

 **FREEPORT-McMoRAN**  
Tyrone Operations  
P.O. Box 571  
Tyrone, NM 88065

July 29, 2025

**Certified Mail #70221670000106990572**  
**Return Receipt Requested**

Mr. Clint Chisler  
Energy, Minerals and Natural Resources Department (EMNRD)  
Mining and Minerals Division (MMD)  
1220 South St. Francis Drive  
Santa Fe, NM 87505-6110

Dear Mr. Chisler:

**Re: Part 3 Minimal Impact Exploration Permit**  
**Application – Little Burros Exploration Project**

Please find attached, the Part 3 Minimal Impact Exploration Permit Application, completed by Freeport-McMoRan Tyrone Inc. (Tyrone). All activities associated with this project will take place on Tyrone property. The project will consist of one drill hole, one drill pad, and one new access road. The total disturbance is estimated at 1 acre, but an additional 1 acre has been added as contingency to accommodate operational flexibility, reclamation, and any other unforeseen circumstances.

As per prior communications and agreements, Tyrone will secure the appropriate permits from the New Mexico Office of the State Engineer (NM-OSE) following the MMD site inspection. At that time, Tyrone will provide the WR-07 form to MMD. Additionally, Tyrone has conducted a rare plant survey with a third-party consultant and the summary was sent to MMD on July 21, 2025. The final report will be sent once it is completed. A cultural resources survey has also been performed, and the report will be provided separately.

Thank you for taking the time to review this application. Enclosed is the minimal impact application fee of \$500. If you have any questions, please contact Ms. Raechel Roberts at (575) 956-3290.

Sincerely,



Sherry Burt-Kested  
Environmental Services Manager  
New Mexico Operations

SBK:rmr  
Attachments  
20250729-100

# PART 3

## MINIMAL IMPACT EXPLORATION OPERATION

### PERMIT APPLICATION

Accompanying instructions for this permit application are available from MMD, and on MMD webpage:

<http://www.emnrd.state.nm.us/MMD/MARP/MARPAApplicationandReportingForms.htm>

Send 6 copies of the completed application to:

**STATE OF NEW MEXICO**  
**ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT**

Director  
Mining and Minerals Division  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505  
Telephone: (505) 476-3400

Webpage: [www.emnrd.state.nm.us/MMD/index.htm](http://www.emnrd.state.nm.us/MMD/index.htm)

#### CHECK OFF LIST TO DETERMINE YOUR PROJECT'S STATUS AS A MINIMAL IMPACT EXPLORATION OPERATION:

- ☐ Yes ☒ No My project will exceed 1000 cubic yards of excavation, per permit.
- ☐ Yes ☒ No Surface disturbances for constructed roads, drill pads and mud pits will exceed 5 acres total for my project.
- ☐ Yes ☒ No My project is located in or is expected to have a direct surface impact on wetlands, springs, perennial or intermittent streams, lakes, rivers reservoirs or riparian areas.
- ☐ Yes ☒ No My project is located in designated critical habitat areas as determined in accordance with the federal Endangered Species Act of 1973 or in areas determined by the Department of Game and Fish likely to result in an adverse impact on an endangered species designated in accordance with the Wildlife Conservation Act, Sections 17-2-37 through 17-2-46 NMSA 1978 or by the State Forestry Division for the Endangered Plants Act, section 75-6-1 NMSA 1978.
- ☐ Yes ☒ No My project is located in an area designated as Federal Wilderness Area,

Wilderness Study Area, Area of Critical Environmental Concern, or an area within the National Wild and Scenic River System.

- ☐ Yes ☒ No My project is located in a known cemetery or other burial ground.
- ☐ Yes ☒ No My project is located in an area with cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties.
- ☐ Yes ☒ No My project will or is expected to have a direct impact on ground water that has a total dissolved solids concentration of less than 10,000 mg/L, except exploratory drilling intersecting ground water may be performed as a minimal impact operation.
- ☐ Yes ☒ No My project is expected to use or using cyanide, mercury amalgam, heap leaching or dump leaching in its operations.
- ☐ Yes ☒ No My project is expected to result in point or non-point source surface or subsurface releases of acid or other toxic substances from the permit area.
- ☐ Yes ☒ No My project requires a variance from any part of the Mining Act Rules as part of the permit application.

