable laws and regulations.

Recent past, ongoing, and planned urban development projects would continue to occur on land surrounding the project area. These would have cumulative short-term and long-term adverse impacts on vegetation communities, wildlife habitat, water quality, soils, and noise. Adverse cumulative impacts include vegetation disturbance and removal as a result of clearing land for new residential and commercial developments and damage to soil substrates that impact growing conditions and increased vulnerability to nonnative species resulting from disturbance. Noise from urban development and recreational activities can disturb both humans and wildlife, contributing to cumulative adverse impacts in the short and long term. Cumulative visual impacts from residential and business developments would be in compliance with City's building code standards and within areas zoned for development.

Habitat restoration activities within the MRG would contribute long-term beneficial cumulative impacts to wildlife, wetlands, and hydrology.

Vegetation management activities within the Rio Grande Valley State Park would have cumulative short-term adverse impacts and long-term beneficial impacts that are similar to those of the Proposed Action. Vegetation management activities and invasive species treatments would create defensible space and reduce fuel loads that would influence how a wildfire would advance, the rate at which it would spread and advance, and the areas from which firefighters could marshal resources to fight and control a wildfire. Impacts to wetlands, drainages, soils, vegetation and invasive species, and wildlife and special-status species would depend on the placement and type of surface disturbance, the type of vegetation and plant species present, and the hydrologic conditions within the individual project sites. Generally, soil erosion and sedimentation of local drainages would be expected, especially when storm events occur during construction of the future actions.

Roads, developments, and vegetation-thinning activities affect wildlife, migratory birds, and special-status species through decreasing available forage and habitat and causing habitat alteration and fragmentation. Loss of habitat and fragmentation breaks the available habitat into smaller and smaller pieces, which can lead to displacement and physiological stress in wildlife species. Fragmentation results in indirect habitat loss and degradation. Wildlife species would have to expend an increased amount of energy to avoid disturbed areas or when experiencing alarm due to human presence, traffic, and associated noise.

No cumulative impacts to cultural or historic resource sites would occur because the project would avoid adverse effects to historic properties. Therefore, no cultural or historic sites would be impacted by the Proposed Action.

No significant cumulative impacts are foreseen from implementation of the Proposed Action and other past, present, and future actions.

CHAPTER 7. AGENCY COORDINATION, PUBLIC INVOLVEMENT, AND PERMITS

This section provides a summary of the agency coordination efforts and public involvement process for the proposed project. In addition, an overview of the permits that would be required under the Proposed Action is included.

7.1 AGENCY COORDINATION

The Proposed Action has been coordinated with FEMA, NMDHSEM, the City Open Space Division, Bernalillo County Fire Department, the City of Albuquerque BioPark, MRGCD, and the New Mexico State Forestry Division. Meetings and coordination for the Proposed Action were conducted with staff from these agencies throughout the EA development process.

Scoping letters were sent to stakeholder agencies on November 11, 2021. Comments received are provided in Appendix A and summarized below.

- The USACE is interested in how invasive vegetation management would be balanced with maintaining native understory shrubs to continue providing habitat for birds and other species. The USACE suggested selectively leaving small numbers of Russian olive to provide valuable bird habitat for overwintering birds and maintaining shrubs of varying heights under the tree canopy while clearing understory fuel away from the base of trees to be consistent with habitat restoration and to reduce fire risks. The agency also recommended revegetation with native shrubs and herbaceous vegetation to continue providing riparian habitat and reduce colonization by invasive plants. The USACE supports coordination and data sharing for avian monitoring to reduce duplication effort and leverage agency collaboration.
- The NMDGF is recommending mitigation measures to minimize the impacts of the project on wildlife known to occur within or near the project area, including migratory birds, burrowing owls, and bats. The NMDGF recommends conducting pre-implementation surveys and outlines restrictions related to these species. Since the proposed project would occur within or near a riparian area, NMDGF also recommends avoiding removal of native riparian vegetation, unless it is to protect structures and/or remove hazard trees dangerous to the public. NMDGF also referenced their Habitat Handbook (NMDGF 2017). To reduce adverse effects from fuels/riparian restoration treatments to wildlife in the Middle Rio Grande bosque, NMDGF recommends replacing removed non-native vegetation as soon as possible with locally adapted ecotypes of native shrub and tree species.

One public comment was received for the Draft EA. The letter is provided in Appendix A and summarized below:

- On June 21, 2022, the NMDGF rei-iterated their previous comments provided during scoping on December 7, 2021. The agency's comments recommended mitigations to reduce project impacts to nesting migratory birds and replanting within the project area with locally-adapted native plant ecotypes. To protect nesting migratory birds and meet the intent of the Migratory Bird Treaty Act, the Department recommends that pre-treatment breeding bird surveys (for all migratory birds, not just federally-listed species) be conducted in low priority units before treatment activities occur during the migratory bird nesting season (15 April to 1 September). Should active nests be documented within those units, or adjacent neighboring units, nontreatment buffers should be set up around all active nests to avoid disturbance until the end of nesting season or the nestlings have fledged. NMDGF also referenced their Habitat Handbook (NMDGF 2017) with a

recommendation to replace removed non-native vegetation as soon as possible with locally adapted ecotypes of native shrub and tree species. NMDGF recommended addition of either a firm commitment to replanting or an explanation of the determinative factors regarding the decision to replant or not in the Final EA. FEMA worked with the City to revise this Final EA accordingly in response to NMDGF's input.

The City will 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.

7.1.1 National Historic Preservation Act Section 106 Consultation

Cultural resource survey methodology was developed in coordination with the New Mexico Historic Preservation Division/SHPO, and it was determined that portions of the project area that were previously surveyed did not require new survey during the current investigation. A 100% (intensive) cultural resources pedestrian inventory was performed January 5, 6, and 12, 2022. FEMA submitted the cultural resources survey report (SWCA 2022c) to the New Mexico SHPO on February 9, 2022, and the eight tribes listed in Section 4.7.2 on February 22, 2022. See Appendix D for detailed consultation correspondence with tribes and the New Mexico SHPO.

During the 30-day formal comment period, FEMA received a response from SHPO, dated March 3, 2022, that indicated a disagreement for the determinations of eligibility for three historic properties. A follow-up letter was sent to SHPO by FEMA explaining the avoidance and mitigation measures that would be taken to avoid adverse effects to historic properties on March 17, 2022. SHPO then issued its concurrence for the project on March 25, 2022. Subject to agency consultation and comment, FEMA has determined that the proposed undertaking would have no adverse effect to historic properties. RPMs described in EA Section 3.2.2 (Cultural-1 through Cultural-3) would be implemented to avoid impacts to cultural resources.

To date, no responses from tribes have been received for the proposed project.

7.1.2 Endangered Species Act Section 7 Consultation

A 100% pedestrian natural resources survey of the project area was conducted between November 17 and 29, 2021, to identify the potential for special-status species and habitat communities regulated by the USFWS under Section 7 of the ESA, active and inactive migratory bird nests protected by the MBTA, and general biological conditions of the project area. FEMA submitted the biological assessment (SWCA 2022b) to the USFWS on February 15, 2022. See Appendix C for detailed consultation correspondence with USFWS.

During the 30-day agency review period, FEMA received an inquiry from USFWS, dated March 8, 2022, that requested a few clarifications related to the biological assessment. A follow-up meeting with FEMA, USFWS, and the City was held on March 23, 2022, and a letter was sent to USFWS by FEMA on March 29, 2022, providing clarifications about the Proposed Action and the biological RPMs. USFWS then issued their concurrence for the project on March 31, 2022. Subject to agency consultation and comment, FEMA has determined that the proposed undertaking "may affect and is not likely to adversely affect" the southwestern willow flycatcher and yellow-billed cuckoo. RPM Bird-1, described in Section 3.2.2, would be implemented to avoid impacts to species protected under the ESA.

7.2 PUBLIC PARTICIPATION

The City notified the public of the availability of the draft EA through the publication of a public notice in the *Albuquerque Journal* (see Appendix F), and via e-mail to the stakeholders list in below. The draft EA was made available for public review at the ABQ BioPark Botanic Garden/Aquarium Administrative Office at 2601 Central NW, Albuquerque, New Mexico 87104 and on FEMA's website (https://www.fema.gov/emergency-managers/practitioners/environmental-historic/region/6). FEMA conducted a 30-day public comment period commencing on the initial date of publication of the public notice on May 23, 2022.

Agencies and other entities contacted formally or informally in preparation of this EA and/or that were notified of the public review of the document include:

- Albuquerque Bernalillo County Water Utility Authority
- Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA)
- Bernalillo County Fire Department
- Bosque Ecosystem Monitoring Program
- Bureau of Reclamation
- ABQ BioPark
- City of Albuquerque Department of Municipal Development
- FEMA Region 6
- Middle Rio Grande Conservation District (MRGCD)
- Middle Rio Grande ESA Collaborative Program
- New Mexico Department of Homeland Security and Environmental Management (NMDHSEM)
- New Mexico Environment Department (NMED)
- New Mexico Interstate Stream Commission
- New Mexico State Historic Preservation Office (SHPO)
- New Mexico State Forestry Division
- U.S. Army Corps of Engineers (USACE)
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Environmental Protection Agency (EPA)

Interested Pueblos and Tribes:

- Hopi Tribe of Arizona
- Navajo Nation
- Ohkay Owingeh
- Pueblo of Isleta
- Pueblo of Laguna
- Pueblo of Pojoaque

- Pueblo of Sandia
- Ysleta del Sur

7.3 PERMITS

The following are permits that would be required to implement the proposed project:

- Coordination with local floodplain administrator regarding the proposed project.

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CHAPTER 9. LIST OF PREPARERS

Table 6-1 lists the individuals that contributed or reviewed potions of this EA.

Table 6-1. List of EA Preparers and Reviewers

Name and Role	Affiliation
Kevin Jaynes, Regional Environmental Officer	FEMA
Dorothy Cook, Senior Environmental Specialist, EA Reviewer	FEMA
Omololu Dawodu, Environmental Specialist, EA Reviewer	FEMA
Robert Moyer, Historic Preservation Specialist, EA Reviewer	FEMA
Colleen Langan-McRoberts, Open Space Division Superintendent, EA Reviewer	City of Albuquerque
James F. Sattler, Open Space Division Assistant Superintendent, EA Reviewer	City of Albuquerque
Tricia Keffer, Planner, EA Reviewer	City of Albuquerque
Joseph Kandel, Wildland Fire Coordinator, EA Reviewer	City of Albuquerque
Cody Stropki, Project Manager	SWCA
Coleman Burnett, Assistant Project Manager	SWCA
Lili Perreault, Environmental Scientist	SWCA
Matt DeFreese, GIS Specialist	SWCA
Alissa Healy, Archeological Specialist	SWCA
Peggy Ford, Technical Editor	SWCA
Kelley Cox, Formatter	SWCA

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APPENDIX A

Public Comment Letters

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5647 Jefferson Street NE
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www.swca.com

November 18, 2021

Sherri Paul
New Mexico Dept. of Homeland Security
13 Bataan Blvd.
Santa Fe, NM 87508
Sherri.Paul@state.nm.us

Re: Scoping period for the Rio Grande Bosque Wildfire Mitigation Project

Dear Interested Party:

The City of Albuquerque's Open Space Division (City) is proposing the Rio Grande Bosque Wildfire Mitigation Project (Project). This project is anticipated to use funding from the Federal Emergency Management Agency (FEMA) Hazard Mitigation Program administered by the New Mexico Department of Homeland Security Emergency Management (NM DHSEM). The Project is designed to reduce the severity of catastrophic wildfires, protect habitat for a variety of endangered and resident species, along with ultimately protecting life and property within and surrounding the Rio Grande State Park. The proposed project area exists within the Rio Grande Valley State Park, a 4,027-acre Rio Grande Cottonwood forest, with the City of Albuquerque Open Space Division being the managing entity. A 470-acre area has been identified for mitigation on both the west and east sides of the Rio Grande, south of Bridge Boulevard to north of Central Avenue (see attached map).

The proposed Project would include fuel reduction treatments of primarily non-native species such as Siberian Elm (*Ulmus Pumila*), Tree of Heaven (*Ailanthus altissima*), Mulberry (*Morus rubra*), Tamarisk (*Tamarisk* spp.), and Russian Olive (*Elaeagnus angustifolia*). The treatments would be aimed at reducing hazardous fuel loads across the Project area in order to minimize the fire hazard risk and reducing soil loss from erosion worsened by invasive species. The vegetation thinning component of the Project could include thinning trees and understory shrubs using a variety of tools, including but not limited to chainsaws, pole saws, wood chippers, and masticators, and using herbicides to treat non-native and invasive species. The Project would reduce the hazardous fuels by removing ladder fuels as well as large accumulations of dead, downed and dry vegetative material. These fuels can connect the understory vegetation to the overstory, providing a pathway for surface fires to reach the tree canopy.

Following hazardous fuel mitigation treatments, planting of indigenous vegetation may occur to enhance habitat value for resident and migratory wildlife and to replace non-native trees and understory removed, depending on site conditions. Upon completion of the environmental compliance steps, the City plans to apply for federal funding to complete the project. Implementation could occur over a series of years depending on funding availability.

The purpose of this scoping letter is to initiate the National Environmental Policy Act (NEPA) process, inform you about the proposed Project, and to give you the opportunity to provide us with information regarding issues,

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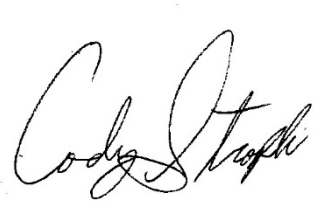
problems or opportunities you may have regarding this project. We request any information you may have within the proposed Project area or surrounding area, such as existing condition information, studies, Environmental Assessments, and Environmental Impact Statements. This information will help us determine the scope of issues to be discussed in the NEPA document for this proposed project. We respectfully request your input by December 7, 2021.

SWCA Environmental Consultants is developing the necessary environmental compliance documents and permits on behalf of the City. Please provide any written comments by December 7, 2021, to me at cstropki@swca.com or via postal mail at 5647 Jefferson Street NE, Albuquerque, NM 87109. Colleen Langan-McRoberts, City of Albuquerque Open Space Superintendent, is the City's point of contact for this project. She can be contacted at cmcroberts@cabq.gov.

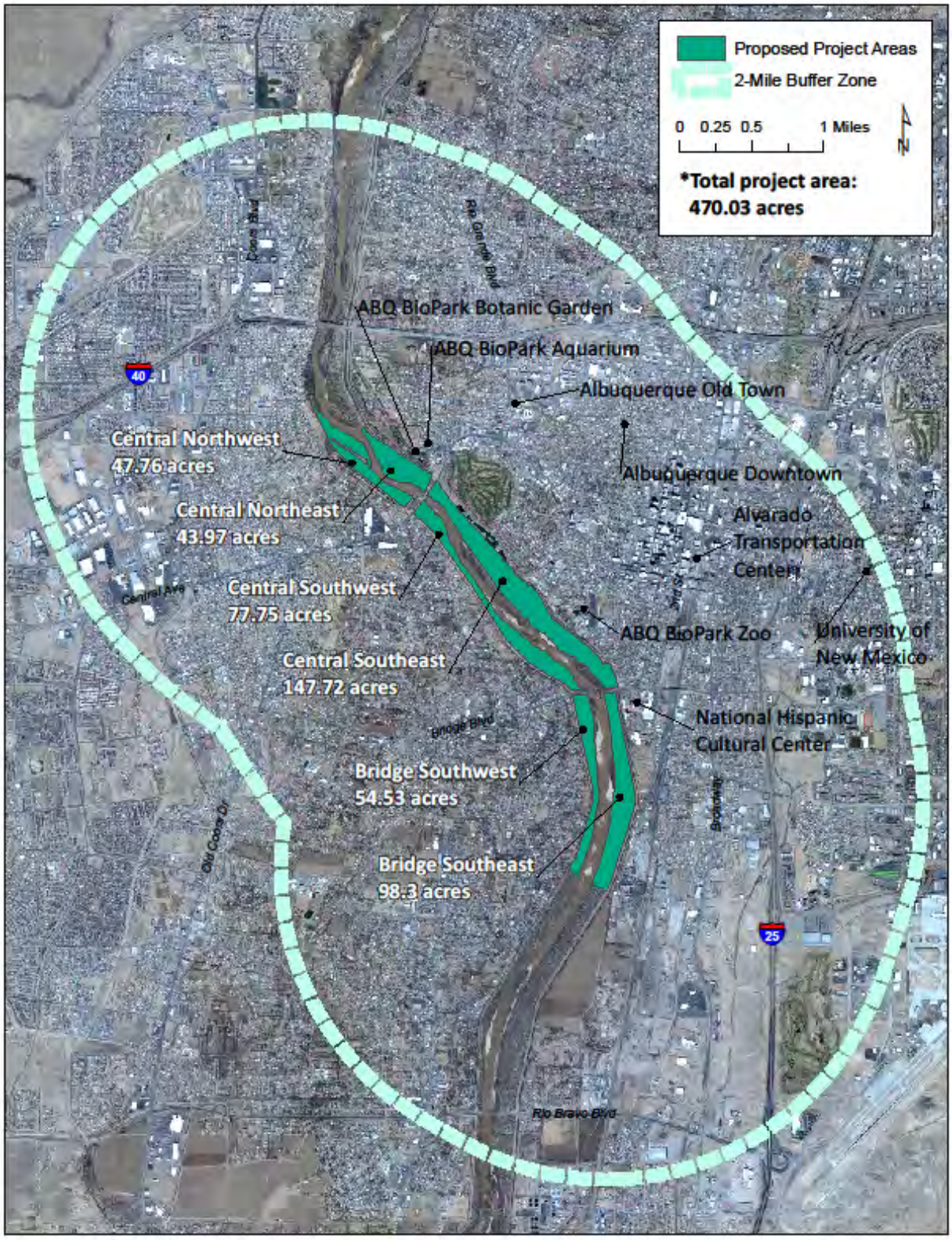
Sincerely,



Cody L. Stropki, Ph.D.
Rockies Region Disaster and Resilience Director
SWCA Environmental Consultants
5647 Jefferson St, NE
Albuquerque, New Mexico 87109
505.254.1115

cc. Colleen Langan-McRoberts, Superintendent, City of Albuquerque Open Space Division

encl.


Proposed Project Areas
2-Mile Buffer Zone
0 0.25 0.5 1 Miles
N
*Total project area:
470.03 acres
ABQ BioPark Botanic Garden
ABQ BioPark Aquarium
Albuquerque Old Town
Albuquerque Downtown
Central Northwest
47.76 acres
Central Northeast
43.97 acres
Central Southwest
77.75 acres
Central Southeast
147.72 acres
Bridge Southwest
54.53 acres
Bridge Southeast
98.3 acres
Alvarado
Transportation
Center
ABQ BioPark Zoo
University of
New Mexico
National Hispanic
Cultural Center
Rio Grande Blvd
Coors Blvd
Central Ave
Old Coors Dr
Rio Bravo Blvd
40
25

AGENCIES AND STAKEHOLDERS THAT RECEIVED A SCOPING LETTER

Albuquerque Bernalillo County Water Utility Authority (ABCWUA)

Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA)

Bernalillo County Fire Department (BERNCO)

Bosque Ecosystem Monitoring Program (BEMP)

Bureau of Reclamation (BOR)

CABQ BioPark

City of Albuquerque Department of Municipal Development (CABQDMD)

FEMA Region 6

Middle Rio Grande Conservation District (MRGCD)

Middle Rio Grande ESA Collaborative Program (MRGESACP)

New Mexico Dept. of Homeland Security (NMDHS)

New Mexico Environmental Department (NMED)

New Mexico Interstate Stream Commission (NMISC)

New Mexico State Historic Preservation Office (NMSHPO)

NM State Forestry Division (NMSFD)

U.S. Army Corps of Engineers (USACE)

U.S. Fish and Wildlife Service (USFWS)

US. Environmental Protection Agency (USEPA)

GOVERNOR
Michelle Lujan Grisham

DIRECTOR AND SECRETARY
TO THE COMMISSION
Michael B. Sloane

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

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7 December 2021

Mr. Cody L. Stropki, Ph.D.
Rockies Region Disaster and Resilience Director
SWCA Environmental Consultants
5647 Jefferson St, NE
Albuquerque, New Mexico 87109

Re: Rio Grande Bosque Wildfire Mitigation Project Scoping; NMERT No. 1529

Dear Mr. Stropki:

The Department of Game and Fish (Department) has reviewed your 18 November 2021 scoping letter regarding the Rio Grande Bosque Wildfire Mitigation Project (Project). The Department provides the following recommendations to minimize adverse effects to wildlife and requests that these recommendations be carried over into planning (NEPA) documents and project implementation.

The Department entered your proposed project into the New Mexico Environmental Review Tool (https://nmert.org/) to generate project recommendations and a list of special status fish and wildlife species within a mile of your proposed project area. The species list includes state and federally listed species and Species of Greatest Conservation Need as identified in the 2016 New Mexico State Wildlife Action Plan (NMDGF 2016). The project report is attached for your use.

Important project mitigation recommendations in the report include:
All migratory birds are protected against direct take under the federal Migratory Bird Treaty Act (16 U.S.C. Sections 703-712) and hawks, falcons, vultures, owls, songbirds, and other insect-eating birds are protected under New Mexico State Statutes (17-2-13 and 17-2-14 NMSA), unless permitted by the applicable regulatory agency. To minimize the likelihood of adverse impacts to migratory bird nests, eggs, or nestlings during project implementation, the Department recommends that ground disturbance and vegetation removal activities be conducted outside of the primary migratory bird breeding season of April 15-September 1. The season starts earlier if raptors are a primary concern. For example, in the Albuquerque area of the Rio Grande bosque, great horned owls (*Bubo virginianus*) can initiate nesting before March 1. If ground disturbing and clearing activities cannot be avoided during the nesting season, the area should be surveyed for active nest sites (with birds or eggs present in the nesting territory), and when occupied, nest disturbance should be avoided until young have fledged. For any active nests, adequate buffer zones should be established to minimize disturbance to nesting birds. Buffer distances should be 100 feet from songbird and raven nests and 0.25 miles from

raptor nests. Active nest sites in trees or shrubs that must be removed should be mitigated by qualified biologists or wildlife rehabilitators. Department biologists are available for consultation regarding nest site mitigation and can facilitate contact with qualified personnel.

As stated in our 2017 Habitat Handbook entitled *Habitat Restoration and Management of Native and Non-native Trees in Southwestern Riparian Ecosystems*, (https://www.wildlife.state.nm.us/download/conservation/habitat-handbook/project-guidelines/Restoration-and-Management-of-Native-and-Non-native-Trees-in-Southwestern-Riparian-Ecosystems-2019.pdf), to reduce adverse effects from fuels/riparian restoration treatments to wildlife in the Middle Rio Grande bosque, we recommend replacing removed non-native vegetation as soon as possible with locally adapted ecotypes of native shrub and tree species.

With implementation of the mitigation recommendations within the attached report and these comments, the Department does not anticipate significant adverse effects to wildlife from completion of this project.

We appreciate the opportunity to comment on this project. Should you have any questions regarding our comments, please contact Mark Watson, Terrestrial Habitat Specialist, at (505) 476-8115 or mark.watson@state.nm.us.

Sincerely,

Virginia Seamster, Ph.D. on behalf of Matthew Wunder, Ph.D.
Chief, Ecological and Environmental Planning Division

CC: USFWS NMESFO
Chuck Schultz, NMDGF Northwest Regional Habitat Biologist

Literature Cited

New Mexico Department of Game and Fish. 2016. State Wildlife Action Plan for New Mexico. New Mexico Department of Game and Fish, Santa Fe, New Mexico, USA. https://www.wildlife.state.nm.us/download/conservation/swap/New-Mexico-State-Wildlife-Action-Plan-SWAP-Final-2019.pdf

From: Porter, Michael D CIV USARMY CESPA (USA) <Michael.D.Porter@usace.army.mil>
Sent: Thursday, December 2, 2021 2:34 PM
To: Cody Stropki <cstropki@swca.com>; Langan-McRoberts, Colleen <cmcroberts@cabq.gov>
Cc: Gronewold, Ryan P CIV USARMY CESPA (USA) <ryan.p.gronewold@usace.army.mil>; MacDonell, George H CIV USARMY CESPA (USA) <George.H.MacDonell@usace.army.mil>; Porter, Michael D CIV USARMY CESPA (USA) <Michael.D.Porter@usace.army.mil>
Subject: Re: Scoping period for the Rio Grande Bosque Wildfire Mitigation Project

---

Hello Ms. McRoberts and Mr. Stropki,

USACE looks forward to coordinating with the City of Albuquerque Open Space (CABQ) on the Rio Grande Bosque Wildfire Mitigation Project. Your letter dated November 18, 2021 to the Middle Rio Grande ESA Collaborative Program identifies areas that overlap several USACE projects constructed with the Middle Rio Grande Conservancy District (MRGCD) and CABQ as the non-federal sponsors.

For your reference, the following environmental compliance documents are available for projects that occur in the proposed project area.
https://www.spa.usace.army.mil/Portals/16/docs/environmental/fonsi/MRG%20Bosque%20Final%20Environmental%20Assessment.pdf
https://www.spa.usace.army.mil/Portals/16/docs/environmental/fonsi/MRG%20Phase%20II%20SEA.pdf
https://www.spa.usace.army.mil/Portals/16/docs/environmental/fonsi/RGEMP-I_Sandia-Isleta_Final_FS-EA_S-A_Review.pdf?ver=2020-02-06-115134-780

The local non-federal sponsor is responsible for the maintenance of these projects. I will transmit the Operations and Maintenance (O&M) Manuals and Monitoring Reports for these projects via secure FTP to SWCA (Stropki) as additional references.

USACE is interested in how invasive vegetation management will be balanced with maintaining native understory shrubs to continue providing habitat for birds and other species. Because Russian Olive (*Elaeagnus angustifolia*) provides food for over-wintering birds, selectively leaving small numbers of this invasive tree would provide valuable bird habitat. Maintaining clumps of native shrubs of varying heights under the tree canopy while clearing understory fuel away from the base of trees would be consistent with habitat restoration O&M and reducing fire risk. Re-vegetation of native shrubs and herbaceous vegetation following fuel reduction treatments is important to continue providing riparian habitat and reduce recolonization of invasive plants that will require re-treatment.

We encourage coordination and data sharing for avian monitoring to reduce duplication of effort and leverage agency collaboration. Our biologists are available for refining the treatment strategy to support the objectives of our previous projects with the need for fuel reduction in the bosque.

Best regards, Mick

Michael Porter Ph.D., Certified Fisheries Professional
Fishery Biologist, Environmental Resources Section

U.S. Army Corps of Engineers
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www.wildlife.state.nm.us

21 June 2022

Omololu Dawodu, Environmental Protection Specialist
FEMA Region 6
800 N Loop 288
Denton, TX 76209

Re: City of Albuquerque Rio Grande Bosque Wildfire Mitigation Project; NMERT 1884

Dear Mr. Dawodu:

The New Mexico Department of Game and Fish (Department) has reviewed the City of Albuquerque Rio Grande Bosque Wildfire Mitigation Project Draft Environmental Assessment (DEA). The Department submitted comments during the scoping period for this project on 7 December 2021. Our comments recommended mitigations to reduce project impacts to nesting migratory birds and replanting within the project area with locally-adapted native plant ecotypes.

Page 3-1 of the DEA states: “In response to the purpose and need, the City proposes to conduct wildfire mitigation treatments on approximately 470 acres within the 4,027-acre Rio Grande Valley State Park over the next several years to meet project objectives. Treatments would focus on clearing downed woody debris piles, hand thinning the understory, removing noxious and invasive weeds, applying herbicide, and potentially replanting native species, as conditions warrant. The treatments would be aimed at reducing hazardous fuel loads across the project area to minimize the fire hazard risk”.

Page 3-2 states: “This work would be conducted in 26 units defined by treatment within the project area (Table 3-1). The area covered by each treatment ranges from approximately 1 to 31 acres (Figures 3-1–3-3). High and medium priority units would be targeted for treatment outside the migratory bird nesting season (treatments would occur September 1–April 14). Low priority units could be subject to treatment during the migratory bird nesting season (April 15–September 1) due to the lack of vegetation suitable for nesting birds”.

Page 3-4 continues: “As stated above, only those lower-priority treatment areas, which have lower vegetation density that do not provide suitable habitat for southwestern willow flycatcher (*Empidonax traillii extimus*) or yellow-billed cuckoo (*Coccyzus americanus*) would be treated between April 15 and September 1”.

Page 3-9 states: “Bird-1: For those treatments implemented between April 15 and September 1, FEMA and the City commit to conducting protocol surveys for southwestern willow flycatcher (and yellow-billed cuckoo, if work extends past June 1). Should an active flycatcher or cuckoo

nest be found within the project area, construction will cease within a 1-mile buffer of the active nest until the nest is no longer active. If an active nest is observed during work activities, the USFWS biologist must be contacted immediately".

