CAPITOL DOME ABANDONED MINES SAFEGUARDING PROJECT

Luna County, New Mexico

e-AMLIS Problem Area: Capitol Dome - NM935069

ENVIRONMENTAL ASSESSMENT

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Reviewed by: Michael W. Thompson, AML Program Manager

Date: April 15, 2025

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LIST OF ACRONYMS

ACEC	Area of Critical Environmental Concern
AIRFA	American Indian Religious Freedom Act
AML	Abandoned Mine Land
AMLP	Abandoned Mine Land Program
APE	Area of Potential Effect
ARPA	Archaeological Resources Protection Act
BA/BE	Biological Assessment/Biological Evaluation
BISON-M	Biota Information System of New Mexico
BLM	DOI Bureau of Land Management
BMP	Best Management Practices
CAA	Clean Air Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
e-AMLIS	Enhanced Abandoned Mine Land Inventory System
EA	Environmental Assessment
EMNRD	Energy, Minerals, and Natural Resources Department
EPA	Environmental Protection Agency
ERMA	Extensive Recreation Management Areas
ESA	Endangered Species Act
EO	Executive Order
FONSI	Finding of No Significant Impact
FUDS	Formerly Used Defense Sites
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
NAGPRA	Native American Graves Protection and Repatriation Act
NAA	No Action Alternative
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMAC	New Mexico Administrative Code
NMDA	New Mexico Department of Agriculture
NMDGF	New Mexico Department of Game and Fish
NMED	New Mexico Environment Department
NMOSE	New Mexico Office of the State Engineer
NMRPTC	New Mexico Rare Plant Technical Council
NMSLO	New Mexico State Land Office
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OMI	Office of the Medical Investigator
OSMRE	Office of Surface Mining Reclamation and Enforcement
PA	Proposed Action
PUF	Polyurethane Foam
RMPs	Resource Management Plans
SHPO	State Historic Preservation Office
SMCRA	Surface Mining Control and Reclamation Act
SQRU	Scenic Quality Rating Unit
SRMA	Special Recreation Management Areas
USACE	United States Army Corps of Engineers
DOI	United States Department of the Interior
UNM	University of New Mexico
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VRI	Visual Resource Inventory
VRM	Visual Resource Management
WSA	Wilderness Study Area

1. INTRODUCTION

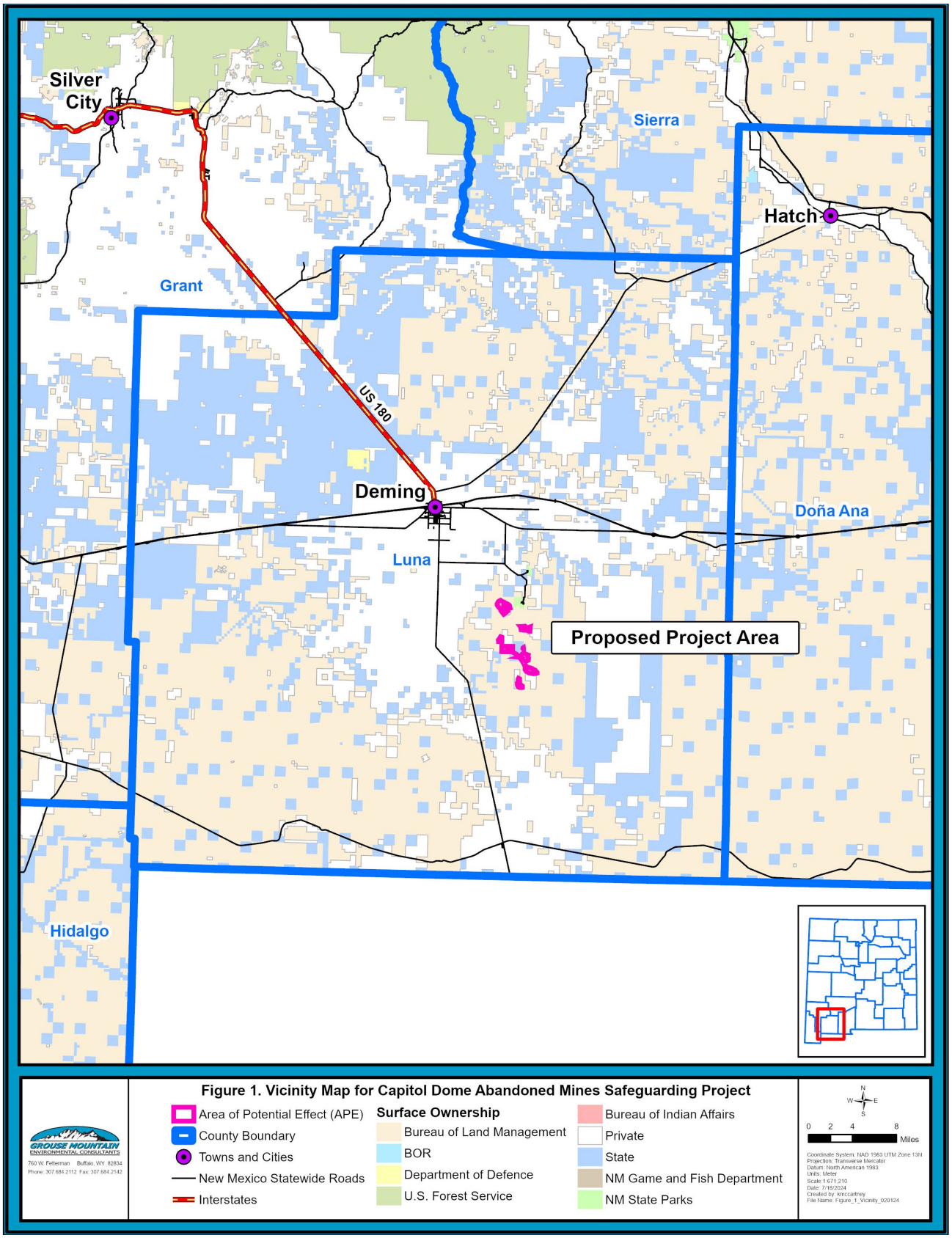
The New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Abandoned Mine Land (AML) Program, in partnership with the United States Department of Interior (DOI) Office of Surface Mining Reclamation and Enforcement (OSMRE) and DOI Bureau of Land Management (BLM), are proposing to safeguard approximately 100+ hazardous abandoned mine openings/features throughout 1,653 acres in the Florida Mountains Mining District located within Luna County, New Mexico (Figure 1; Figure 2).

Safeguarding activities would utilize a variety of methods, including manually or mechanically filling mine openings with surrounding waste material or polyurethane foam (PUF), and building structural barriers that restrict human ingress, such as locking gates, cupolas, high-tensile steel mesh coverings, gated culverts, or other wildlife-compatible closures.

1.1 Project History/Background

Many abandoned mine sites and features exist throughout New Mexico and pose a safety and health risk to the public. Past initiatives and legislations have been formulated to aid with closure and rehabilitation of these abandoned mine sites. The NM AML Program and other abandoned mine land programs throughout the nation were formed by the passage of the Surface Mining Control and Reclamation Act (SMCRA) on May 2, 1977; the State of New Mexico and OSMRE signed an agreement in 1981 which created the New Mexico AML Program. Fees collected through the SMCRA from active coal mines are placed in the Abandoned Mine Reclamation Fund, and these monies are utilized to reclaim qualified coal and non-coal mines abandoned prior to 1977. Abandoned mine sites in New Mexico are inventoried and evaluated to determine if they qualify for AML Program funding. Reclamation priorities include: "(1) protection of public health, safety, general welfare, and property from extreme danger of adverse effects of mineral mining and processing practices, (2) protection of public health, safety, general welfare, and property from adverse effects of mineral mining and processing practices, and (3) restoration of eligible land and water resources and the environment previously degraded by adverse effects of mineral mining and processing practices" (Public Law [PL] 95-87, 30 United States Code [USC] 1240(a) 2006).

Mines from the Florida Mining District produced zinc, silver, lead, and gold primarily from 1880-1920. Manganese deposits were located and heavily produced in the mid-1900s. The primary mine features remaining are generally associated with prospecting/mine exploration or mine development (Chronical Heritage 2024). The AML program has conducted previous safeguarding activities in the Florida Mountains under the Bradley Group Mine Reclamation Project (EMNRD-MMD-2012-01) and the Bradley Group Mine Reclamation Project Phase II (DOI-BLM-L000-2014-0050-EA; EMNRD-MMD-2015-09).


Silver City
Sierra
Hatch
Grant
US 180
Deming
Doña Ana
Luna
Proposed Project Area
Hidalgo
Figure 1. Vicinity Map for Capitol Dome Abandoned Mines Safeguarding Project
Area of Potential Effect (APE)
County Boundary
Towns and Cities
New Mexico Statewide Roads
Interstates
Surface Ownership
Bureau of Land Management
BOR
Department of Defence
U.S. Forest Service
Bureau of Indian Affairs
Private
State
NM Game and Fish Department
NM State Parks
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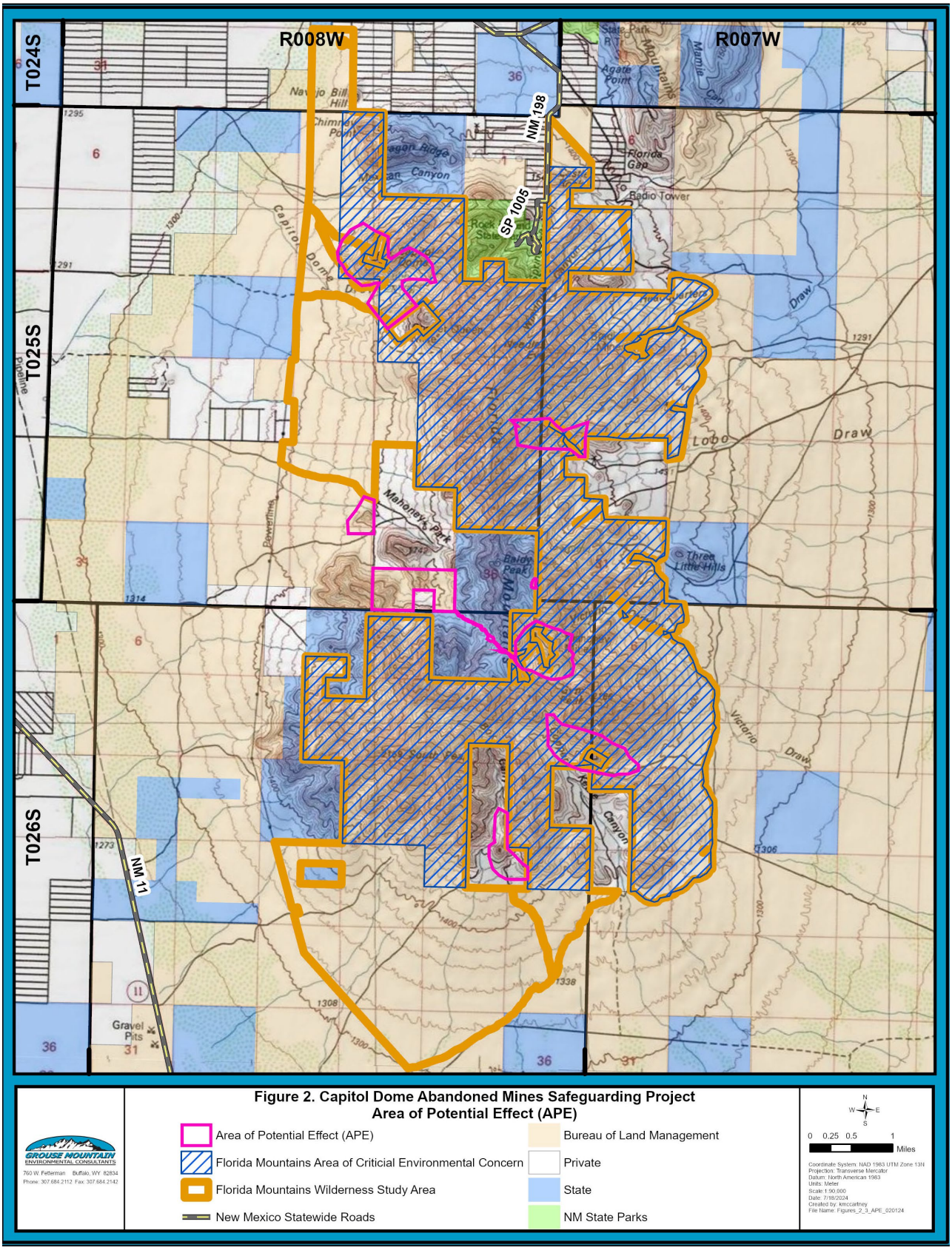
R008W
R007W
T024S
T025S
T026S
NM 198
SP 1005
NM 11
Florida Gap
Radio Tower
Lobo Draw
Victorio Draw
Three Little Hills
Baldy Peak
Mahoney's Park
Gravel Pits
Figure 2. Capitol Dome Abandoned Mines Safeguarding Project
Area of Potential Effect (APE)
Area of Potential Effect (APE)
Florida Mountains Area of Criticial Environmental Concern
Florida Mountains Wilderness Study Area
New Mexico Statewide Roads
Bureau of Land Management
Private
State
NM State Parks
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Miles
Coordinate System: NAD 1983 UTM Zone 13N
Projection: Transverse Mercator
Datum: North American 1983
Units: Meter
Scale: 1:50,000
Date: 7/18/2024
Created by: kmccartney
File Name: Figures_2_3_APE_020124

1.2 Project Location

The area of potential effect (APE) is located in the Florida Mountains of Luna County, New Mexico, approximately 10 miles southeast of Deming, New Mexico (Figure 1). The APE is located within Township 25 South-Range 8 West (T25S-R8W), T26S-R8W, T25S-R7W, and T26S-R7W of the USGS Capitol Dome, South Peak, and Gym Peak 7.5' quadrangles.

The APE is a combination of public land administered by the BLM Las Cruces District Office, privately owned, and state managed land that makes up approximately 1,653 acres (Figure 2). The percentage of surface ownership within the APE includes: 1,438 acres (87 percent) Bureau of Land Management (BLM), 202 acres (12 percent) privately owned and 13 acres (less than 1 percent) New Mexico State Lands Office. Of the 1,438 acres of BLM-owned land within the APE, 1,006 acres are designated as the Florida Mountains Wilderness Study Area (WSA) which also extends to surrounding areas outside of the APE. A larger version of Figure 2 is available on the AML Program website: https://www.emnrd.nm.gov/mmd/public-notices/.