If you answer yes to any of the above questions, your project does not qualify as a minimal impact exploration operation.

### Confidential Information

- ☐ Yes ☒ No Is any of the information submitted in this application considered by the applicant to be confidential in nature? If yes, please provide this information separately and marked as "confidential."

### Timeline

- Exploration applications must be provided no less than 45 days prior to the anticipated date of operations desired by the applicant.
- Renewal applications shall be filed at least 30 days preceding expiration of the current permit. Permits are valid for one year.
- Approved permit is valid for one year from the date of approval.

## SECTION 1 – OPERATOR INFORMATION (§304.D.1)

Project Name: Little Burros Exploration

Nearest Town To Project: Silver City, NM

Applicant Name and Contact Information (entity obligated under the Mining Act):

Name: Freeport-McMoRan Tyrone Inc.

Address: HWY 90 South, Tyrone Mine Road

Tyrone, NM 88065

Office Phone: 575-912-5231 Cell Phone: \_\_\_\_\_

Fax Number: \_\_\_\_\_ Email: \_\_\_\_\_

Name of On-Site Contact, Representative, or Consultant:

Name: Raechel Roberts

Address: HWY 90 South, Tyrone Mine Road

Tyrone, NM 88065

Office Phone: 575-912-5231 Cell Phone: 575-956-3290

Fax Number: \_\_\_\_\_ Email: rroberts2@fmi.com



## SECTION 2 – RIGHT TO ENTER INFORMATION (§302.D.1)

- A. Describe or attach copies of documents that give the applicant the right to enter the property to conduct the exploration and reclamation, include: lease agreements, access agreements, right of way agreements, surface owner agreements, and claim numbers, if applicable.

Exploration will be conducted on private land owned by FMI, adjacent to the Tyrone Mine (Permit No. GR010RE)

Attachment Figure 2

- B. List the names and addresses of surface and mineral ownership within the proposed permit area. If the mineral is federal mineral, indicate as federal mineral, but provide the name of the claim holder or lease holder.

### Surface Estate Owner(s):

Name	Address	Phone #
<input type="checkbox"/> U.S. BLM	_____	_____
	_____	
<input type="checkbox"/> U.S. Forest Service	_____	_____
	_____	
<input type="checkbox"/> State of NM	_____	_____
	_____	
<input checked="" type="checkbox"/> Private/Corporate Freeport-McMoRan	HWY 90 South, Tyrone Mine Roa	575-912-5231
Name: <u>Tyrone Inc.</u>	<u>Tyrone, NM 88065</u>	
<input type="checkbox"/> Other	_____	_____
Name: _____	_____	

**Lease Holder(s) of Surface Estate (if applicable):**

Name	Address	Phone #
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Mineral Estate Owner(s):**

Name	Address	Phone #
<input type="checkbox"/> Bureau of Land Management	_____	_____
	_____	
<input type="checkbox"/> US Forest Service	_____	_____
	_____	
<input type="checkbox"/> State of NM	_____	_____
	_____	
<input checked="" type="checkbox"/> Claim/Lease Holder Freeport-McMoRan Name: <u>Tyrone Inc.</u>	<u>HWY 90 South, Tyrone Mine Roa</u> <u>Tyrone, NM 88065</u>	<u>575-912-5231</u>
Claim Numbers: <u>See Figure 2</u>		
<input type="checkbox"/> Claim/Lease Holder	_____	_____
Name: _____	_____	
Claim Numbers: _____		
<input type="checkbox"/> Other	_____	_____
Name: _____	_____	

C. Has a Cultural Resource Survey been performed on the site? ☒ Yes ☐ No

If yes, please provide the author, title, date and report number, and include a copy of the survey with this application, if possible:


Westland Resources, NMCRIS 158639, June 02, 2025. Due to confidentiality, a copy of the report will be provided to MMD separately.