It is unclear how "low priority units" that require treatment to reduce ladder fuels and downed woody material do not contain suitable habitat for nesting migratory birds (in addition to southwestern willow flycatcher and yellow-billed cuckoo). Migratory birds can nest in treatment-targeted non-native trees and shrubs, such as tamarisk and Russian olive; grass clumps; and on the ground. To protect nesting migratory birds and meet the intent of the Migratory Bird Treaty Act, the Department recommends that pre-treatment breeding bird surveys (for all migratory birds, not just federally-listed species) be conducted in low priority units before treatment activities occur during the migratory bird nesting season (15 April to 1 September). Should active nests be documented within those units, or adjacent neighboring units, non-treatment buffers should be set up around all active nests to avoid disturbance until the end of nesting season or the nestlings have fledged.

The Department's 7 December 2021 comments, provided during the scoping period for this project, recommended replacing removed non-native vegetation as soon as possible with locally-adapted ecotypes of native shrub and tree species. Although mentioned as a possibility (as stated on page 3-1 above), the DEA does not provide a firm commitment to replanting with native species.

Page 3-2 states: "Following hazardous fuel mitigation treatments, planting of indigenous vegetation may occur to enhance habitat value for resident and migratory wildlife and to replace nonnative trees and understory removed, depending on site conditions. Native species to be planted would include Rio Grande cottonwood, Goodding's willow (*Salix gooddingii*), narrowleaf (coyote) willow (*Salix exigua*), New Mexico olive (*Forestiera neomexicana*), pale desert-thorn (wolfberry) *(Lycium pallidum*), and other native shrubs. Native plantings would focus on 1) seeding in areas where nonnative plants are removed in open forest habitats to provide forage for birds, and 2) native understory planting in areas where nonnative plants are removed under gallery forest cottonwood trees. Where possible, cottonwoods would be established to provide structural diversity to planting patches".

As stated in our 7 December 2021 comments, the Department encourages the project proponents to replant with locally-adapted native species as recommended in our 2017 Habitat Handbook entitled *Habitat Restoration and Management of Native and Non-native Trees in Southwestern Riparian Ecosystems*, (https://www.wildlife.state.nm.us/download/conservation/habitat-handbook/project-guidelines/Restoration-and-Management-of-Native-and-Non-native-Trees-in-Southwestern-Riparian-Ecosystems-2019.pdf). We recommend addition of either a firm commitment to replanting or an explanation of the determinative factors regarding the decision to replant or not to the final EA.

Chapter 7 Agency Coordination, page 7-3 states: "The NMDGF is recommending mitigation measures to minimize the impacts of the project on wildlife known to occur within or near the project area, including migratory birds, burrowing owls, and bats. The NMDGF recommends conducting pre-implementation surveys and outlines restrictions related to these species. *Since the proposed project would occur within or near a riparian area, NMDGF also recommends avoiding removing any riparian vegetation or creating ground disturbance* (italics ours)".

The last sentence is incomplete as it fails to include the remaining language from the New Mexico Environmental Review Tool report, which was provided along with our 7 December 2021

comments, regarding following the Department's above-referenced 2017 Habitat Handbook in the event that a project involves removal of non-native riparian trees or planting of native riparian vegetation. The Department recommends modifying this statement in the final EA to state that the Department recommends avoiding removal of ***native*** riparian vegetation, unless it is to protect structures and/or remove hazard trees dangerous to the public.

We appreciate the opportunity to comment on this project. Should you have any questions regarding our comments, please contact Mark Watson, Terrestrial Habitat Specialist at (505) 476-8115, or mark.watson@state.nm.us.

Sincerely,

Matt Wunder, Ph.D. Digitally signed by Matt Wunder, Ph.D.
Date: 2022.06.21 09:42:16 -06'00'

Matt Wunder, Ph.D.
Chief, Ecological and Environmental Planning Division

CC: New Mexico Ecological Services Field Office

APPENDIX B

Eight-Step Process for Evaluating Floodplain and Wetland Impacts

EO 11990, Protection of Wetlands, directs federal agencies "to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands" for federally funded projects. EO 11988, Floodplain Management, requires federal agencies to "take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains" when conducting federal activities.

FEMA regulations for compliance with EO 11990 and EO 11988 are found at 44 CFR 9, Floodplain Management and Protection of Wetlands. In compliance with FEMA regulations implementing the EOs, FEMA is required to apply the eight-step decision-making process for actions that would impact wetlands or floodplains. The eight-step process is applied to the proposed wildfire mitigation treatments in the Rio Grande bosque project area. The following are the eight steps in the decision-making process.

Step 1: Determine if the Proposed Action is in the 100-year floodplain and/or wetland.

Based on review of FEMA's Flood Insurance Rate mapping system, the large majority of the project area would be located within zone AE the 100-Year floodplain (FEMA 2022).

USFWS NWI mapping identifies four different wetland types within portions of the project area: freshwater pond, freshwater emergent wetland, freshwater forested/shrub wetland, and riverine. Wetland features and associated area are presented in Table B.1 and Figures B-1 through B-3.

Table B.1. Wetland Types and Features within the Project Area

Wetland Type	Code(s)	Area (acres)
Freshwater pond	PAB4Hx	4.4
Freshwater emergent wetland	PEM1Fx	0.4
Freshwater forested/shrub wetland	PFO1A, PSS1A, PSS1C	50.2
Riverine	R2UB2F, R2UB2Fx, R2UB3Fx, R2UBFx, R2UBHx, R2US2C, R4SB3A, R4SB4Cx	4.8

Step 2: Early public notice.

In accordance with 44 CFR 9.8(b)(2), the publication of this draft EA fulfills the early public notice requirement. A public notice concerning the proposed wildfire mitigation project and on the availability of the draft EA will be published in the *Albuquerque Journal*, the local paper, and on FEMA's website (https://www.fema.gov/emergency-managers/practitioners/environmental-historic/region/6). Public comment on the proposed project and draft EA will be open for 30 calendar days. The notice will include the name, proposed locations and description of the activities, and an indication that portions of the Proposed Action are in the floodplain and/or wetland.

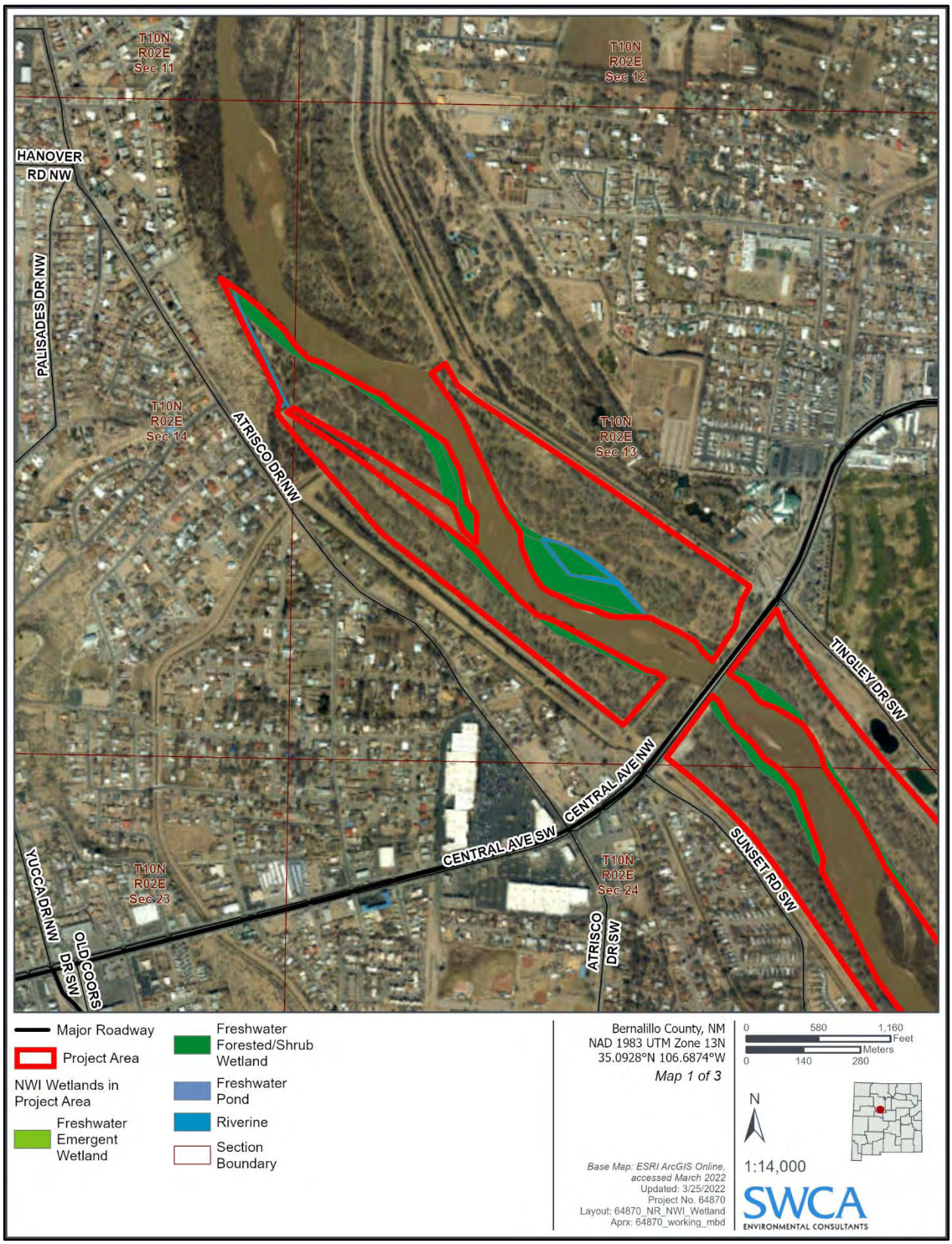

Figure B-1. NWI wetlands within the project area (map 1 of 3)

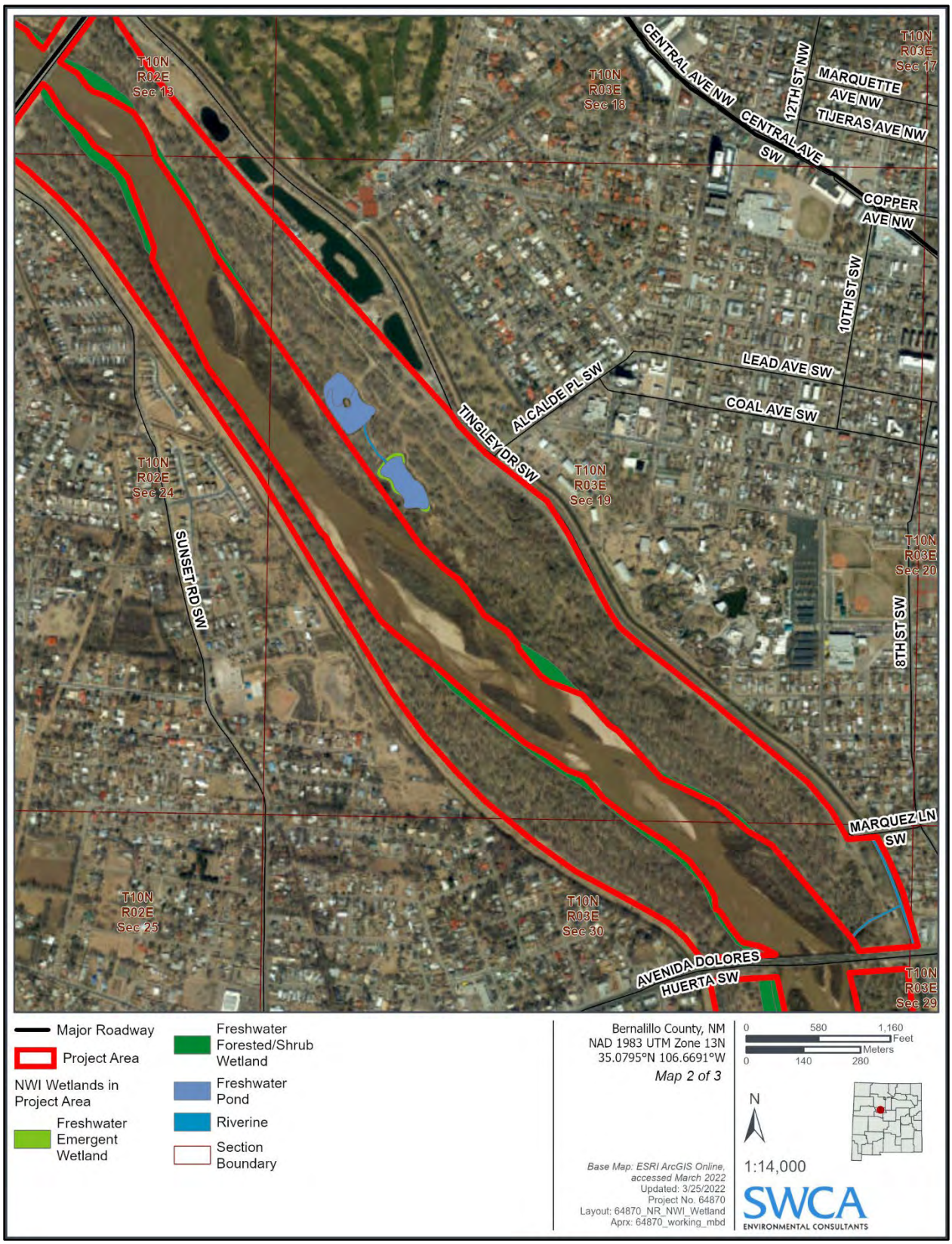

Figure B-2. NWI wetlands within the project area (map 2 of 3).

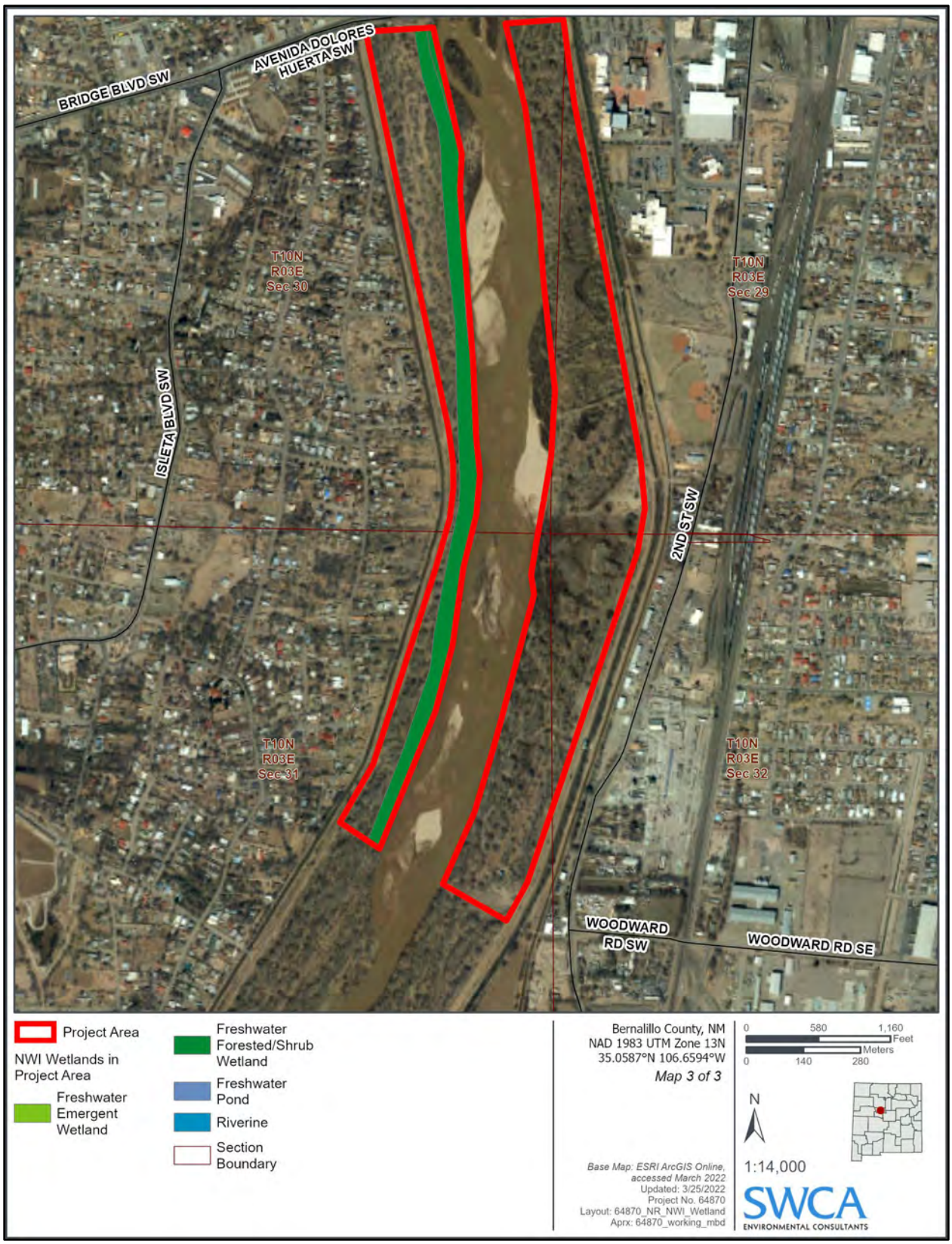

Figure B-3. NWI wetlands within the project area (map 3 of 3).

Step 3: Identify and evaluate practicable alternatives to working in floodplains and wetlands.

Avoiding work in the floodplain and/or wetland would mean that the entire project area would not undergo treatments for wildfire mitigation. Avoiding work in the floodplain and wetland is not a practicable alternative as it may cause the entire project to be cancelled and would not meet the purpose and need for the mitigation activity.

Step 4: Identify potential direct and indirect impacts associated with floodplain management and protection of wetlands.

Because the project area would be predominately located on floodplains, temporary impacts to floodplains would occur during treatment implementation. Vegetation removal and movement of work crews would result in temporary disturbance to soils and vegetation communities. Within wetlands, some vegetation would be removed but overall function of soils and hydrology would remain unaltered. No root balls would be removed, and stumps would be cut down to ground level, which would minimize impact to soils and the potential for erosion. The Proposed Action would not significantly affect the functions and values of floodplains and wetlands in the project areas.

The functions of floodplains and wetlands to filter nutrients and impurities from runoff; to provide floodwater storage; to reduce flood velocities; to reduce flood peaks; to reduce sedimentation; and to promote infiltration and aquifer recharge would remain intact after the implementation of this project because vegetation would be thinned but not removed completely. Floodplains and wetlands also provide services in the form of providing fish and wildlife habitat, breeding, and feeding grounds. These values would not be adversely impacted because implementation of the project would be implemented in phases to avoid treatments in areas with dense vegetation likely to support active migratory bird nests between April 15 and September 1. The overall integrity of the ecosystem would not change compared to the No Action Alternative. The Proposed Action would not adversely affect the societal and recreational benefits provided by floodplains and wetlands. Open space and recreational uses in the project area would not be affected by the Proposed Action.

The hazardous fuels reduction activities would reduce the potential for the adverse impact of a major wildfire on soils if a wildfire occurs. A wildfire could alter the cycling of nutrients; the physical and chemical properties of soils; and the temperature, moisture, and biotic characteristics of the existing soils. These primary impacts from a wildfire could also result in decreased infiltration and increased runoff, which often causes increased erosion. These potential negative effects of a major wildfire on the natural wetland functions would be reduced through implementation of the Proposed Action.

Step 5: Minimize adverse impacts to floodplains and wetlands; restore and preserve the natural and beneficial floodplain values; preserve the nature and beneficial wetland values.

The proposed treatment activities would not have significant adverse effects on the natural values provided by floodplains and wetlands. Soil disturbances in and near wetlands would be minimized by conducting the work by hand within wetlands and within 200 feet of wetlands. Per RPM Water-2, work conducted within 200 feet of potential waters of the U.S. (WOTUS) would be restricted to hand cutting and hand hauling debris. No mulch would be placed in WOTUS. Per RPM Water-3, no wheeled equipment would be allowed within a 100-foot buffer zone of potential WOTUS, including the Rio Grande, to mitigate disturbance of riparian and wetland vegetation, protect soils from compaction and other disturbances, and protect water quality. The controlled vegetation removal would protect the natural environment from spreading wildfire and reduce the impact of destruction to property and possible loss of life. The proposed project would not result in the destruction, loss, or degradation of floodplains or wetlands.

The City of Albuquerque is coordinating with the local floodplain administrator to obtain any required permits prior to initiating work and comply with any conditions of the permit to ensure any harm to the floodplain is minimized.

Step 6: Determine if the Proposed Action is practicable and re-evaluate alternatives.

FEMA maintains that the Proposed Action is the only practicable alternative to meet the purpose and need of the project.

Step 7: Findings and public explanation (Final Notification)

For actions located in the floodplain and/or wetland, the City of Albuquerque must issue a final public notice per 44 CFR 9.12(e) at least 15 days prior to the start of work. The final notice shall include the following: 1) a statement of why the Proposed Action must be located in an area affecting or affected by a floodplain or a wetland; 2) a description of all significant facts considered in making this determination; 3) a list of the alternatives considered; 4) a statement indicating whether the action conforms to applicable state and local floodplain and wetland protection standards; 5) a statement indicating how the action affects or is affected by the floodplain and/or wetland, and how mitigation is to be achieved; 6) identification of the responsible official or organization for implementation and monitoring of the Proposed Action, and from whom further information can be obtained; and 7) a map of the area or a statement that such map is available for public inspection, including the location at which such map may be inspected and a telephone number to call for information.

Step 8: Implement the action.

Step 8 is the review of the implementation and post-implementation phases of the Proposed Action to ensure that the requirements stated in 44 CFR 9.11 are fully implemented. The proposed wildfire mitigation project will be conducted in accordance with applicable floodplain and wetland development requirements and any applicable permit conditions.

The City of Albuquerque will adhere to the grant conditions outlined in the Finding of No Significant Impact, if issued by FEMA, for the Proposed Action.

APPENDIX C

USFWS Correspondence and Biological Assessment

U. S. Department of Homeland Security
FEMA Region 6
800 North Loop 288
Denton, TX 76209-3698

FEMA

February 15, 2022

Shawn Sartorius
Field Supervisor
U.S. Fish and Wildlife Service
2105 Osuna NE
Albuquerque, NM 87113

Subject: Initiate Informal Consultation under Section 7 of the Endangered Species Act

Dear Mr. Sartorius:

This letter is to request initiation of informal consultation between the Federal Emergency Management Agency (FEMA) and your office under Section 7 of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) for the Rio Grande Valley State Park Wildfire Mitigation Project. Using FEMA funds, the City of Albuquerque is proposing to implement wildfire prevention measures across 470 acres of lands managed by the City and the Middle Rio Grande Conservancy District. The 470-acre parcel has been identified for mitigation on both the west and east sides of the Rio Grande, south of Bridge Boulevard to north of Central Avenue. The proposed wildfire mitigation measures include thinning of dense understory vegetation, clearing and mulching of dead woody debris, and the removal and chemical treatment of exotic plant species. FEMA will be providing federal funding for work associated with the Rio Grande Valley State Park Wildfire Mitigation Project to the City of Albuquerque through FEMA's Hazard Mitigation Grant Program (HMGP); HMGP-5184-0004-NM.

Five threatened or endangered species are federally listed in Bernalillo County. In addition, the proposed action is adjacent to the designated critical habitat of the Rio Grande Silvery Minnow (*Hybognathus amarus*). FEMA has determined that the proposed action will have no effect on the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*); Mexican Spotted owl (*Strix occidentalis lucida*); or the Rio Grande Silvery Minnow (*Hybognathus amarus*) or their critical habitat. FEMA understands that the U.S. Fish and Wildlife Service does not concur with no effect determinations, therefore we are not requesting concurrence, rather we are providing this determination for your awareness.

FEMA has determined that the proposed Rio Grande Valley State Park Wildfire Mitigation Project **"may affect and is not likely to adversely affect"** the Southwestern willow flycatcher (*Empidonax traillii extimus*) (flycatcher). No designated critical habitat exists within the proposed project area.

FEMA has determined that the proposed Rio Grande Valley State Park Wildfire Mitigation Project "**may affect but is not likely to adversely affect**" the Yellow-billed Cuckoo (*Coccyzus americanu*s). No designated critical habitat exists within the proposed project area.

Justifications for these determinations are provided in the enclosed Biological Assessment that was prepared by SWCA Environmental Consultants on behalf of The City of Albuquerque and reviewed and approved by FEMA.

FEMA requests your concurrence with this effect determination and input on any additional conservation measures required to ensure accuracy of this determination. Thank you for your attention and assistance. Should you have any questions, please contact Environmental Specialist, Omololu Dawodu at Omololu.Dawodu@fema.dhs.gov or at 202-674-1910.

Sincerely,

DWC for DOROTHY K COOK Digitally signed by DOROTHY K COOK Date: 2022.02.15 09:08:59 -06'00'

Kevin Jaynes
Regional Environmental Officer
FEMA Region 6

Enclosures: Biological Assessment

Biological Assessment for the Proposed Rio Grande Valley State Park Wildfire Mitigation Project, Albuquerque, Bernalillo County, New Mexico

FEBRUARY 2022

PREPARED BY

SWCA Environmental Consultants

BIOLOGICAL ASSESSMENT FOR THE PROPOSED RIO GRANDE VALLEY STATE PARK WILDFIRE MITIGATION PROJECT, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

Prepared for

Federal Emergency Management Agency
6840 Second St. NW
Albuquerque, New Mexico 87107

Prepared for

City of Albuquerque Open Space Division
P.O. Box 1293
Albuquerque, New Mexico 87103

Prepared by

SWCA Environmental Consultants
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Albuquerque, New Mexico 87109
(505) 254-1115
www.swca.com

SWCA Project No. 64870

February 2022

CONTENTS

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1 INTRODUCTION

The City of Albuquerque (City) proposes to develop and implement a community wildfire mitigation plan along an approximately 4-mile-long section of the Rio Grande, within the city limits of Albuquerque in Bernalillo County, New Mexico. The Rio Grande Valley State Park Wildfire Mitigation Project (Proposed Project) aims to develop a wildfire mitigation plan and implement wildfire prevention measures to avoid and/or lessen the severity of wildfires along the Rio Grande within the city.

The City is proposing to implement wildfire prevention measures across 470 acres of lands managed by the City and the Middle Rio Grande Conservancy District (MRGCD) (Figure 1.1). The 470-acre parcel has been identified for mitigation on both the west and east sides of the Rio Grande, south of Bridge Boulevard to north of Central Avenue. The proposed wildfire mitigation measures include thinning of dense understory vegetation, clearing and mulching of dead woody debris, and the removal and chemical treatment of exotic plant species. The purpose of the Proposed Project is to reduce the potential for and severity of catastrophic wildfires and protect habitat for a variety of endangered and resident species, along with ultimately protecting life and property.

The biological survey completed for this report covered the entire 470-acre Proposed Project area. This Biological Assessment (BA) evaluates the potential effects of the Proposed Project on federally threatened or endangered species listed under the Endangered Species Act (ESA) of 1973, as amended (16 United States Code [USC] 1531–1541 et seq.). This BA also provides a description of general site characteristics, soils, vegetation, wildlife, and aquatic resources within the Proposed Project area.

Section 7 of the ESA, as amended, requires federal agencies to use their authorities to carry out programs to conserve threatened and endangered species, and to ensure that actions authorized, funded, or carried out by them are not likely to jeopardize the continued existence of listed or proposed species or result in the destruction or adverse modification of their critical habitat. A BA must be prepared for federal actions that entail major construction activities (also defined as a Proposed Project significantly affecting the quality of the human environment as defined under the National Environmental Policy Act [NEPA] of 1970) to evaluate the City's compliance with the following federal and state laws and regulations:

- NEPA (Public Law [PL] 91-190, 42 USC 4321 et seq.)
- ESA (PL 93-205) and amendments of 1988 (PL 100-478)
- Sections 401 and 404 of the Clean Water Act. All federal consultations, including the ESA, must be completed prior to U.S. Army Corps of Engineers (USACE) issuance of Section 404 authorizations

This BA was prepared primarily to evaluate (1) federally and state-listed species that have the potential to occur within the Proposed Project area, (2) mechanisms through which wildfire mitigation activities may affect any of those listed species, and (3) the likelihood of beneficial and/or harmful effects on listed species based on the mechanisms mentioned above. Also included in this BA are measures proposed by the City to mitigate any potential negative effects of the Proposed Project on listed and proposed species.