1.3 Purpose and Need for Proposed Action

The purpose of the proposed action is to address human health and safety concerns associated with the hazards of abandoned mines within the Florida mountains, including adits, shafts, subsidence features, and other mine features, while also working to limit disturbance to other resources on state, federal, and private lands. The need for the proposed action is to meet the obligations under the Surface Mining Control and Reclamation Act (SMCRA), by promoting "the reclamation of mined areas left without adequate reclamation and safeguarding…which continue, in their unreclaimed condition, to…endanger the health and safety of the public" (SMCRA §102(h) 1977).

1.4 Project Decision

This EA was prepared on behalf of the AML Program and discloses the environmental consequences of implementing Alternatives A and B. The Office of Surface Mining Reclamation and Enforcement (OSMRE) and the Bureau of Land Management Las Cruces District Office (BLM LCDO) are the joint lead agencies. This EA will be reviewed by land management agencies with jurisdiction and made available to the public for review, comment, and consideration. A Finding of No Significant Impact (FONSI) document will then be prepared by both the OSMRE and the BLM LCDO describing the findings of the analysis in this EA. The OSMRE Denver Field Branch Manager and BLM LCDO District Manager or representative will be the "Deciding Officials" as the signatory of their respective FONSI documents, if applicable.

Decisions regarding the proposed action and alternative will be documented in a decision record, in which the OSMRE and partnering agencies will determine the following:

- Is the analysis contained in this EA adequate for the purposes of reaching an informed decision regarding the proposed action?
- Whether to approve the proposed action or no action alternative.

- Is the proposed action or alternative in conformance with applicable land use and Resource Management Plans (RMP)?
- What terms and conditions are necessary if the proposed action is approved?

1.5 Relevant Statutes and Regulations

The proposed action does not conflict with any known state or local planning or zoning ordinances. All alternatives are required to conform and comply with the following applicable and relevant regulations and statutes:

- American Indian Religious Freedom Act (AIRFA) of 1978 (42 USC 1996)
- Archaeological Resources Protection Act (ARPA) of 1979 (16 USC 470)
- Bald and Golden Eagle Protection Act (BGEPA) of 1978
- Clean Air Act (CAA) of 1970, as amended (42 USC 7401 et seq.)
- Clean Water Act (CWA) of 1972, as amended (33 USC 1251 et seq.)
- Endangered Species Act (ESA) of 1973, as amended (16 USC 1531 et seq.)
- Floodplain Management (EO 11988)
- Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 USC 703–712)
- National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321 et seq.)
- National Historic Preservation Act (NHPA) of 1966 as amended, (54 USC 300101 et seq.; formerly 16 USC 470 et seq.)
- National Pollutant Discharge Elimination System (NPDES), as amended (33 USC 1251 et seq.)
- Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (25 USC 3001 et seq.)
- Protection and Enhancement of the Cultural Environment (EO 11593)
- Protection of Wetlands (EO 11990)
- Regulations for Implementing the Procedural Provisions of National Environmental Policy Act (NEPA) (40 CFR 1500 et seq.)
- Secretarial Order 3206: American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act
- Tackling the Climate Crisis at Home and Abroad (EO 14008)

Executive Order 14154, Unleashing American Energy (Jan. 20, 2025), and a Presidential Memorandum, Ending Illegal Discrimination and Restoring Merit-Based Opportunity (Jan. 21, 2025), require the Department to strictly adhere to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 et seq. Further, such Order and Memorandum repeal Executive Orders 12898 (Feb. 11, 1994) and 14096 (Apr. 21, 2023). Because Executive Orders 12898 and 14096 have been repealed, complying with such Orders is a legal impossibility. The [bureau] verifies that it has complied with the requirements of NEPA, including the Department's regulations and procedures implementing NEPA at 43 C.F.R. Part 46 and Part 516 of the Departmental Manual, consistent with the President's January 2025 Order and Memorandum. The [bureau] has also voluntarily considered the Council on Environmental Quality's rescinded regulations implementing NEPA, previously found at 40 C.F.R. Parts 1500–1508, as guidance to the extent appropriate and consistent with the requirements of NEPA and Executive Order 14154.

1.5.1 Conformance with BLM Resource Management Plan

The proposed action is in conformance with the terms and conditions of the Mimbres RMP (BLM 1993), prepared by the Las Cruces District Office, as required by 43 CFR 1610.5 The purpose of the RMP is to provide guidance to the BLM Las Cruces District Office for management of public lands and resources under BLM jurisdiction within Dona Ana, Luna, Hidalgo, and Grant Counties, New Mexico. As mandated by Federal Land Policy and Management Act of 1976, the RMP is in accordance with multiple use and sustained yield principles.

1.6 Public Involvement

A public scoping meeting was held on February 7, 2024, in Deming, New Mexico. The purpose of the public scoping meeting was to provide an overview of the proposed action and to accept comments and answer questions from the public. Public meeting notices were published in the *Silver City Daily Press and Independent* and *The Deming Headlight* on January 24, 2024. Meeting notices were mailed or emailed to local and state organizations, and a meeting notice was mailed to 1,220 local addresses between January 22-27, 2024. Approximately 14 private citizens attended the meeting, as well as AML Program, BLM, NM State Land Office, and Grouse Mountain representatives. Scoping comments were taken at the meeting as well as by phone and email over an open comment period from February 7 to March 6, 2024 (Appendix A).

The following is a summary of the community's concerns as discussed in the meeting and comment period:

- Initial confusion about the proposed action’s relations to other proposed projects in the area
- General AML Program projects, protocols, and budget
- Traffic
- Protection of wildlife resources
- Effects to hunting
- Preservation of cultural resources
- Protection of springs
- Unexploded ordinances in project area

A final public meeting will be held in Deming, New Mexico, after the Draft EA is posted. Public notice will be published in the *Silver City Daily Press and Independent* and *The Deming Headlight*. Notices will also be mailed to 161 addresses. Comments on the Draft EA will be taken at the meeting as well as by phone and email over an open 30-day comment period.

The Final EA will be published for viewing on the AML Program’s website, BLM’s National Register ePlanning and sent to OSMRE for agency review. OSMRE will be providing a 30-day comment period via the Federal Register.

2. DESCRIPTION OF ALTERNATIVES

Provided below is a description of the two alternatives developed by the AML Program. Included is Alternative A, the Proposed Action and the AML Program's preferred alternative, as well as Alternative B, the No Action Alternative.

2.1 Alternative A, Proposed Action

Within the 1,653-acre APE, there are 210 identified mine features. The mine features are sorted into danger levels designated by the BLM, primarily based on their depth but also related to their vicinity to public access or evidence of use. These ratings are as follows: extreme- 20 to over 100 feet deep; high- 8 to 20 feet deep; moderate- 5 to 8 feet deep; low- less than 5 feet deep; none- features present but not a safety concern. BLM ratings of extreme and high meet the criteria of AML Priority 1 extreme hazards, which pose a threat to public health and safety. Of the 210 features, there are 67 extreme, 29 high, 37 moderate, 62 low, and 15 none. Features proposed for safeguarding and/or reclamation activities fall into categories extreme, high, and moderate. Moderate rated features would only be safeguarded if they present a unique hazard.

Specific safeguarding measures have not been determined/designed for each mine feature within the APE. In general, the AML Program safeguards mine features that descend into the ground surface and are eight feet or greater in depth or length. Safeguarding actions may include mechanical or manual filling of mine openings with surrounding waste material or Polyurethane Foam (PUF), and construction of access barriers to prevent human ingress, such as locking gates, cupolas, high-tensile steel mesh coverings, gated culverts, or other wildlife-compatible closures. In general, structural closures are preferred for this project, due to accessibility issues, sensitive plant species, wildlife habitat, and maintaining the visual integrity of the historic mining district. The amount of hand-back-filling and grading the waste piles would be reduced as much as possible.

Safeguarding measures are designed to preserve cultural resources and wildlife habitat where present. Features identified as suitable bat habitat would be given wildlife-friendly closures. Some features that do not require wildlife-friendly closures may still receive them if they are not accessible by equipment. Mining features filled with existing waste rock or PUF would remain visible as shallow depressions, and residual waste rock material would be recontoured in place. Mining features with large, highly visible waste piles, particularly on steep slopes, would be closed using PUF or by other structural means, to preserve the mining landscape viewshed. Structural closures would be built on site to BLM's Visual Resource Management specifications.

Existing access routes would be used to the greatest extent possible to access the mine features proposed for closure. Backhoes, trucks, and other small equipment would be used to complete project activities. Due to limited access and extreme topography in the APE, helicopters would be used during construction to limit surface disturbance and deliver equipment and materials where needed. Due to funding limitations, it is likely this project would be implemented in phases.

2.1.1 Project Design Features

The following are design features incorporated into the proposed action with the intention to avoid, minimize, or mitigate potential impacts to resources from the proposed action.

Areas of Critical Environmental Concern, Visual Resources, and Wilderness Study Areas

- To preserve the wilderness characteristics (naturalness, outstanding opportunities for solitude and primitive and unconfined recreation, and special features) of the Florida Mountains WSA and character of the landscape within the APE, AML will use BLM-identified roads (and BLM-identified primitive routes in the WSA), reduce the number of trips by heavy equipment on unimproved roads/routes, minimize vegetation clearing, when feasible, helicopter in equipment and materials, and reclaim features disturbed as part of project activities.
- Restrict vehicle access within the WSA to the BLM-identified primitive routes.
- Access mine features inaccessible from BLM-identified primitive routes by foot or helicopter.
- Make no improvements to access roads or primitive routes or clear vegetation from routes within the WSA.
- Ensure the design of mine closure structures within the WSA repeat the form, line, color, and texture present in the existing landscape; and in areas of high concentrations of mine closures limit the use of above ground mine closure structures, as feasible.
- Minimize surface disturbance to areas within 20 feet of mine features.
- Minimize the height of any structure. Avoid the use of bird perches.
- Make concrete collars flush with, or as low as possible to, the ground
- Minimize the use of "perfect" circles and right angles in any visible structure, and minimize the creation of circular earth mounds and depressions. Use of irregular shapes and greater than 90-degree angles will be considered.
- Treat all exposed and visible metal surfaces, including interior culvert surfaces, to reduce reflectivity or use weathering steel.
- Color all concrete to blend with the surrounding soil and rock, using slightly darker color.
- Concrete, high tensile steel mesh covering, gated culverts and other cage like barriers, will be dyed with Natina
- Use environmental colored mesh to reduce line and color contrast.
- Landscaping bricks and other repetitive structures will not be used.
- Minimize the use of flat concrete surfaces and embed rocks or place them on flat surfaces.
- Minimize creation of all-rock surfaces around structures and use soil and a variety of rock sizes where possible.
- Ensure that all surface fill material blends with the existing rock and soil colors.
- Ensure that fill slopes at horizontal (adit) closures mimic existing slopes as much as possible.
- Re-contour backfilled pits to resemble surrounding terrain.
- When recontouring project sites, match the rock and soil type to the natural landscape, to the extent possible.

- New structures should be low profile and not have shiny, reflective surfaces.
- For structures that remain visible, paint with standard environmental colors that match the surrounding landscape. BLM will designate the appropriate environmental colors to be used on BLM lands, from the Standard Environmental Color Chart CC-001 or other sources as necessary.

Cultural and Historic Resources

Design features listed in Table 1 were developed to consider the effects of the proposed action on historic properties and to mitigate potential adverse effects. These treatments include instituting safeguarding methods that protect the visual and informational integrity of the site. The construction contractor and AML Program Project Manager should adhere to avoidance practices to prevent any unauthorized collection or removal of known or undocumented cultural resources.

Table 1. Capitol Dome Archaeological Site NRHP Eligibility Determinations and Proposed Mitigation Treatments

Resource No.	HPD Eligibility Determination	Proposed Mitigation Treatment
HCPI 41118	Eligible A & D (HPD Log 105944)	Institute safeguarding methods that protect the visual and informational integrity of the site
HCPI 41147	Unevaluated to the potential historic mining district (HPD Log 105944)	No further management
HCPI 41148	Unevaluated to the potential historic mining district (HPD Log 105944)	No further management
HCPI 41149	Unevaluated to the potential historic mining district (HPD Log 105944)	No further management
HCPI 41150	Unevaluated to the potential historic mining district (HPD Log 105944)	No further management
HCPI 41151	Eligible A & C (HPD Log 105944)	Institute safeguarding methods that protect the visual and informational integrity of the site
LA 140552	Eligible, A, C, & D (HPD Log 154324)	Institute safeguarding methods that protect the visual and informational integrity of the site
LA 140555	Subsumed into LA 140552	Subsumed into LA 140552
LA 181085	Eligible, A & D (HPD Log 105944)	Institute safeguarding methods that protect the visual and informational integrity of the site
LA 181087		

Resource No.	HPD Eligibility Determination	Proposed Mitigation Treatment
LA 181089	Eligible, A & D (HPD Log 105944)	Institute safeguarding methods that protect the visual and informational integrity of the site
LA 181090		
LA 181092		
LA 181094		
LA 181095		
LA 181096		
LA 181097		
LA 181099		
LA 181100		
LA 181101		
LA 181104		
LA 181105		
LA 181106		
LA 181108		
LA 181109		
LA 181112		
LA 181115		
LA 181116		
LA 181117		
LA 181121		
LA 181122		
LA 184940		
LA 181098	Eligible, A & D (HPD Log 105944)	No further management is recommended, provided the two-track road intersecting the site is not widened during the project and project vehicles stay within the current road tracks.
LA 203792	Eligible, A (HPD Log 154324)	Institute safeguarding methods that protect the visual and informational integrity of the site

Resource No.	HPD Eligibility Determination	Proposed Mitigation Treatment
LA 203795	Eligible, A (HPD Log 105944)	Institute safeguarding methods that protect the visual and informational integrity of the site
LA 181119	Eligible, D (HPD Log 105944)	None
LA 181113		
LA 181114		
LA 181111	Unevaluated (HPD Log 105944)	No further management is recommended. Site will be avoided unless road is used for access to other sites (nothing to safeguard at the site).

If unmarked human burials are discovered during ground disturbing activities on state or private land, work will stop. The remains will be protected from further disturbance and the AML Program (AMLP) will notify the local law enforcement agency, the Office of the Medical Investigator (OMI), the state land managing agency, and State Historic Preservation Officer (SHPO). If the OMI determines that the remains are without medico-legal significance, the OMI will terminate jurisdiction and SHPO, in consultation with AMLP and the state land managing agency, will determine the steps to be taken to protect or remove the remains in accordance with the Cultural Properties Act §18-6-11.2, NMSA 1978 and implementing rule 4.10.11 NMAC. AMLP will consult with Tribes that may attach religious and cultural significance to human remains, graves or associated funerary objects. This consultation will be coordinated with SHPO and may be conducted concurrently with SHPO notification to the tribes pursuant to 4.10.11 NMAC. If unmarked human burials are discovered on federal land, work will stop, and the remains will be protected from further disturbance. AMLP will contact the federal land managing agency(s) and SHPO. The federal land managing agency(s) will comply with 25 USC 3002 (d) of the Native American Graves Protection and Repatriation Act (NAGPRA) and implementing regulations at 43 CFR § 10.