No archaeological sites or HCPI's were encountered during the survey.

Attachment Separate

D. Has a wildlife survey or vegetation survey been performed for the permit area?

☒ Yes ☐ No If yes, please provide the author, title, date and report number, and include a copy of the survey with this application, if possible:

A biological screening of this area has been performed for the potential of species to occur. The habitat is analogous and in close proximity to the existing mine and surrounding exploration sites. Due to the size and location, the likelihood of impacting any T&E species is highly unlikely. A rare plant survey was completed in July of 2025. In order to accommodate project timelines, FMI discussed a procedure with the NM Forestry Division. The results were sent through email as soon as the survey was completed and the site cleared. 

Attachment A

### SECTION 3 – MAPS AND PROJECT LOCATION (§302.D.2)

A. Project Location:

Township T19S Range R15W Section 12

Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_

Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_

List the drill hole/exploration name and the GPS coordinates for each site.

I.D. Number	Northing / Latitude	Easting / Longitude
IP-24-01	32° 40'01.92"	108°21'02.39"

Coordinate system used to collect GPS data points:

- ☐ NAD83 Geographic
 ☐ NAD27 Geographic  
☐ NAD83 UTM Zone 13 (or 12)
 ☐ NAD27 UTM Zone 13 (or 12)  
☒ WGS 1984
 ☐ Other: \_\_\_\_\_

Attachment \_\_\_\_\_ (for listing additional boreholes)

**B. Maps** (see application form instructions for examples of maps to be included):

Are topographic maps included with the application that show the following items:

- ☒ Yes – The boundary of the proposed exploration project Permit Area
- ☒ Yes – The proposed exploration locations (i.e., borehole locations)
- ☒ Yes – Existing roads, new roads and overland travel routes
- ☒ Yes ☐ N/A – Areas of proposed road improvement

Attachments Figure 1 & 2

Are maps or figures included with the application showing the approximate dimensions and locations of drill pads and other disturbances:

- ☒ Yes – Drill pad dimensions and constructed drill pad locations

Attachments Figures 3

C. Provide detailed driving directions to access the site:

From Silver City, NM, go south on NM Highway 90. Turn right on the Tyrone Mine Road. Turn right on the Mangas Valley Road and travel approximately 1 mile to the existing access gate. Once passed the gate, travel along the existing road that is used to access freshwater tanks on FMI property. The new road begins near the tanks and extends northeast until it meets up with an existing ranch road. Turn left on the ranch road and the proposed drill pad is located in the first clearing to the left.

## SECTION 4 – EXPLORATION DESCRIPTION (§302.D.3 & 4)

A. Anticipated exploration: Start Date: 10/1/2025 End Date: 12/15/2025

B. List the mineral(s)/element(s) to be explored for: Copper  
Molybdenum, Gold, Lead, Zinc

C. Proposed method(s) of exploration:

☒ **Air drilling (air rotary, coring, etc.):**

1 # of holes 3850 Depth (ft.) 3.5 Diameter (in.)

1 # of drill pads 100 Length (ft.) 100 Width (ft.)

Will drill pads be graded/bladed or overland: ☒ Graded/bladed ☐ Overland

Will drill pads need some mechanical leveling (grading/blading): ☒ Yes ☐ No

Approx. Weight of Drill Rig (lbs.) 18,500 Number of Axles: 2

Total length of drill stem that can be carried on the rig: 10 feet

Is a support pipe truck anticipated? ☒ Yes ☐ No 33,000 Weight (lbs.)

Weight of support compressor (lbs.): N/A Trailer mounted? No

Anticipated Drilling Contractor: Boart Longyear License No. WD-1854

☒ **Mud/fluid drilling:**

1 # of holes 3850 Depth (ft.) 5.5 Diameter (in.)

1 # of drill pads 100 Length (ft.) 100 Width (ft.)