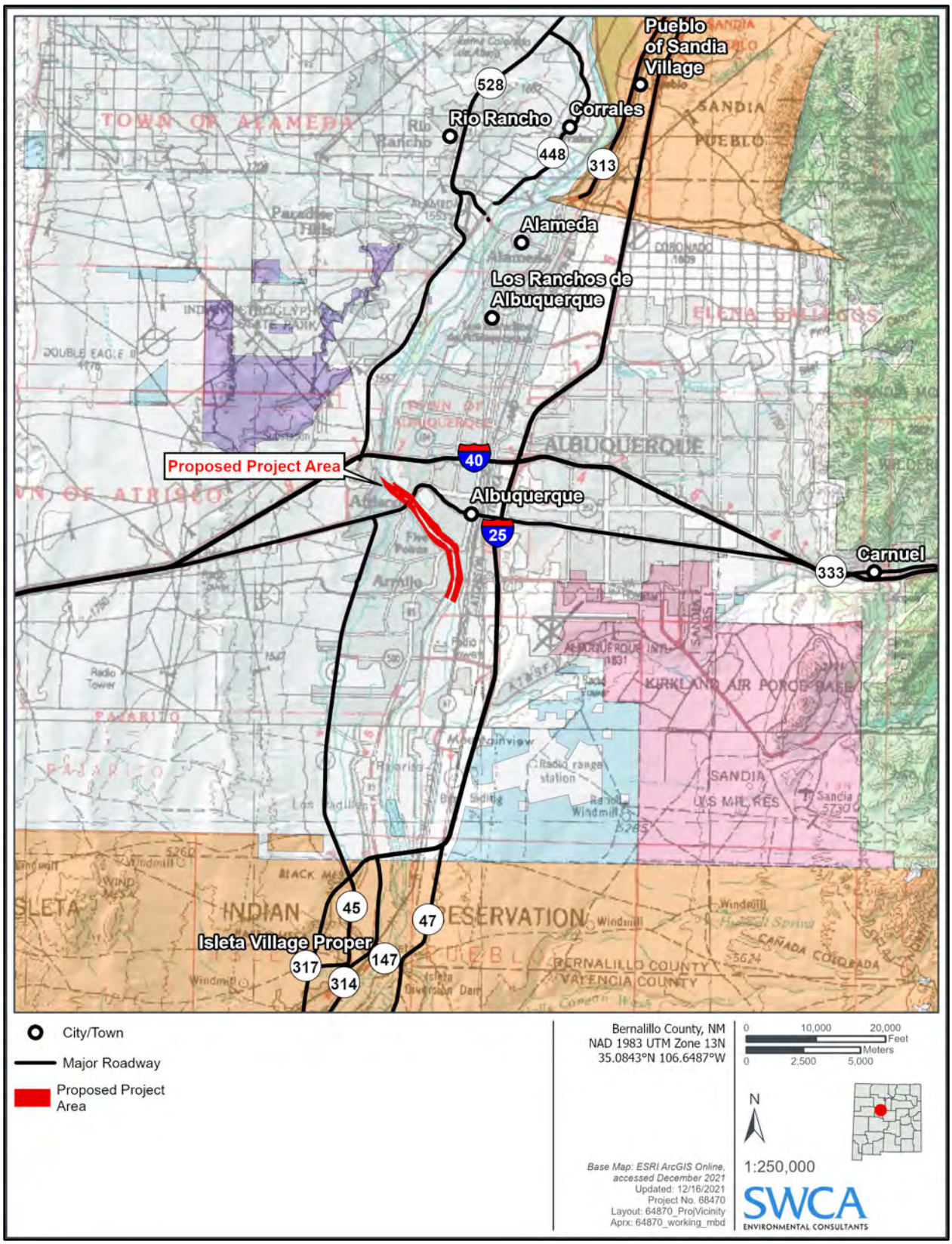

Figure 1.1. Proposed Project vicinity map.

2 PROPOSED PROJECT

The purpose of the Proposed Project is to reduce the threat of wildfires that could be ignited in the Rio Grande bosque, either through human or natural ignition sources. The Proposed Project is also intended to protect habitat for a variety of endangered and resident species, along with ultimately protecting life and property within and surrounding the Rio Grande Valley State Park. This area of the bosque is in close proximity to the frequently visited ABQ BioPark, which includes a zoo, aquarium, Tingley Beach, and a botanical garden, as well as the nearby the National Hispanic Cultural Center. These areas draw many visitors to the bosque daily. In addition, portions of the Proposed Project area are used by transient populations for establishing illegal campgrounds (Washington 2020). These human interactions within the bosque can lead to an increased risk for wildfire ignition.

Since March 2019, the Albuquerque Fire Rescue department has responded to over 140 fire-related emergency calls within or adjacent to the Proposed Project area. Furthermore, this stretch of forest has seen numerous wildfires varying in size and severity. With modifications and impoundments created on and along the Rio Grande riparian ecosystem, nonnative species of plants have been able to populate large areas, adding to the overall fuel load. Currently, high levels of dead, downed, and dry vegetative material combined with nonnative vegetation within the Proposed Project area create a substantial hazardous fuel load, which could result in catastrophic wildfires. The Proposed Project is intended to reduce hazardous fuel loading, which would protect species habitat in the Rio Grande Corridor, promote ecosystem health, and protect the urban community.

To respond to the purpose and need for the Proposed Project, the City proposes to conduct wildfire mitigation treatments on approximately 470 acres within the 4,027-acre Rio Grande Valley State Park. Treatments would focus on clearing downed woody debris piles, hand thinning the understory, removing noxious and invasive weeds, applying herbicide, and potential replanting of native species, as conditions warrant. The treatments would be aimed at reducing hazardous fuel loads across the Proposed Project area to minimize the fire hazard risk.

The Proposed Project is designed to provide a range of treatment methods (also referred to as tools) that could be used to achieve a reduction in wildfire threat in the bosque. The proposed tools may be used on any given location depending on the characteristics of the specific treatment site, such as vegetation type, topography, presence of federally listed species, etc. This approach provides flexibility and would allow implementation of specific design elements from a broader Proposed Project, where the design elements vary according to a range of on-the-ground conditions to minimize fire hazard risk.

The Proposed Project would include fuel reduction treatments of primarily nonnative species by removing surface nonnative fuels, clearing or mulching the treated fuels, and following initial treatment with spot spraying to assure effective nonnative fuels control. The target noxious weeds for removal would include ravenna grass (*Saccharum ravennae*), Siberian elm (*Ulmus pumila*), Russian thistle (*Kali tragus*), saltcedar (*Tamarix* spp.), and tree of heaven (*Ailanthus altissima*) (Figure 2.1).

The vegetation thinning component of the Proposed Project could include thinning trees and understory shrubs using a variety of tools, including, but not limited to, chainsaws, pole saws, wood chippers, and masticators. Grazing ungulates, such as goats (*Capra hircus*), could also be used to reduce the density of understory shrubs and nonnative vegetation. The Proposed Project would reduce the hazardous fuels by removing ladder fuels and large accumulations of dead, downed, and dry vegetative material. These ladder fuels connect the understory vegetation to the overstory, providing a pathway for surface fires to reach the tree canopies and resulting in fire transitioning into a crown fire. The vegetation treatments would reduce these ladder fuels, which would help keep fire out of the tree canopies and mitigate the effects of a wildfire moving across the wildland-urban interface into developed areas.

Following hazardous fuel mitigation treatments, planting of indigenous vegetation may occur to enhance habitat value for resident and migratory wildlife and to replace nonnative trees and understory removed, depending on site conditions. Native species to be planted would include Rio Grande cottonwood (*Populus deltoides wislizeni*), Goodding's willow (*Salix gooddingii*), coyote willow (*Salix exigua*), New Mexico olive (*Forestiera neomexicana*), wolfberry (*Lycium pallidum*), and other native shrubs.

Native plantings would focus on (1) seeding in areas where nonnative plants are removed in open forest habitats to provide forage for birds, and (2) native understory planting in areas where nonnative plants are removed under gallery forest cottonwood trees. Where possible, cottonwoods would be established to provide structural diversity to planting patches.

This work would be conducted in 26 defined-by-treatment units within the Proposed Project area, ranging from approximately 1 to 31 acres (Figure 2.2–Figure 2.4). For a schedule of major activities, please refer to table 2.1.

Table 2.1. Schedule of Major Activities

Time Frame	Management Prescription
January 1–December 31	Hand excavation of ravenna grass
January 1–April 15	Girdling of Siberian elms
August 1–April 15	Cut and spray (initial treatment) for tree of heaven
August 1–September 30	Additional herbicidal treatment of tree of heaven
February 1–June 15	Thinning of selected units (hand or mechanized)
September 15–December 15	Thinning of selected units (hand or mechanized)
February 1–June 15	Cut and spray treatment for tamarisk

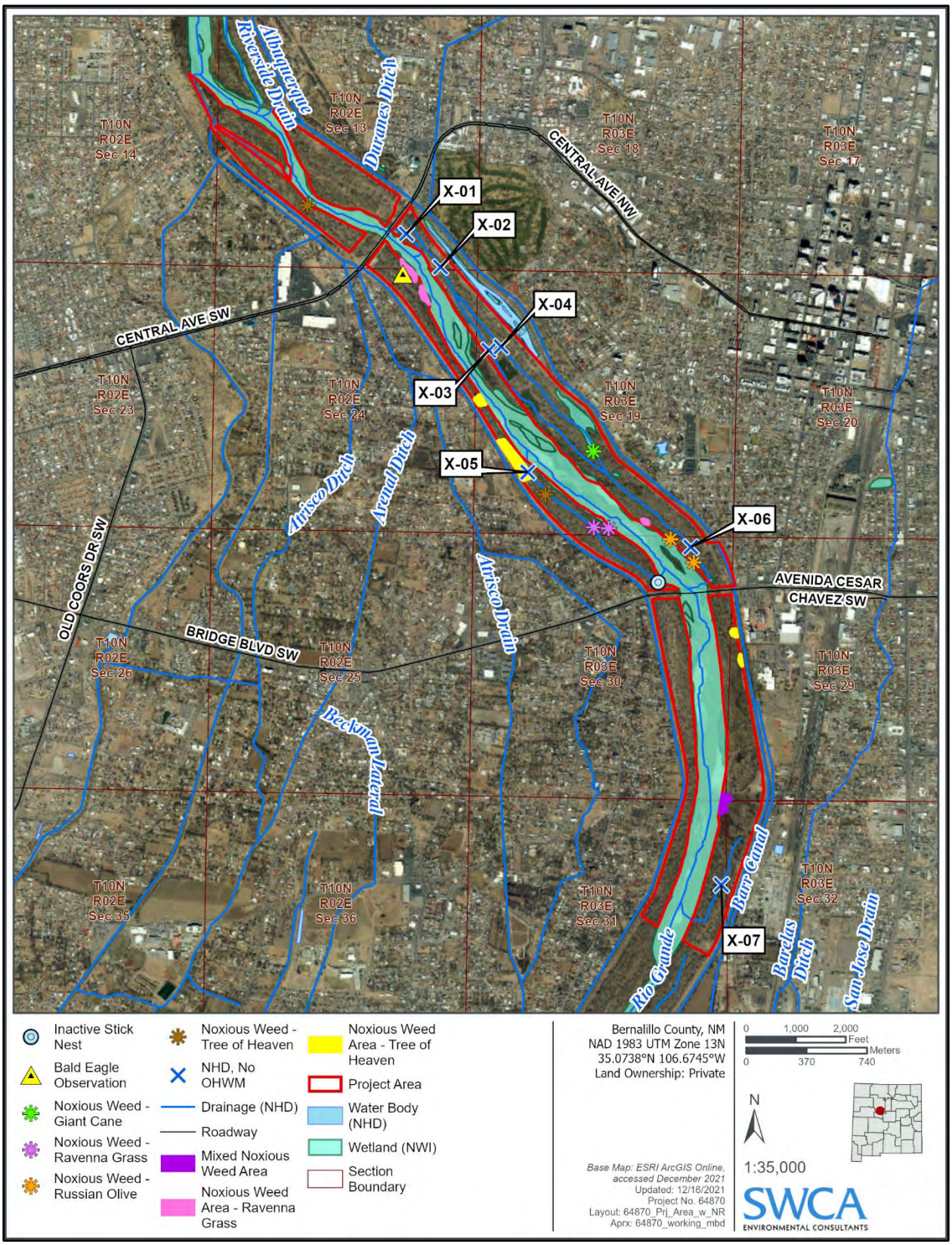

Figure 2.1. Proposed Project area map with natural resources.

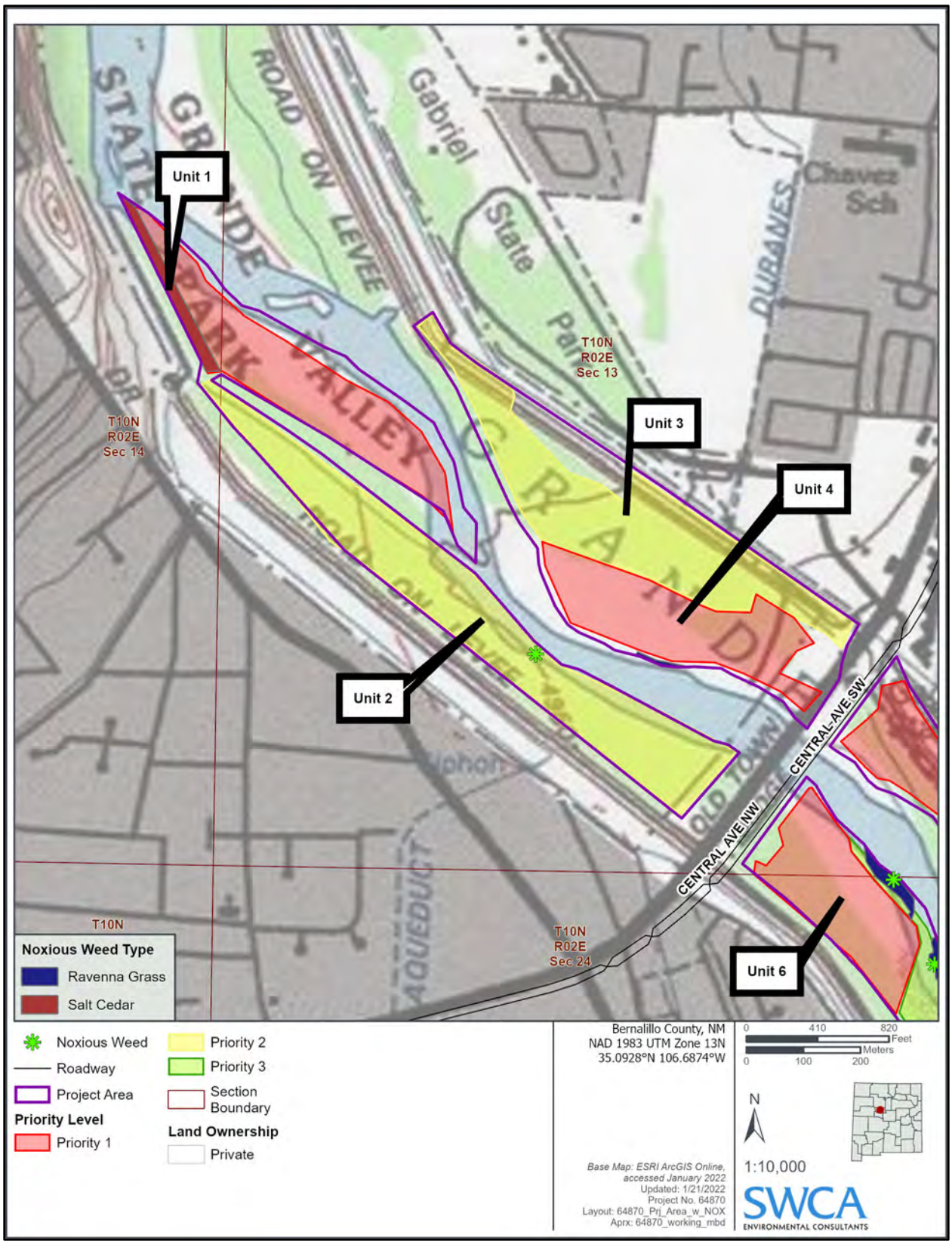

Figure 2.2. Proposed Project area map with treatment units and noxious weed data (1/3).

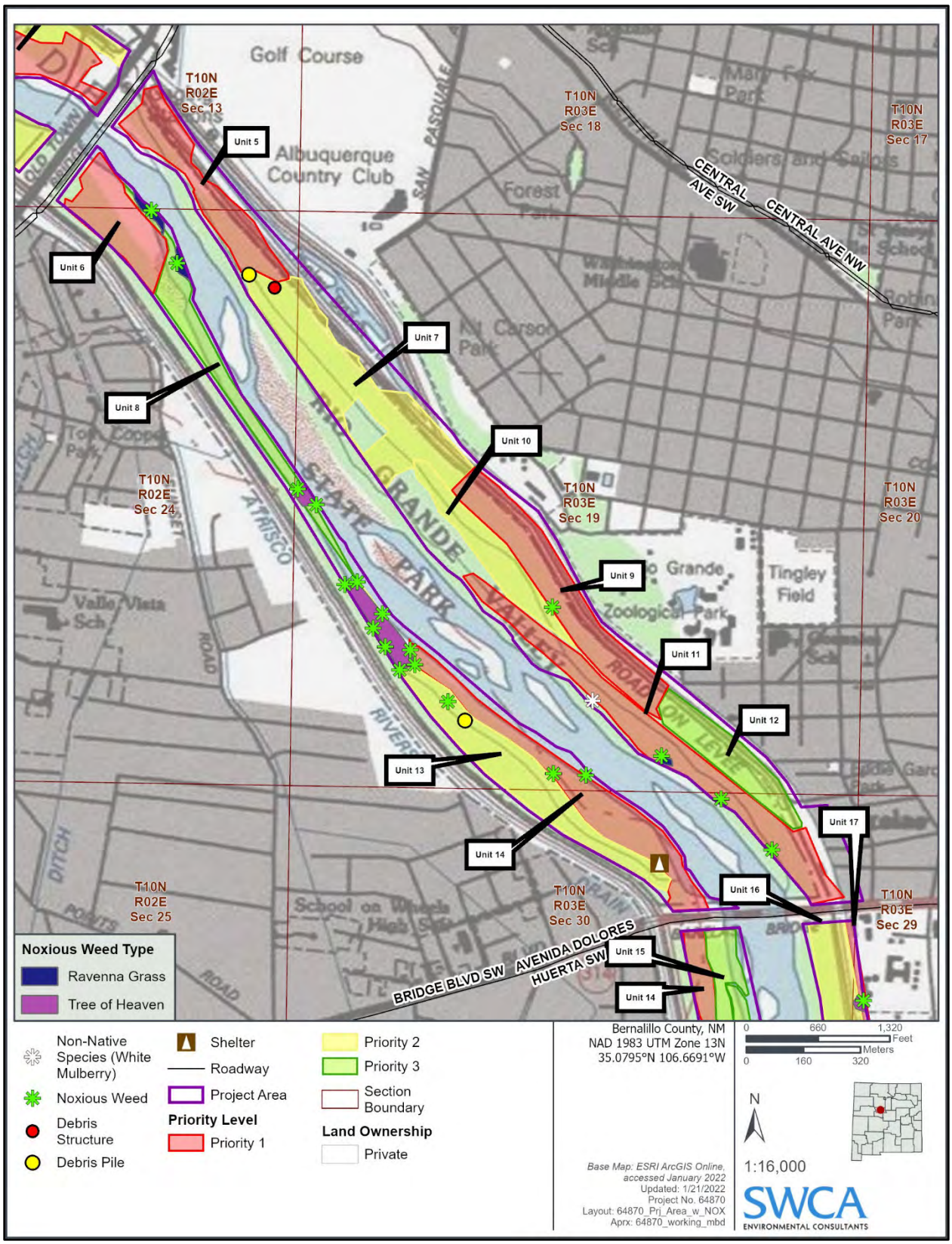

Figure 2.3. Proposed Project area map with treatment units and noxious weed data (2/3).

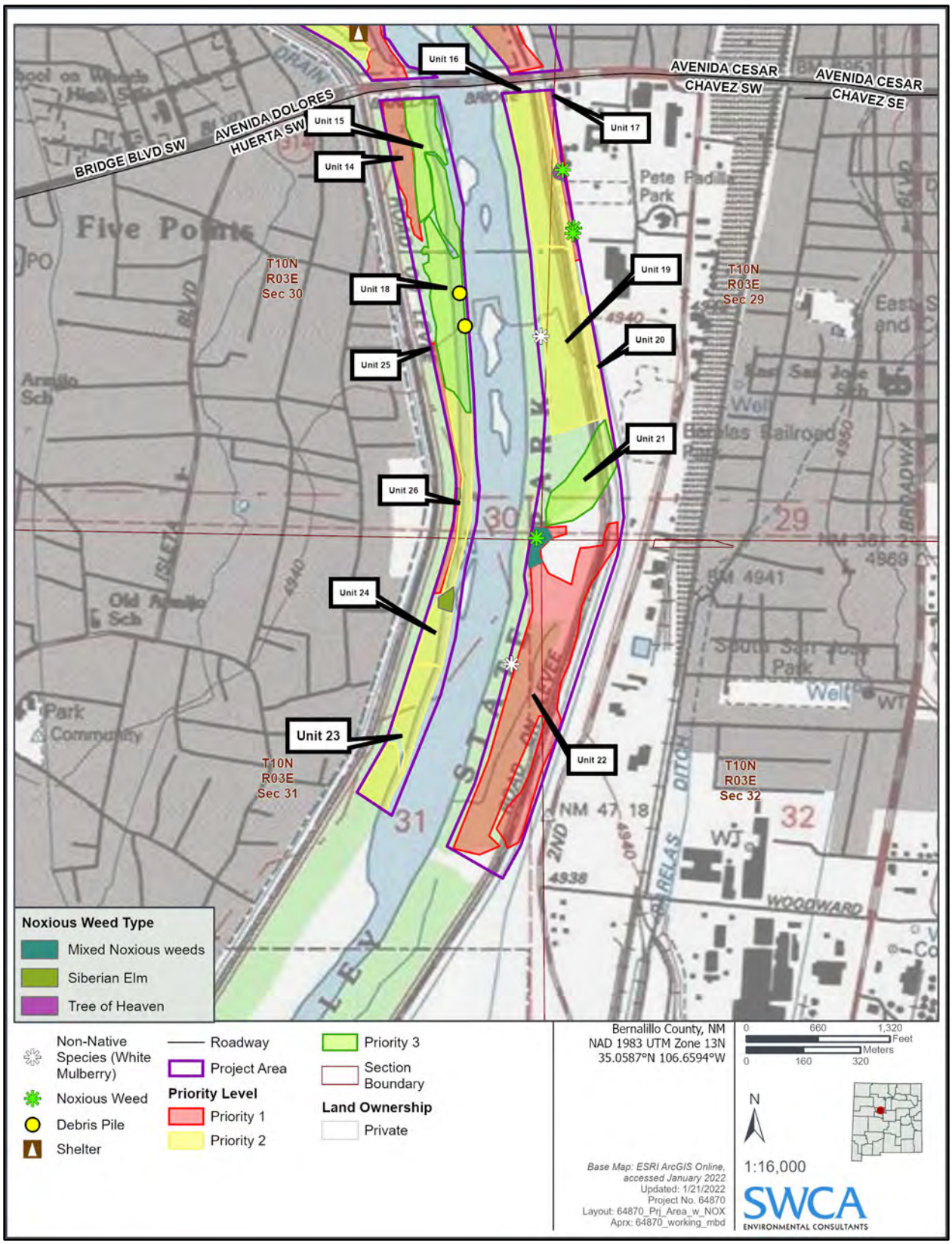

Figure 2.4. Proposed Project area map with treatment units and noxious weed data (3/3).

3 METHODOLOGY AND SPECIES COVERED IN THE EVALUATION OF POTENTIAL IMPACTS

The U.S. Fish and Wildlife Service (USFWS) maintains lists of endangered, threatened, proposed, and candidate species known or thought to occur in Bernalillo County, New Mexico. The USFWS also designates critical habitats in the state for some listed species. Endangered and threatened species are protected under the ESA (16 USC 1531 et seq.). The ESA specifically prohibits "take," which means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to engage in any such conduct" to a listed species. Avian species, except for upland game birds and introduced species, also receive legal protection under the federal Migratory Bird Treaty Act (MBTA) (16 USC 703–712).

The special-status species evaluated in this BA consist of (1) all federally protected (i.e., endangered and threatened) species and (2) additional species listed by the USFWS as proposed or species under review (USFWS 2021a. The distribution of critical habitat was examined using the USFWS's online Critical Habitat Portal (USFWS 2021b).

All information on the vegetation within the Proposed Project area was derived from a biological survey conducted on November 16, 17, 19, and 24, 2021. The potential for local species occurrence was based on (1) existing information on distribution, and (2) qualitative comparisons of the habitat requirements of each species with vegetation communities and landscape features in the Proposed Project area. Possible impacts to these species were evaluated based on reasonably foreseeable Proposed Project-related activities and the local loss of vegetation.

All of the special-status species in Bernalillo County were first evaluated based on their potential to occur in the Proposed Project area. The potential for occurrence of a species was identified using the following categories:

- *Known to occur*: the species was documented along the embayment by a reliable observer.
- *May occur*: the embayment is within the species' currently known range, and vegetation communities, soils, water quality conditions, etc., resemble those known to be used by the species.
- *Unlikely to occur*: the embayment is within the species' currently known range, but vegetation communities, soils, water quality conditions, etc., do not resemble those known to be used by the species, or the embayment is clearly outside the species' currently known range.

Species listed as endangered, threatened, or proposed by the USFWS were assigned to one of three categories of possible effect, following USFWS recommendations:

- *May affect, is likely to adversely affect*: This effect determination means that the Proposed Project would have an adverse effect on the species or its critical habitat. Any action that would result in take of an endangered or threatened species is considered an adverse effect. A combination of beneficial and adverse effects is still considered "likely to adversely affect," even if the net effect is neutral or positive. Adverse effects are not considered discountable because they are expected to occur. In addition, the probability of occurrence must be extremely small to qualify as discountable effects. Likewise, an effect that can be detected in any way or that can be meaningfully articulated in a discussion of the results of the analysis is not insignificant; it is an adverse effect.
- *May affect, is not likely to adversely affect*: Under this effect determination, all effects to the species and its critical habitat are beneficial, insignificant, or discountable. Beneficial effects have contemporaneous positive effects without adverse effects to the species (for example, there

cannot be "balancing," so that the benefits of the action would outweigh the adverse effects). Insignificant effects relate to the size of the impact and should not reach the scale where take occurs. Discountable effects are considered extremely unlikely to occur. Based on best judgment, a person would not (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur. Determinations of "not likely to adversely affect, due to beneficial, insignificant, or discountable effects" require written concurrence from the USFWS.

- *No effect*: A determination of no effect means there are absolutely no effects to the species and its critical habitat, either positive or negative. It does not include small effects or effects that are unlikely to occur.

The distribution of critical habitat was examined using the USFWS's online Critical Habitat Portal (USFWS 2021b).

4 AFFECTED ENVIRONMENT

4.1 Location of Proposed Project Area

The Proposed Project area is located in the city of Albuquerque in Bernalillo County, New Mexico, beginning 1 mile north of Central Avenue NW and ending approximately 1.3 miles south of Avenida Dolores Huerta. Elevation in the Proposed Project area varies between 4,937 and 4,959 feet above mean sea level (amsl).

4.2 Climate

The climate for the area, based on the climatic records for the Albuquerque Valley, New Mexico (COOP Station 290231), has an average annual maximum temperature of 72 degrees Fahrenheit (°F), with an average annual minimum temperature of 40.5°F. The average annual precipitation is 9.6 inches, with the majority occurring between July and October, while the average annual total snowfall is 6.9 inches, which largely occurs between November and April (Western Regional Climate Center 2021). Weather conditions during the biological survey were 55°F to 70°F and mostly sunny with varying winds.

4.3 Vegetation

The Proposed Project area is located within the Arizona/New Mexico Plateau U.S. Environmental Protection Agency (USEPA) Level IV Ecoregion (Griffith et al. 2006). During the biological survey, the SWCA biologist determined there was one habitat type: Western Great Plains Riparian Woodland and Shrubland. The dominant species in the Proposed Project area are denoted in Table 4.1. These dominant species are typical of current conditions of the ecoregion. Vegetative cover within the Proposed Project area ranges from 10% to 70%. The Proposed Project area and surrounding landscape have been previously disturbed by access roads, hiking trails, and other utility corridors.