Soils and General Vegetation

- Prevent project vehicles from creating unnecessary routes, shortcuts, or parking areas.
- Although rocks and boulders may be moved for access, no access routes would be cleared, and the ground surface would not be altered.
- Any overland access routes required to access features would be reclaimed to prevent continued vehicle access. If feasible, routes would be closed off with site boulders.
- Helicopters would be used to limit surface disturbance and deliver equipment and materials where needed.
- Clean up vehicle and equipment spills.
- Seed with native species any areas of bare ground resulting from reclamation work. This would include areas from which backfill material is removed as well as the backfilled areas themselves.

Vegetation/Invasive and Noxious Weeds

- To minimize impacts to Orcutt's pincushion cactus, a state sensitive species, the AML project manager would be present during reclamation activities to identify cacti in the vicinity of activities. Flagging or fencing would be placed around the cacti for the duration of the reclamation activities.
- To minimize potential impacts to night-blooming cereus, the AML Project Manager would monitor during reclamation activities to identify any night-blooming cereus in the vicinity of activities. Flagging or fencing would be placed around the plants for the duration of the reclamation activities. An Incidental Take permit through the NM Forestry Division would be necessary if impacts by project activities to a night-blooming cereus cannot be avoided.
- Existing access routes would be used to the greatest extent possible.
- Any tree/shrub trimming or removal for equipment access would be localized and minimized to the greatest extent possible.
- Seed with native species any areas of bare ground resulting from reclamation work. This would include areas from which backfill material is removed as well as the backfilled areas themselves.
- Prior to bringing mechanical equipment into the APE, all equipment would be pressure washed at an off-site location to remove any foreign seed or vegetation parts which may be transported into the site.
- All seed, mulch, matting, straw, and/or hay used would be certified weed-free of invasive and noxious weeds.
- During the project construction phase, reclamation sites would be monitored by the AML project manager for the presence of invasive and noxious weeds. If weeds are identified, the BLM would be notified so that BMPs can be identified and used for control.

Wildlife, including Special Status Species, Migratory Birds, and Big Game

- Herpetofauna-compatible openings would be included at the base of bat friendly closures, where applicable.
- Features with suitable bat habitat which appear to receive more casual, infrequent bat use are recommended to close at any time "bat compatible closure, any time" (BCAT). It is unlikely that gating has the potential to disturb important hibernation or maternity use in these features.
- Features with suitable bat habitat which see summer day and night roosting are recommended to close during the cold season, "bat compatible closure, cold season" (BCCS), to avoid disturbing important maternity use. Bat Conservation International generally recommends work be conducted December through March for cold season closures.
- Features with suitable bat habitat which see winter use are recommended to close during the warm season, "bat compatible closure, warm season" (BCWS), to avoid disturbing important hibernation. Bat Conservation International generally recommends work be conducted April through November for warm season closures.

- Features not suitable for bat habitat but exhibit signs of minor bat use or have the potential for bats to be present during destructive closure are recommended for "destructive closure, warm season" (DCWS). Appropriate exclusion methods would be used during the warm season when bats are active and will be able to escape.
- To minimize the likelihood of adverse impacts to migratory bird nests, eggs, or nestlings during project construction activities, ground disturbance and vegetation removal activities would be conducted outside of the primary breeding season, as feasible. That season is March 1 – September 1 for migratory songbirds and most raptors; it is January 1 – July 15 for golden eagle (*Aquila chrysaetos canadensis)* and great horned owl (*Bubo virginianus).*
- If ground-disturbing and clearing activities must be conducted during the breeding season, the area would be surveyed for active nest sites (with birds or eggs present in the nesting territory) and avoid disturbing active nests until young have fledged. For active nests, adequate buffer zones would be established to minimize disturbance to nesting birds. Buffer distances would be a minimum of 100 feet from songbird and raven nests; 0.25 miles from most raptor nests; 1 mile for golden eagle; and 0.5 mile for peregrine falcon (*Falco peregrinus),* and prairie falcon (*Falco mexicanus)* nests. Active nest sites in trees or shrubs that must be removed would be mitigated by qualified biologists or wildlife rehabilitators.
- Several shallow mine shaft features (less than 10 feet deep) have western hackberry (*Celtis reticulata*) trees growing in them that are considered migratory bird nesting habitat; these mine features would be safeguarded with wildlife friendly closures rather than backfilling to preserve nesting habitat.
- Mine adit features providing cave-like areas for large animal shelter from summer heat and adverse weather which do not pose a direct threat to human health and safety would not be safeguarded to preserve wildlife access. Those that do pose a direct threat may be safeguarded with a recessed gate to address the safety issue while still allowing wildlife access.
- Though presence of reticulate Gila monsters is unlikely, proposed construction activities would take place outside of the breeding season/active (April-June) to minimize impacts on the species, where feasible. If timing of construction during this season cannot be avoided, AML would consult with the NMDGF on recommended monitoring measures.
- Helicopters would not be flown during the Ibex hunting season each year for the duration of the project.

Table 2. Wildlife Mitigation Timing Summary

Wildlife Species/Group	Construction Avoidance Window
Migratory birds and most raptors	March 1 – September 1
Golden eagle & great horned owl	January 1 – July 15
Bats (Recommended cold season closure)	April 1 – November 30
Bats (Recommended warm season closure)	December 1 - March 31

Paleontological Resources

- BLM, AML, or contractors working on the project shall immediately notify the BLM Authorized Officer of any paleontological resources discovered as a result of operations for the proposed action. BLM, AML, or contractors shall suspend all activities in the vicinity of such discovery until notified to proceed by the Authorized Officer and shall protect the discovery from damage or looting. BLM, AML, or contractors may not be required to suspend all operations if activities can be adjusted to avoid further impacts to a discovered locality or be continued elsewhere. The Authorized Officer will evaluate, or will have evaluated, such discoveries as soon as possible, but not later than 10 working days after being notified. Appropriate measures to mitigate adverse effects to significant paleontological resources will be determined by the Authorized Officer after consulting with BLM, AML, or contractors. Within 10 days, BLM, AML, or contractors will be allowed to continue construction through the site or will be given the choice of either (1) following the Authorized Officer's instructions for stabilizing the fossil resources in place and avoiding further disturbance to the fossil resource, or (2) following the Authorized Officer's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.
- If significant fossils are encountered, on-site monitoring or spot-checking may be necessary during construction activities.
- All personnel would refrain from collecting or disturbing fossils.

Air Quality

- Earth disturbing and work areas associated with the project actions shall be treated with water on a schedule sufficient to control fugitive dust or as needed.

2.2 Alternative B, No Action Alternative

Under Alternative B, the no action alternative, proposed safeguarding activities to protect the public from hazards associated with approximately 210 abandoned mine features throughout the Florida Mountains would not occur. No site reclamation would occur, and safety hazards at mine features, including adits, shafts, subsidence features, and other mine openings, would remain on the landscape. Specifically, Alternative B does not satisfy the purpose and need of the proposed action based on AML Program reclamation priorities (PL 95-87, 30 USC 1240(a) 2006):

1. "Protect public health, safety, general welfare, and property from extreme danger resulting from the adverse effects of past mineral mining practices.

2. Protect public health, safety, and general welfare from adverse effects of past mineral mining and processing practices, which do not constitute an extreme danger.

3. Reduce or eliminate environmental impacts of past mining on public lands."

2.3 Alternatives Considered but Not Analyzed

No other alternatives were considered to meet the purpose and need.

3. AFFECTED ENVIRONMENT

This chapter presents a description of the affected environment within the vicinity of the APE and the potential impacts to resources of concern. Only those resources identified as issues of concern will be carried forward for detailed impact analysis. This chapter focuses on existing conditions and potential impacts of the PA and No Action Alternative (NAA) of those resources. A general discussion of resources not impacted or minimally impacted and not carried forward for detailed analysis will be provided as well.

3.1 General Project Setting

The APE is ten miles southeast of Deming, New Mexico, in the Florida Mountains. The Florida Mountain range is a 12-mile, eastward-titled Basin and Range fault block. The mountains are surrounded by a broad bajada, or a series of coalescing alluvial fans along a mountain front, that slopes gently into the Mimbres Basin. Its highest peak, Florida Peak, reaches 7,295 feet above sea level in elevation and Capitol Dome, the second tallest peak, reaches 5,962 feet. The topography ranges from nearly level in the valley floor to steeply sloping mountain sides. The APE includes steep slopes and drainages with narrow ridgelines. Average temperatures in the general area range from a minimum of 27.8°F in January to a maximum of 96.2°F in July; annual precipitation averages 8.77 inches (NOAA 2021).

The APE is located within the Chihuahuan desert scrub subregion (Level IV ecoregion) of the desert grassland and scrub (Level III ecoregion; Griffith et al 2006). This subregion is a moderate to sparse xeromorphic shrub community characterized by a sparse to dense tall shrub layer dominated or co-dominated by whitethorn acacia, viscid acacia, tarbush, and creosote. Stands of this habitat occur in broad desert basins and plains and extend up unto dissected gravelly alluvial fans, piedmonts, and foothills. A few springs are present in the APE, but no wetlands or Waters of the U.S. are present.

3.2 Resources Not Carried Forward for Detailed Analysis

Resources and environmental elements analyzed identified as not present or not affected to a degree that detailed analysis is required are listed in Table 3, with justifications for dismissal.

Table 3. Resources and Environmental Elements Not Carried Forward for Detailed Analysis

Resource or Environmental Element	Rationale for Dismissal from Detailed Analysis
Air/Climate Change	The most reasonable day-to-day pollutant source from the project will result from equipment operation and earth disturbing activities. While these air contaminants would be greater than the no action alternative, the operation of the equipment and completion of the earth disturbing activities are not expected to contribute to significant air quality impacts. The activities are short-term and temporary in nature and include remediation and reclamation of currently exposed stockpiles and mining areas. The remediation and reclamation of these lands would reduce potential long-term emissions from the existing exposed mining areas. The Class I airshed in closest proximity to the APE is the Gila Wilderness Area, located approximately 100 miles north of the APE. Winds are predominantly westerly as measured near Deming Municipal Airport. It is unlikely that any emissions generated directly or indirectly by the proposed action would affect the nearest Class I airshed. BMPs would be applied to reduce fugitive dust generated from earth disturbance activities (Section 2.1.1). The proposed action would utilize construction vehicles, equipment, and helicopters to complete the proposed activities. While equipment and implementation energy demand, including the associated greenhouse gas emissions and potential climate change impacts, are not quantitatively described in this EA, the operation of the equipment is short duration and temporary in nature. The equipment operation and duration would be considered de minimis nor subject to 40 CFR 98 requiring greenhouse accounting and reporting.
Geology and Minerals	The Florida Mountains are an eastward tilted basin and range fault block approximately 15 miles southeast of Deming. The mountains are surrounded by a broad bajada that slopes gently into the Mimbres basin. The oldest rocks exposed in the Florida mountains are a Precambrian hornblende and granitic gneisses exposed only north of Capitol Dome. An Upper Cambrian pluton intruded an andesitic to basaltic volcanic sequence producing the hornblende and pyroxene hornfels common in the western and southern parts of the mountains. The alkali-feldspar plutonic rocks are granite at the northern and southern ends of the range and syenite and quartz syenite in the central part. These shallow plutonic rocks and hornfels were unroofed before deposition of a diamictite that, in turn, was mostly eroded preceding deposition of the Bliss Sandstone in Early Ordovician time.

Resource or Environmental Element	Rationale for Dismissal from Detailed Analysis
	The purpose of the proposed action is to safeguard hazardous abandoned mine features. Existing mining claims would only be impacted with agreement from the mine claimant. The majority of the APE is federal minerals estate. There are no active federal or state mineral or oil and gas leases in the APE. There are numerous closed lode and placer claims within the APE, but only one active lode claim. The proposed action would not impact the potential for future mining permits.
Hazardous Materials	According to the New Mexico Environment Department's EnviroMap (NMED 2024), there are no known environmental hazards within the APE. However, owing to the area's historical mining operations, hazardous materials may be present. Exposure of metal-bearing ores to surficial environmental conditions can mobilize anions, cations and metals, which can negatively affect soils and surface water. Metals mined in the area include copper, gold, lead, silver, and zinc, with fluorite and manganese having also been historically mined within the Project study area. Mine tailings and waste rock, or the material left over from mining operations, are common throughout the Project area. These mine wastes are exposed to oxygen and water, which accelerate weathering of the residual minerals and can potentially mobilize heavy metals such as lead, arsenic, and mercury. These metals can be spread away from the mine wastes through surface runoff and infiltrate into the ground surface below the mine wastes and along the surface runoff paths. Another potential hazard of mining operations is the outflow of acidic water from mine tailings (acid mine drainage). The natural process of acid mine drainage occurs when sulfide minerals, such as pyrite, are exposed to oxygen and water. This combination, often accompanied by bacterial catalysts, creates sulfuric acid, which can impact surficial water bodies, groundwater chemistry, and soil quality. In addition to natural sources of hazardous materials, anthropogenic releases may have occurred in the areas exposed to mining activity. Industrial equipment uses materials derived from petroleum distillates, such as oils, greases, and fuels. Processing materials to extract metals from the host rock may have been historically used at the mining sites. Solvent extraction and gold cyanidation are examples of processing activities that commonly occur on mining sites. Therefore, there is potential for historical releases of

Resource or Environmental Element	Rationale for Dismissal from Detailed Analysis
	hydrocarbons, solvents, and/or processing materials within the Project study area. The Proposed Action would use waste rock material surrounding mine openings to backfill open mine features. Waste rock piles exposed to oxygen and water can mobilize metals and form acidic water, which can be entrained in surface water runoff during precipitation. By placing waste rock in mine openings as backfill, the rock is removed from exposure to the outside environment and the potential for mobilization of metals and acidic water with surface water runoff would be reduced or eliminated. Also, since waste rock would be used to backfill mine openings, the potential exposure of wildlife, livestock, and recreational human users to mobilized metals entrained in surface water runoff from the waste rock piles would be decreased.
Hydrology	The APE occurs within the Crump Draw-Seventysix Draw (HUC-1303020216) and Mesquite Lake (HUC-1303020212) subwatersheds of the Mimbres River watershed (HUC-130302). Surface water features in and around the Florida Mountains are ephemeral and dependent on surface runoff of precipitation for flow. Ephemeral drainages are located within the APE (USGS 2023). Ground-truthing has confirmed they do not meet the requirements of Waters of the U.S. There are no riparian zones or National Wetlands Inventory (NWI) wetlands within the APE, and no undocumented wetland features were identified during biological surveys (USFWS 2023a) One spring, Tubb Spring, is located within the APE but would be avoided by project activities (USGS 2023). There are no surface or ground water drinking water sources in the APE (NMED 2024). There are also no water well locations, surface declarations, or surface permits within the APE (NMOSE 2024). Short-term, localized erosion of freshly disturbed soils could occur during precipitation events after mine feature reclamation until reseeded vegetation becomes established.
Invasive and Noxious Weeds	The proposed action would result in ground disturbance at many mine features. No noxious weed species, as defined by the New Mexico Department of Agriculture, were located within the APE during biological surveys. In addition, design features (Section 2.1.1) would minimize the potential for introduction and spread of invasive and noxious weeds.