Table 4.1. Plant Species Recorded within the Proposed Project Area During the Biological Survey in November 2021

Common Name	Scientific Name	Growth Form	Duration	Native/Exotic
Annual ragweed	*Ambrosia artemisiifolia*	Forb	Annual	N
Blue grama	*Bouteloua gracilis*	Graminoid	Perennial	N

Common Name	Scientific Name	Growth Form	Duration	Native/Exotic
Broom snakeweed	*Gutierrezia sarothrae*	Subshrub, shrub, forb	Perennial	N
Canada wildrye	*Elymus canadensis*	Graminoid	Perennial	N
Colorado bedstraw	*Galium coloradoense*	Subshrub, forb	Perennial	N
Copper globemallow	*Sphaeralcea angustifolia*	Subshrub, forb	Perennial	N
False indigo bush*	*Amorpha fruticosa*	Shrub	Perennial	N
Field bindweed	*Convolvulus arvensis*	Vine, forb	Perennial	E
Five-stamen tamarisk*	*Tamarix chinensis*	Tree, shrub	Perennial	E
Fourwing saltbush*	*Atriplex canescens*	Shrub	Perennial	N
Foxtail barley	*Hordeum jubatum*	Graminoid	Perennial	N
Giant dropseed	*Sporobolus giganteus*	Graminoid	Perennial	N
Golden currant	*Ribes aureum*	Shrub	Perennial	N
Goodding's willow*	*Salix gooddingii*	Tree, shrub	Perennial	N
Indian ricegrass	*Achnatherum hymenoides*	Graminoid	Perennial	N
James' galleta	*Pleuraphis jamesii*	Graminoid	Perennial	N
Kochia (burning bush)	*Bassia (Kochia) scoparia*	Forb	Annual	E
Narrowleaf (coyote) willow	*Salix exigua*	Tree, shrub	Perennial	N
Pale desert-thorn (wolfberry)	*Lycium pallidum*	Shrub	Perennial	N
Pigweed	*Amaranthus*	Forb	Annual	E
Prickly Russian thistle	*Salsola tragus*	Forb	Annual	E
Prostrate sandmat	*Chamaesyce prostrata*	Forb	Annual, perennial	N
Punctureveine	*Tribulus terrestris*	Forb	Annual	E
Purple threeawn	*Aristida purpurea*	Graminoid	Annual, perennial	N
Ravenna grass*	*Saccharum ravennae*	Graminoid	Perennial	E
Riddell's ragwort	*Senecio riddellii*	Subshrub, forb	Perennial	N
Rio Grande cottonwood*	*Populus deltoides wislizeni*	Tree	Perennial	N
Rubber rabbitbrush	*Ericameria nauseosa*	Shrub, subshrub	Perennial	N
Russian olive*	*Elaeagnus angustifolia*	Tree, shrub	Perennial	E
Sand dropseed*	*Sporobolus cryptandrus*	Graminoid	Perennial	N
Scarlet beeblossom	*Oenothera suffrutescens*	Forb	Perennial	N
Siberian elm*	*Ulmus pumila*	Tree, shrub	Perennial	E
Silverleaf nightshade	*Solanum elaeagnifolium*	Subshrub, forb	Perennial	N
Spike dropseed	*Sporobolus contractus*	Graminoid	Perennial	N
Spreading dogbane	*Apocynum androsaemifolium*	Forb	Perennial	N
Squirreltail	*Elymus elymoides*	Graminoid	Perennial	N
Stretchberry (New Mexico olive)	*Forestiera pubescens*	Shrub	Perennial	N
Sweetclover	*Melilotus officinalis*	Forb	Annual, perennial	E
Thymeleaf sandmat	*Chamaesyce serpyllifolia*	Forb	Annual	N
Touristplant	*Dimorphocarpa wislizeni*	Forb	Annual	N

Common Name	Scientific Name	Growth Form	Duration	Native/Exotic
Tree of heaven*	*Ailanthus altissima*	Tree, shrub	Perennial	E
Tufted evening primrose	*Oenothera caespitosa*	Forb, subshrub	Perennial	N
Vine mesquite*	*Panicum obtusum*	Graminoid	Perennial	N
White heath aster	*Symphyotrichum ericoides*	Forb	Perennial	N
White mulberry	*Morus alba*	Tree, shrub	Perennial	E
White prairie clover	*Dalea candida*	Subshrub, forb	Perennial	N
Woodbine*	*Parthenocissus vitacea*	Vine	Perennial	N

Note: Nomenclature follows the PLANTS Database (Natural Resources Conservation Service [NRCS] 2021a).

* Denotes dominant species

4.4 Special Aquatic Sites and Other Waters Desktop Review

Prior to conducting the biological survey, SWCA personnel completed a desktop review to identify potential waters of the U.S. (WOTUS), including wetlands and other special aquatic sites, as defined under the Clean Water Act (33 Code of Federal Regulations [CFR] 1251-C), within the Proposed Project area. SWCA accessed several public databases to characterize surface water features and provide additional data relating to their function. SWCA personnel reviewed recent aerial photographs and online datasets relative to water resources within the boundaries of the Proposed Project area.

The Proposed Project area crosses one watershed: City of Albuquerque-Rio Grande (Hydrologic Unit Code 1302020303) (Natural Resources Conservation Service [NRCS] 2021b).

According to National Wetlands Inventory (NWI) data (USFWS 2021c), approximately 27 acres of NWI wetland features, including 11 riverine wetland features, five freshwater emergent wetlands, two freshwater forested/shrub wetland features, and one freshwater pond, occur in the Proposed Project area.

Based on review of the National Hydrography Dataset (NHD) (U.S. Geological Survey [USGS] 2021), 15 mapped linear water features were identified that intersect the Proposed Project area. These features include canals, streams, artificial paths, and ditches.

4.5 Wildlife

The ecoregion identified within the Proposed Project area provides habitat for a variety of wildlife species. The SWCA biologist detected 36 bird species and five mammal species during the biological survey of the Proposed Project area (Table 4.2). None of the species detected are listed as special-status species.

Table 4.2. Wildlife Detected during Biological Survey

Common Name	Scientific Name
Birds	
American coot	*Fulica americana*
American crow	*Corvus brachyrhynchos*
American goldfinch	*Spinus tristis*

Common Name	**Scientific Name**
American robin	*Turdus migratorius*
American wigeon	*Mareca americana*
Bald eagle	*Haliaeetus leucocephalus*
Belted kingfisher	*Megaceryle alcyon*
Bewick's wren	*Thryomanes bewickii*
Brown creeper	*Certhia americana*
Canada goose	*Branta canadensis*
Common raven	*Corvus corax*
Cooper's hawk	*Accipiter cooperii*
Dark-eyed junco	*Junco hyemalis*
Downy woodpecker	*Picoides pubescens*
Eastern bluebird	*Sialia sialis*
Gadwall	*Mareca strepera*
Great blue heron	*Ardea herodias*
Greater roadrunner	*Geococcyx californianus*
Green-winged teal	*Anas carolinensis*
Hermit thrush	*Catharus guttatus*
House finch	*Haemorhous mexicanus*
Lesser goldfinch	*Spinus psaltria*
Lincoln's sparrow	*Melospiza lincolnii*
Mallard	*Anas platyrhynchos*
Mourning dove	*Zenaida macroura*
Northern flicker	*Colaptes auratus*
Northern shoveler	*Spatula clypeata*
Ret-tailed hawk	*Buteo jamaicensis*
Rock pigeon	*Columba livia*
Sandhill crane	*Antigone canadensis*
Song sparrow	*Melospiza melodia*
Spotted towhee	*Pipilo maculatus*
White-breasted nuthatch	*Sitta carolinensis*
White-crowned sparrow	*Zonotrichia leucophrys*
Wood duck	*Aix sponsa*
Yellow-rumped warbler	*Setophaga coronata*
Mammals	
American beaver (tracks)	*Castor canadensis*
American porcupine	*Erethizon dorsatum*
Coyote (tracks)	*Canis latrans*
Domestic cat	*Felis catus*
Domestic dog	*Canis lupus familiaris*

Note: Individuals of each species were observed unless otherwise noted.

4.6 Special-Status Species

The special-status species evaluated in this report consist of (1) all federally protected (i.e., endangered and threatened) species; and (2) additional species listed by the USFWS as proposed species and species under review (USFWS 2021a.

The species federally listed as endangered, threatened, or proposed and being evaluated in this BA are listed in Table 4.3. Three federally endangered and one federally threatened species have the potential to occur in Bernalillo County (see Table 4.3). Of those, two species were found to have the potential to occur in the Proposed Project area and are further evaluated in Section 5.1 of this document. The monarch butterfly (*Danaus plexippus*) is designated as a USFWS candidate species and does not receive protection under ESA and is not further evaluated in the report. The Proposed Project is not likely to directly or indirectly jeopardize the continued existence of the species (USFWS 2021a).

4.6.1 Federally Threatened, Endangered, and Proposed Species

Seven federally endangered or threatened species have the potential to occur in the Proposed Project area (Table 4.3). Species that are unlikely to occur in the Proposed Project area are discussed in Table 4.3, but are not further evaluated in detail. Designated critical habitat for the Rio Grande silvery minnow occurs within the Rio Grande adjacent to the Proposed Project area (USFWS 2022). However, no work will be occurring in Rio Grande, backwaters, canals, or stream bank corridors.

Table 4.3. Species Federally Listed as Endangered, Threatened, or Proposed in Bernalillo County, New Mexico

Common Name (Scientific Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Proposed Project Area	Determination of Effect
Fish				
Rio Grande silvery minnow (*Hybognathus amarus*)	USFWS E State E	Endemic to the Rio Grande and Pecos River systems and canals. Requires pools and backwaters of medium to large streams with low or moderate gradient in mud, sand, or gravel bottom; ingests mud and bottom ooze for algae and other organic matter; and probably spawns on silt substrates of quiet coves.	**May occur.** However, no work will be occurring in Rio Grande, backwaters, canals, or stream bank corridors.	No effect
Birds				
Mexican spotted owl (*Strix occidentalis lucida*)	USFWS T	Inhabits canyon and forest habitats across a range that extends from southern Utah and Colorado, through Arizona, New Mexico, and west Texas, to the mountains of central Mexico. Inhabits mesic and shaded canyons and mountainous forests, including ponderosa pine (*Pinus ponderosa*) and mixed-conifer forests.	**Unlikely to occur.** Habitat does not exist in the Proposed Project area—no mountainous forests, canyons, or rocky cliffs exist in the area.	No effect

Common Name (Scientific Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Proposed Project Area	Determination of Effect
Southwestern willow flycatcher (*Empidonax traillii extimus*)	USFWS E State E	Breeds and migrates through relatively dense riparian tree and shrub communities associated with rivers, swamps, and other wetlands, including lakes and reservoirs. Historically, nested in native vegetation, including willows (*Salix* sp.), seepwillow (*Baccharis salicifolia*), boxelder (*Acer negundo*), buttonbush (*Cephalanthus occidentalis*), and cottonwood (*Populus* sp.). Nests in native vegetation, but also uses thickets dominated by nonnative tamarisk (*Tamarix* sp.) and Russian olive (*Elaeagnus angustifolia*), or in mixed native and nonnative stands of vegetation.	**May occur.** The Proposed Project area contains riparian habitat and dense vegetation.	See Section 5.1.2
Yellow-billed cuckoo (*Coccyzus americanus*)	USFWS T	Only the western population beyond the Pecos River drainage has been listed as threatened under the ESA. Breeds in and migrates through riparian habitat and associated drainages; springs, developed wells, and earthen ponds supporting mesic vegetation; and deciduous woodlands with cottonwoods and willows. Dense understory foliage is important for nest site selection. Nests in willow, mesquite (*Prosopis* sp.), cottonwood, and hackberry (*Celtis* sp.); forages in similar riparian woodlands.	**May occur.** The Proposed Project area contains riparian habitat and dense vegetation.	See Section 5.1.3

Common Name (Scientific Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Proposed Project Area	Determination of Effect
Mammals				
New Mexico meadow jumping mouse (*Zapus hudsonius luteus*)	USFWS E State E	Endemic to New Mexico, Arizona, and a small area of southern Colorado. Primarily utilizes two riparian community types: (1) persistent emergent herbaceous wetlands (i.e., beaked sedge [*Carex rostrata*] and reed canarygrass [*Phalaris arundinacea*] alliances) and (2) scrub-shrub wetlands (i.e., riparian areas along perennial streams that are composed of willows and alders) (New Mexico Department of Game and Fish [NMDGF] 2020). They are also known to use irrigation canal systems with moist soil conditions and herbaceous riparian vegetation (Frey and Wright 2012).	**Unlikely to occur.** The species has not been documented north of Isleta Pueblo, New Mexico, which is approximately 10 miles south of the Proposed Project area (Morrison 1988; Frey 2006).	No effect

*** Federal (USFWS) status definitions:**

E = Endangered. Any species considered by the USFWS as being in danger of extinction throughout all or a significant portion of its range. The ESA specifically prohibits the take of a species listed as endangered. Take is defined by the ESA as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to engage in any such conduct.

T = Threatened. Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The ESA specifically prohibits the take (see definition above) of a species listed as threatened.

Note: A no effect determination is defined based on recommendations by the USFWS.

*** State status definitions:**

E = Endangered. Any species that is considered by the State of New Mexico (New Mexico Department of Game and Fish [NMDGF]) as being in jeopardy of extinction or extirpation from the state.

T = Threatened. Any species that, in the view of the State of New Mexico, is likely to become endangered within the foreseeable future throughout all or a significant portion of its range in New Mexico.

Except where otherwise noted, range or habitat information for wildlife species is taken from BISON-M website (BISON-M 2021) and the USFWS New Mexico Southwest Region Ecological Services Field Office Information for Planning and Consultation (IPaC) System (USFWS 2021a).

5 EFFECTS ANALYSIS

5.1 Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

5.1.1 Description

The southwestern willow flycatcher (flycatcher) (*Empidonax traillii extimus*) is a small passerine bird about 6 inches long and one of 11 species of the genus *Empidonax* flycatchers that occur in North America. The flycatcher is a migratory species that winters in Mexico and Central America and breeds in the southwestern United States and northern Mexico. The flycatcher's geographic distribution has not declined significantly, but habitat and numbers of breeding birds have.

5.1.2 Status and Distribution

The flycatcher is federally and state listed as endangered and is one of four subspecies of willow flycatcher currently recognized (Unitt 1987). The flycatcher breeds in dense, mesic riparian habitats at scattered, isolated sites in New Mexico, Arizona, southern California, southern Nevada, southern Utah,

southwestern Colorado, and, at least historically, extreme northwestern Mexico and western Texas (Unitt 1987).

The flycatcher currently is known to use six breeding areas along the Middle Rio Grande (MRG) in New Mexico: (1) Velarde to San Juan Pueblo, (2) Isleta Pueblo, (3) Sevilleta National Wildlife Refuge, (4) San Acacia Dam to Bosque del Apache National Wildlife Refuge, (5) Bosque del Apache National Wildlife Refuge, and (6) San Marcial to Elephant Butte Reservoir. The highest densities of breeding pairs occur in the San Marcial Reach (U.S. Bureau of Reclamation 2006), and the flycatcher is not known to breed within the Albuquerque Reach. Flycatcher surveys have been conducted in the Albuquerque Reach since 2004 (USACE 2004, Hawks Aloft 2005, 2006, 2009), and no breeding pairs have been found. However, two individual territorial flycatchers were observed in 2009, one near the Montaño Bridge, and one near the Rio Bravo Bridge (Hawks Aloft 2009).

The flycatcher was listed as endangered without critical habitat designation on February 27, 1995 (USFWS 1995). Critical habitat designation was finalized in October 2005 (USFWS 2005). The USFWS has recently proposed a revision to flycatcher critical habitat (USFWS 2021c). The historic range of the flycatcher includes riparian areas throughout Arizona, California, Colorado, New Mexico, Texas, Utah, and Mexico (USFWS 2002). The flycatcher is an insectivore that forages in dense shrub and tree vegetation along rivers, streams, and other wetlands and prefers dense riparian thickets, typically willows with a scattered cottonwood (*Populus* sp.) overstory. Dense riparian woodlands are particularly important as breeding habitat (USFWS 2002).

As described in a USFWS 2003 Biological Opinion, declining flycatcher numbers have been attributed to loss, modification, and fragmentation of riparian breeding habitat; loss of wintering habitat; and brood parasitism by the brown-headed cowbird (*Molothrus ater*) (USFWS 2003a). Habitat loss and degradation are caused by a variety of factors, including urban, recreational, and agricultural development; water diversion and groundwater pumping; and channelization, dams, and livestock grazing.

The USFWS (2002) designated critical habitat for the flycatcher along three reaches of the Rio Grande: (1) from the southern boundary of the Isleta Pueblo to the northern boundary of the Sevilleta National Wildlife Refuge, (2) from the southern boundary of the Sevilleta National Wildlife Refuge to the northern boundary of Bosque del Apache National Wildlife Refuge, and (3) from the southern boundary of Bosque del Apache National Wildlife Refuge to a location 12.5 miles south. No designated critical habitat exists within the Proposed Project area.

5.1.3 Habitat Characteristics

The flycatcher is a riparian-obligate species that breeds only in dense vegetation, both native and nonnative, typically growing on wet soils (e.g., Sogge and Marshall 2000).

In a 9-year study of nesting success along the MRG, Moore and Ahlers (2008) report that 79.5% of flycatcher nests were in willow-dominated stands (defined as greater than 90% *Salix* species), 6.3% were in saltcedar-dominated stands, and 14.1% were in mixed-dominance territories. However, the nesting success in willow-dominated territories, saltcedar-dominated territories, and mixed territories is similar: 56.8%, n = 764; 57.1%, n = 9; and 46.7%, n = 135; respectively. Moore (2007) examines vegetation characteristics associated with flycatcher nesting sites along the MRG and finds flycatcher habitat use to be uncommonly associated with typical MRG riparian woodlands with a high overstory and more often associated with willow stands lacking an overstory layer.

The nearest recorded flycatcher nesting territories to the Proposed Project area are in the Isleta Pueblo, with seven pairs (14 adults) recorded in 2004; habitat at Isleta consisted of Russian olive, coyote willow, and saltcedar (Smith and Johnson 2005, 2008).

A greater variety and distribution of habitats, including non-riparian vegetation, is used by flycatchers during migration than during breeding. Migration habitats may lack key components important for breeding birds, such as the presence of standing water or moist soils and suitable patch size and structure (Finch et al. 2000). Along the MRG, migrating flycatchers use cottonwood woodlands with understories composed of native and/or exotic shrubs such as Russian olive, saltcedar, New Mexico olive (*Forestiera pubescens*), willow, and saltbush (*Atriplex* sp.); monotypic saltcedar habitats; irrigation ditches; and agricultural fields (Yong and Finch 1997). Migrant flycatchers have been captured in mist nets along mowed and unmowed water-conveyance channels dominated by coyote willow and seepwillow (e.g., Finch et al. 1998; Finch and Kelly 1999).

5.1.4 Effects Analysis

5.1.4.1 DIRECT EFFECTS

Suitable migratory habitat for the flycatcher occurs in the Proposed Project area along the banks of the Rio Grande. It is recommended that the vegetation along the banks of the Rio Grande be preserved to provide shelter, foraging, and nesting habitat for wildlife, including the flycatcher. The Proposed Project would not result in a loss of suitable flycatcher habitat in the Proposed Project area. Temporary noise disturbance would be caused by thinning trees and understory shrubs using a variety of tools, including chainsaws, pole saws, wood chippers, and masticators during vegetation thinning activities.
The flycatcher is a migrant through this portion of the Rio Grande and may be present from April through September, which includes the anticipated construction period. Flycatcher territory size varies, probably because of differences in population density, habitat quality, and nesting stage. Early in the season, territorial flycatchers may move several hundred meters between singing locations, although this has been noted only at sites with one or two territorial males (Sogge et al. 2010). Based on recent surveys, it's unlikely that nesting flycatchers or flycatcher territories have been established within the Proposed Project area (Smith and Johnson 2005, 2008). Based on the available suitable migratory habitat within the Proposed Project area and previous years' survey data indicate that the species may use the Proposed Project area for migration and foraging activities.

Implementation activities are currently planned to occur during the migratory bird breeding season (between March 1 and September 1), which also coincides with the flycatcher's species-specific migratory period. Migrating flycatchers, if present in the Proposed Project area during implementation, could be disturbed by that activity. Thus, direct effects to migrating flycatchers may occur. To avoid and mitigate potential impacts, protocol surveys are required to ensure no flycatchers nesting in the vicinity of the Proposed Project area could be impacted by noise disturbance. Should an active nest be found within 0.25 mile of the Proposed Project area, activities would cease until the nest is no longer active. With implementation of the recommended avoidance and mitigation measures, any potential direct effects to the flycatcher would be insignificant and discountable due to the lack of nesting flycatchers and flycatcher territories in the vicinity of the Proposed Project area.

5.1.4.2 INDIRECT EFFECTS

Implementation activities could indirectly affect flycatchers that may be present in migrating habitat in and adjacent to the Proposed Project area. The Proposed Project may temporarily and minimally affect access to food resources along the riparian corridor. The vegetation that will be removed for this project represents a small percentage of the total foraging habitat available within the bosque; therefore, the

potential indirect effects resulting from vegetation loss represents an insignificant percentage of available foraging habitat. Implementation of the avoidance and minimization measures in Section 6.0 would further reduce potential indirect effects to flycatchers.

5.2 Yellow-Billed Cuckoo (*Coccyzus americanus*)

5.2.1 Status and Distribution

The yellow-billed cuckoo (cuckoo) (*Coccyzus americanus*) is proposed threatened by the USFWS. It breeds from southern Canada to south Texas and Florida across almost all of the eastern United States, and in scattered locations throughout the west from California to the Rocky Mountain states. Historically, the western distribution of this species was larger and less fragmented. In the twentieth century, it became extirpated from British Columbia, Washington, and Oregon, and California populations have dwindled to near zero. The breeding range also extends south to central Mexico along both the Pacific and Atlantic slopes, and to parts of the Yucatan Peninsula and the Greater Antilles.

In New Mexico, cuckoos breed along the major river valleys, including the San Juan, Rio Grande, Pecos, Canadian, San Francisco, and Gila Rivers. The species also occurs in numerous smaller drainages plus isolated wetlands, isolated woodlands, and suburban plantings. It is found statewide but is far more common in the southern half of New Mexico (New Mexico Partners in Flight 2015).

5.2.2 Habitat Characteristics

The yellow-billed cuckoo occupies a wide array of vegetation types across its large geographic range, but generally prefers open woodland with clearings and low, dense, scrubby vegetation. In the southwestern United States, it is most associated with riparian woodlands dominated by Fremont cottonwood or dense mesquite (Hamilton and Hamilton 1965, Howe 1986). Cuckoos prefer mature or late-successional cottonwood/willow associations with a dense understory. In parts of the west, they also breed in orchards adjacent to river bottoms. Habitat in New Mexico may be primarily native, mixed native and exotic, or primarily exotic plant species, the latter including riparian salt cedar, orchards, and ornamental/shade plantings (Williams and Travis 2005).

Nesting activity in New Mexico begins in May, and generally occurs in large groves of broad-leafed deciduous trees. In the Pecos River valley, Yellow-billed cuckoos commonly nest in areas dominated by salt cedar and reach highest densities in areas of taller trees (Howe 1986). Elsewhere, nests are often placed in willow, Fremont cottonwood, or mesquite (*Prosopis* sp.); also, hackberry (*Celtis* sp.), soapberry (*Sapindus* sp.), or other deciduous vegetation. In native riparian habitat along the Gila River, breeding is confined to areas of tallest trees and densest understory vegetation (Stoleson and Finch 1998). Here, nests are placed at a range of heights (8.8–61.6 feet) in deciduous trees often overgrown with vines and well concealed by surrounding or overhanging foliage. In the Gila River area, habitat patches as small as 3 hectares may be used, though more generally the species is considered sensitive to fragmentation and prefers larger patches of 40 hectares or more (Stoleson and Finch 1998).trees

5.2.3 Conservation Threats

Historical declines in New Mexico have been associated with loss or degradation of riparian habitat. Losses have been due to inundation from water management Proposed Projects, lowering of the water table, urbanization, agricultural conversion, and excessive cattle grazing. Such intrusions caused the loss of habitat for up to 1,000 pairs along the Pecos River from the 1960s to the 1980s. Recently, saltcedar eradication has further reduced the breeding cuckoo population along the Pecos. Saltcedar removal in the

Pecos and other drainages represents the greatest threat to the species in New Mexico (New Mexico Partners in Flight 2015).

5.2.4 Effects Analysis

5.2.4.1 DIRECT EFFECTS

Suitable migratory habitat for the cuckoo occurs in the Proposed Project area along the banks of the Rio Grande. It is recommended that the vegetation along the banks of the Rio Grande be preserved to provide shelter, foraging, and nesting habitat for wildlife, including the cuckoo. The Proposed Project would not result in a loss of suitable cuckoo habitat in the Proposed Project area. Temporary noise disturbance would be caused by thinning trees and understory shrubs using a variety of tools, including chainsaws, pole saws, wood chippers, and masticators during vegetation thinning activities. Cuckoos have one of the most restrictive suites of macro-habitat requirements of any bird species. Not only are they restricted to a single habitat type, but the size and configuration of the habitat is also extremely important (Greco 1999). The cuckoo is a migrant and summer resident through this portion of the Rio Grande and may be present from mid-June through August, which includes the anticipated construction period. Cuckoo detections and territories have increased fairly consistently since 2009, with greatest concentrations occurring farther south of the Proposed Project area in the in the Isleta and San Acacia Reaches of the Rio Grande (U.S. Bureau of Reclamation 2016). Based on the available suitable migratory habitat within the Proposed Project area and previous years' survey data indicate that the species may use the Proposed Project area for migration and foraging activities. However, it's unlikely that nesting cuckoos or cuckoo territories have been established within the Proposed Project area.

Construction activities are currently planned to occur during the cuckoo's migratory period (between mid-June and August) and the migratory bird breeding season (between March 1 and September 1). Migrating cuckoos, if present in the Proposed Project area during implementation, could be disturbed by that activity. Thus, direct effects to migrating cuckoos may occur. To avoid and mitigate potential impacts, protocol surveys are required to ensure no cuckoos nesting in the vicinity of the Proposed Project area could be impacted by noise disturbance. Should an active nest be found within 0.25 mile of the Proposed Project area, activities would cease until the nest is no longer active. With implementation of the recommended avoidance and mitigation measures, any potential direct effects to the cuckoo would be insignificant and discountable due to the lack of nesting cuckoos and cuckoo territories in the vicinity of the Proposed Project area.

5.2.4.2 INDIRECT EFFECTS

Implementation activities could indirectly affect cuckoos that may be present within migrating habitat in and adjacent to the Proposed Project area. The Proposed Project may temporarily and minimally affect access to food resources along the riparian corridor. The vegetation that will be removed for this project represents a small percentage of the total foraging habitat available within the bosque; therefore, the potential indirect effects resulting from vegetation loss represents an insignificant percentage of available foraging habitat. Implementation of the avoidance and minimization measures in Section 6.0 would further reduce potential indirect effects to cuckoos.

6 AVOIDANCE AND MINIMIZATION MEASURES

The following best management practices (BMPs) and conservation measures would be implemented to avoid, minimize, or mitigate potential direct and indirect effects to federally protected species:

1. Since construction activities will occur during the flycatcher and cuckoo breeding season, protocol surveys are required to ensure no flycatchers or cuckoos are nesting in the Proposed Project area that could be impacted by noise disturbance. Should an active nest be found within 0.25 mile of the Proposed Project area, construction would cease until the nest is no longer active. If an active nest is observed during work activities, the USFWS biologist shall be contacted immediately.
2. Prior to leaving contractor facilities, all equipment will be thoroughly inspected, and any leaky or damaged hydraulic hoses will be replaced. At the Proposed Project site, crews shall inspect equipment for leaks regularly and make repairs immediately if leaks are detected.
3. To avoid any potential impacts to aquatic habitats, all fuels, hydraulic fluids, and other hazardous materials will be stored outside the normal floodplain. No equipment refueling shall take place within 100 feet of any water feature, wetted or dried. Equipment will be parked at predetermined locations on high ground overnight. If a spill occurs during construction or maintenance activities, the City and USFWS will be immediately notified.
4. Spill kits shall be on hand at all times to manage any unanticipated spills of materials from equipment. Designated construction personnel will be trained in spill prevention, and spill cleanup will be on-site during all construction activities. A spill kit will be maintained on-site with spill pans, containment diapers, oil booms, absorbent pads, oil mats, plastic bags, gloves, and goggles.
5. The contractor and their personnel will be briefed and a responsible party will sign off on local environmental considerations specific to the Proposed Project tasks, including specific Stormwater Pollution Prevention Plans (SWPPPs).
6. Local fire hydrants will be sourced for dust suppression water. Native water will not be taken from the river or irrigation drains.
7. No burning of piles of removed vegetation will be conducted.

7 CONCLUSIONS – DETERMINATION OF EFFECTS

The proposed wildfire implementation measures may affect two federally listed species: flycatcher and cuckoo. Impacts to the flycatcher and cuckoo are expected to be mitigated with protocol surveys for the species. Previous surveys have not identified the presence of either the flycatcher or the cuckoo in the Proposed Project area or adjacent area (Smith and Johnson 2005, 2008). The Proposed Project does not involve the removal of any suitable habitat for the flycatcher or cuckoo in the Proposed Project area. Furthermore, the proponent has committed to implementing conservation measures to further avoid, minimize, or mitigate potential impacts to these species and habitats associated with the Proposed Project.