Resource or Environmental Element	**Rationale for Dismissal from Detailed Analysis**
Lands and Realty	There are no state rights-of-way (ROWs) within the APE (NMSLO 2024). There is one BLM-authorized road ROW in the APE. The majority of the public land is closed to ROWs (BLM 2024b). The proposed action would not conflict with or inhibit the use of existing or future ROWs, permits, or leases.
Livestock Grazing	There are two New Mexico State Land Office (NMSLO) agricultural leases which intersect the APE (Lease IDs GT32070000 and GM18770000; NMSLO 2024). There are five grazing allotments administered by the BLM with intersect the APE (Allotment numbers: 02035, 02025, 02033, 26791, 02008; BLM 2024a). The proposed action would not conflict with any existing grazing leases intersecting the APE. Closure of hazardous mining features would prevent livestock from entering features associated with the mining landscape, and thus help prevent livestock injury and mortality associated with abandoned mines.
Noise	Sensitive receptors in the vicinity of the APE consist of the Florida Mountains Area of Critical Environmental Concern (ACEC), Florida Mountains WSA, and Rockhound State Park. The proposed action would result in short-term increases in noise levels in the project vicinity during active construction. Noise level increase would be associated with construction vehicles, equipment, and helicopter use. Noise levels would return to previous levels when not in active construction and when completed.
Paleontological	The BLM's Potential Fossil Yield Classification (PFYC) system was used to assess the potential for paleontological resources in the APE. Of the 1,653-acre APE, 783 acres (47 percent) are classified as PFYC 2-Low Potential, 498 acres (30 percent) are classified as PFYC 1-Very Low Potential, 289 acres (17 percent) are classified as Unknown Potential, and 83 acres (5 percent) are classified as PFYC 4- High Potential (BLM 2023). A paleontological survey was not completed for the proposed action. PFYC-4 and Unknown Potential classifications, which make up 22 percent of the APE, have management concerns which are moderate to high, depending on the proposed action. However, the proposed action would have very isolated surface impacts. These impacts would be concentrated on areas that have been previously disturbed by mining activities. In addition, design features (Section 2.1.1) would minimize potential impacts to paleontological resources.

Resource or Environmental Element	Rationale for Dismissal from Detailed Analysis
Soils	Because of the mining history in the APE, sites proposed for safeguarding are located on previously disturbed ground surface. At many of the hazardous mine features, the ground surface is characterized by exposed bedrock, man-made spoil piles, and minimal vegetative growth. Temporary ground disturbance within the APE would be limited to the immediate areas of the mine features. A disturbance buffer of approximately 30 feet is typical for this type of safeguarding project. Existing access routes would be used to the greatest extent possible. Limited overland access by small construction equipment would cause minor, localized impacts, such as soil compaction and increased potential for surface runoff and soil erosion. Helicopters would be used to deliver materials for many hard to access sites. In addition, design features (Section 2.1.1) would minimize potential impacts to soil resources.
Threatened, Endangered, Proposed or Candidate Animal Species	The United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool listed the yellow-billed cuckoo, Aplomado falcon, Chiricahua leopard frog, Chihuahua chub, and monarch butterfly as potentially affected by the proposed action (USFWS 2023b). However, suitable habitat is not present in the APE, and thus these species would not be affected. In addition, the proposed action is not likely to adversely affect the Mexican wolf, classified as an experimental population, non-essential.
Threatened, Endangered, Proposed or Candidate Plant Species	The USFWS IPaC tool did not list any threatened, endangered, proposed, or candidate plant species potentially affected by the proposed action (USFWS 2023b). Therefore, there would be no effect to threatened, endangered, proposed, or candidate plant species.
Transportation	Pickup trucks and small machinery would use existing public and private access routes (with permission) to access the APE, and no improvements are planned. No new roads would be constructed. There are no anticipated impacts existing road conditions or traffic conditions in and around the APE.

3.3 Areas of Critical Environmental Concern

Of the 1,653 acres of APE, 981 acres overlap with the Florida Mountains ACEC. According to the Mimbres RMP (BLM 1993), “The Florida Mountains ACEC meets the relevance criteria of significant scenic values, wildlife resources…, natural systems…, and natural hazards. The

Floridas meet the importance criteria because of significant values of more than local significance and endangered species both of which could be vulnerable to adverse change from mining or ibex use" (BLM 1993). The management goal for this ACEC is to protect its scenic and biological values.

BLM restrictions within this ACEC include, but are not limited to:

- Limit vehicle use to designated roads and trails, except for the central portion of the area which is closed to vehicle use
- Close to mineral material sales and fluid mineral leasing
- Exclude heavy equipment for fire suppression
- Manage for primitive and semi-primitive recreational opportunities

3.4 Cultural and Historic Resources

The proposed action is subject to Section 106 (54 USC 306108) of the National Historic Preservation Act (NHPA) (54 USC 300101 et seq. and its implementing regulations 36 Code of Federal Regulations (CFR) Part 800: Protection of Historic Properties, as revised August 2004). To comply with Section 106 of the NHPA, a Class III cultural resource inventory, including archival research, records review, preliminary listing recommendations for NRHP eligibility, and a 100 percent pedestrian survey of the entire APE was completed in 2024 to identify any historic properties that would be potentially impacted by the proposed action. During the field inventory, cultural resource contractors evaluated and provided preliminary listing recommendations for NRHP eligibility; through the consultation process with the SHPO, final NRHP eligibility determinations were made in accordance with Section 106. Class III archaeological survey methods were conducted in accordance with *Standards for Survey and Inventory* (NMAC 2006) and in compliance with Sections 18-6-5, 18-6-9, and 18-6-9.1 through 18-6-9.3 of the Cultural Properties Act; New Mexico Statutes Annotated 1978 (NMSA 1978) of the Cultural Properties Act and in observance of the requirements of NMAC Title 4, Chapter 10, Part 8, Subsection 17 (4.10.8.17 NMAC) and Title 4, Chapter 10, Part 15 (4.10.15 NMAC) for protection of archaeological resources in New Mexico.

The APE for cultural resources includes a combination of public land administered by the BLM Las Cruces District Office, privately owned, and state managed land that makes up approximately 1,653 acres. The cultural inventories completed in 2016 by SWCA Environmental Consultants (Mead et al. 2016) and 2023-2024 by Chronicle Heritage (Howell et al. 2024) determined there are 1 historic building, 5 historic structures, and 47 archaeological sites (LA140555 was subsumed under LA140552) within the APE. All identified historical resources are associated with the mining and ranching history of the Florida Mining District.

The nature of the historic buildings, structures, and archaeological sites within the APE can be split between the following group type descriptions and summarized in Table 4:

1. Residential Buildings and Features and subtype

    1.a. Community Refuse Disposal,

2. Transportation and Infrastructure System Features,
3. Mine-Related Buildings, Structures, Features, and Objects

Table 4. Summary of Historic Properties and Sites by Property Type.

Site Type	Property Type 1	Property Type 1a	Property Type 2	Property Type 3
Buildings[1]	1			
Structures	1		4	
Archaeological Sites[1]	16	11		39

[1] Some buildings and sites were assigned to multiple property types. Three of the sites are prehistoric sites and were not included in these counts.

Only one historic building is within the APE and was determined eligible for inclusion in the NRHP under Criterion A and Criterion D. Of the five structures, four were determined unevaluated by the SHPO and the other was determined eligible for inclusion in the NRHP under Criterion A and Criterion C. Of the 47 historical archaeological sites, 34 are determined eligible for inclusion in the NRHP, 12 are determined not eligible, and 1 is determined unevaluated (HPD Log Nos. 105944 – June 29, 2017 & 122700 – June 18, 2024). The historic significance of the eligible resources within the APE is summarized in Table 5.

Table 5. SHPO Determinations of Historical Significance of NRHP Eligible Resources Summary within the APE as Defined by 36 CFR 60.4.

NRHP Eligibility Criterion[1]	Buildings	Structures	Archaeological Sites
Criteria A, C, and D			1
Criteria A and C		1	
Criteria A and D	1		26
Criterion A			3
Criterion D			3
Not Eligible			12
Unevaluated		4	1

[1] Criterion A- associated with events that have made a significant contribution to the broad patterns of our history

Criterion B- associated with the lives of persons significant to our past

Criterion C- embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess highly artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction

Criterion D- that have yielded, or may be likely to yield, information important in prehistory or history

Evidence of historic mining activities are visually apparent throughout the APE. There are historic buildings, structures, and historic sites throughout the APE and surrounding area that help visually

tell the history of the Florida Mining District, including Capitol Dome. The larger mines, particularly the Atir Mine and Mill Complex have numerous standing structures. Adits, prospects, and other mining related features are visible in the APE. While the mining features detract from the natural visual quality, they do provide a distinctive visual context of the historical land use in the area. Visual sensitivity is high given the area is used for recreation, particularly the BLM managed land in the APE.

3.5 Human Health and Safety

Abandoned mine features throughout the APE present serious threats to human health and safety. Approximately, 133 mine features in the APE have AML Program-designated danger levels of extreme, high, and moderate, but the hazards are not always obvious to the public. Unstable ground and open/inadequately sealed mine features, such as shafts, highwalls, adits/portals, and deteriorated structures, present serious fall and/or entrapment hazards. Within mines, dangers include falls into winzes and water bodies, collapses or cave-ins, poor air circulation, poisonous gases, insufficient oxygen, deteriorated explosives, wildlife, and the potential to become disoriented or lost in the mine workings.

There are multiple formerly used defense sites (FUDS) located at the base of the Florida Mountains. These properties were used during World War II as practice bombing ranges. Some of these properties are known or suspected to contain military munitions and explosives of concern (e.g., unexploded ordnance; USACE 2021a, 2021b, 2021c, 2021d). However, these sites are located at the base of the Florida Mountains and are outside of the APE (USACE 2024).

3.6 Recreation

The BLM manages recreation on public lands with an objective "to enhance opportunities for developed and undeveloped recreation on public land…" and to "enhance the public's knowledge and uses of those areas for recreational purposes." There are no special recreation management areas (SRMA) nearby. Areas outside of SRMAs are defined as extensive recreation management areas (ERMA), which emphasize traditional dispersed recreation use of public land. Except for areas of special management, all areas that are not managed to maintain particular recreational values are, by default, part of the ERMA and are generally managed to limit use conflicts and resource damage. Much of the APE is located within an ERMA, and includes opportunities for backpacking, hunting, camping, sightseeing, climbing, and rockhounding (BLM 1993).

Rockhound State Park is located within 0.3 miles of the northernmost section of APE. Recreational activities within this park include camping (developed campsites), picnicking, hiking, and wildlife viewing.

3.7 Vegetation

The APE is located within the Chihuahuan desert scrub subregion (Level IV ecoregion) of the desert grassland and scrub (Level III ecoregion; Griffith et al 2006). This subregion is a moderate to sparse xeromorphic shrub community characterized by a sparse to dense tall shrub layer

dominated or co-dominated by whitethorn acacia, viscid acacia, tarbush, and creosote. Stands of this habitat occur in broad desert basins and plains and extend up unto dissected gravelly alluvial fans, piedmonts, and foothills.

3.7.1 Special Status Plant Species

Special status species includes state listed threatened or endangered species, sensitive/vulnerable plant species in the state of New Mexico, and BLM Sensitive Species that may occur within Luna County. The BLM's Las Cruces Office Special Status Species List and the New Mexico Rare Plant Technical Council were used for obtaining state lists and data (BLM n.d.; NMRPTC 1999). A review of special status species likely to occur and/or with potential habitat in the APE was analyzed in detail within a separate Biological Assessment and Biological Evaluation, with the results summarized below. Special status species considered unlikely to occur or without suitable habitat in the APE were removed from further consideration. Table 6 summaries those special status species which were determined to have the potential to occur within the APE.

Table 6. Special Status Plant Species with Potential to Occur in the APE

Species	State Legal Status[1]	BLM Status
Night-blooming cereus (*Peniocereus greggii)*	State Endangered, State S3, NMRPTC county list	BLM Sensitive
Mimbres figwort *(Scrophularia macrantha)*	State Endangered, State S2, NMRPTC county list	BLM Sensitive
Grayish-white giant hyssop (*Agastache cana)*	State S3, NMRPTC county list	
Orcutt's pincushion cactus (*Escobaria orcuttii)*	State S3, NMRPTC county list	
Wright's globe mallow (*Sphaeralcea wrightii*)	State S3, NMRPTC county list	

[1]State S1 = Critically imperiled in NM because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from NM.
State S2= Imperiled in NM because of rarity or because of some other factor(s) making it very vulnerable to extirpation from NM.
State S3= Vulnerable in NM either because rare or uncommon, or found only in a restricted range, or because of other factors making it vulnerable to extirpation.
New Mexico Rare Plant Technical Council (NMRPTC) county list= a taxon that is narrowly endemic to a specific geographic feature or subset area of a phytogeographic region.

In total, there are five special status plant species with potential to occur within the APE. There is overlap between specials status plant designations, resulting in the five plant species having more than one special status plant designation. There are two State Endangered, all are on the rare plant list for Luna County, one is ranked as State S2, four are ranked State S3, and two are BLM sensitive

species. The following are habitat descriptions and occurrence information for the special status species which were determined to have the potential to occur within the APE.

Night-blooming cereus: This species can be found in desert flats and washes around 3900 – 4900 feet in elevation. They prefer sandy to silty gravelly soils in gently broken to level terrain in desert grassland or Chihuahuan desert scrub. It is typically found growing with and supported by shrubs. This plant is extremely rare and difficult to identify as its thin branches are shriveled up for much of the year, resembling creosote bush and other shrubs, and its other identifying feature, its flower, only blooms at night. While there is suitable habitat in the APE, there are no verified historical accounts of this plant in Luna County according to the New Mexico Rare Plant Council (NMRPTC 2023), but according to SEINet there are three recorded observations by the University of New Mexico Herbarium (SEINet Portal Network 2024). Information such as year of observation or a location to determine if they are within the APE is redacted due to the species' state endangered status. It is important to note, however, that the APE environment is extremely mountainous, and the elevation begins higher than this plant's general elevation range. No night-blooming cereus were observed during the daytime biological survey.

Mimbres figwort: This species' habitat consists of steep, rocky, primarily north-facing igneous cliffs and talus slopes. It is occasionally found in canyon bottoms or in pinon-juniper woodland and lower montane coniferous forests. Prefers habitat 6,500- 8,200 feet in elevation (NMRPTC 1999). Suitable habitat is present within the APE. However, it has not been documented in the Florida Mountains (NMRPTC 1999). No Mimbres figwort were observed during the biological survey.

Grayish-white giant hyssop: This species exists from 4,600 – 5,900 feet of elevation and its habitat generally consists of box canyons or in crevices, the bottom of granite cliffs, or at the upper edge of the desert and lower edge of the pinyon-juniper zone. The current abundance of the species is not well understood, but a species as showy as this is not normally underreported (NMRPTC 2023). Suitable habitat exists throughout the APE. No individuals were found during the biological survey.

Orcutt's pincushion cactus: This species is typically found in cracks of limestone or in rocky soils of broken mountainous terrain in Chihuahuan desert scrub, desert grassland, and oak woodland from 5,200 – 6,000 feet of elevation. It has documented occurrences in the Florida Mountains. Suitable habitat exists throughout the APE. Over 290 cacti were located during the biological survey, in some instances on mine waste piles and at entrances to mine features.

Wright's globe mallow: This species' habitat consists of rocky slopes in Chihuahuan desert scrub and grassland from 4,000 to 6,000 feet in elevation (NMRPTC 1999). Suitable habitat is present throughout the APE. No individuals were found during the biological survey.

3.8 Visual Resources

Visual resources consist of landforms, vegetation, rock and water features, and cultural modifications that create the visual character and sensitivity of landscapes. Two factors were considered when evaluating the existing condition of visual resources within the APE: visual

quality and visual sensitivity. Visual quality is the overall impression or attractiveness of an area, considering the variety, vividness, coherence, harmony, or pattern of landscape features. Visual sensitivity is a measure of an area's potential sensitivity to visual change considering types of viewers, viewer exposure, volumes, as well as viewing distance.

The APE is located in the Florida Mountains, which are approximately 10 miles southeast of the community of Deming, New Mexico. The mountains are a dominant landscape feature viewed from Deming and by motorists along Interstate 10. The proposed mine closures are scattered throughout the APE. Vegetation in these areas is dominated by a moderate to sparse xeromorphic shrub community characterized by a sparse to dense tall shrub layer dominated or co-dominated by whitethorn acacia, viscid acacia, tarbush, and creosote. This area has been mined in the past, which can positively influence scenic quality through the juxtaposition of historic structures within the natural landscape producing a culturally influenced landscape.

BLM Scenic Quality Rating Unit (SQRU): The entire Florida Mountain range, including the APE, occurs within the Florida Mountains SQRU. The SQRU is rated as Class B, which has outstanding features common to the physiographic region (BLM 2024c).

BLM Sensitivity Level Rating Unit: The entire Florida Mountain range, including the APE, occurs within a high sensitivity area, primarily due to the area being the scenic backdrop for Deming (BLM 2024c).

BLM Visual Resource Inventory (VRI) Class: The entire Florida Mountain range, including the APE, is rated as VRI Class II (BLM 2024d). The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Portions of the APE on private and state lands are not subject to BLM Visual Resource Management (VRM) classifications or objectives.

3.9 Wilderness Study Areas

Of the 1,653 acres of APE, 1,006 acres overlap with the Florida Mountains Wilderness Study Area (WSA). WSAs are currently managed according to BLM Manual 6330 - Management of Wilderness Study Areas (BLM 2012), until the area is either added to the National Wilderness Preservation System or removed from further wilderness consideration. This WSA was not recommended for wilderness designation based on the area's mineral resource potential, probably mineral development on valid mining claims, and numerous site-specific impacts on naturalness (BLM 1991). The following summarizes the wilderness characteristics of the Florida Mountains WSA. The following are direct quotes from the Wilderness Study Report (BLM 1991). For more detailed information, refer to the report.

Naturalness - The Florida Mountains WSA generally appears natural. Naturalness is locally impacted by wildlife waters, rangeland developments, vehicle ways, cherry-stemmed roads, and mining activity. Mining activity has had the greatest impact.

Solitude – Portions of the Florida Mountains WSA provide outstanding opportunities for solitude. The large size of the WSA allows visitors to disperse and avoid the sights and sounds of others, and the rugged topography provides numerous secluded canyons and ridges. The Florida Mountains lie in a major east-west airline traffic route as well as in the approach and departure path for air traffic to and from El Paso International Airport. As a result, numerous aircraft, as many as 15 to 20 per hour (during peak traffic), fly over the area. The noise from this traffic intermittently impacts solitude in the WSA, however, this impact is not significant.

Primitive and Unconfined Recreation - The Florida Mountains WSA offers a variety of outstanding primitive recreational opportunities. The area is large enough to support a 3 or 4-day pack trip. Opportunities also exist for rock climbing, horseback riding, nature study, photography, and hunting. The rugged mountain range, with its steep ridges and canyons, offers an excellent opportunity to use outdoor skills and to interact with a natural environment. Opportunities for primitive recreation are enhanced by the size of the WSA and the diversity of vegetation and topography.

Special Features (Supplemental Values) - The Florida Mountains WSA contains special ecological and scenic features. The plant species in the WSA are numerous and diverse. The WSA provides habitat for a State-listed plant species proposed for Federal listing, night blooming cereus (*Cereus greggii*). (Later, this species was renamed [*Peniocereus greggii* var. *greggii*], was deemed not warranted for Federal listing in 1993 [58 FR 51144], and is currently a state-threatened and BLM sensitive species.)

Most of the WSA, 18,336 acres composed of the peaks and slopes of the mountains, has high scenic quality. The higher elevations are characterized by steep, angular rock outcroppings, with jagged, vertical intrusions dominating the highest peaks.

There are two known prehistoric sites in the Florida Mountains WSA.

Recently Identified Changes to Wilderness Characteristics

Special Features (Supplemental Values)- Two mammals, pale Townsend big eared bat with state species of greatest conservation concern (SGCN) status and the lesser long-nosed bat, with both SGCN and state threatened status have potential to occur and use mine features within the Florida Mountains Wilderness Study Area (WSA).

WSA Project Area Specific Information

The APE occurs on 1,006 acres of the 22,336 acres of Florida Mountains WSA. The APE is divided into multiple polygons which fall within the northern, central, east, west, and southeast portions of the WSA (Figure 2). The APE does not extend into the south and southwest areas of the WSA.

Because of this, the majority of the previously listed WSA characteristics apply to the portions of APE within the WSA.

Relevant exception to the Non-Impairment Standard

The following exception applies to this project:

b. Public safety. In addition to emergencies, the BLM may take actions that would otherwise violate the non-impairment standard to protect public safety. These actions are limited to remediation of human-caused hazards in the WSA (e.g., mine adits). In addition to correcting the public safety issue, the impacts of the hazard should be mitigated and the area restored, to the extent possible, as part of the authorized action. Altering naturally occurring hazards is not permissible. Since some human-caused hazards may be historic, compliance with the National Historic Preservation Act might be necessary (see section 1.6.D.1 of BLM Manual 6330). See also Section 2.3 and Appendix 5 of the BLM NEPA Handbook, H-1790-1, regarding NEPA compliance obligations for emergencies and actions relating to public health or safety.

3.10 Wildlife

Habitat is present for species which use desert grassland and scrub habitat. During biological surveys conducted in 2023 and 2024 throughout the surface of the APE, 42 vertebrate species were recorded: 37 species of birds, 3 species of mammals, and 5 species of reptiles. Numerous open mine features within the APE and surrounding area provide suitable roosting, maternity, and hibernation habitat for bat species. The open mine features also provide habitat for other cavity users. Subterranean surveys conducted 2014-2015 and 2023-2024 assessed bat habitat quality to provide closure recommendations. During the 2014-2015 surveys, 113 features were surveyed, of which 13 contained live bats and 22 additional features contained bat evidence. During the 2023-2024 surveys, initial surveys were conducted on 116 features and secondary closure surveys were conducted on 94 features. During the combination of these surveys, 5 features contained bats and 43 features contained bat evidence. Evidence of other wildlife use was also noted, including small to large mammal use (ranging from deer mice to ibex), various snakes including rattlesnakes, and barn owl nesting was observed (Bat Conservation International 2014 and 2024).

3.10.1 Special Status Animal Species

The BLM's Las Cruces Office Special Status Species List and the Biota Information System of New Mexico (BISON-M) database were reviewed to determine potential occurrence of state threatened and endangered species, BLM sensitive species, and SGCN (i.e., Special Status Species) in the APE. Bald eagle and golden eagle were also reviewed based on protections granted under the Bald and Golden Eagle Protection Act (BGEPA) of 1978. A review of special status species likely to occur and/or with potential habitat in the APE was analyzed in detail within a separate Biological Assessment and Biological Evaluation (BA/BE), with the results summarized below. Special status species considered unlikely to occur or without suitable habitat in the APE were removed from further consideration. Table 7 summaries those special status species which were determined to have the potential to occur within the APE.

Table 7. Special Status Animal Species with Potential to Occur in the APE

Species	State Legal Status	BLM Status
Birds (21)		
Common ground dove (*Columbina passerina*)	State Endangered, SGCN	
Golden Eagle (*Aquila chrysaetos*)	BGEPA	
Peregrine falcon (*Falco peregrinus*)	State Threatened, SGCN	
Common nighthawk (*Chordeilis minor)*	SGCN	
Elf owl *(Micrathene whitneyi)*	SGCN	
Lucifer hummingbird (*Calothorax lucifer*)	State Threatened, SGCN	
Costa's hummingbird (*Calypte costae)*	State Threatened, SGCN	
Broad-billed hummingbird (*Cyanthus latirostris*)	State Threatened, SGCN	
Thick-billed kingbird (*Tyrannus crassirostris*)	State Endangered, SGCN	
Loggerhead shrike (*Lanius ludovicianus*)	SGCN	
Gray vireo (*Vireo vicinior*)	State Threatened, SGCN	
Pinyon jay (*Gymnorhinus cyanocephalus*)	SGCN	BLM Sensitive
Bendire's thrasher (*Toxostoma bendirei*)	SGCN	BLM Sensitive
Botteri's sparrow (*Peucaea botterii*)	SGCN	BLM Sensitive
Cassin's sparrow (*Peucaea cassinnii*)	SGCN	
Black-chinned sparrow (*Spizella atrogularis*)	SGCN	
Sagebrush sparrow (*Artemisiospiza nevadensis*)	SGCN	
Grasshopper sparrow (*Ammodramus savannarum*)		BLM Sensitive
Lucy's warbler (*Leiothlypis luciae*)	SGCN	
Varied Bunting (*Passerina versicolor*)	State Threatened, SGCN	

Species	State Legal Status	BLM Status
Thick-billed longspur (*Rhynchophanes mccownii)*	SGCN	BLM Sensitive
Reptiles (3)		
Reticulate Gila monster (*Heloderma suspectum suspectum*)	State Endangered, SGCN	BLM Sensitive
Banded rock rattlesnake (*Crotalus lepidus klauberi*)	SGCN	
Gray-checkered whiptail (*Aspidoscelis dixoni*)	State Endangered, SGCN	BLM Sensitive
Mammals (2)		
Pale Townsend's big-eared bat (*Corynorhinus townsendii*)	SGCN	BLM Sensitive
Lesser long-nosed bat (*Leptonycteris yerbabuenae*)	State Threatened, SGCN	BLM Sensitive
Mollusks (1)		
New Mexico talussnail (*Sonorella hachitana flora*)	SGCN	BLM Sensitive
Crustaceans (6)		
Alkali fairy shrimp (*Branchinecta mackini*)	SGCN	
Moore's fairy shrimp (*Streptocephalus moorei*)	SGCN	BLM Sensitive
Beavertail fairy shrimp (*Thamnocephalus platyurus*)	SGCN	
Mexican clam shrimp (*Cyzicus mexicanus*)	SGCN	
Cylindrical cyst clam shrimp (*Eulimnadia cylindrova*)	SGCN	
Texan clam shrimp (*Eulimnadia texana*)	SGCN	

In total there are 33 special status species with potential to occur within the APE. As represented in Table 7 a fauna species can have more than one "State Legal Status". There are 31 state species of greatest conservation concern (SGCN), and 2 species granted protections under the Bald and Golden Eagle Protection Act (BGEPA). In addition to the SGCN status there are 4 species that are also listed as state endangered and 7 species that are also state threatened status.

Common ground dove: The open stands of creosote bushes are very limited and located along the edge of and outside of the proposed project area. While this area would constitute minimally

suitable common ground dove habitat, it is heavily fragmented and most suitable habitat is located outside of the APE. During biological surveys, no common ground doves were observed.

Golden eagle: Golden eagles occur year-round in southwest New Mexico and use a variety of habitats, including semidesert grassland-shrub, sagebrush-grassland, grassland, and pinyon-juniper woodland. They use mountainous cliff habitat in higher elevation areas. Suitable foraging and nesting habitat is present in the APE and surrounding area. Nests are generally found on rock outcrops, cliff faces, or in deciduous or coniferous trees. One golden eagle was observed during the wildlife survey. No nests were located.

Peregrine falcon: Portions of the APE and surrounding area contain steep to near vertical topography which could serve as potential nesting or roosting habitat for peregrine falcons. During the biological surveys, no peregrine falcons or evidence of nests/eyries that could be used by the species were observed.

Common nighthawk: This species' breeding habitat generally consists of areas of desert scrub/rocky slopes, juniper savannahs, pinon/juniper woodlands, ponderosa/oak forests, and mixed conifer forests near ponderosa pine forests with oak understory. They can be found in a variety of environments from desert riparian deciduous woodland and marsh to annual grasslands, riparian woodlands, and mountain and alpine meadows. The juniper savannahs and desert riparian deciduous woodland areas in the APE are limited while areas of desert scrub and rocky slopes are abundant. While this would constitute suitable common nighthawk habitat, the desert riparian environment is lacking. No common nighthawks were observed during the wildlife survey.