7.1 Southwestern Willow Flycatcher

There are currently no known flycatcher territories within or adjacent to the Proposed Project area, and no suitable habitat would be removed by the Proposed Project. Additionally, only suitable migratory and foraging habitat exists in the bosque in and adjacent to the Proposed Project area. With the implementation of the avoidance, minimization, and mitigation measures, such as preconstruction

surveys, any potential direct or indirect effects to the flycatcher would be insignificant and discountable. The City makes the following determination: the Proposed Project ***may affect, but is not likely to adversely affect*** the flycatcher.

7.2 Yellow-Billed Cuckoo

There are currently no known cuckoo territories are within or adjacent to the Proposed Project area, and no suitable habitat would be removed by the Proposed Project. Additionally, only suitable migratory and foraging habitat exists in the bosque in and adjacent to the Proposed Project area. With the implementation of the avoidance, minimization, and mitigation measures, such as preconstruction surveys, any potential direct or indirect effects to the cuckoo would be insignificant and discountable. The City makes the following determination: the Proposed Project ***may affect, but is not likely to adversely affect*** the cuckoo.

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U. S. Department of Homeland Security
FEMA Region 6
800 North Loop 288
Denton, TX 76209-3698

March 29, 2022

Mr. Vance Wolf
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
2105 Osuna NE
Albuquerque, NM 87113

Subject: Additional Information Regarding Section 7 Informal Consultation for FEMA's Rio Grande Valley State Park Wildfire Mitigation Project for City of Albuquerque (HMGP-5184-0004-NM)

Dear Mr. Wolf,

Thank you for meeting with the Federal Emergency Management Agency (FEMA), the City of Albuquerque (City), and SWCA Environmental Consultants (SWCA) on March 23, 2022, to discuss the proposed Rio Grande Valley State Park Wildfire Mitigation Project (Project). This letter follows FEMA's original submission of a Biological Assessment (BA) to your office on February 15, 2022, and addresses USFWS feedback provided via email on March 8, 2022 and at the March 23, 2022 meeting. The purpose of this letter is to clarify the project description, proposed treatment schedule, and resource protection measures for the southwestern willow flycatcher (flycatcher) (*Empidonax traillii extimus*) and yellow-billed cuckoo (cuckoo) (*Coccyzus americanus*).

Purpose and Need for Wildfire Mitigation

As described in the Project's BA, dated February 2022, the purpose of the Project is to reduce the threat of wildfires that could be ignited in the Rio Grande bosque, either through human or natural ignition sources. The project is also intended to protect habitat for a variety of endangered and resident species, along with ultimately protecting life and property within and surrounding the Rio Grande Valley State Park. In addition, portions of the project area are used by transient populations for establishing illegal campgrounds. These human interactions within the bosque can lead to an increased the risk for wildfire ignition.

Project Description

In response to the purpose and need for wildfire mitigation, the City proposes to conduct wildfire mitigation treatments on approximately 470 acres within the Rio Grande Valley State Park (see attached maps). The treatments would be aimed at reducing hazardous fuel loads across the Project area to minimize the fire hazard risk. These treatments would be targeted outside of the dense riparian buffer directly adjacent to the Rio Grande and focus more on the continuous fuel loads on the elevated floodplain.

The proposed Project would include the following fuel reduction treatments:

- Removal of all downed timber greater than 6-inches diameter that are contributing to ladder fuels
- Removal of nonnative trees and shrubs
- All stumps or stubs from the mechanized removal of shrub or tree species will be low, flat, and flush with the ground.
- No felling of any standing live/dead native trees within the project area, unless the tree presents a hazard
- Chipping and/or removal of all woody material deemed to be hazardous fuels
- All materials will be chipped and dispersed within the project boundary to the extent possible. If necessary, off-site removal of materials to a location chosen by the contractor may be considered.
- Following initial treatment, with spot spraying to assure effective nonnative fuels control. The target noxious weeds for removal would include Ravenna grass (*Saccharum Ravennae*), Siberian elm (*Ulmus Pumila*), Saltcedar (*Tamarix* spp.) and Tree of Heaven (*Ailanthus altissima*).

Treatment Prioritization

The proposed wildfire mitigation treatments would be prioritized based on twenty-six treatment units within the project area (Table 1). The area covered by each treatment ranges from approximately 1 to 31 acres (see figures). High and medium priority units are those with the more dense vegetation and fuel loads, and they would be targeted for treatment outside the migratory bird nesting season (treatments would occur September 1 through April 14). Low priority units could be subject to treatment during migratory bird nesting season (April 15 through September 1), due to the lack of vegetation suitable for nesting birds.

Table 1. Proposed treatment units

Unit Number	Treatment Priority	Acreage	Predominant Wildfire Mitigation Tool(s)
1	High	16.0	• Thinning and cut-and-spray stump treatments (Tamarisk) • Hand removal and herbicide application (Ravenna grass) • Removal, chipping, masticating of woody material
2	Medium	25.4	• Thinning and cut-and-spray stump treatment (tree of heaven) • Girdling (Siberian elm) • Removal, chipping, masticating of woody material
3	Medium	21.0	• Removal, chipping, masticating of woody material
4	High	13.2	• Hand removal and herbicide application (Ravenna grass) • Removal, chipping, masticating of woody material
5	High	13.8	• Removal, chipping, masticating of woody material • Debris shelter removal
6	High	11.5	• Hand removal and herbicide application (Ravenna grass) • Removal, chipping, masticating of woody material
7	Medium	26.6	• Removal, chipping, masticating of woody material • Debris shelter removal
8	Low	10.6	• Thinning and cut-and-spray stump treatment (tree of heaven) • Hand removal and herbicide application (Ravenna grass) • Removal, chipping, masticating of woody material
9	High	19.9	• Removal, chipping, masticating of woody material

10	Medium	9.5	• Removal, chipping, masticating of woody material • Debris shelter removal
11	High	23.7	• Thinning and cut-and-spray stump treatments (Russian olive) • Hand removal and herbicide application (Ravenna grass) • Removal, chipping, masticating of woody material
12	Low	10.4	• Removal, chipping, masticating of woody material
13	Medium	20.7	• Thinning and cut-and-spray stump treatment (tree of heaven) • Girdling (Siberian elm) • Removal, chipping, masticating of woody material • Debris shelter removal
14	High	22.0	• Hand removal and herbicide application (Ravenna grass) • Removal, chipping, masticating of woody material • Debris shelter removal
15	Low	5.2	• Removal, chipping, masticating of woody material
16	Medium	11.0	• Thinning and cut-and-spray stump treatment (tree of heaven) • Removal, chipping, masticating of woody material • Debris shelter removal
17	High	2.4	• Thinning and cut-and-spray stump treatment (tree of heaven) • Girdling (Siberian elm) • Removal, chipping, masticating of woody material • Debris shelter removal
18	Low	12.4	• Removal, chipping, masticating of woody material
19	Medium	15.6	• Removal, chipping, masticating of woody material
20	Medium	1.2	• Removal, chipping, masticating of woody material
21	High	6.7	• Removal, chipping, masticating of woody material
22	High	31.3	• Thinning and cut-and-spray stump treatment (tree of heaven) • Girdling (Siberian elm) • Thinning and cut-and-spray stump treatments (Russian olive and Tamarisk) • Removal, chipping, masticating of woody material
23	Medium	7.1	• Removal, chipping, masticating of woody material
24	Medium	15.6	• Girdling (Siberian elm) • Removal, chipping, masticating of woody material
25	High	2.8	• Girdling (Siberian elm) • Removal, chipping, masticating of woody material
26	Medium	4.7	• Girdling (Siberian elm) • Removal, chipping, masticating of woody material

Implementation Schedule

The City envisions that this project will be largely implemented by trained youth conservation crews using funding available through FEMA's Hazard Mitigation Program (HMGP) administered by the New Mexico Department of Homeland Security Emergency Management (NM DHSEM). The City plans to obtain FEMA funding (through NMDHSEM) for implementation by the fall 2022. Under this scenario, implementation would occur between September 2022 to early March 2023. However, if permitting and/or funding causes a delay in implementation, the City would prefer to implement portions of the proposed treatments during migratory bird nesting season (April 15-September 1).

As stated above, only those lower-priority treatment areas, which have lower vegetation density that do not provide suitable habitat for flycatcher or cuckoo would be treated between April 15 and September 1.

Table 2. Revised Schedule of Major Activities

Timeframe	Management Prescription
January 1-December 31	Hand removal of ravenna grass
January 1- April 14	Girdling of Siberian elms
August 1- April 14	Cut and spray (initial treatment) for tree of heaven
August 1 – September 30	Additional herbicide treatment for tree of heaven
September 1-April 14	Thinning of high and medium priority units (hand or mechanized)
Year-round	Thinning of low priority units (hand or mechanized)
February 1-June 15	Cut and spray treatment for tamarisk

Resource Protection Measures for Federally-listed Species

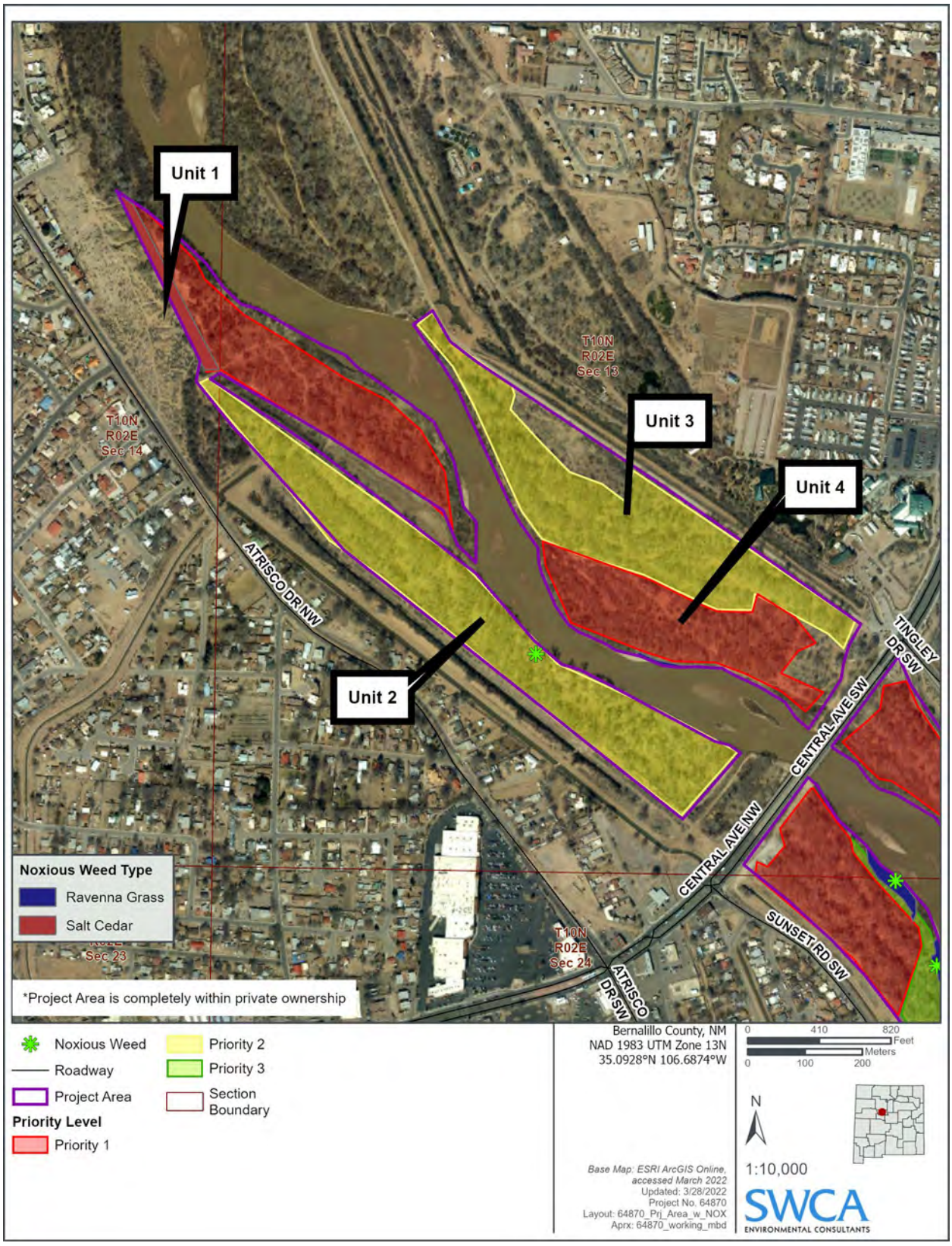
For those treatments that would be implemented between April 15 and September 1, FEMA and the City commit to conducting protocol surveys for flycatcher (and cuckoo, if work extends past June 1). Should an active flycatcher or cuckoo nest be found within the project area, construction would cease within a 1-mile buffer of the active nest until the nest is no longer active. If an active nest is observed during work activities, the USFWS biologist shall be contacted immediately.

FEMA maintains its determination of **May Affect, Not Likely to Adversely Affect** for the flycatcher and cuckoo as a result of the proposed federally funded Project. Should you have any questions, please contact Senior Environmental Specialist, Dorothy Cook at Dorothy.Cook@fema.dhs.gov or at 940-435-9275. We appreciate your review of the proposed Project.

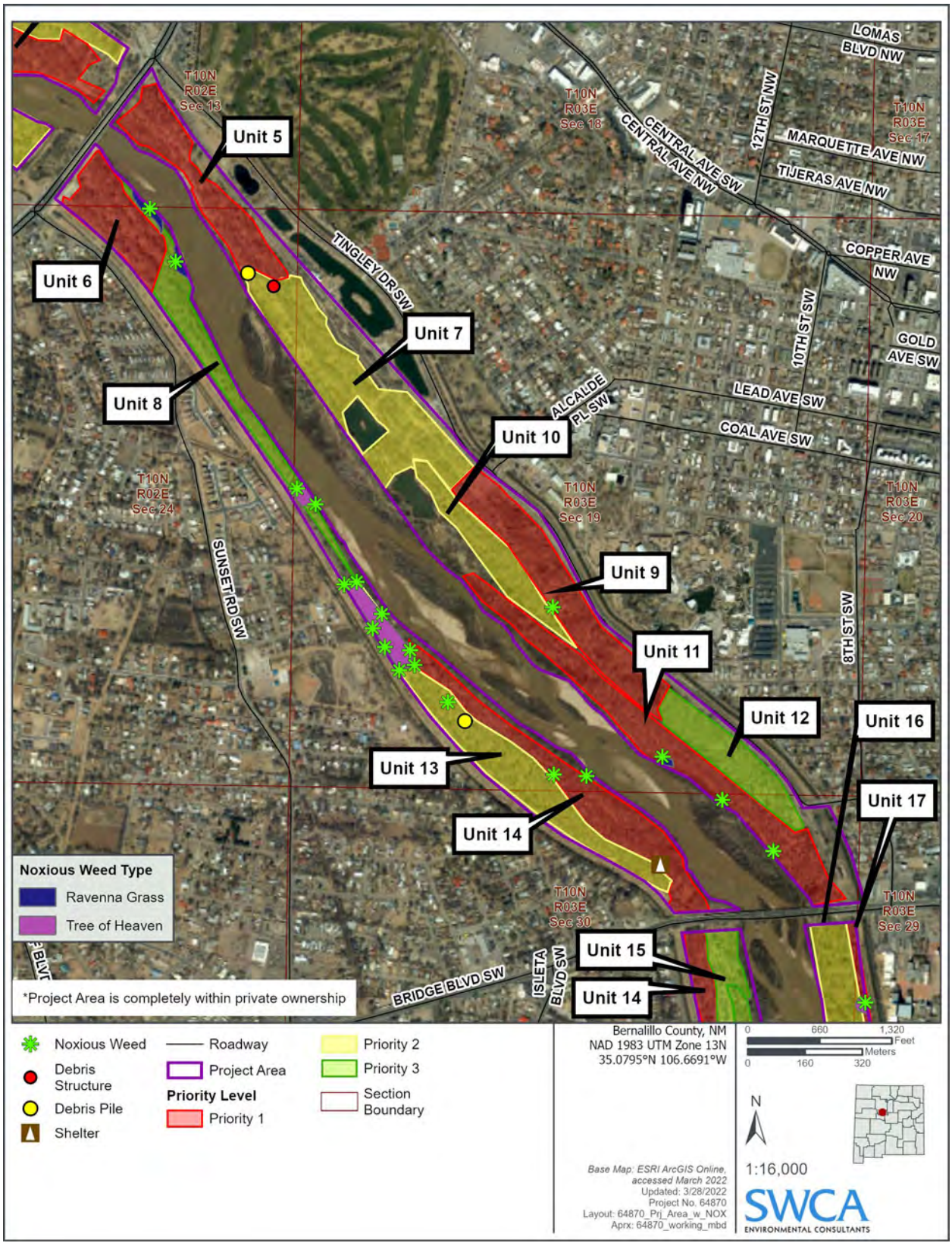
Sincerely,

Kevin Jaynes
Regional Environmental Officer
FEMA Region 6

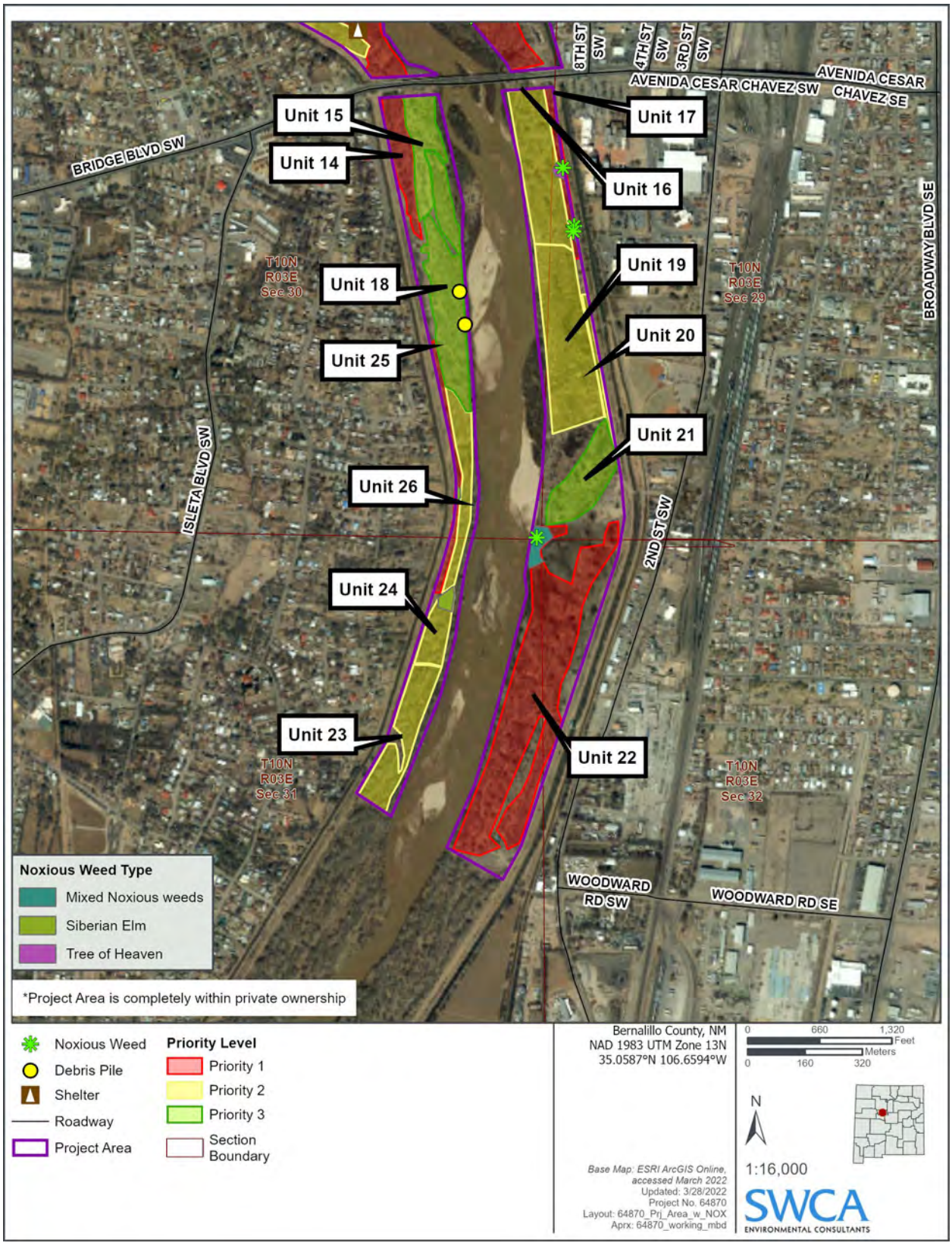
Mr. Vance Wolf
March 29, 2022



Mr. Vance Wolf
March 29, 2022



Mr. Vance Wolf
March 29, 2022



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 31, 2022

Consultation Number 2022-0015847

Kevin Jaynes
Regional Environmental Officer
FEMA Region 6
U. S. Department of Homeland Security
800 North Loop 288
Denton, TX 76209-3698

Dear Kevin Jaynes,

Thank you for your Biological Assessment (BA), for the Rio Grande Valley State Park Wildfire Mitigation Project dated February 2022, letter dated February 15, 2022, and additional information response letter dated March 29, 2022, requesting to conduct informal 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 et seq.), as amended. A determination of "*may affect, not likely to adversely affect*" was made for two species, which are the Southwestern willow flycatcher (Empidonax traillii extimus) and the Yellow-billed cuckoo (Coccyzus americanus).

Project Description

The City of Albuquerque (City) proposes to develop and implement a community wildfire mitigation plan along an approximately 4-mile-long section of the Rio Grande, within the city limits of Albuquerque in Bernalillo County, New Mexico (Figure 1). The Rio Grande Valley State Park Wildfire Mitigation Project (Proposed Project) aims to develop a wildfire mitigation plan and implement wildfire prevention measures to avoid and/or lessen the severity of wildfires along the Rio Grande within the city. The city is proposing to implement wildfire prevention measures across 470 acres of lands managed by the city and the Middle Rio Grande Conservancy District (MRGCD).

The proposed wildfire mitigation measures include clearing downed woody debris piles, hand thinning the understory, removing noxious and invasive weeds, applying herbicide, and potential

replanting of native species, as conditions warrant. The purpose of the Proposed Project is to reduce the potential for and severity of catastrophic wildfires and protect habitat for a variety of endangered and resident species, along with ultimately protecting life and property. High and medium priority units are those with the denser vegetation and fuel loads, and they would be targeted for treatment outside the migratory bird nesting season (treatments would occur September 1 through April 14). Low priority units could be subject to treatment during migratory bird nesting season (April 15 through September 1), due to the lack of vegetation suitable for nesting birds.

Table 2. Revised Schedule of Major Activities Timeframe	**Management Prescription**
January 1-December 31	Hand removal of Ravenna grass
January 1- April 14	Girdling of Siberian elms
August 1- April 14	Cut and spray (initial treatment) for tree of heaven
August 1 – September 30	Additional herbicide treatment for tree of heaven
September 1-April 14	Thinning of high and medium priority units (hand or mechanized)
Year-round	Thinning of low priority units (hand or mechanized)
February 1-June 15	Cut and spray treatment for tamarisk

Southwestern willow flycatcher

In your additional information response letter, you have a revised list of activities (Table 2) which describes the projects timeframes for each specific activity. After further discussion and correspondence, we believe your adjustments to the timeframes to end by April 14 for thinning and cut/spray activities is sufficient. This will prevent management prescriptions from overlapping with the flycatchers nesting period. The densely vegetated areas in the project area will be untouched until the breeding bird season has concluded.

The Service agrees that the avoidance and minimization measures outlined in your BA and additional letter are appropriate, and with their implementation, the likelihood of wildfire effects to the bosque is reduced and, therefore, insignificant, and discountable. Thus, the Service concurs with your determination.

Yellow-billed cuckoo

In your additional information response letter, you state that you will keep a 1-mile buffer of any cuckoo active nests that are in the project area. We believe your 1-mile buffer around any active, Yellow-billed cuckoo nests is appropriate to allow adequate habitat for nesting. Also, we believe your adjustments to Table 2 is sufficient to allow habitat for the cuckoo while migrating by allowing densely vegetated areas to remain undisturbed until after the migratory bird season.

The Service agrees that the avoidance and minimization measures, outlined in your BA and additional letter are appropriate, and with their implementation, the likelihood of wildfire effects to Yellow-billed cuckoo is insignificant and discountable, therefore the Service concurs with the determination.

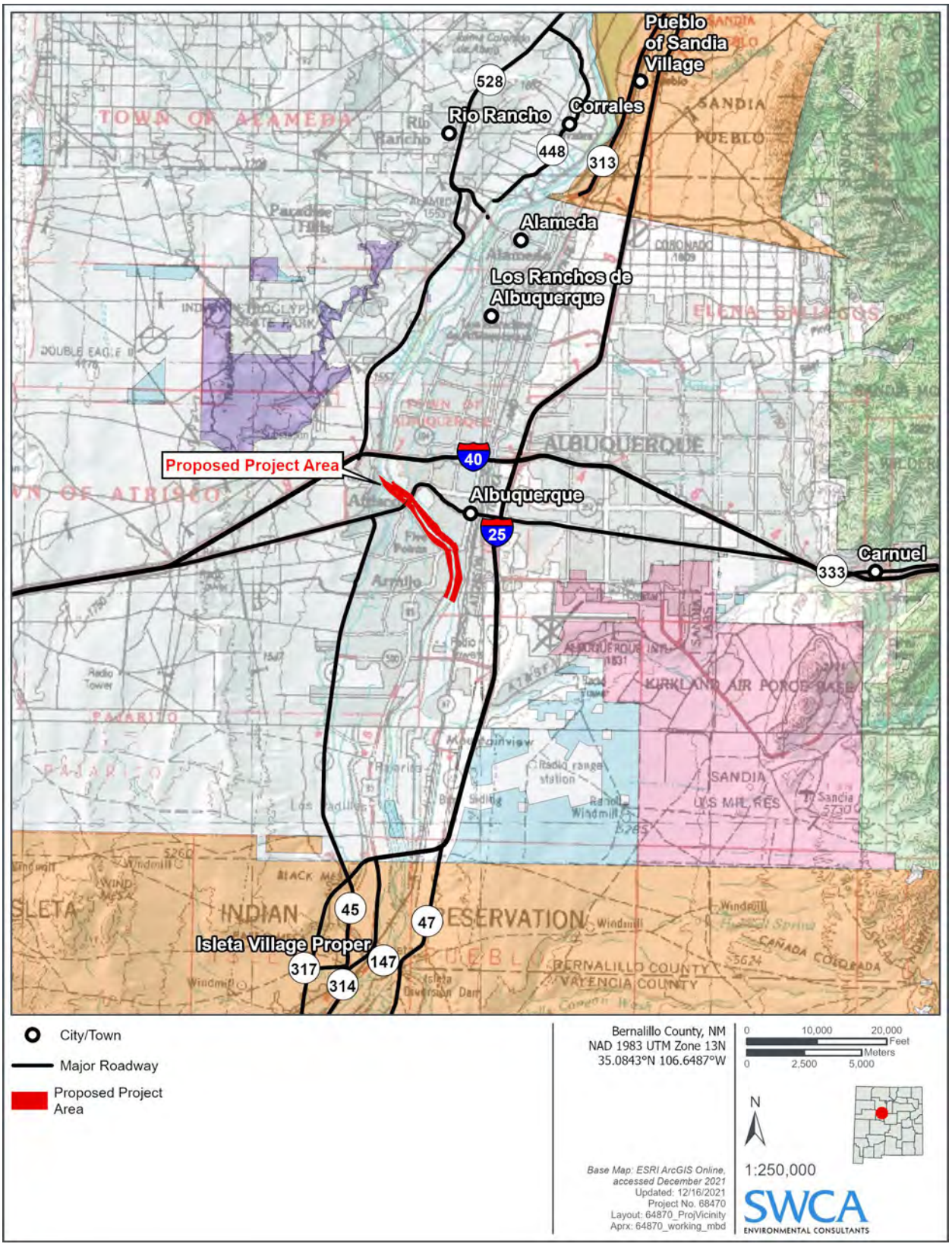
Conclusion

This concludes informal section 7 consultation with the Service for the Rio Grande Valley State Park Wildfire Mitigation Project. Please contact the Service if: 1) new information reveals the identified action may affect federally protected species or designated Critical Habitat in a manner or to an extent not previously considered; or 2) a new species is listed or Critical Habitat is designated under the Endangered Species Act of 1973, as amended (16 USC 1531 et seq.) that may be affected by the identified action.