Elf Owl: The species can be found in a variety of environments from desert with honey mesquite and screwbean mesquite, to higher-elevation riparian corridors with willows, ashes, maples, cottonwoods, and walnuts. They may occur up to 5,400 feet elevation in pine-oak-juniper habitat as well or use open stands of creosote bush and large succulents. This species relies on abandoned woodpecker cavities for their nests. In the Chihuahuan Desert, they may nest in cavities in flower stalks of agave and yucca, or in riparian areas with Rio Grande cottonwood, black willow, Emory oak, gray oak and chinkapin oak. The amount of suitable habitat is within the APE is marginal. No elf owls were observed during the biological survey.

Lucifer hummingbird: The sloped canyons with flowering plants that this species prefers is heavily fragmented. In addition, there are no records of the Lucifer hummingbird in the Florida Mountains and its surrounding area. During the biological surveys, no Lucifer hummingbirds were observed.

Costa's hummingbird: The arid habitat of sparsely vegetate land within the APE is widespread yet fragmented. The species is more closely associated with Sonoran Desert scrub and lower elevations (up to 5,500 feet). During the biological surveys, no Costa's hummingbirds were observed.

Broad-billed hummingbird: This species' habitat generally consists of riparian woodlands at low to moderate elevations. In southern New Mexico, this species is most closely associated with open stands creosote bush and large succulents. The amount of suitable habitat in the APE is marginal. No broad-billed hummingbirds were observed during the biological survey.

Thick-billed kingbird: This species' habitat generally consists of riparian woodlands with cottonwoods. However, this species can also be found in habitats like thorn forest and oak scrub. In southern New Mexico, this species is found in open stands of creosote bush and large succulents. Within the APE, the riparian areas that this species is generally associated with are absent. The amount of suitable habitat is marginal. No thick-billed kingbirds were observed during the biological survey.

Loggerhead shrike: This species' habitat is variable, from xeric habitats dominated by shrubs and desert saltgrass to grasslands and ponderosa forests. In southern New Mexico, loggerhead shrikes are known to use open stands of creosote bush and large succulents. Within the APE, suitable habitat is present. Loggerhead shrikes were observed during the biological survey.

Gray vireo: This species' habitat generally consists of open woodlands/shrublands with evergreen trees and a variety of shrubs. The pinon-juniper present in the APE is fragmented, and it is unlikely that gray vireos would be present. During the biological surveys, no gray vireos were observed.

Pinyon jay: This species' habitat generally consists of pinyon-juniper woodlands, but also breeds in sagebrush, scrub oak, chaparral, ponderosa pine, and Jeffrey pine forests. They prefer mature stages of pinyon; however, they can also be found in desert scrub. During the biological surveys, no pinyon jays were observed.

Bendire's thrasher: This species' habitat is typically desert habitats and relatively open grassland, shrubland, or woodland with scattered shrubs or trees. In southern New Mexico, Bendire's thrashers are known to use open stands of creosote bush and large succulents. Within the APE, the habitat available is marginal. No Bendire's thrashers were observed during the biological survey.

Botteri's sparrow: This species' habitat is variable, from sacaton grassland to upland mesquite, oak woodland, and tall grass-covered hillsides. This species can also be found in open to dense vegetation desert scrub with shrubs, low trees, and succulents, dominated by paloverde, prickly pear, and giant saguaro. Within the APE, the habitat available is marginal. No Botteri's sparrows were observed during the biological survey.

Cassin's sparrow: This species' habitat generally consists of arid shrub grasslands, desert scrub and rocky slopes, and juniper savannas. Cassin's sparrows typically overwinter in areas with scattered bushes, mesquite, cactus, or yucca. In southern New Mexico, this species is known to use open stands of creosote bush and large succulents. Suitable habitat is present in the APE. No Cassin's sparrows were observed during the wildlife survey.

Black-chinned sparrow: This species' habitat is variable, from arid brushlands on rugged mountain slopes to ponderosa pine forest and desert scrub. In southern New Mexico, black-chinned sparrows are known to use open stands of creosote bush and large succulents. Habitat within the APE is marginal. No black-chinned sparrows were observed during the biological survey.

Sagebrush sparrow: This species' habitat generally consists of sagebrush shrublands at lower and middle elevations. Sagebrush sparrows can be transient in areas of desert scrub and rocky slopes

near juniper savannas. Suitable habitat in the APE is marginal. No sagebrush sparrows were observed during the biological survey.

Grasshopper sparrow: This species' habitat generally consists of moderately open grasslands and prairies with patchy bare ground. In arid areas of the Southwest, however, the species occupies lusher areas with shrub cover. In southern New Mexico, grasshopper sparrows are known to use open stands of creosote bush and large succulents. Habitat within the APE is marginal. No grasshopper sparrows were observed during the biological survey.

Lucy's warbler: This species' habitat generally consists of dense lowland riparian mesquite woodlands but is also associated with desert scrub. In southern New Mexico, Lucy's warblers are known to use open stands of creosote bush and large succulents. Habitat within the APE is marginal. No Lucy's warblers were observed during the biological survey.

Varied bunting: This species' habitat generally consists of dense shrublands and relatively arid canyons. Dense stands of mesquite were only found in isolated, fragmented canyon bottoms. During the biological surveys, no varied buntings were observed.

Thick-billed longspur: This species' breeding habitat generally consists of mixed-grass prairies with blue grama and buffalograss. In southern New Mexico, thick-billed longspurs are known to use open stands of creosote bush and large succulents for their winter habitat. Habitat within the APE is marginal. No thick-billed longspurs were observed during the biological survey.

Reticulate Gila monster: This species' habitat consists of desert, mesquite-grasslands, lower mountain slopes and nearby outwash plains, especially where water is at least periodically present. The APE lacks water presence. Additionally, there are no reputable accounts of this species east of the Peloncillo mountains. During the biological surveys, no reticulate Gila monsters were observed.

Banded rock rattlesnake: This species can be found in a variety of habitats, from pine-oak forests and mesquite-grasslands to deserts, but it mostly inhabits mountainous areas with rugged, rocky terrain. Mountainous rugged, rocky areas are present throughout the APE. Mine features within the APE may be used as temporary shelters or hibernation den sites. One rock rattlesnake was located during the wildlife survey but was not identified to subspecies.

Gray-checkered whiptail: This species' habitat in New Mexico generally consists of desert grassland. Dominant plants in suitable habitat include various grasses, forbs, and shrubs, such as creosote bush, mesquite, acacias, and tarbush. They are active throughout the day, although tending to seek shade during hotter periods and sunlight during cooler ones. Prey is sought in various ways, including in dashes across open areas and by prowling through litter and dense growth, often in a noisy, disruptive fashion. Habitat within the APE is marginal. No gray-checkered whiptails were observed during the biological survey.

Pale Townsend's big eared bat: This species occurs in a variety of xeric to mesic habitats, including desert scrub, sagebrush, chaparral, deciduous and coniferous forests. These bats are frequently associated with caves and abandoned mines for day roosts. They are very sedentary and

do not usually travel long distances from their roosts. Suitable habitat is present within the APE. This species has been documented using mine features proposed to be safeguarded (Bat Conservation International 2014).

Lesser long-nosed bat: This species occurs in a variety of habitats, including shortgrass prairies, sacaton grassland, canyons and nearby areas in desert grassland. These bats are also known to be dependent on the availability of abandoned or inactive mines for roosting. Suitable habitat is present within the APE. No lesser long-nosed bats have been documented using mine features proposed to be safeguarded (Bat Conservation International 2014).

New Mexico talussnail: This subspecies occurs in habitats with cliff, scree, and rock vegetation (Wallace 2022). It is endemic to the Florida Mountains and broadly distributed throughout the range. This species is understudied, and there is little information regarding its habitat and management considerations. The entire APE is potential habitat. Surveys were not conducted specifically for this species; however, 4 specimens were located within the APE and confirmed by the New Mexico Department of Game & Fish mollusk expert.

Alkali fairy shrimp, Cylindrical cyst clam shrimp, and Texan clam shrimp: These species inhabit ephemeral catchments, temporary pools, wetlands and playas. These species are very understudied and there is little information regarding their distribution or management. Suitable habitat may be present within the APE in the form of ephemeral rock catchments. Surveys were not conducted for these species.

Moore's fairy shrimp, Beavertail fairy shrimp, Mexican clam shrimp: These species inhabit arid and semi-arid regions with playa lakes, vernal pools and other ephemeral bodies of water. These species are also closely associated with stock tanks for habitat. Suitable habitat may be present within the APE in the form of ephemeral rock catchments and stock tanks. Surveys were not conducted for these species.

3.10.2 Migratory Birds

Habitat is present for numerous bird species protected by the MBTA which are likely to use the area for breeding, wintering, or migratory stopover habitat. Thirty-four (34) of the bird species documented during the surveys are federally protected under the MBTA and likely breed within the area. The three (3) non-native species documented, Eurasian collared-dove (*Streptopelia decaocto*), European starling (*Sturnus vulgaris*), and house sparrow (*Passer domesitcus*), have no federal or state protection. Three inactive and two active passerine nests were recorded in the APE during biological surveys. In addition, owl and other bird roosting sign has been observed in multiple mine features as well as one active barn owl (*Tyto alba*) nest (Bat Conservation International 2014).

3.10.3 Big Game

The APE occurs within New Mexico Department of Game and Fish (NMDGF) Game Management Unit (GMU) 25, Florida Mountains Hunt Area. Table 8 shows the big game species with potential to occur in the APE and their associated 2024-2025 hunting seasons for GMU 25. For further

details, such as license type, hunt type, etc., see the New Mexico Department of Game and Fish Rules & Info guide (NMDGF 2025).

Table 8. Big Game Species and Associated 2024-2025 Hunting Seasons within the APE.

Species	Hunt Dates
Mule deer (*Odocoileus hemionus*)	September 1-24
	October 26-30
	November 2-6
	November 9-13
	January 1-15
Persian ibex (*Capra hircus)* *exotic species established in the state	October 1-15
	November 15-29
	December 14-18
	December 27-January 10
	January 15-29
	February 1-5
	February 22-28
Javelina (*Peccari tajacu*)	January 1-March 31
Mountain lion (*Puma concolor*)	April 1-March 31
	During ibex season by licensed ibex hunters

4. ENVIRONMENTAL IMPACTS

This section evaluates the effects or impacts, including the potential cumulative effects, to the affected environment that potentially could result from Alternative A, the proposed action and Alternative B, the no action alternative. Baseline information regarding the existing condition of the environment, as described in Chapter 3, was used to identify potential impacts. An impact, or effect, is a modification to the environment brought about by an outside action. Impacts vary in degree from no change, or only slightly discernible change, to a full modification or elimination of the environmental condition. Impacts can be beneficial (positive) or adverse (negative), and short-term, long-term, or permanent.

An action can have direct or indirect effects and can contribute to cumulative effects. Direct effects occur at the same time and place that an action is being performed. Indirect effects occur later in time or farther from the initial action but are still reasonably foreseeable. Cumulative effects result from a proposed action's incremental impacts, when these impacts are added to the impacts of other past, present, and reasonably foreseeable future actions, regardless of the agency or person who undertakes them (federal or non-federal).

For the cumulative effects analysis, the impacts of the proposed action, when added to other past, present, and reasonably foreseeable future actions, were evaluated in context with inventoried resources within the APE. Implementation of the no action alternative, along with past, present,

and reasonably foreseeable future actions, would have no cumulative impacts on resources in the APE. Therefore, cumulative impacts for the no action alternative will not be discussed in the following resource sections. Table 9 displays a general list of past, present, and reasonably foreseeable future actions within the APE.

Table 9. Past, Present, and Reasonably Foreseeable Future Actions within the APE.

Activity Name or Action	Type of Activity
Grazing	Ongoing permitting and management of livestock grazing
Dispersed recreation	Dispersed recreation
Mining	Dispersed mining activity
Fire	Natural, prescribed, and other human-caused fires

4.1 Areas of Critical Environmental Concern

4.1.1 Alternative A

The proposed action is expected to have little to no long-term adverse impacts to the Florida Mountains ACEC. The Florida Mountain's ACEC is designated for scenic and biological resource values. For biological resources, the majority of adverse impacts (described in Table 3, Section 4.6 and Section 4.9) are expected to be short-term and isolated to areas directly near the mine features. Long-term beneficial impacts to bats are expected (Section 4.9.1). At the fine scale, long-term impacts to scenic resources would occur (described in Section 4.7.1) from the installation of permanent structures. Impacts would be mitigated by proposed design features (Section 2.1.1). The proposed action does not conflict with the management goal or planned actions for this ACEC as described in the RMP.

The effects of past, present, and reasonably foreseeable future actions in context with the proposed action would lead to negligible cumulative impacts to ACECs.

4.1.2 Alternative B

Under the no action alternative, existing conditions within the ACEC would persist.

4.2 Cultural Resources

4.2.1 Alternative A

Cultural resource inventories indicate 34 eligible or potentially eligible archaeological sites and 6 historic resources are in the APE that could be adversely impacted by the proposed action. Avoidance is recommended as a Best Management Practices (BMP) for cultural properties determined eligible for listing in the National Register of Historic Places (NRHP) or listed on the State or National Registers. If avoidance cannot be accomplished, it is recommended to implement measures to mitigate potential adverse effects to historic properties. Site-specific design features

(Section 2.1.1) were developed to mitigate these adverse impacts. These treatments include instituting safeguarding methods that protect the visual and informational integrity of the site. The construction contractor and AML Program Project Manager should adhere to avoidance practices to prevent any unauthorized collection or removal of known or undocumented cultural resources. The New Mexico State Land Office (NMSLO), BLM, and SHPO concur that implementing the design features in Table 1 would mitigate adverse effects. Therefore, no adverse impacts on cultural resources are anticipated.

No further archaeological investigations, testing, or other documentation is required within the APE for resources determined not eligible for listing in the NRHP. Moving, altering, collecting, or unauthorized removal of archaeological or historic resources within the APE is prohibited by contractors, subcontractors, or oversight personnel. Collections by a qualified archaeologist are strongly discouraged except in cases where an artifact is likely to be lost through illegal collection (NMR 2005).

In addition to the interagency consultations, the AML Program initiated consultation with potentially concerned tribes pursuant to 36 C.F.R. Part 800, the regulations implementing Section 106 of the NHRP (54 U.S.C. § 100101); none of the tribes have identified properties having religious and cultural significance within the APE.

There will be no cumulative impacts to cultural resources as a result of the proposed action.

4.2.2 Alternative B

Under the no action alternative, existing conditions for cultural resources will remain.

4.3 Human Health and Safety

4.3.1 Alternative A

Implementation of the Proposed Action would result in the closure of mine features within the Florida Mountains Mining District, many of which pose a hazard to the public in their current state. While the closure of these mine features may not prevent individuals from being drawn to the mining features, closures would help deter and prevent humans from entering shafts, adits, subsidence areas, and other physical openings associated with the mining landscape, and thus help to prevent hazardous incidents associated with abandoned mines. Long-term, beneficial effects would occur to human health and safety.