Thank you for working to conserve endangered and threatened species and other resources. We appreciate the opportunity to continue working on the proposed project. If you have any questions, please contact Vance Wolf at vance_wolf@fws.gov or (505)761-4726. Please refer to the Service Consultation number listed above in any future correspondence regarding this project.

Sincerely,

Shawn Sartorious
Field Supervisor, NMESFO


Pueblo of Sandia Village
528
Rio Rancho
Corrales
448
313
Alameda
Los Ranchos de Albuquerque
Proposed Project Area
40
Albuquerque
25
Carnuel
333
ALBUQUERQUE
KIRTLAND AIR FORCE BASE
SANDIA
INDIAN
RESERVATION
Isleta Village Proper
45
47
317
147
314
BERNALILLO COUNTY
VALENCIA COUNTY
City/Town
Major Roadway
Proposed Project Area
Bernalillo County, NM
NAD 1983 UTM Zone 13N
35.0843°N 106.6487°W
0 10,000 20,000 Feet
0 2,500 5,000 Meters
N
1:250,000
Base Map: ESRI ArcGIS Online, accessed December 2021
Updated: 12/16/2021
Project No. 68470
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SWCA
ENVIRONMENTAL CONSULTANTS

Figure 1. This is the whole project area in which wildfire reduction activities will take place and is 4 mile stretch of the Rio Grande and about 470 acres.

APPENDIX D

Tribal and State Historic Preservation Office Consultation Correspondence

U.S. Department of Homeland Security
FEMA Region 6
800 N. Loop 288
Denton, TX 76209

FEMA

February 22, 2022

RE: Section 106 Review Consultation, FEMA-HMGP-NM-5184-004 City of Albuquerque Rio Grande Valley State Park Hazardous Fuels Mitigation, Bernalillo County, New Mexico (35.087135, -106.680414 and 35.089537, -106.678822)

To: Representatives of Federally recognized Tribes with Interest in this Project Area

The Federal Emergency Management Agency (FEMA) will be providing funds authorized under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288, as amended, in response to the major Disaster Declaration for FEMA-FM-5184-NM, New Mexico el Cajete Fire, dated June 15, 2017. FEMA is initiating Section 106 review for the above referenced project based on your Tribe's ancestral interest in the project area.

Through FEMA's Hazard Mitigation Grant Program, FEMA proposes to fund the City of Albuquerque's (Applicant) reduction of fuel wood in Rio Grande Valley State Park (Undertaking).

Ground disturbing work involves clearing and grubbing along with installation of indigenous shrubs on both the west and east sides of the Rio Grande, south of Bridge Boulevard to north of Central Avenue in Albuquerque, Bernalillo County, New Mexico. (35.087135, -106.680414 and 35.089537, -106.678822). The proposed project area encompasses 470 acres located along the Rio Grande that is owned by the Middle Rio Grande Conservancy District (MRGCD) and co-managed with the City of Albuquerque.

Portions of the mitigation work will take place in undisturbed ground.

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.

We are writing to request your comments on historic properties of cultural or religious significance to your Tribe that may be affected by the proposed Undertaking. Any comments you may have on FEMA's findings and recommendations should also be provided.

On February 9, 2022, a FEMA Historic Preservation Specialist performed a cultural records search using the New Mexico Historic Preservation Division (HPD)'s New Mexico Cultural Resource Information System (NMCRIS) and associated site files, photographs, and maps to identify historic properties and districts in the area. The APE for this Undertaking does not lie within any National Register of Historic Places (NRHP)-listed or NRHP-eligible districts according to the databases listed above. Research conducted on HPD's NMCRIS system also revealed that there are seven (7) known archaeological sites and two (2) known linear resources in or adjacent to the APE.

NMCRIS Resource Number	Resource Type	NMCRIS NRHP Eligibility
LA 138857	Archaeological Site	Not Eligible
LA 127144	Archaeological Site	No Determination on File
LA 138856	Archaeological Site	Not Eligible
LA 138858	Archaeological Site	Not Eligible
LA 138859	Archaeological Site	No Determination on File
LA 145193	Archaeological Site	Eligible Under Criteria A and D
LA 159913	Archaeological Site	No Determination on File
HCPI 31263	Linear Resource	Eligible Under Criterion A
HCPI 43875	Linear Resource	No Determination on File

Table 1: Known Cultural Resources in or Adjacent to APE

In January 2022, SWCA Environmental Consultants conducted a Cultural Resources Investigation of the APE, including archaeological survey of those portions of the APE that had not previously been surveyed. The archaeological survey did not reveal any new sites or isolated occurrences. The SWCA report concluded that none of the cultural resources listed in Table 1 with no NRHP eligibility determination on file were eligible for NRHP listing, and that the proposed Undertaking would have no effect on NRHP-eligible cultural resources in the APE.

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

Please provide your comments within 30 days of receipt of this letter. Any comments provided after 30 days may be taken into consideration. If you concur with FEMA's determination, please sign below. If you notify us that your review identifies cultural properties within the APE, or project work discloses the presence of archeological deposits, FEMA will contact your Tribe to continue consultation.

Topographic maps showing the project vicinity and the project location, as prepared by the Applicant, and a copy of the SWCA Report are attached. Your prompt review of this project is greatly appreciated. Should you need additional information please contact Robert Scoggin, EHP Tribal Liaison at Robert.w.scoggin@fema.dhs.gov (202) 716-4139.

Sincerely,

Kevin Jaynes
Regional Environmental Officer
FEMA Region 6

_____ _____

Concurrence by: Date:

_____

Tribe

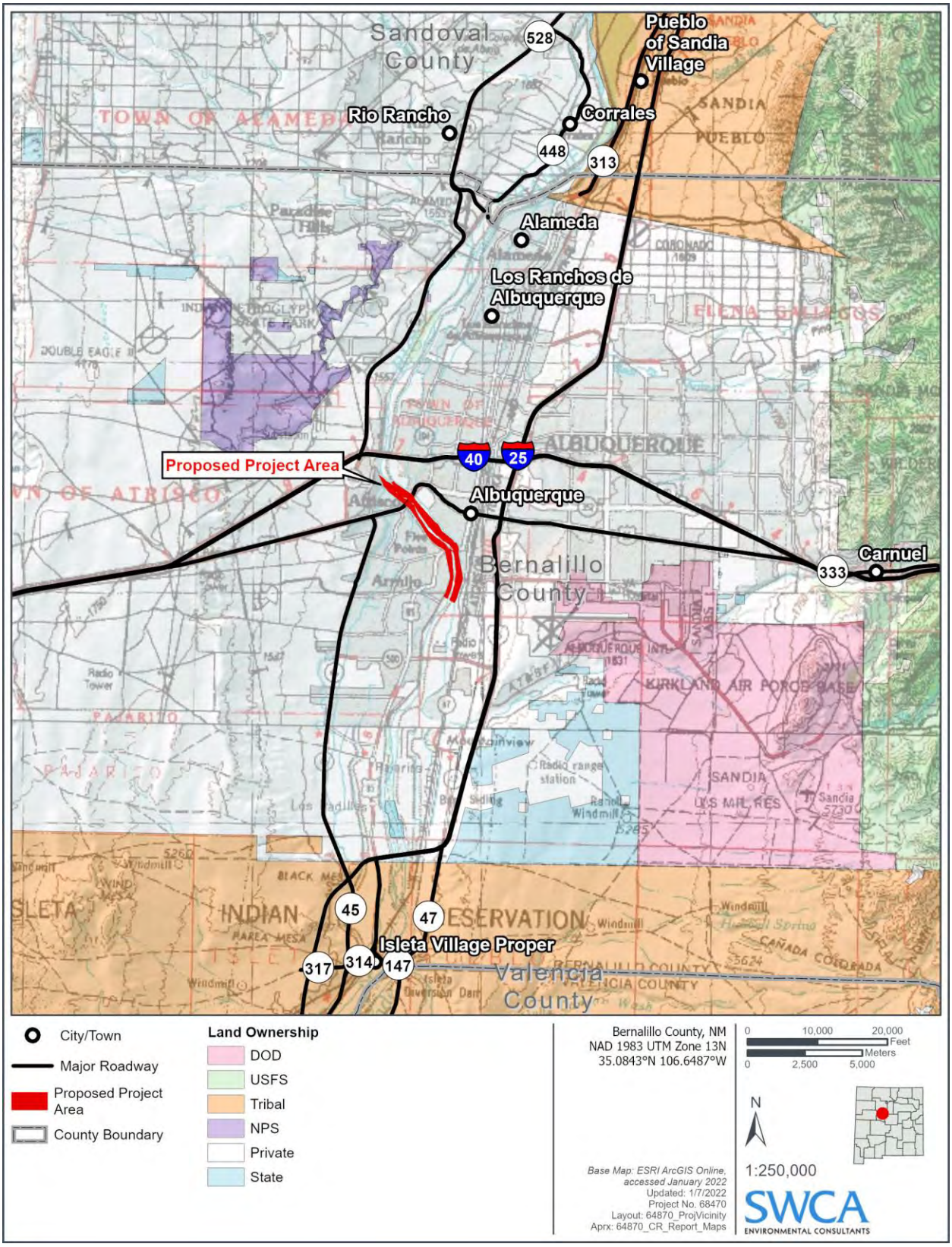

Figure 1.1. Project vicinity map.

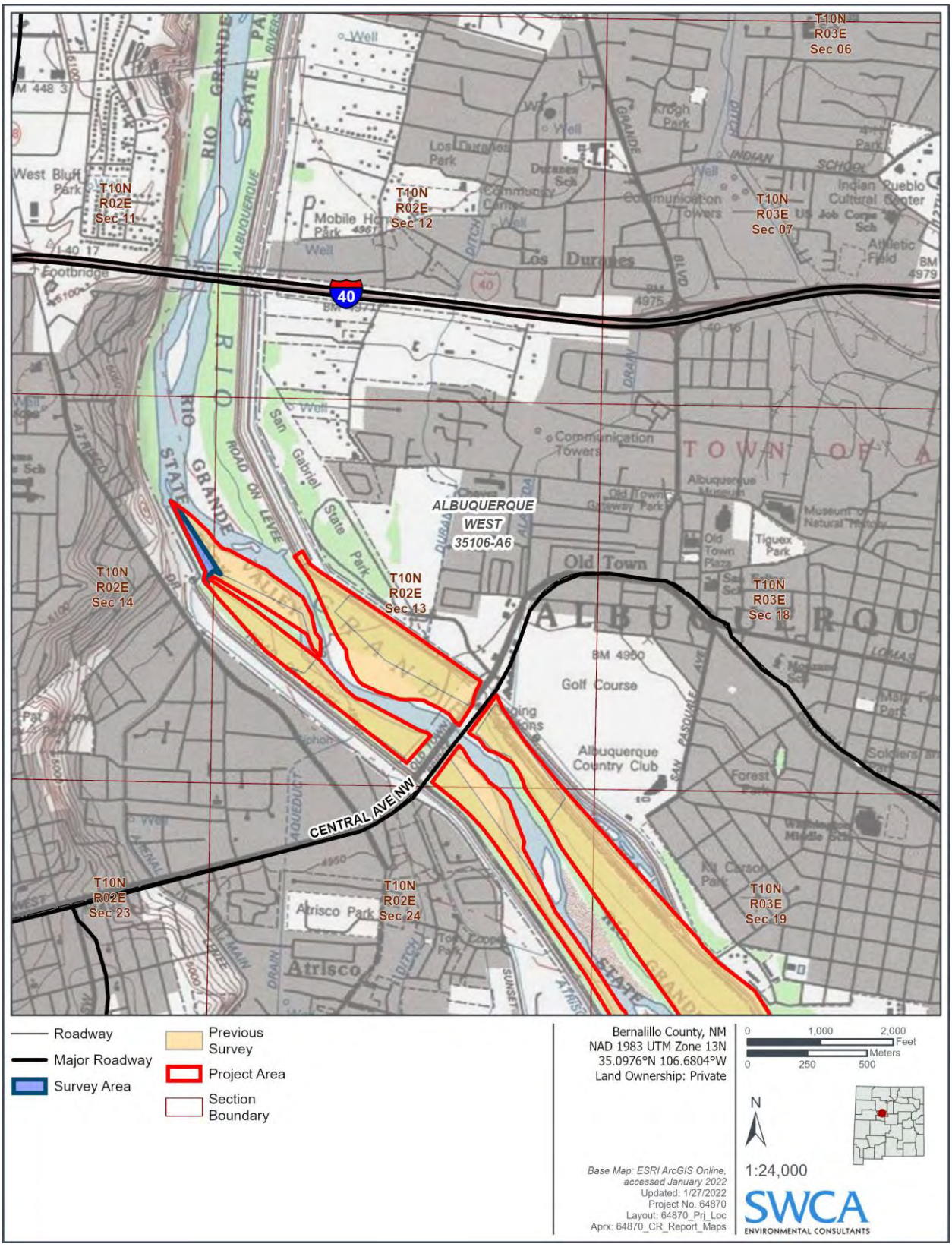

Figure 1.2. Project location map, 1 of 2.

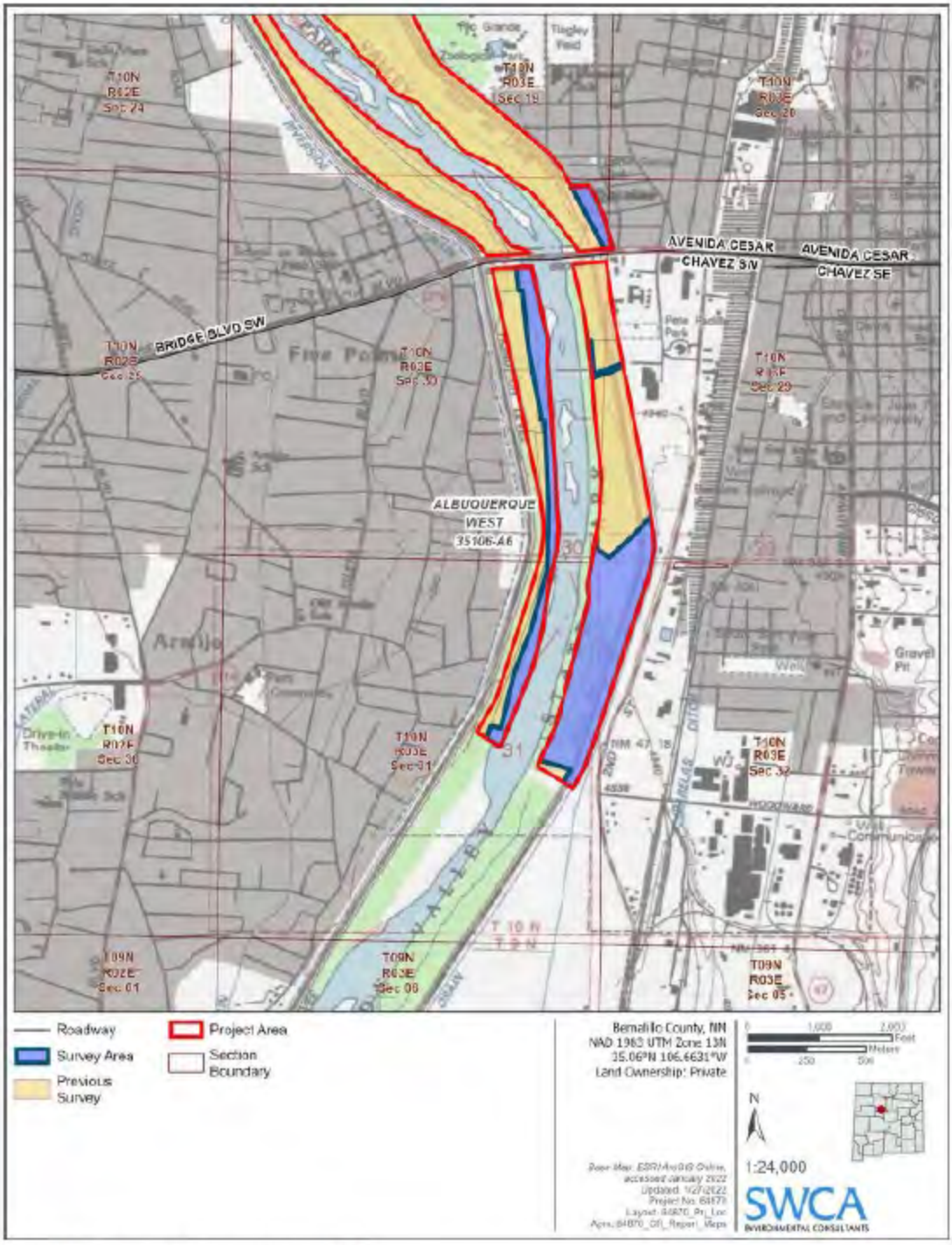

Figure 1.3. Project location map, 2 of 2.

FEMA SENT CONSULTATION LETTERS TO THE FOLLOWING TRIBES

Hopi Tribe of Arizona

Navajo Nation

Ohkay Owingeh

Pueblo of Isleta

Puebla of Laguna

Pueblo of Pojoaque

Pueblo of Sandia

Ysleta del Sur

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

FEMA

February 9, 2022

Jeff Pappas, PhD
State Historic Preservation Officer
Attention Bob Estes, Archaeologist
Department of Cultural Affairs
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe, New Mexico 87501

RE: Section 106 Review Consultation, HPD log 116306, FEMA-HMGP-NM-5184-004, City of Albuquerque Rio Grande Valley State Park Hazardous Fuels Mitigation Project (35.087135, -106.680414 and 35.089537, -106.678822)

Dear Dr. Pappas:

The Federal Emergency Management Agency (FEMA) through its 404 Hazard Mitigation Grant Program (HMGP) proposes to provide funding to the City of Albuquerque (Applicant) as authorized under Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. §§ 5121-5206, as amended), for fuel wood reduction in Rio Grande Valley State Park (Undertaking), in response to the major Disaster Declaration for FEMA-FM-5184-NM, dated June 15, 2017. 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).

Utilizing HMGP funding, The City of Albuquerque Open Space Division proposes to clear vegetation for its Rio Grande Bosque Wildfire Mitigation Project located on both the west and east sides of the Rio Grande, south of Bridge Boulevard to north of Central Avenue in Albuquerque, Bernalillo County, New Mexico. (35.087135, -106.680414 and 35.089537, -106.678822). The proposed project area encompasses 470 acres located along the Rio Grande that is owned by the Middle Rio Grande Conservancy District (MRGCD) and co-managed with the City of Albuquerque. Soil disturbance will include clearing and grubbing along with installation of indigenous shrubs.

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.

FEMA performed a cultural records search using the New Mexico Historic Preservation Division (HPD)'s New Mexico Cultural Resource Information System (NMCRIS) and associated site files, photographs, and maps to identify historic properties and districts in the area. The APE for this

Undertaking does not lie within any National Register of Historic Places (NRHP)-listed or NRHP-eligible districts according to the databases listed above. Research conducted on HPD's NMCRIS system also revealed that there are seven (7) known archaeological sites and two (2) known linear resources in or adjacent to the APE.

NMCRIS Resource Number	Resource Type	NMCRIS NRHP Eligibility
LA 138857	Archaeological Site	Not Eligible
LA 127144	Archaeological Site	No Determination on File
LA 138856	Archaeological Site	Not Eligible
LA 138858	Archaeological Site	Not Eligible
LA 138859	Archaeological Site	No Determination on File
LA 145193	Archaeological Site	Eligible Under Criteria A and D
LA 159913	Archaeological Site	No Determination on File
HCPI 31263	Linear Resource	Eligible Under Criterion A
HCPI 43875	Linear Resource	No Determination on File

Table 1: Known Cultural Resources in or Adjacent to APE

In January 2022, SWCA Environmental Consultants conducted a Cultural Resources Investigation of the APE, including archaeological survey of those portions of the APE that had not previously been surveyed. SWCA submitted a report to HPD detailing the results of the Investigation (NMCRIS Activity No. 149512). The archaeological survey did not reveal any new sites or isolated occurrences. The SWCA report concluded that none of the cultural resources listed in Table 1 with no NRHP eligibility determination on file were eligible for NRHP listing, and that the proposed Undertaking would have no effect on NRHP-eligible cultural resources in the APE.

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

We respectfully request concurrence with this determination. Topographic maps showing the project vicinity and the project location, as prepared by the Applicant, are attached. Your prompt review of this project is greatly appreciated. Should you need additional information please contact Robert Moyer, Historic Preservation Specialist at robert.moyer@fema.dhs.gov or (940) 297-0216.

Sincerely,

Kevin Jaynes
Regional Environmental Officer
FEMA Region 6

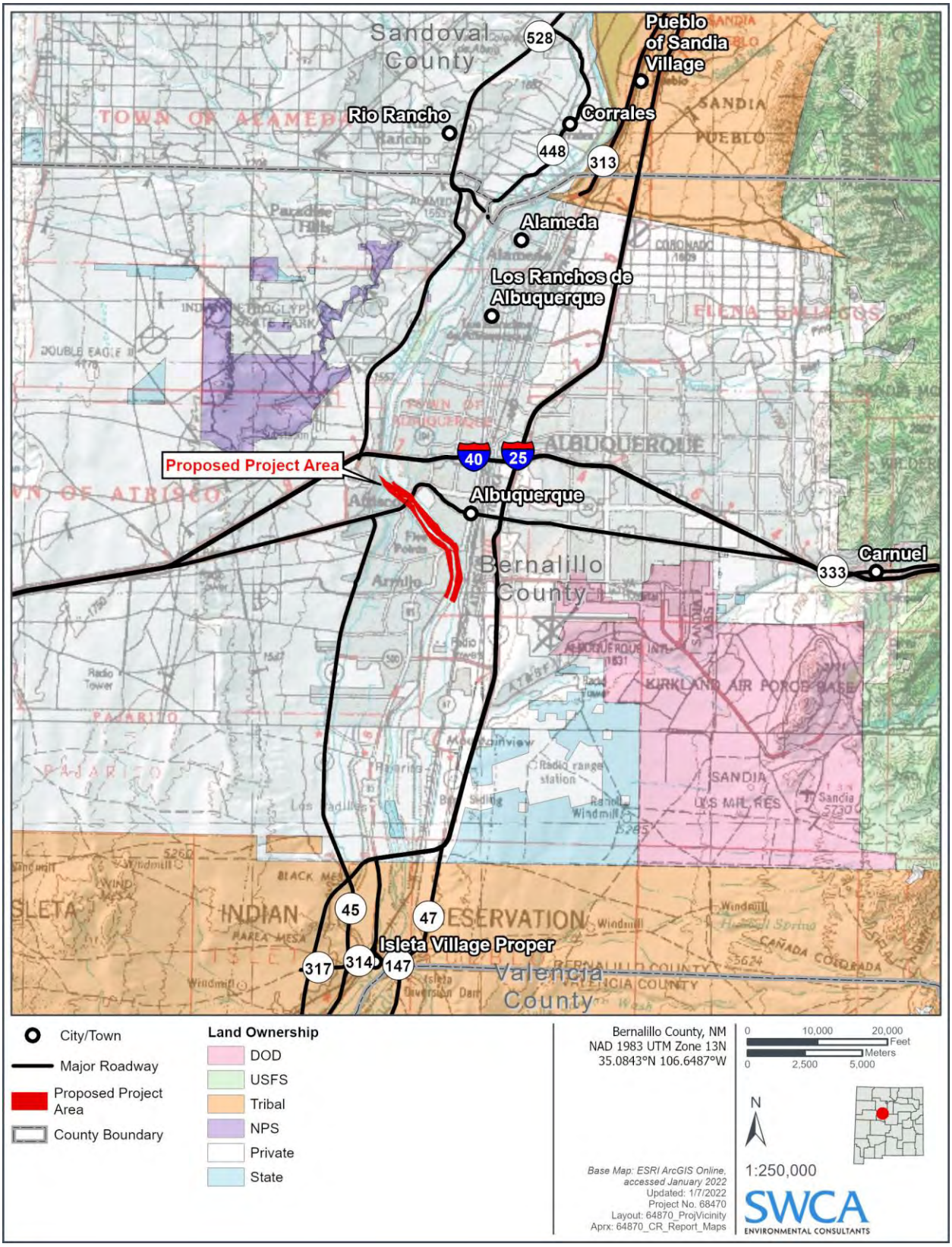

Figure 1.1. Project vicinity map.

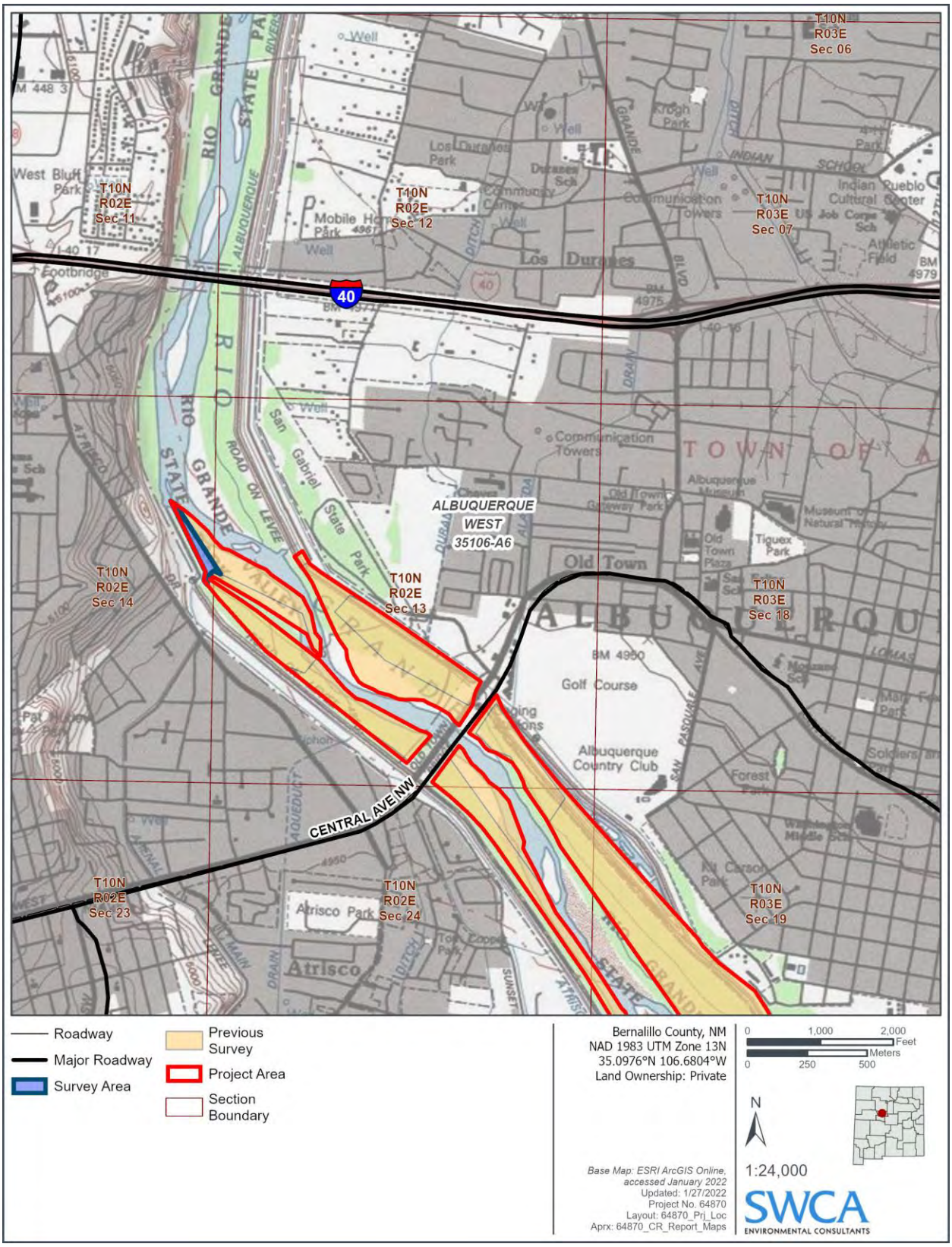

Figure 1.2. Project location map, 1 of 2.

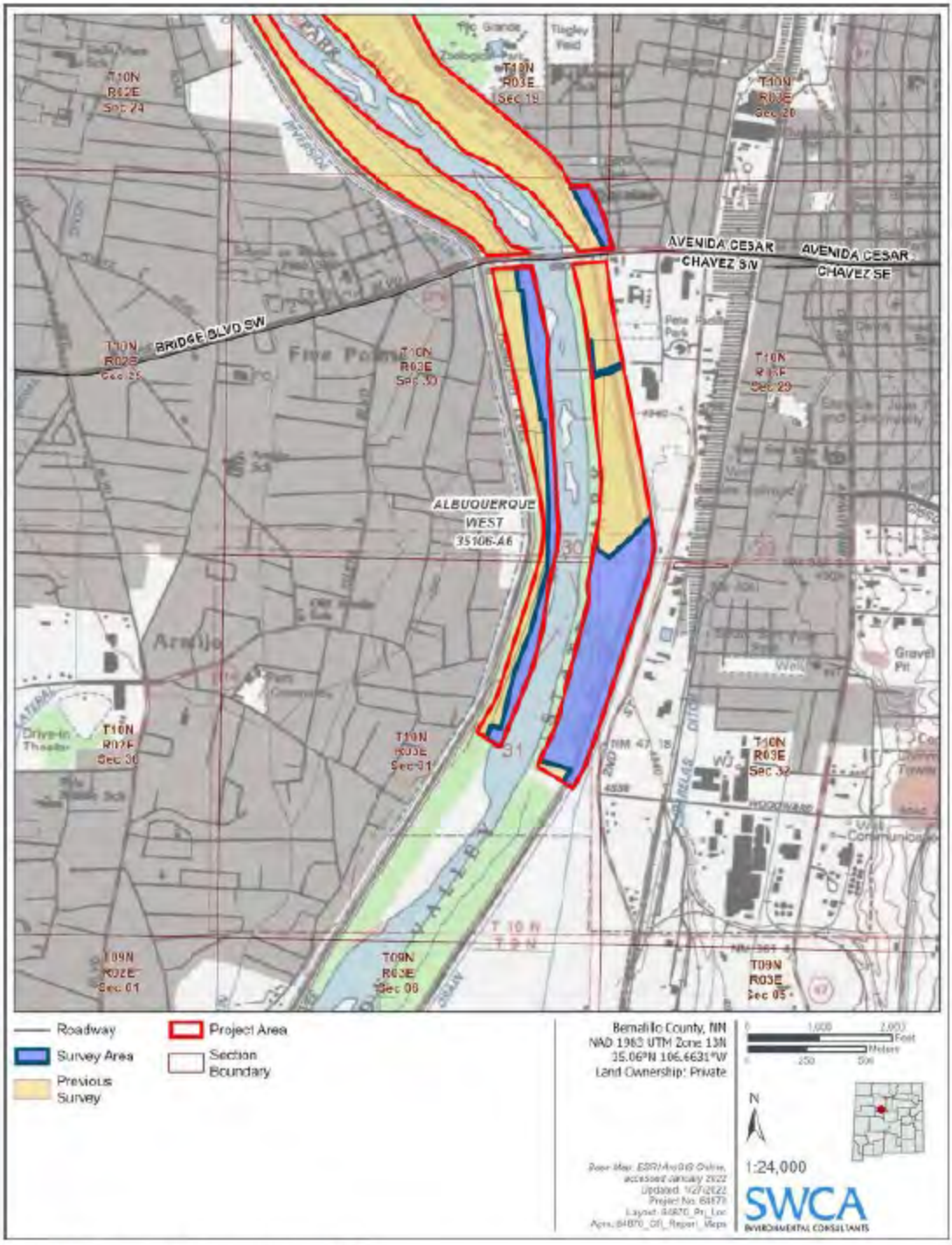

Figure 1.3. Project location map, 2 of 2.

Michelle Lujan-Grisham
Governor

STATE OF NEW MEXICO
DEPARTMENT OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

BATAAN MEMORIAL BUILDING
407 GALISTEO STREET, SUITE 236
SANTA FE, NEW MEXICO 87501
PHONE (505) 827-6320 FAX (505) 827-6338

March 3, 2022

Robert Moyer
U.S. Department of Homeland Security
Federal Emergency Management Agency
800 N Loop 288
Denton, Texas 76209

Re: Section 106 Review Consultation FEMA-HMGP-NM-5184-004, City of Albuquerque Rio Grande Valley State Park Hazardous Fuels Mitigation Project (HPD log 116727)

Dear Mr. Moyer:

I want to thank FEMA for consulting with the New Mexico State Historic Preservation Officer (SHPO) concerning the hazardous fuels mitigation project within the Rio Grande Valley State Park, Albuquerque, New Mexico (HPD log 116727). I have completed a review of the report entitled *Cultural Resources Investigations for the Rio Grande Bosque Wildfire Mitigation project in Albuquerque, Bernalillo County, New Mexico* (NMCRIS 149512), which identifies and evaluates National Register of Historic Places (NRHP) eligibilities for properties in the undertaking's area of potential effects (APE). This letter provides SHPOs' review comments on the properties identified, the determinations of eligibility, and FEMAs' finding of effects.

Table 1 summarizes the consultant's recommendations for properties identified and evaluated in the report. Please note that SHPO does not concur with the recommended determinations of eligibility for three properties. An explanation for our disagreement follows.

Table 1. Summary Determinations of Eligibility

Property	**Resource**	**Eligibility**	
		Consultant	**SHPO**
LA 127144	Glass Garden	Not eligible	Does not concur, undetermined eligibility
LA 138856	wood piles	Not Eligible	Concurs not eligible
LA 138857	wood piles	Not Eligible	Concurs not eligible
LA 138858	wood piles	Not Eligible	Concurs not eligible
LA 138859	Arenal acequia	Not eligible	Does not concur, undetermined eligibility
LA 145193	Drain/discharge	Eligible; Criteria A and D	Concurs eligible
LA 159913	Atrisco drain?	Not eligible	Does not concur, undetermined eligibility
HCPI 31263	Riverside drain	Eligible; Criterion A	Concurs eligible
HCPI 43875	Riverside drain	Eligible: Criteria and C	Concurs eligible

The SHPO does not concur that LA 127144, aka the Glass Garden or, is not eligible for the NRHP. Despite the report's assertion that the site was moved to its current location in the 1930s, the City of Albuquerque's website for Environmental health indicates that the Old River Landfill was in use from the 1920s to 1940s. In addition, the 1934 USGS topographic map for West Albuquerque shows Tingley Beach, the alleged previous location of the city dump, was in place and known as Conservancy Beach. In any case, it is the SHPOs' opinion that LA 127144 is eligible for the NRHP for its information potential under significance Criterion C. However, we have entered the site's eligibility as "undetermined" because we need more information about the site's historic use and an appropriate historic context with which to evaluate it.

The SHPO does not concur with the determination that LA 138859 and LA 159913 are not eligible for listing in the NRHP. Both properties are associated with historic irrigation in Albuquerque. But it's not clear if they are associated with the Middle Rio Grande Project of the 1930s or if they represent earlier elements of traditional acequias. Until we have more information on these structures and an appropriate historic context with which to evaluate them, their respective eligibility has been entered as "undetermined".

Before we can comment on the undertaking's effects to historic properties, we would like more information on the methods that will be used to reduce fuel loads. Large mechanical mulchers are likely to disturb surface deposits and features, except when on hard ground. This is a concern for LA 127144, LA 138859, and LA 159913. Other methods such as hand cutting or "lop and scatter" are not at all likely to disturb damage these sites. We also would like to know if FEMA has considered treatments to avoid or minimize effects to historic properties.

We look forward to working with FEMA to advance this important project. If you have any questions, please contact me at 505-819-7609 or bob.estes@state.nm.us

Sincerely,

John R. (Bob) Estes Ph.D.
HPD Staff Historic Preservation Specialist

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

March 17, 2022

Jeff Pappas, PhD
State Historic Preservation Officer
Attention Bob Estes, Archaeologist
Department of Cultural Affairs
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe, New Mexico 87501

RE: Section 106 Review Consultation, HPD log 116306, FEMA-HMGP-NM-5184-004, City of Albuquerque Rio Grande Valley State Park Hazardous Fuels Mitigation Project (35.087135, -106.680414 and 35.089537, -106.678822)

Dear Dr. Estes:

Thank you for your correspondence dated March 3, 2022 regarding the above referenced Section 106 Undertaking.

In response to your request for more information regarding the methods that will be used to reduce fuel loads in the APE, FEMA has worked with the Applicant and with SWCA Environmental Consultants to develop the following resource protection measures for all known archaeological sites in the APE:

Resource No.	Resource Type	Current Eligibility Status	Proposed Resource Protection Measures
LA 127144	Historic artifact scatter	Undetermined eligibility	The boundaries of the site plus a 25-foot buffer will be added as a generic “resource protection area” in the wildfire treatment implementation plan and identified as an area for hand and mechanical treatments only, with no use of heavy equipment. Woody material will be hand removed and treated outside the boundary. The City of Albuquerque will ensure the treatment crews are briefed on the specific treatment measures allowed within the site boundary.
LA 138856	Historic bridge	Not Eligible	None
LA 138857	Historic bridge	Not eligible	None
LA 138858	Old Atrisco Ditch Irrigation Diversion	Not Eligible	None

LA 138859	Historic Arenal Main Canal irrigation ditch	Undetermined eligibility	The boundaries of the site plus a 25-foot buffer will be added as a generic "resource protection area" in the wildfire treatment implementation plan and identified as an area for hand and mechanical treatments only, with no use of heavy equipment. Woody material will be hand removed and treated outside the boundary. The City of Albuquerque will ensure the treatment crews are briefed on the specific treatment measures allowed within the site boundary.
LA 145193	Historic artifact scatter and three water control features	Eligible, Criterion A and D	The boundaries of the site plus a 25-foot buffer will be added as a generic "resource protection area" in the wildfire treatment implementation plan and identified as an area for hand and mechanical treatments only, with no use of heavy equipment. Woody material will be hand removed and treated outside the boundary. The City of Albuquerque will ensure the treatment crews are briefed on the specific treatment measures allowed within the site boundary.
LA 159913	Abandoned segment of the Atrisco Riverside Drain	Undetermined eligibility	Avoidance; no wildfire mitigation treatments will occur on the banks or within the irrigation drain
HCPI 31263	Atrisco Riverside Drain	Eligible, Criterion A	Avoidance; no wildfire mitigation treatments will occur on the banks or within the irrigation drain
HCPI 43875	Albuquerque Riverside Drain	Eligible	Avoidance; no wildfire mitigation treatments will occur on the banks or within the irrigation drain

Table 1: Proposed Resource Protection Measures

FEMA will implement these protection measures as Project Conditions for this Undertaking. With the inclusion of these Project Conditions and based on the information previously provided to your office regarding this Undertaking, FEMA respectfully reaffirms the determination that there will be **No Adverse Effect to Historic Properties** as a result of the proposed Undertaking that was stated in FEMA's correspondence to SHPO dated February 9, 2022.

We respectfully request concurrence with this determination. Your prompt review of this project is greatly appreciated. Should you need additional information please contact Robert Moyer, Historic Preservation Specialist at robert.moyer@fema.dhs.gov or (940) 297-0216.

Sincerely,

CHRISTOPHER P DOOLEY Digitally signed by CHRISTOPHER P DOOLEY
Date: 2022.03.17 16:41:40 -05'00'

For
Kevin Jaynes CPD
Regional Environmental Officer
FEMA Region 6

for the NM SHPO
The SHPO concurs with the recommendations as proposed. March 25, 2022; HPD log 116919

APPENDIX E

City of Albuquerque Policy for Responding to Encampments on Public Property

City of Albuquerque

Policy for Responding to Encampments on Public Property

October 2021

Contents

I. Guiding Principles

Homelessness is a growing issue throughout the United States, including in Albuquerque. People without homes who live in encampments can be an uncomfortable reminder that while we live in the richest nation in the world, economic inequality and structural racism have created the conditions where thousands of people are without housing each year in Albuquerque. Homelessness impacts people from many walks of life, but there are particularly high rates among Native Americans, Black and Hispanic populations, people with disabilities, and people with mental health or substance use disorders. People experiencing homelessness are frequently victims of crime and certain populations are especially susceptible to human trafficking, sex crimes, and other crimes of violence.

The proliferation of encampments is a result of decades' worth of policy decisions at the federal, state, and local levels that have created structural inequities that will take time to reverse. This policy cannot by itself end homelessness; however, this policy can and should be interpreted to provide protections for people experiencing homelessness, to help guide coordination of resources, to set expectations for how City personnel are to treat people experiencing homelessness, and to provide guidance on fair procedures for encampment removal when necessary.

The City of Albuquerque recognizes that there are no "homeless people," but rather people who have lost their homes and deserve to be treated with dignity and respect. We believe deeply in the strengths and assets of people who are experiencing homelessness, believe in the value of having their voices at the planning table, and remain committed to supporting each and every individual in fulfilling their potential.

In order to formalize a policy on encampments, the City of Albuquerque must balance multiple, sometimes competing priorities from a diverse group of stakeholders. These include homeowners, business owners, public health and safety officials, and our unsheltered neighbors. In order to strike the right balance, the City must ensure that the rights of people who are unsheltered are given equal protection under the law. As cities struggle to accommodate rising numbers of unsheltered people and encampments, the courts have also weighed in on how to balance public safety and constitutional rights. While this is a rapidly evolving area of the law, courts have recognized that there are legitimate public safety reasons for removing or cleaning up encampments, such as the safety of unsheltered people, unsanitary conditions, and public health concerns. However, courts have also identified several constitutional concerns that must addressed, including 1) adequate notice provisions prior to removal, 2) due process for retrieving personal property, 3) assessment of individual needs such as mental or physical disability, and 4) whether appropriate shelter beds exist in the community as a condition prior to removal of an encampment.

The City of Albuquerque has identified several guiding principles through which this policy is informed and should be interpreted, including:

A. **Harm Reduction** - Refers to policies, programs, and practices that aim to minimize negative health, social, and legal impacts associated with drug use, drug policies, and drug laws. Harm reduction is grounded in justice and human rights – it focuses on

positive change and on with people without judgement, coercion, discrimination, or requiring that they stop using drugs as a precondition of support.[1]

B. **Trauma-informed** - Trauma-informed approaches emphasize safety, trustworthiness, peer support, collaboration, empowerment, and a focus on cultural, historical and gender issues. Adopting a trauma-informed approach is not accomplished through any single particular technique or checklist. It requires constant attention, caring awareness, sensitivity, and possibly a cultural change at an organizational level. On-going internal organizational assessment and quality improvement, as well as engagement with community stakeholders, will help to imbed this approach which can be augmented with organizational development and practice improvement.[2]

C. **Housing First –** The Housing First principle recognizes that the primary need of people experiencing homelessness is housing. This Housing First approach is based on the premise that people are best able to address their needs, such as substance abuse and mental health treatment and employment, once they have a home. Additionally, Housing First is based on the theory that client choice is valuable in housing selection and supportive service participation, and that exercising that choice is likely to make a client more successful in remaining housed and improving their life.[3]

D. **Person-Centered Response** - We aim to provide person-centered, trauma-informed care that respects the dignity and ensures the safety of all individuals and families seeking assistance. Progressive engagement that is respectful of participant choice and attuned to participant safety and confidentiality needs will inform data collection efforts, level of services provided, and location/type of housing accessed.

[1] https://www.hri.global/what-is-harm-reduction

[2] https://www.cdc.gov/cpr/infographics/6_principles_trauma_info.htm

[3] https://endhomelessness.org/resource/housing-first/

II. Definitions

A. "AVAILABLE EMERGENCY SHELTER BEDS" shall be shelter space:

i. Where an individual has not exceeded a shelter's maximum stay rule

ii. That can accommodate the individual's gender identity and/or sexual orientation.

iii. That can reasonably accommodate the individual's mental or physical needs or disabilities.

iv. That permits a minor child to be housed in the same facility with at least one parent or legal guardian, for families with minor children.

v. For which an individual is not required to attend or participate in religious activities or programs as a condition of utilizing the shelter space.

vi. Where an individual has not been banned or suspended from accessing shelter at the time that the encampment is being removed.

B. “CAMP or CAMPING” means the erection of, residing or dwelling within, or maintaining of tents or simple dwellings for temporary shelter or residence.

C. “CITY EMPLOYEE” means any employee of the City of Albuquerque acting during the scope of their employment.

D. “COMMUNITY SAFETY DEPARTMENT (ACS) DESIGNEE” means the person or people designated by the department to respond to encampments on public property. This may include staff from an organization that is contracted with the City for this purpose.

E. “ENCAMPMENT” means one or more tent, structure composed of any type of material, or assembly of equipment or personal property located upon an identifiable area of public property within the City of Albuquerque, which appears to a reasonable person as being used as a dwelling.

F. “DEPARTMENT OF FAMILY & COMMUNITY SERVICES (FCS) DESIGNEE” means the person or people designated by FCS to respond to encampments on public property. This may include staff from another City department or from an organization that is contracted with the City for this purpose.

G. “IMMEDIATE HAZARD” means a situation where an encampment creates an immediate and articulable risk of serious injury or death to either the residents of the encampment or others. The mere possession of illegal drugs, drug paraphernalia or a weapon does not in and of itself constitute an immediate hazard.

H. “LOST OR ABANDONED PROPERTY” means property that has been physically relinquished or affirmatively disclaimed by encampment resident, when encampment resident is present; trash and debris left in a public area; and property deserted beyond a reasonable period of time, when considering the totality of the circumstances, is abandoned. Property left in someone else’s care is not abandoned.

I. “OBSTRUCTION” means people, tents, personal property, garbage, debris or other objects related to an encampment that interfere with areas that are necessary for or essential to the intended use of a public property or facility.

J. “PERSONAL PROPERTY” means an item that: is reasonably recognizable as belonging to a person; has apparent utility in its present condition and circumstances; is not an empty plastic or paper bag or other trash; is not hazardous; or is identified by an owner as personal property. Examples of personal property include but are not limited to identification, personal papers and documents, tents, bicycles, radios and other electronic equipment, eyeglasses, prescription medications, photographs, jewelry, crutches, and wheelchairs. Personal property does not include shopping carts, large furniture items and building materials such as wood products, metal, pallets, or rigid plastic except those the owner intends to recycle for money. The relevant City Employee or contracted entity shall determine whether an item is personal property, and in cases when the status of an item cannot be reasonably determined under the

totality of the circumstances, the item shall be treated and handled as personal property.

K. "PRIVATE PROPERTY" means any property that is not owned by a governmental entity, such as an individual, business, or non-profit organization, including but not limited to business parking lots and private residences.

L. "PUBLIC PROPERTY" means any real property owned by any governmental entity within the municipal limits of the city, including but not limited to, the public way, right-of-way, roads, streets and public alleys.

M. "SPECIAL PERSONAL PROPERTY" means personal property that is specifically identifiable or of readily identifiable unique value and would be difficult to replace, including, but not limited to, identification documents, birth certificates, photographs, address & phone number books, paperwork including notebooks with writing, mail, and any notices from governmental agencies or prescription medication. Special personal property does not include weapons, contraband or illegal items such as illicit drugs.

N. "RISK ASSESSMENT ANALYSIS" means a standardized assessment of the risk that an encampment poses to encampment residents and other users of the public space in which the encampment is located in order to prioritize encampments for removal.

O. "TRASH OR DEBRIS" includes property that appears to have been discarded by its owner, but the fact that property is unattended does not necessarily mean that it has been discarded. Reasonable doubt about whether property is "trash or debris" or valuable property should be resolved in favor of the conclusion that the property is valuable and has not been discarded.

III. Identifying an Encampment

A. The preferred method for members of the community or City employees to report an encampment is through 311. However, this policy recognizes that members of the public and City employees also report encampments directly to other City departments.

B. 311 shall send reports regarding encampments that appear to be on public property to the FCS Designee and shall send reports regarding encampments that appear to be on private property to the Code Enforcement Division within the Planning Department.

C. 311 shall collect information from callers or via the 311 application so that the FCS Designee may determine the priority level of encampments reported through 311 as described in Section IV.

D. After receiving a report of an encampment, the FCS Designee shall determine whether the encampment is located upon public or private property and assess the risk of the encampment. In doing so, the FCS Designee may use the City's Geographic Information System, the records of the City's Planning Department, or obvious visual

signs such as whether the encampment is located on a public sidewalk or road or in a City Park or conspicuously posted on the grounds of a City building or facility.

i. If the FCS Designee identifies the property on which the encampment is located as private property, they shall coordinate with the Department of Planning, Code Enforcement Division. Code Enforcement will then address the encampment following their own protocol for addressing encampments on private property and will close the 311 ticket or follow up with the constituent or city employee reporting the encampment, as applicable.

ii. If the FCS Designee identifies the property upon which the encampment is located as public property, they shall take actions in accordance with this policy.

IV. Risk Assessment Analysis & Prioritization of Response

A. The FCS designee shall conduct a risk assessment analysis of each encampment located on public property based on the information reported about the encampment. The risk assessment analysis will consider the location of the encampment, the risk to encampment occupants and other users of the public space in which the encampment is located, the number of encampment occupants and the presence of needles and/or human waste.

B. Based on the risk analysis, encampments will be prioritized as a 1, 2, 3 or 4 priority. FCS Designee will respond to encampments identified as “priority 1” first, then “priority 2” and so on.

C. Based on the risk assessment analysis, encampments on public property will be prioritized as described below:

i. Priority 1 encampments are those that appear to meet the definition of immediate hazard or obstruction.

ii. Priority 2 encampments meet one or more of these criteria:

a. Located in a public park

b. Located at or adjacent to a community center, senior center, multi-generational center and early childhood development center

c. Located adjacent to or in the median of a roadway with a speed limit of 35 miles per hour or higher

d. Located in an underpass near roadway with a speed limit of 35 miles per hour or higher

e. On a footbridge over a roadway with a speed limit of 35 miles per hour or higher

f. 5 or more encampment residents and/or structures present

iii. Priority 3 encampments meets one or more of these criteria:

a. Located adjacent to or in the median of a roadway that has a speed limit under 35 miles per hour

b. Located in an underpass near a roadway with a speed limit under 35 miles per hour.

c. 2 to 4 encampment residents and/or structures

d. Human waste present

e. Needles present

iv. Priority 4 encampments are all encampments that do not meet the criteria above.

V. Initial Engagement of Encampment

A. The FCS or ACS Designee shall go the encampment location in person to attempt to engage the encampment residents according to the prioritization system established in Section IV.

B. When contacting the residents of an encampment, the FCS or ACS Designee shall first identify themselves to the person or persons who appear to be residents of the encampment.

C. The first priority of the FCS or ACS Designee is to engage encampment residents, assess their basic needs, and provide any notice required by this policy. The FCS or ACS Designee shall attempt to educate encampment residents regarding resources, and provide basic referral information to such resources, including but not limited to meals, showers and bathroom facilities, emergency shelter, medical services and supportive housing programs. If appropriate, ACS Designee may transport individual(s) to shelter, provider, or location in which long term care can be provided.

D. When an encampment resident requests medical assistance or has an injury that poses a risk of death or serious bodily harm, the FCS or ACS Designee shall contact 9-1-1 or contact dispatch directly via radio.

E. If a resident requires an interpreter, then the FCS or ACS Designee shall communicate through an interpreter or interpreter service, which may be telephonic. If there is a need for translation, FCS and ACS Designee will arrange to have material translated in appropriate language.

F. If the FCS or ACS Designee observes any weapons at the encampment the FCS or ACS Designee may not engage the encampment residents at that time and may request APD assistance.

VI. Removal of Encampments – Immediate Hazard or Obstruction

A. The City is not required to provide notice to remove an encampment constituting an immediate hazard or obstruction. However, the City shall document every instance where an encampment was deemed to be an immediate hazard or obstruction and what specific factors led to that determination. By nature, immediate hazards are not typical encampments because an encampment that is an immediate hazard must present an imminent risk of serious injury or death. Immediate hazards are an emergency exception to the general rule that notice is required before requiring the removal of an encampment.

B. The FCS Designee shall make reasonable efforts to locate the resident(s) of an encampment that is an immediate hazard or obstruction. If the FCS Designee is able to locate the encampment resident(s), the FCS Designee shall instruct the individual(s) to immediately remove the encampment or obstruction.

C. If persons are present at the encampment when the FCS Designee identifies that an encampment is an immediate hazard or obstruction:

   i. City personnel shall work collaboratively with such persons to allow for them to collect and remove their own personal property, to connect them to social services and shelter, to identify and offer to store any personal property, to identify where personal property will be stored if removed by the City, and explain how personal property may be claimed by its owner.

   ii. All trash or debris that are in the immediate area of the encampment may be removed and disposed of and FCS designee asks the persons at the encampment to assist with the clean-up.

   iii. If the resident has difficulty complying due to underlying behavioral health issues, the FCS Designee may request ACS Behavioral Health Responder.

D. If persons are not present at the encampment when City staff identify the encampment as an immediate hazard or obstruction:

   i. The City shall take steps to identify and coordinate with appropriate responsible entity to preserve personal property, provided that doing so does not pose a danger to the City Employees present. Lost or abandoned personal property shall be handled according to Section X of this policy.

   ii. All trash or debris that are in the immediate area of the encampment may be removed and disposed of immediately.

VII. Notice Requirements for Encampment Removal

A. If individuals are not present and the encampment is not an immediate hazard or obstruction:

   i. The FCS Designee shall post a written notice, in English and Spanish, on or near the encampment stating: the date and time the notice was posted; the

date and time by which the individual is required to vacate the area, which shall be not less than seventy-two hours after the date and time notice was posted; contact information for outreach providers and shelter alternatives; that the encampment is subject to removal and cleanup; where personal property will be stored if removed by the City; and how personal property may be claimed by its owner.

ii. The FCS Designee shall make a record of such notice as described in Section XIII.

B. If individuals are present and the encampment is not an immediate hazard or obstruction:

i. The FCS Designee shall give verbal and written notice to the individuals that the encampment is subject to removal. The written notice shall contain the same information required in Section VIIA.

ii. The FCS Designee shall make a record of such notice as described in Section XIII.

VIII. Encampment Outreach

A. At the time encampment residents are informed that an encampment is an immediate hazard or obstruction, or at the time notice is posted, FCS Designee shall engage encampment residents and assess their basic needs. The FCS Designee shall attempt to educate encampment residents regarding resources, and provide basic referral information to such resources, including but not limited to meals, showers and bathroom facilities, emergency shelter, medical services and supportive housing programs.

B. Before the encampment is removed, the FCS or ACS Designee shall take reasonable steps to determine if there is shelter space available for the encampment resident(s) that meets the definition in Section IIA.

C. For all encampments that are not an immediate hazard or obstruction, FCS shall refer the encampment to the ACS Designee or personnel using a shared database. The ACS Designee shall conduct outreach to the encampment residents in accordance with ACS protocol.

D. The FCS Designee or ACS Designee shall assess whether removing the encampment will disrupt the encampment resident's current connection to services. If so the FCS Designee or ACS Designee shall take steps to mitigate that impact.

E. For the removal of encampments that constitute an immediate hazard or obstruction, the FCS Designee shall contact ACS Designee to see if an outreach specialist is immediately available to conduct outreach prior to the encampment removal. If an ACS Designee is not available, FCS Designee may proceed with the removal of the encampment after providing information about resources as described in Section VIIA.

F. To effectively communicate with those experiencing homelessness and providers who assist with long term care, ACS will provide community outreach and provide updates on policy or personnel changes (i.e. new employees) Outreach and education efforts include:

   i. Staff and leadership will regularly meet and work with local community organizations, providers and those experiencing homelessness.

   ii. The Community Safety Department will also solicit input from community and its representatives through facilitations and surveys.

IX. Encampment Removal & Site Clean-Up

A. Encampments that are not an immediate hazard or obstruction shall not be removed without the required notice provisions and verifying whether available emergency shelter beds exist in the community. After these steps have been completed, if the encampment is still present, the City may initiate removal of the encampment.

B. Except for an immediate hazard or obstruction, the FCS or ACS Designee shall take reasonable steps to confirm whether available emergency shelter beds exist that meet the definition in Section IIA prior to any enforcement action, including removal of an encampment. The FCS or ACS Designee shall use their observations of the encampment resident(s) and information reported by the encampment resident(s) to make this determination, including to determine whether there is a shelter bed that can reasonably accommodate the individual's mental or physical needs or disabilities. If available emergency shelter beds do not exist, the FCS Designee shall not require the removal of the encampment. If available emergency shelter beds do exist, FCS or ACS Designee shall inform the individuals where beds are available and provide contact information. A network of emergency shelter beds exists in Albuquerque, including the Westside Emergency Housing Center (WEHC). The following website may be accessed which has contact information in order to confirm the availability of beds at the WEHC: https://www.cabq.gov/family/services/homeless-services/westside-emergency-housing-center. If the WEHC cannot be considered "an available emergency shelter bed" for the encampment resident, FCS Designee and/or ACS Designee shall work to identify an alternative available emergency shelter bed.

C. If persons are present at the encampment when FCS Designee return to the site after the period specified in the written removal notice has expired:

   i. FCS Designee shall work collaboratively with such persons to allow time for them to collect and remove their own personal property and to identify and offer to store any personal property.

   ii. The FCS Designee shall educate encampment resident regarding resources, and provide basic referral information to such resources, including but not limited to meals, showers and bathroom facilities, emergency shelter, medical services and supportive housing programs.

   iii. All trash or debris that are in the immediate area of the encampment may be removed and disposed of immediately.

iv. As part of the removal of any trash and/or debris, the City shall not destroy any materials of apparent value which appear to be the personal property of any individual.

v. Personal property and special personal property shall be collected and stored as described in Section X.

vi. The FCS Designee shall be responsible for identifying what is personal property, special personal property and trash or debris.

vii. If any personal property or special personal property is stored, FCS designee shall provide written notice indicating where the property has been stored and how to retrieve the property.