The effects of past, present, and reasonably foreseeable future actions in context with the proposed action would lead to negligible cumulative impacts to health and human safety within the APE. Although the activities identified in Table 9 could result in an overall increase in human visitation to the area, the safeguarding measures outlined under the Proposed Action would minimize any potential for increases in human health and safety issues.

4.3.2 Alternative B

Under the no action alternative, no site reclamation would occur, and hazardous abandoned mine features would remain open, presenting a continued risk to the health and safety of the public. There would be long-term, adverse effects to human health and safety.

4.4 Recreation

4.4.1 Alternative A

Implementation of the proposed action would result in minimal impacts to BLM recreation. Impacts to the ERMA, within which much of the APE is located, are expected to be minimal. Recreation opportunities within the ERMA will persist, though with less risk of potential harm associated with recreationists purposely or accidentally entering open mine features. Some short-term disturbance to recreationists may occur during project implementation from construction activities and helicopter use.

Rockhound State Park is located adjacent to the northern portion of the APE. Some short-term disturbance to recreationists may occur during project implementation, primarily from helicopter use.

The effects of past, present, and reasonably foreseeable future actions in context with the proposed action would lead to negligible cumulative impacts to recreation.

4.4.2 Alternative B

Under the no action alternative, existing recreational conditions will persist. The potential risks associated with recreationists entering open mine features would remain.

4.5 Vegetation

4.5.1 Alternative A

The proposed action would result in ground disturbance at many mine features. Waste rock piles that are used to fill mine features would be displaced, and any vegetation that has naturally reclaimed those areas would be lost. Existing roads would be utilized to the extent possible, minimizing impacts to habitat. Helicopter access to hard-to-reach locations would also minimize impacts on vegetation. Reseeding or natural reclamation of areas temporarily disturbed by the proposed action would occur. This reseeding would include climate adapted seed and be comprised of native plant species via an AML Program approved seed mix. In addition, design features (Section 2.1.1) would further minimize impacts to vegetation.

The proposed action would cause a negligible and temporary contribution to the effects of livestock grazing which causes ground disturbance and can alter vegetation communities.

4.5.1.a Special Status Plant Species

A detailed analysis of impacts to special status plant species was prepared in a separate BA/BE and is summarized herein. Impacts to special status plant species would primarily be the same as those listed above in the general vegetation section (Section 4.5.1). Species-specific impacts are discussed below.

Night-blooming cereus, Mimbres figwort, grayish-white giant hyssop, and Wright's globe mallow: The proposed project would not result in any measurable amount of habitat loss. Proposed project construction activities would primarily be focused in previously disturbed areas. No plants were located during biological surveys. If undetected plants are present, accidental crushing could occur. However, direct impacts are unlikely to occur due to the limited disturbance footprint. Therefore, the proposed action is not likely to result in a trend toward federal listing or loss of viability for these species.

- To minimize potential impacts to night-blooming cereus, the AML Project Manager would monitor during reclamation activities to identify any night-blooming cereus in the vicinity of activities. Flagging or fencing would be placed around the plants for the duration of the reclamation activities. An Incidental Take permit through the NM Forestry Division would be necessary if impacts by project activities to a night-blooming cereus cannot be avoided.

Orcutt's pincushion cactus: The proposed project would not result in any measurable amount of habitat loss. Proposed project construction activities will primarily be focused in previously disturbed areas. Direct impacts would be limited due to the limited disturbance footprint. However, this species occurs throughout a large portion of the APE, in some instances, on mine waste piles and adjacent to the entrances of abandoned mines. Therefore, it is possible cacti located close to mine features could be crushed during construction. However, the design feature included in the proposed action (Section 2.1.1) and listed hereafter would avoid or minimize impacts this species:

- To minimize impacts to these cacti, the AML project manager would be in place during reclamation activities to identify cacti in the vicinity of activities. Flagging or fencing would be placed around the plants for the duration of the reclamation activities.

However, some cacti are likely too close to the features to be reasonably avoided. Therefore, the proposed action may adversely affect but is not likely to result in a trend toward federal listing or loss of viability of Orcutt's pincushion cactus.

The proposed action would cause a negligible and temporary contribution to the effects of livestock grazing which causes ground disturbance and can affect special status plant species.

4.5.2 Alternative B

Under the no action alternative existing conditions would persist. No disturbance to vegetation would occur.

4.6 Visual Resources

4.6.1 Alternative A

The proposed action would alter the area's landscape character in the short-term through minimal vegetation clearing at the sites and grading of mine waste piles where appropriate. In general, structural closures are preferred for this project, due to accessibility issues, sensitive plant species, wildlife habitat, and maintaining the visual integrity of the historic mining district. The amount of hand back-filling and grading the waste piles would be reduced as much as possible. Over time, these modifications would blend with the existing landscape character and return the area closer to its pre-mining character. The introduction of mine closure structures would be the most visible long-term modification. To reduce the effects associated with the presence of mine closure structures (including gates, cupolas, and wire mesh), the design of these structures would repeat the form, line, color, and texture present in the existing landscape, and in areas of high concentrations of mine closures, use of above ground mine closure structures (i.e. cupolas) would be limited (Section 2.1.1). Additionally, using helicopters and existing roads (and BLM-identified primitive routes in the WSA), reducing the number of trips by heavy equipment on unimproved roads/routes, and vegetation clearing, when feasible, would preserve the character of this highly sensitive landscape.

The visual effects of the proposed mine closure methods are described below.

Backfilling mine shafts and pits would remove the evident holes. Backfilling could remove most surface evidence of the shaft in addition to any associated mine waste piles. However, a slight depression with waste materials recontoured outside the filled features would be implemented when possible to help preserve the historic mining character of the area. Depending on the site-specific method, there could be a new surface flush with the existing ground, a semi-circular mound with gentle slopes, or a steep-sided circular pit up to four feet deep. Moderate to strong color contrasts could be created if non-native materials are used for the topdressing.

Plugging mine shafts with Polyurethane Foam (PUF) would also remove the evident holes. In this method, the depth and thickness of the PUF plug varies by site. A 12" or smaller diameter plastic pipe is set into the PUF as a vent and drain. A grate is installed over the top end and a concrete collar is poured around the top of the pipe. The top of the PUF plug is covered with fill. Moderate to strong color contrasts could be created if non-native materials are used for fill and if the concrete color does not blend with the surrounding soil and rock.

Installing steel mesh closures would involve anchoring the mesh across shafts, adits, or larger mine openings. This would introduce repeating, trapezoid/diamond shapes into the landscapes. However, environmental colored mesh would be used to reduce line and color contrast. Weak line and color contrasts would result.

Installing bat cupolas and airflow structures into mine shafts would introduce flat-topped, truncated, conical features into the landscape. The sides of these features would be rough and regular with short vertical lines and circular and diagonal bands. Grates would be set into the flat top or cupolas would be attached onto the flat tops. The grates would be of mesh or evenly spaced

bars, while the cupolas would right-angled boxes with evenly spaced horizontal bars on the sides and tops. The conical structures could be 1½ to three feet tall. The bat cupolas would add another two feet to the structures for a maximum height of five feet. Moderate to strong line and form contrasts would be expected, while weak to strong color and texture contrasts would be expected.

Installing bat gates in horizontal mine features (adits) would introduce circular or arched, corrugated, shiny metal structures (culverts) with horizontal, evenly spaced bars into the landscape. Materials placed around the culverts could result in bare rock faces with relatively similar size rocks and slopes that may not blend with the landscape. Moderate to strong line, form, and color contrast would be expected, while weak to moderate textures contrast could result.

Backfilling adits would safeguard the evident holes and would introduce sloping forms into the landscape. These "angle of repose" forms may be less steep than nearby existing slope and cliff features. Weak to moderate form and slope contrasts could be expected. It is unknown whether there could be color and/or texture contrasts.

As proposed, there would be a variety of line, form, color, and texture contrasts created by the structures and activities. Design features included in Section 2.1.1 would assist in reducing the visual contrasts identified above to below moderate and strong contrasts. Therefore, VRM Class II objectives would be met.

Views from local residences in the surrounding area would be minimally affected over the long-term due to the viewing distance and the small-scale of permanent proposed features. In the short-term, vegetation may need to be altered at the sites, and spoil piles may need to be graded, which would not be noticeably out of character in the site's existing viewshed. Viewers from Deming and Interstate 10 would incur negligible impacts based on the long viewing distance (over nine to 10 miles away) in context with the small scale of the permanent proposed features.

The effects of past, present, and reasonably foreseeable future actions in context with the proposed action would lead to an incremental modification of landscape character and views from identified viewing locations. Due to dispersed nature of the types of past, present, and reasonably foreseeable future actions listed in Table 9, as well as the lack of major projects proposed in this area, the cumulative effects on visual resources would not vary greatly from those described for direct-proposed action effects.

4.6.2 Alternative B

Under the no action alternative, existing conditions for visual resources would remain the same and the existing cultural modifications associated with mine sites would remain. The Class II VRM objectives would be met.

4.7 Wilderness Study Areas

The following discussion follows BLM Manual 6330 – Management of Wilderness Study Areas (BLM 2012) section 1.6, E.3.f.v.

4.7.1 Alternative A

Effects to Wilderness Characteristics- The proposed action would affect approximately 133 mine features within the Florida Mountains WSA. Mine features would be backfilled, closed using PUF plugs, or have bat gates or air flow structures installed. The proposed action would negatively affect wilderness characteristics in the WSA.

Naturalness would be negatively affected through the introduction of structures, including but not limited to:

- Horizontal or vertical round metal culverts
- Smooth-surfaced concrete collars and footers
- Flat concrete surfaces
- Vertical, horizontal, and diagonal lines from cupolas, gates and steel mesh
- Patterns (regular spacing of bars and opening in bat cupolas, gates, steel mesh) and angles (especially right angles of concrete and metal structures) not found in the area
- Rock stack around structures

Naturalness would also be negatively affected through the surface disturbance associated with mechanized access to mine features, mechanical backfilling of selected mine features, and installation of closure structures at mine features. Design features listed in Section 2.1.1, along with the eventual revegetation of reseeded areas, would minimize these impacts to the extent possible.

Opportunities for solitude would be negatively affected during the phased project (intermittently possibly up to 3 years) by the increased human and mechanized equipment presence in and adjacent to the WSA.

Opportunities for primitive and unconfined types of recreation could be positively affected through the reduction of man-made hazards and increased safety.

The supplemental values identified in the WSA study report would not be affected. However, new information has documented potential presence of numerous special-status species in the WSA. The proposed action would protect and maintain habitat for special-status bat species. The proposed action may affect individuals but is not likely to contribute to federal listing or loss of viability for the 37 special status species that may occur in the area (Section 4.9.1).

The Non-Impairment Standard

Degree of Impairment- The Florida Mountains Wilderness Study Area is approximately 22,336-acres and within the WSA the APE encompasses approximately 1,006-acres. Despite the proposed action, the WSA would still meet the key criteria of being 5,000-acres of roadless public land.

Substantially Unnoticeable- Application of the design features would reduce noticeability of some closures. The area is currently affected by past mining activity, but many impacts are mitigated by vegetation and topographic screening. Under the proposed action, each treated mine feature in the WSA could individually be substantially unnoticeable, but cumulatively, the treated features may be noticeable but have no adverse effect on the historic mining landscape. Vegetation screening immediately around mine features may be disturbed or removed, making any structure more visible until it regrows. Backfilling of shafts and installing PUF plugs at mine features would result in circular mounds of unknown height or depressions up to four feet deep. Mesh closures could be noticeable because of the regular pattern of the mesh openings, but an environmental color (tan, brown, etc.) would reduce their visibility. Installation of bat access cupolas and airflow structures at vertical mine features could result in substantially noticeable structures because of the flat-topped, circular, natural rock and mortar walls and bulkheads and/or concrete collars and the angular, boxlike, metal shapes of the bat cupolas. These structures are typically constructed at or near the natural ground surface; however, could be up to five feet tall, further increasing their noticeability. However, the use of the features would be limited. Pedestal/concrete color would be very important, especially if it does not blend with the existing landscape colors. Installation of horizontal bat gates at mine features would be noticeable because of the circular or arched corrugated structures; relatively uniform surface rock sizes; and slopes that may not blend with the landscape. Piling of rocks of similar sizes around closure structures also would be noticeable because of the relative uniformity and the lack of smaller stones and soil.

Quality of Opportunities – The quality of solitude would be reduced through the increased human and equipment presence during the phased project (up to 3 years), especially from use of helicopters. The quality of primitive and unconfined types of recreation would be improved through the reduction of mining hazards.

Conclusion

Implementation of the proposed action will not conform to the non-impairment standard for the following reasons:

a) The use or facility is not temporary. All proposed structures (e.g., bat cupolas and gates, airflow structures, concrete collars) would be permanent installations; and

b) The use or facility would create new surface disturbance. Surface disturbance would result from moving rocks, soil, and/or vegetation for installation of concrete collars associated with bat cupolas, for installation of wire mesh closures, from backfilling of features with waste rock, and from using mechanized vehicles to access features to be safeguarded.

The proposed action would be an exception to the Non-Impairment Standard because it falls under exemption *b). Public safety*. The proposed action would reduce the number of human-caused hazards created by past mining activity in the WSA.

4.7.2 Alternative B

Effects to Wilderness Characteristics- The no action alternative would not affect the identified wilderness characteristics. However, the special-status bat species and newly identified supplemental values could be affected by human disturbance of roost, maternity, and hibernacula sites.

The Non-Impairment Standard

Wilderness characteristics would not be impaired because permanent structures would not be introduced into the WSA. The no action alternative would continue to be substantially unnoticeable. Many existing mine features are mitigated by vegetation and topography. There would be no changes in the quality of opportunities for solitude and primitive and unconfined types of recreation.

Conclusion

The no action alternative will conform to non-impairment standard because no permanent structures would be placed in the WSA and there would be no new surface disturbance.

4.8 Wildlife

4.8.1 Alternative A

A detailed analysis of impacts to wildlife, special status species, migratory birds, and big game was prepared in a separate BA/BE and is summarized herein. Recreational use of mine features can cause ongoing disturbance to bat colonies and may cause temporary or permanent abandonment of roost sites. Mines proposed for wildlife-friendly closures would preserve the features' ability to support bat roosts while eliminating a potential source of disturbance. Wildlife other than bats that use mine features and are small enough to fit through the closures would receive the same benefit. Wildlife that cannot fit through the closure (such as big game) would no longer be able to use the mine features as habitat. If wildlife is present inside mine features proposed for safeguarding without wildlife-friendly closures during construction, disturbance and potential mortality could occur. Safeguarding open mine features would have a long-term, beneficial impact of removing an entrapment and injury/mortality hazard for wildlife.