D. If persons are not present at the encampment when FCS Designee return to the site after the period specified in the written removal notice has expired:

i. The City shall take reasonable steps to identify and coordinate with appropriate responsible agencies to preserve personal property, provided that doing so does not pose a danger to the City Employees present. Lost or abandoned personal property shall be handled according to Section X of this policy.

ii. All trash or debris that are in the immediate area of the encampment may be removed and disposed of immediately.

iii. As part of the removal of any trash and/or debris, the City shall not destroy any materials of apparent value which appear to be the personal property of any individual.

iv. Personal property and special personal property shall be collected and stored as described in Section X.

v. The FCS Designee shall be responsible for identifying what is personal property, special personal property and trash or debris.

vi. If any personal property or special personal property is stored, FCS designee shall provide written notice indicating where the property has been stored and how to retrieve the property.

E. The FCS Designee shall work with the appropriate City department or other entity to clean the area where the encampment was located. When the Department of Solid Waste is the appropriate City department, the FCS Designee shall notify the Department of Solid Waste in writing with the location of the encampment prior to any site cleanup as well as the time for notice.

F. Whenever possible, City staff shall work collaboratively with residents of an encampment to clean up the area where an encampment is located.

X. Lost or Abandoned Property

A. Personal property collected by the City shall be stored for ninety (90) days without charge, during which time said property shall be available to be reclaimed by the subject owner. After the expiration of ninety (90) days, any unclaimed property will be destroyed.

B. Special personal property shall be in a designated area, in order to make it easier for encampment residents to retrieve these items.

C. The FCS Designee shall determine whether an item is personal property and whether it is lost or abandoned. In the case of lost or abandoned property, the FCS designee shall attach a written notice where the encampment was located indicating that personal property has been stored and how to retrieve the property.

D. Written notice will be given to the individual instructing them how to claim their property.

E. The Solid Waste Department shall dispose of any items that have been unclaimed for 90 days.

F. This portion of the Encampment Policy regarding lost or abandoned property shall not go into effect until the City has established a process for transporting, storing and returning personal property.

XI. Coordination with APD

A. DFCS and ACS Designees may request APD assistance at any point if the Designee believes it is necessary. This may include, but is not limited to, situations in which the resident(s) of the encampment refuses to cooperate with the removal of the encampment after the appropriate notice period has passed or threatens the safety and security of the Designee.

B. APD shall comply with all relevant standard operating procedures when responding to such requests.

XII. Training

A. At minimum the FCS and ACS Designees who are City employees shall receive training in accordance with City policies, which as of the date of the adoption of this policy addresses the following areas:

i. Best practices for working with people experiencing homelessness, such as motivational interviewing, trauma informed care and harm reduction

ii. Brain injury and dementia symptoms

iii. Crisis Intervention Training

iv. Cultural sensitivity

v. De-escalation training

vi. Encampment Policy, including how and when to apply the terms “immediate hazard” and “obstruction”

vii. Field safety, including situational awareness, traffic safety and safe handling/disposal of sharps

viii. CPR, first aid and responding to medical emergencies

ix. Mental health training, including mental health first aid and mental health laws

x. Substance abuse training, including overdose prevention/reversal and substance abuse symptoms

xi. Resources available to help people experiencing homelessness

xii. VI-SPDAT/Coordinated Entry System

xiii. Wellness Check (Albuquerque Fire and Rescue)

B. The Community Safety Department and FCS are committed to providing a variety of techniques and best practices for working with community and individuals experiencing homelessness. ACS and FCS Designees that address encampments and are City employees will receive training within 6 months of commencement of employment and annually as needed.

XIII. Record Keeping

A. FCS and ACS Designees will use their best efforts to maintain a written record of every encounter with a homeless encampment by means of the following variables:

i. Priority level of the encampment as described in Section IV

ii. Location of the encampment;

iii. Approximate number of residents;

iv. Date initial contact was made;

v. Date notice was given and the date notice expired;

vi. Date the encampment was removed and the site was cleaned;

vii. Whether the encampment was an immediate hazard or obstruction;

viii. Why an encampment was deemed an immediate hazard or obstruction,

ix. What resources the encampment residents were referred to or received information about.

x. Whether outreach has occurred at the encampment

xi. Whether available shelter beds exist for encampment residents

B. The City shall utilize a common database to record this information

C. The City of Albuquerque will periodically assess the need for changes to this Policy. Every year, FCS and ACS will evaluate the Policy for completeness and effectiveness and recommend updates as necessary. The evaluation will include identification of any problem areas and development of corrective action strategies. Elements of the evaluation will include:

i. Number of encampments reported;

ii. Assessment of personnel needs to determine if additional services or materials or supplies should be provided.

iii. Solicitation and review of feedback from City employees and community stakeholders

iv. Assessment of whether FCS and ACS staff adequately understand encampment policies and procedures and how to carry them out;

v. Assessment of whether encampment residents were connected to resources and services

vi. Assessment of whether priority 1 immediate hazards or obstructions were properly identified.

D. FCS and ACS will provide an annual report of the data required to be gathered under this Policy to the Chief Administrative Officer and make the report publicly available on the City's website.

XIV. Grievance Process

A. If an encampment occupant believes that an FCS Designee, ACS Designee or other City employee did not adhere to this policy when addressing an encampment, the occupant and/or his/her representative may submit a grievance.

B. Grievances may be submitted in writing to: Deputy Director of Homelessness, Department of Family & Community Services, PO Box 1293, Albuquerque, NM 87103.

C. The grievance should contain contact information, date of incident and description of the problem.

D. The formal complaint should be submitted by the grievant and/or his/her representative as soon as possible but no later than 45 days after the alleged violation.

E. The Deputy Director of Homelessness or their designee shall respond to grievances in writing within 45 days. The Deputy Director of Homelessness may refer the

grievance to one or more other departments, including without limitation ACS or APD, whose shall respond to any referred grievance within 14 days of receiving the referral. The written response shall indicate whether, after an investigation, the grievance has been substantiated, dismissed, or if more time is needed to complete the investigation. Regardless of the findings, a written explanation as to why or why not the grievance was substantiated should be included in the response.

F. All written grievances received by the Deputy Director of Homelessness and responses will be retained by the City of Albuquerque for at least one year.

APPENDIX F

Draft EA Public Notice

FEMA PUBLIC NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL ASSESSMENT
CITY OF ALBUQUERQUE
RIO GRANDE BOSQUE WILDFIRE MITIGATION PROJECT
BERNALILLO COUNTY, NEW MEXICO
HMGP-5184-0004-NM

Interested persons are hereby notified that the City of Albuquerque has applied to the Federal Emergency Management Agency (FEMA), through the New Mexico Department of Homeland Security and Emergency Management for Hazard Mitigation Grant Program (HMGP) funding under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. FEMA's Hazard Mitigation Grant Program provides grants to states and local governments to implement long-term hazard mitigation measures that reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. In accordance with 44 CFR Part 9.8(b)(2),this notice also serves as FEMA's initial public notice under Executive Order (EO) 11988 for Floodplain Management and EO 11990 for Protection of Wetlands, as the portion of the proposed action is taking place in the 100-year floodplain and wetlands.

FEMA proposes to provide funding to the City of Albuquerque to reduce the threat of wildfires that could be ignited in the Rio Grande bosque, either through human or natural ignition sources, to protect life and property within and surrounding the Rio Grande State Park. Under the Proposed Action Alternative, City of Albuquerque proposes to conduct wildfire mitigation treatments on approximately 470 acres within the 4,027-acre Rio Grande Valley State Park over the next several years. The project area includes portions of the bosque (riparian habitat) adjacent to the Rio Grande. The project encompasses 3.1 river miles on the east and west sides of levees and riverside drains managed by the Middle Rio Grande Conservancy District (MRGCD). The land within the project area is managed by the City.

Mitigation treatments would focus on clearing downed woody debris piles, hand thinning the understory, removing noxious and invasive weeds, applying herbicide, and potentially replanting native species, as conditions warrant. The treatments would be aimed at reducing hazardous fuel loads across the project area to minimize the fire hazard risk. The Proposed Action is designed to provide a range of treatment methods that could be used to achieve a reduction in wildfire threat in the bosque. The proposed tools may be used on any given location depending on the characteristics of the specific treatment site, such as vegetation type, topography, presence of federally listed species, etc. The specific fuel reduction treatments include removal of all downed timber greater than 6-inches in diameter that are contributing to ladder fuels, removal of nonnative trees and shrubs, and all stumps or stubs from the mechanized removal of shrub or tree species will be low, flat, and flush with the ground. No felling of any standing live/dead native trees within the project area, chipping and/or removal of all woody material deemed to be hazardous fuels, chipping and dispersal of all materials within the project boundary to the extent possible, and if necessary, removal of materials to an off-site location. Spot spraying following initial treatment to ensure effective nonnative fuels control.

A draft EA has been prepared to assess the potential impacts of the proposed action and alternatives on the human and natural environment in accordance with the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500 – 1508), FEMA's Instruction 108-1-1 for implementing NEPA, the National Historic Preservation Act, Executive Order 11988, Executive Order 11990, and 44 CFR Part 9. The draft EA 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 EA is available for review and comment at the ABQ BioPark Botanic Garden/Aquarium Administrative Office at 2601 Central NW, Albuquerque, New Mexico 87104, Monday-Friday, 9-5 pm. An electronic version of the draft EA can be requested from Omololu Dawodu, FEMA Region 6, at omololu.dawodu@fema.dhs.gov or viewed on FEMA's website at *https://www.fema.gov/emergency-managers/practitioners/environmental-historic/region/6.*

The comment period will end 30 days from the initial notice publication date on May 23, 2022. Written comments on the draft EA can be mailed or emailed to Omololu Dawodu, Environmental protection Specialist, FEMA Region 6, 800 N Loop 288, Denton, TX 76209; Email: omololu.dawodu@fema.dhs.gov.

If no substantive comments are received, the draft EA 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.

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO

County of Bernalillo SS

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David Montoya, the undersigned, authorized Representative of the Albuquerque Journal, on oath states that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, that payment therefore has been made of assessed as court cost; and that the notice, copy of which is hereto attached, was published in said paper in the regular daily edition, for 2 time(s) on the following date(s):

05/23/2022, 06/06/2022

OFFICIAL SEAL
Phyllis A. Santora
NOTARY PUBLIC - State of New Mexico
My Commission Expires 7-19-2022

David Montoya

Phyllis A. Santora

Sworn and subscribed before me, a Notary Public, in and for the County of Bernalillo and State of New Mexico this 6 day of June of 2022

PRICE $426.32

Statement to come at the end of month.

ACCOUNT NUMBER 1021588

of shrub or tree species will be low, flat, and flush with the ground. No felling of any standing live/dead native trees within the project area, chipping and/or removal of all woody material deemed to be hazardous fuels, chipping and dispersal of all materials within the project boundary to the extent possible, and if necessary, removal of materials to an off-site location. Spot spraying following initial treatment to ensure effective non-native fuels control.

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Journal: May 23, June 6, 2022

FEMA PUBLIC NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL ASSESSMENT
CITY OF ALBUQUERQUE
RIO GRANDE BOSQUE WILDFIRE MITIGATION PROJECT
BERNALILLO COUNTY, NEW MEXICO
HMGP-5184-0004-NM

Interested persons are hereby notified that the City of Albuquerque has applied to the Federal Emergency Management Agency (FEMA), through the New Mexico Department of Homeland Security and Emergency Management for Hazard Mitigation Grant Program (HMGP) funding under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. FEMA's Hazard Mitigation Grant Program provides grants to states and local governments to implement long-term hazard mitigation measures that reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. In accordance with 44 CFR Part 9.8(b)(2),this notice also serves as FEMA's initial public notice under Executive Order (EO) 11988 for Floodplain Management and EO 11990 for Protection of Wetlands, as the portion of the proposed action is taking place in the 100-year floodplain and wetlands.

FEMA proposes to provide funding to the City of Albuquerque to reduce the threat of wildfires that could be ignited in the Rio Grande bosque, either through human or natural ignition sources, to protect life and property within and surrounding the Rio Grande State Park. Under the Proposed Action Alternative, City of Albuquerque proposes to conduct wildfire mitigation treatments on approximately 470 acres within the 4,027-acre Rio Grande Valley State Park over the next several years. The project area includes portions of the bosque (riparian habitat) adjacent to the Rio Grande. The project encompasses 3.1 river miles on the east and west sides of levees and riverside drains managed by the Middle Rio Grande Conservancy District (MRGCD). The land within the project area is managed by the City.

Mitigation treatments would focus on clearing downed woody debris piles, hand thinning the understory, removing noxious and invasive weeds, applying herbicide, and potentially replanting native species, as conditions warrant. The treatments would be aimed at reducing hazardous fuel loads across the project area to minimize the fire hazard risk. The Proposed Action is designed to provide a range of treatment methods that could be used to achieve a reduction in wildfire threat in the bosque. The proposed tools may be used on any given location depending on the characteristics of the specific treatment site, such as vegetation type, topography, presence of federally listed species, etc. The specific fuel reduction treatments include removal of all downed timber greater than 6-inches in diameter that are contributing to ladder fuels, removal of nonnative trees and shrubs, and all stumps or stubs from the mechanized removal of shrub or tree species will be low, flat, and flush with the ground. No felling of any standing live/dead native trees within the project area, chipping and/or removal of all woody material deemed to be hazardous fuels, chipping and dispersal of all materials within the project boundary to the extent possible, and if necessary, removal of materials to an off-site location. Spot spraying following initial treatment to ensure effective non-native fuels control.

A draft EA has been prepared to assess the potential impacts of the proposed action and alternatives on the human and natural environment in accordance with the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500 – 1508), FEMA's Instruction 108-1-1 for implementing NEPA, the National Historic Preservation Act, Executive Order 11988, Executive Order 11990, and 44 CFR Part 9. The draft EA 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 EA is available for review and comment at the ABQ BioPark Botanic Garden/Aquarium Administrative Office at 2601 Central NW, Albuquerque, New Mexico 87104, Monday–Friday, 9-5 pm. An electronic version of the draft EA can be requested from Omololu Dawodu, FEMA Region 6, at omololu.dawodu@fema.dhs.gov or viewed on FEMA's website at https://www.fema.gov/emergency-managers/practitioners/environmental-historic/region/6.

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Journal: May 23, June 6, 2022

VIT OF PUBLICATION

NEW MEXICO

nalillo SS

the undersigned, authorized Representative of the Albuquerque Journal, on oath hewspaper is duly qualified to publish legal notices or advertisements within the on 3, Chapter 167, Session Laws of 1937, that payment therefore has been made court cost; and that the notice, copy of which is hereto attached, was published in egular daily edition, for 2 time(s) on the following date(s):

)6/2022

vid Montoya

OFFICIAL SEAL
Phyllis A. Santora
NOTARY PUBLIC - State of New Mexico
My Commission Expires 7-19-2022
Phyllis A. Santora

oscribed before me, a Notary Public, in and f Bernalillo and State of New Mexico this

June of 2022

426.32

me at the end of month.

MBER 1021588

APPENDIX G

Finding of No Significant Impact (FONSI)

U. S. Department of Homeland Security
FEMA Region 6
800 North Loop 288
Denton, TX 76209

FINDING OF NO SIGNIFICANT IMPACT
CITY OF ALBUQUERQUE
RIO GRANDE BOSQUE WILDFIRE MITIGATION PROJECT
BERNALILLO COUNTY, NEW MEXICO
HMGP-5184-0004-NM

BACKGROUND

In accordance with the Federal Emergency Management Agency's (FEMA) Instruction 108-1-1, an Environmental Assessment (EA) has been prepared 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 the project is to reduce the threat of wildfires that could be ignited in the Rio Grande bosque, either through human or natural ignition sources, to protect life and property within and surrounding the Rio Grande State Park. This EA informed FEMA's decision on whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

The City of Albuquerque (City) has applied for Hazard Mitigation Grant Program (HMGP) funding, through the New Mexico Department of Homeland Security and Emergency Management (NMDHSEM), under HMGP-5184-0004-NM, for wildfire mitigation in Bernalillo County. Through HMGP, FEMA provides grants to states and local governments to implement long-term hazard mitigation measures, including wildfire mitigation. The purpose of HMGP is to reduce the loss of life and property due to natural disasters and enable mitigation measures to be implemented during the immediate recovery from a disaster. HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

Two project alternatives were considered in this EA: 1) No Action and 2) Proposed Action (Implementation of wildfire mitigation treatments within the Rio Grande Valley State Park). Under the No Action alternative, no work would be conducted to reduce wildfire fuel loads in the target areas identified in the Rio Grande bosque. Fuel reduction activities would not be implemented within the bosque, and the existing fuel load within the project area would not be reduced. The current level of wildfire risk would persist. Nonnative vegetation would continue to thrive in the current condition. The No Action Alternative provides a baseline for comparison in determining the environmental effects of the Proposed Action. Under the No Action Alternative, FEMA would not provide funding to reduce wildfire fuel loads in the target areas identified in the Rio Grande bosque.

Under the Proposed Action Alternative, the City of Albuquerque proposes to conduct wildfire mitigation treatments on approximately 470 acres within the 4,027-acre Rio Grande Valley State Park over the next several years to meet project objectives. The project area includes portions of the bosque (riparian habitat) adjacent to the Rio Grande and exists within the Rio Grande Valley State Park, a cottonwood forest. The project encompasses 3.1 river miles on the east and west sides of levees and riverside drains managed by the Middle Rio Grande Conservancy District (MRGCD). The land within the project area is managed by the City.

Mitigation treatments would focus on clearing downed woody debris piles, hand thinning the understory, removing noxious and invasive weeds, applying herbicide, and potentially replanting native species, as conditions warrant. The treatments would be aimed at reducing hazardous fuel loads across the project area to minimize the fire hazard risk. The Proposed Action is designed to provide a range of treatment methods (also referred to as tools) that could be used to achieve a reduction in wildfire threat in the bosque. The proposed tools may be used on any given location depending on the characteristics of the specific treatment site, such as vegetation type, topography, presence of federally listed species, etc. This approach provides flexibility and would allow implementation of specific design elements from a broader Proposed Action, where the design elements vary according to a range of on-the-ground conditions to minimize fire hazard risk.

The specific fuel reduction treatments include removal of all downed timber greater than 6-inches in diameter that are contributing to ladder fuels, removal of nonnative trees and shrubs, and all stumps or stubs from the mechanized removal of shrub or tree species will be low, flat, and flush with the ground. No felling of any standing live/dead native trees within the project area, chipping and/or removal of all woody material deemed to be hazardous fuels, chipping and dispersal of all materials within the project boundary to the extent possible, and if necessary, removal of materials to an off-site location. Spot spraying following initial treatment to ensure effective nonnative fuels control. The target noxious weeds for removal would include ravenna grass (*Saccharum ravennae*), Siberian elm (*Ulmus pumila*), saltcedar (*Tamarix spp.*) and tree of heaven (*Ailanthus altissima*).

A public notice was posted in the *Albuquerque Journal* and on FEMA's website. The draft EA was made available for public comment at the ABQ BioPark Botanic Garden/Aquarium Administrative Office at 2601 Central NW, Albuquerque, New Mexico 87104, and on FEMA's website for 30 days. On June 21, 2022, FEMA received comments on the draft EA from the State of New Mexico Department of Game and Fish (NMDGF) related to surveys for migratory bird species, removal of non-native species, planting of native species, and prior input they had provided on the proposed project. The Final EA and FONSI were revised to address NMDGF concerns related to native plantings and migratory bird surveys during project implementation.

FINDING OF NO SIGNIFICANT IMPACT

The Proposed Action as described in the EA will not significantly adversely impact physiography, geology, hydrology, water depletions, floodplains, historic properties, or tribal resources. During project activities, short-term, minor impacts to soils, air quality, water quality, wetlands, vegetation, fish and wildlife, migratory birds, bald and golden eagles, land use and recreation, environmental justice communities, visual resources, and traffic and noise are anticipated. Long-term beneficial impacts to climate change, fish and wildlife, land use and recreation, environmental justice communities, and public health and safety are expected. The project may affect, but is unlikely to adversely affect, the southwestern willow flycatcher and the yellow-billed cuckoo. There would be no impacts to critical habitat. All adverse impacts require conditions to minimize and mitigate impacts to the proposed project site and surrounding areas.

CONDITIONS

The following conditions must be met as part of this project. Failure to comply with these conditions may jeopardize the receipt of federal funding.

Soils, Water, and Vegetation Resources

1. Off-road use of wheeled equipment will occur only during times when soils are dry to minimize soil compaction, soil displacement, and rutting and erosion.
2. Non-City vehicles and equipment will be cleaned of soil and debris capable of transporting weed seed prior to beginning work in the bosque to prevent the spread of noxious weeds.
3. No chipped materials will be dispersed into water bodies, and no trees will be felled into water bodies.
4. Work conducted within 200 feet of potential waters of the U.S. (WOTUS) will be restricted to hand cutting and hand hauling debris. No mulch will be placed in WOTUS.
5. No wheeled equipment will be allowed within a 100-foot buffer zone of potential WOTUS, including the Rio Grande, to mitigate disturbance of riparian and wetland vegetation, protect soils from compaction and other disturbances, and protect water quality.
6. To avoid any potential impacts to aquatic habitats, all fuels, hydraulic fluids, and other hazardous materials will be stored outside the normal floodplain. No equipment refueling will take place within 100 feet of any water feature, wetted or dried. Equipment will be parked at predetermined locations on high ground overnight. If a spill occurs during implementation activities, the City and USFWS will be immediately notified.
7. Spill kits will be on hand at all times to manage unanticipated spills of materials from equipment. Designated personnel will be trained in spill prevention, and spill cleanup will be on-site during all implementation activities. A spill kit will be maintained on-site with spill pans, containment diapers, oil booms, absorbent pads, oil mats, plastic bags, gloves, and goggles.

8. Prior to leaving contractor facilities, all equipment will be thoroughly inspected, and any leaky or damaged hydraulic hoses will be replaced. At the project area, crews will inspect equipment for leaks regularly and make repairs immediately if leaks are detected.
9. The contractor and their personnel will be briefed and a responsible party will sign off on local environmental considerations specific to the Proposed Project tasks.
10. Local fire hydrants will be sourced for dust suppression water. Native water will not be taken from the river or irrigation drains.
11. The accumulation of chipped materials will be limited to an average maximum of 2 inches deep and no greater than 4 inches deep in any one spot and spread evenly throughout the treatment area. This will allow for grasses and other ground vegetation to grow up through the shredded woody mulch and help retain ground moisture.
12. Herbicides will be applied with prescribed environmental conditions stated on the herbicide label. This includes label instructions required by the EPA pertaining to wind speed, relative humidity, water, air temperature, chemical persistence, and time since last rainfall when determining timing of application in relation to drift reduction.
13. Herbicide use will be restricted to EPA- and New Mexico Department of Agriculture (NMDA)-registered application rates (usually in terms of pound of active ingredient applied per acre) and conditions listed on the label. Follow-up application of a second herbicide to an area will be conducted only after reviewing best available information on compatibility with the previous application's formulation.
14. Areas used for mixing herbicides and cleaning equipment will be located where spillage will not run into surface waters or result in groundwater contamination and will adhere to the other RMPs listed in the spill prevention, control, and containment plan.
15. A pesticide application record will be completed on a daily basis for each treatment area detailing the herbicide application, treatment area, target species distribution and density, weather conditions, and recommendations for follow-up treatments or rehabilitation.

Wetlands and Floodplain Resources

1. The City of Albuquerque will 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.
2. The City of Albuquerque must issue a final public notice per 44 CFR Part 9.12(e) at least 15 days prior to the start of work. The final notice shall include the following: (1) A statement of why the proposed action must be located in an area affecting or affected by a floodplain or a wetland; (2) A description of all significant facts considered in making this determination; (3) A list of the alternatives considered; (4) A statement indicating whether the action conforms to applicable state and local floodplain protection standards; (5) A statement indicating how the action affects or is affected by the floodplain and/or wetland, and how mitigation is to be achieved; (6) Identification of the responsible official or organization for implementation and monitoring of the proposed action, and from whom further information can be obtained; and (7) A map of the area or a statement

that such map is available for public inspection, including the location at which such map may be inspected and a telephone number to call for information.

Air Resources

1. Vehicle speed on levee roads will be limited to 15 mph, which will also minimize dust.
2. All vehicles involved in implementation will be required to have passed a current New Mexico emissions test and have required emission control equipment.

Wildlife Resources

1. For those treatments implemented between April 15 and September 1, FEMA and the City commit to conducting protocol surveys for southwestern willow flycatcher (and yellow-billed cuckoo, if work extends past June 1). Should an active flycatcher or cuckoo nest be found within the project area, construction will cease within a 1-mile buffer of the active nest until the nest is no longer active. If an active nest is observed during work activities, the USFWS biologist must be contacted immediately.
2. No burning of piles of removed vegetation will be conducted.
3. To prevent impacts to migratory bird species, any vegetation removal during the breeding season (April 15– September 1) would be preceded by a pre-treatment nesting survey up to 2 weeks prior to vegetation removal to identify active nests within the treatment unit or adjacent treatment units. An avoidance buffer around each active nest would be implemented until the end of the nesting season or until the nestlings have fledged. The buffer size may vary by species but would be no less than 100 feet.

Cultural and Historic Resources

1. For cultural resource sites LA 127144, LA 138859, and LA 145193, the boundaries of the site plus a 25-foot buffer will be subjected to hand and mechanical treatments only, with no use of heavy equipment. Woody material will be hand removed and treated outside the boundary. The City of Albuquerque will ensure the treatment crews were briefed on the specific treatment measures allowed within the site boundary.
2. For cultural resource sites LA 159913, HCPI 31263, and HCPI 43875, no wildfire mitigation treatments will occur in the banks or within the irrigation drain.
3. If intact, buried cultural deposits are discovered during project construction activities, the following requirements will apply:
    a. Upon notification by a subrecipient of an unexpected discovery, or if it appears that an undertaking has affected a previously unidentified property or affected a known historic property in an unanticipated manner, in accordance with Stipulation I.B.3(e), Recipient(s) Roles and Responsibilities, the recipient(s) will immediately notify FEMA and require the subrecipient to:
        1. Stop construction activities in the vicinity of the discovery.
        2. Take all reasonable measures to avoid or minimize harm to the property until FEMA has completed consultation with the State Historic Preservation Office (SHPO), appropriate tribe(s), and any other consulting parties. Upon notification by the recipient of a

discovery, FEMA must immediately notify the SHPO, appropriate tribe(s), and other consulting parties that may have an interest in the discovery, previously unidentified property, or unexpected effects, and consult to evaluate the discovery for National Register of Historic Places (NRHP) eligibility and/or the effects of the undertaking on historic properties.

Public Health and Safety

1. Personnel and public safety will be the highest priority when implementing thinning activities.
2. To minimize potential occupational safety and health risks, the treatment crew members will be required to wear appropriate personal protective equipment and be properly trained for the work being performed, including applicable forest safety certification(s) or forest safety training(s).
3. Temporary signage, press releases, and online public notices will be used to notify the public of trail closure during treatment implementation.
4. The homeless encampments will be removed by the City prior to treatment implementation. According to the City's *Policy for responding to encampments on public property* (Appendix E), the City will be required to engage with its residents, provide notice of removal, and offer assistance prior to initiating encampment removal.
5. All waste material associated with the project must be disposed of properly and not placed in identified floodway or wetland areas or in habitat for species listed under the Endangered Species Act.
6. The public will be notified of upcoming thinning projects through press releases, signs posted in the area, and updates posted on the City's website.
7. To minimize noise disturbance impacts, implementation activities will be limited to occur between the hours of 7 a.m. to 6 p.m., and all equipment and machinery used will meet all applicable local, state, and federal noise control regulations.
8. All Occupational Safety and Health Administration (OSHA) and local municipality noise control ordinance requirements (as described in Section 4.9.3) will be adhered to.
9. Vehicle and equipment running times will be minimized, and engines will be properly maintained.

CONCLUSION

Based on the findings of the EA, coordination with the appropriate agencies, comments from the public, 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 EA may proceed.

APPROVAL AND ENDORSEMENT

KEVIN R JAYNES
Digitally signed by KEVIN R JAYNES
Date: 2022.07.12 08:12:46 -05'00'

Kevin Jaynes
Regional Environmental Officer
FEMA Region 6

BRIANNE M SCHMIDTKE
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Brianne Schmidtke
Hazard Mitigation Assistance Branch Chief
FEMA Region 6