Direct impacts to wildlife habitat outside of mine features, including habitat removal or degradation, would be limited to areas directly adjacent to proposed safeguarded mine features and not throughout the entire APE. Ground disturbance, such as the removal of waste rock piles, may cause a temporary loss of habitat for terrestrial wildlife. Existing roads would be utilized to the extent possible, minimizing impacts to habitat. Human and helicopter activity during closure activities may disturb wildlife, and any vegetation removal could affect small animals and nesting

habitat for birds. Accidental crushing of species with the inability to relocate, such as crustaceans or mollusks, could occur. However, construction in general will be low impact and limited to mine sites, decreasing the likelihood of these mortalities. Construction during the avian breeding season (January 1 to September 1) could result in avoidance, nest abandonment, decreased productivity, and/or mortalities. Preconstruction nest clearance surveys and subsequent species-specific avoidance buffers would minimize impacts. If construction activities occur outside the breeding season, no impact to avian breeding success would occur.

Several mine shaft features have western hackberry (*Celtis reticulata*) trees growing in them that are considered migratory bird nesting habitat; these mine features would be safeguarded with the use of metal gates rather than backfilling to preserve hackberry tree nesting habitat. Additionally, mine adit features providing cave-like areas for large animal shelter from summer heat and adverse weather which do not pose a direct threat to human health and safety would not be safeguarded to preserve wildlife access. Those that do pose a direct threat may be safeguarded with a recessed gate to address the safety issue while still allowing wildlife access.

The Proposed Action would cause temporary disturbance to wildlife species that occur within the APE, particularly those that use mine features proposed for treatment. Displaced wildlife could temporarily relocate to suitable, undisturbed habitat in the surrounding area. The proposed action would not cause long-term avoidance of the APE.

The timing of proposed actions has the potential to increase or decrease impacts to wildlife. As such, the proposed action includes design features to avoid or minimize impacts to wildlife species (Section 2.1.1). Features with suitable bat habitat would follow Bat Conservation International recommendations for timing to avoid impacts to hibernating or maternity bat colonies (Section 2.1.1; Bat Conservation International 2014 and 2024). In addition, herpetofauna-friendly openings would be included at the base of bat friendly closures to allow continued use.

The proposed action would cause a negligible and temporary contribution to the cumulative effects of some sources of disturbance, by temporarily increasing vehicle traffic and human presence that could disturb wildlife. Ground disturbance would contribute marginally to the existing dispersed, low-intensity ground disturbance already present. Implementation of mine closures that protect bat colonies from disturbance would lower the overall cumulative effect of recreational activity on bat colonies.

4.8.1.a Special Status Species

Impacts to special status species would primarily be the same as those listed above in the general wildlife section (Section 4.9.1). However, the design features included in the proposed action (Section 2.1.1) and listed hereafter would avoid or minimize impacts to special status species.

- Herpetofauna-compatible openings would be included at the base of bat friendly closures, where applicable.
- Though presence of reticulate Gila monsters is unlikely, proposed construction activities would take place outside of the breeding season/active (April-June) to minimize impacts

on the species, where feasible. If timing of construction during this season cannot be avoided, AML would consult with the NMDGF on recommended monitoring measures.

Therefore, the proposed action may affect individuals but is not likely to contribute to federal listing or loss of viability for any special status species.

The proposed action would cause a negligible and temporary contribution to the cumulative effects of some sources of disturbance, by temporarily increasing vehicle traffic and human presence that could disturb special status wildlife species. Ground disturbance would contribute marginally to the existing dispersed, low-intensity ground disturbance already present. Implementation of mine closures that protect bat colonies from disturbance would lower the overall cumulative effect of recreational activity on special status bat species colonies.

4.8.1.b Migratory Birds

Impacts to migratory birds would be the same as those listed above in the general wildlife section (Section 4.9.1) pertaining to all birds. However, the design features included in the proposed action (Section 2.1.1) and listed hereafter would avoid or minimize impacts to migratory birds:

- To minimize the likelihood of adverse impacts to migratory bird nests, eggs, or nestlings during project construction activities, ground disturbance and vegetation removal activities would be conducted outside of the primary breeding season, as feasible. That season is March 1 – September 1 for migratory songbirds and most raptors; it is January 1 – July 15 for golden eagle (*Aquila chrysaetos canadensis)* and great horned owl (*Bubo virginianus).*
- If ground-disturbing and clearing activities must be conducted during the breeding season, the area would be surveyed for active nest sites (with birds or eggs present in the nesting territory) and avoid disturbing active nests until young have fledged. For active nests, adequate buffer zones would be established to minimize disturbance to nesting birds. Buffer distances would be a minimum of 100 feet from songbird and raven nests; 0.25 miles from most raptor nests; 1 mile for golden eagle; and 0.5 mile for peregrine falcon (*Falco peregrinus),* and prairie falcon (*Falco mexicanus)* nests. Active nest sites in trees or shrubs that must be removed would be mitigated by qualified biologists or wildlife rehabilitators.
- Several shallow mine shaft features (less than 10 feet deep) have western hackberry (*Celtis reticulata*) trees growing in them that are considered migratory bird nesting habitat; these mine features would be safeguarded with wildlife friendly closures rather than backfilling to preserve nesting habitat.

Therefore, the proposed action would be in compliance with the MBTA.

The proposed action would cause a negligible and temporary contribution to the cumulative effects of some sources of disturbance, by temporarily increasing vehicle traffic and human presence that could disturb wildlife. Ground disturbance would contribute marginally to the existing dispersed, low-intensity ground disturbance already present.

4.8.1.c Big Game

Impacts to big game would generally be the same as those listed above in the general wildlife section (Section 4.8) pertaining to large animals. Direct impacts to big game habitat outside of mine features, including habitat removal or degradation, would be limited to areas directly adjacent to proposed safeguarded mine features and not throughout the entire APE. The Proposed Action would cause temporary disturbance to big game species that occur within the APE. Displaced wildlife could temporarily relocate to suitable, undisturbed habitat in the surrounding area. The proposed action would not cause long-term avoidance of the APE. Construction may temporarily impact hunting seasons in the immediate vicinity of the mine features. Helicopter use may scare big game and affect hunting in the larger area. Big game that use mine features proposed for closure may no longer be able to access the mine features as habitat. However, mine adit features providing cave-like areas for large animal shelter from summer heat and adverse weather that does not pose a direct threat to human health and safety would not be safeguarded to preserve wildlife access. Those that do pose a direct threat to human health and safety may be safeguarded with a recessed gate to address the safety issue while still allowing wildlife access.

Therefore, the proposed action would cause minimal impacts to big game species, which in turn could minimally impact hunting. No significant impacts are anticipated.

The proposed action would cause a negligible and temporary contribution to the cumulative effects of some sources of disturbance, by temporarily increasing vehicle traffic and human presence that could disturb big game species. Ground disturbance would contribute marginally to the existing dispersed, low-intensity ground disturbance already present.

4.8.2 Alternative B

Under the no action alternative, existing conditions of wildlife habitat, including habitat for special status species, migratory birds, and big game, would persist. Mine features that support bats and other wildlife would remain in their current condition. Wildlife-friendly closures of some mine features would not take place, allowing continued recreational disturbance of wildlife using these mine features. Mine features proposed for closures other than wildlife-friendly closures (those that do not provide suitable bat habitat) would remain open for other wildlife use. Open mine features would continue to be entrapment hazards for wildlife of various species depending on the conditions.

5. AGENCY CONSULTATION

The following public agencies and tribal entities were contacted or consulted with during the development of this EA (in alphabetical order):

- Bureau of Land Management, Las Cruces District Office
- Fort Sill Apache Tribe
- Hopi Tribe

- Luna County
- Mescalero Apache Tribe
- New Mexico Department of Game and Fish
- New Mexico Rare Plant Technical Council
- New Mexico State Historic Preservation Office
- New Mexico Forestry Division
- New Mexico State Land Office
- Office of Surface Mining, Reclamation and Enforcement
- U.S. Fish and Wildlife Service, Ecological Services Field Office
- White Mountain Apache Tribe
- Ysleta Del Sur Pueblo

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7. REFERENCES

Bat Conservation International. 2024. Final Report: Capitol Dome Abandoned Mine Bat Surveys.

Bat Conservation International. 2014. Report communication to the Bureau of Land Management, Las Cruces District. Subject: Report on Mahoney District Abandoned Mine Surveys.

Bureau of Land Management (BLM). 2024a. *BLM Natl Grazing Allotment Polygons*. https://gis.blm.gov/arcgis/rest/services/range/BLM_Natl_Grazing_Allotment/MapServer

_____. 2024b. *Research Map.* Mineral & Land Records System. Available online: https://mlrs.blm.gov/s/research-map#11,32.05628220782518,-107.59794516201708

_____. 2024c. BLM National Data Viewer. Accessed June 2024. https://experience.arcgis.com/experience/9a89ee80c604431e8f8d939a186fbdbb

_____. 2023. *BLM Natl PFYC Potential Fossil Yield Classification Geologic Formation 2022 Polygons.* https://gbp-blm-egis.hub.arcgis.com/datasets/068a3f5506eb423bb025943deba67822/about

_____. 2012. Management of BLM Wilderness Study Areas. BLM Manual 6330. Available at: https://www.blm.gov/sites/blm.gov/files/uploads/mediacenter_blmpolicymanual6330.pdf . Accessed July 3, 2024.

_____.1993. *Mimbres Resource Management Plan.* Available online: https://eplanning.blm.gov/public_projects/lup/72801/97036/117193/LCDO_-_1993_-_Mimbres_Resource_Area_RMP.pdf

_____. 1991. *New Mexico Wilderness Study Report.* State Overview.

_____. 1997. Environmental Justice Guidance under the National Environmental Policy Act. Executive Office of the President, Washington, D.C.

Federal Register. 1993. National Archives and Records Administration, 58(188), 51144.

Griffith, G.E., Omernik, J.M., McGraw, M.M., Jacobi, G.Z., Canavan, C.M., Schrader, T.S., Mercer, D., Hill, R., and Moran, B.C. 2006. Ecoregions of New Mexico (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,400,000).

Howell, Joseph, Heather Seltzer-Rogers, and Scott Cole
2024 A Class III Cultural Resources Inventory of 330.70 Acres for the Mahoney-Capitol Dome Abandoned Mine Mitigation and Safeguarding Project, Luna County, New Mexico. Technical Report No. 23-667. Chronicle Heritage, Albuquerque, New Mexico.

Mead et al. 2016. *Cultural Resources Survey for the Florida Mining District, Luna County, New Mexico.* SWCA Environmental Consultants

New Mexico Administrative Code. 2006. NMAC 4.10.15: Cultural Resources, Cultural Properties and Historic Preservation, Standards for Survey and Inventory. Accessed 2 July 2021. Available online: http://164.64.110.239/nmac/parts/title04/04.010.0015.pdf

New Mexico Department of Agriculture (NMDA). 2020. New Mexico Department of Agriculture. New Mexico Noxious Weed List. Update July 2020. https://nmdeptag.nmsu.edu/media/pdf/noxious-weed-memo-and-list-june-2020.pdf

New Mexico Department of Game and Fish (NMDGF). 2024-2025. New Mexico Hunting Rules & Info. Available online: https://wildlife.dgf.nm.gov/download/2024-2025-new-mexico-hunting-rules-and-info/?wpdmdl=48306&refresh=668b73c006c671720415168

New Mexico Environment Department (NMED). 2024. EnviroMap. Available online: https://app.enviromap.com/

New Mexico Office of the State Engineer (NMOSE). 2024. OSE PODs. Available online: https://geospatialdata-ose.opendata.arcgis.com/datasets/OSE::ose-pods/about

New Mexico Register (NMR)/Volume XVI, Number 15/August 15, 2005. Cultural Resources. Cultural Properties and Historic Preservation. Standards for Survey and Inventory. Available online: https://www.nmhistoricpreservation.org/documents/rules-and-regulations.html

New Mexico State Land Office (NMSLO). 2024. *Land Status.* Available online: https://mapservice.nmstatelands.org/LandStatus/

Public Law 95-87, 30 USC 1240(a). 2006. Supplement 5, Title 30 Mineral Lands and Mining, Chapter 25 Surface Mining Control and Reclamation, Subchapter IV – Abandoned Mine Reclamations, Section 1240a - Certification. Accessed 5 July 2021. Available online: https://www.osmre.gov/lrg/docs/USCODE-2011-title30-chap25.pdf

SEINet Portal Network. 2024. Peniocereus greggii var. greggii Occurrence Records. Available online: https://swbiodiversity.org/seinet/collections/list.php?usethes=1&taxa=13680

U.S. Army Corps of Engineers (USACE). 2024. *FUDS FY21 and IRM Data*. Property and Project geospatial data. Interim Risk Management Data. FUDS Program Division and District Boundaries.

U.S. Army Corps of Engineers (USACE). 2021a. *DEMING AAF PBR #2. Formerly Used Defense Sites Program Management Action Plan.* USACE, Environmental Programs Data as of 2021 Annual Report to Congress.

U.S. Army Corps of Engineers (USACE). 2021b. *DEMING AAF PBR #1. Formerly Used Defense Sites Program Management Action Plan.* USACE, Environmental Programs Data as of 2021 Annual Report to Congress.

U.S. Army Corps of Engineers (USACE). 2021c. *DEMING AAF PBR #6. Formerly Used Defense Sites Program Management Action Plan.* USACE, Environmental Programs Data as of 2021 Annual Report to Congress.

U.S. Army Corps of Engineers (USACE). 2021d. *DEMING AAF PBR #23. Formerly Used Defense Sites Program Management Action Plan.* USACE, Environmental Programs Data as of 2021 Annual Report to Congress.

U.S. Fish and Wildlife Service (USFWS). 2023a. National Wetlands Inventory. Accessed July 11, 2023. <http://www.fws.gov/wetlands/>

U.S. Fish and Wildlife Service (USFWS). 2023b. Official Species List. Project Code: 2023-0050913. New Mexico Ecological Services Field Office.

U.S. Geological Survey (USGS). 2023. US Geological Survey: National Hydrography Dataset. Accessed July 10, 2023. <https://www.usgs.gov/national-hydrography/national-hydrography-dataset>

Wallace, J.E. 2022. Status and Distribution of Terrestrial Snails in Southwestern New Mexico. New Mexico Department of Game and Fish Share With Wildlife Program. Professional Services Contract #21- 516-0000-00033. Santa Fe, New Mexico.