Will drill pads be graded/bladed or overland: ☒ Graded/bladed ☐ Overland

Will drill pads need some mechanical leveling (grading/blading): ☒ Yes ☐ No

Will a closed loop system be used or will mud/fluid pits be used? Pits will be used

If mud/fluid pits are proposed:

1 # of pits    10 Length (ft.)    10 Width (ft.)    8 Depth (ft.)

Anticipated excavating equipment: Backhoe

How will excavating equipment be transported to the site (i.e., driven, low-boy, etc.):

Driven

Will mud pits be lined?: ☒ Yes    ☐ No

If yes, proposed material to line the mud pits: Visqueen lining

Approx. Weight of Drill Rig (lbs.) 18,500    Number of Axles: 2

Anticipated Drilling Contractor: Boart Longyear    License No. WD-1854

☐ **Test pits / exploratory trenches:**

       # of pits           Length (ft.)           Width (ft.)           Depth (ft.)

Anticipated excavating equipment: N/A

How will excavating equipment be transported to the site (i.e., driven, low-boy, etc.):

N/A

☐ **Other methods of exploration** (i.e., cuts, shafts, tunnels, adits, declines, blasting, etc.). Indicate method and details:

N/A

**TOTAL ACREAGE TO BE DISTURBED DUE TO DRILL PADS = 0.4 acres**  
(to convert to acres, multiply total square footage of drill pads by 0.0000229)

D. Disposal of drill cuttings

If this exploration project is for uranium or other radioactive elements/minerals, applicant agrees to perform a gamma radiation survey at each drill site prior to, and after, exploration activities. Applicant/Owner/Operator agrees to restore gamma radiation levels at each drill site to pre-exploration levels. ☐ Yes ☐ No ☒ N/A

Will excess drill cuttings be buried at each drill site location or within a single disposal pit?

☒ At each drill pad location ☐ Within a single disposal pit

If a single disposal pit is proposed, please provide the following:

Description or GPS coordinates of the proposed cuttings disposal pit location:

Dimensions of the single proposed cuttings disposal pit (length, width, and depth):

\_\_\_\_\_ Length (ft.) \_\_\_\_\_ Width (ft.) \_\_\_\_\_ Depth (ft.)

**TOTAL ACREAGE TO BE DISTURBED DUE TO DISPOSAL PIT = 0 acres**  
(to convert to acres, multiply total square footage of disposal pit by 0.0000229)

E. Other Supporting Equipment (check all that apply):

<input checked="" type="checkbox"/> 4x4 Trucks/Vehicles	Quantity: <u>6</u>
<input checked="" type="checkbox"/> Water Truck	Weight (lbs.): <u>46,000</u>
<input checked="" type="checkbox"/> Geophysical Truck	Weight (lbs.): <u>9,900</u>
<input checked="" type="checkbox"/> Pipe Truck (rig support)	Weight (lbs.): <u>35,000</u>
<input checked="" type="checkbox"/> Bulldozer	Type: <u>D-8</u>
<input checked="" type="checkbox"/> Backhoe	Type: _____
<input type="checkbox"/> Trackhoe	Type: _____
<input checked="" type="checkbox"/> Scaper/Grader	Type: <u>H-14</u>
<input checked="" type="checkbox"/> Trailers	Quantity/Type: <u>1 Flatbed utility</u>
<input checked="" type="checkbox"/> Portable Toilet	Quantity: <u>1</u>
<input type="checkbox"/> Other	List: _____
	_____
	_____
	_____
	_____



F. Roads and Overland Travel:

List of new roads to be constructed for this exploration project:

Description of <i>NEW</i> Roads	Length (ft.)	Width (ft.)	Total Acres (length x width x 0.0000229)
From tanks to existing ranch road	1540	15	0.53
<b>TOTAL ACRES DISTURBED BY NEW ROAD CONSTRUCTION :</b>			<b>0.53</b>

Describe how new roads will be constructed:

Road will be pushed in using a small dozer or blade.

List for extension or widening of existing roads:

Description of Modification to <i>EXISTING</i> Roads	Length (ft.)	Width (ft.)	Total Acres (length x width x 0.0000229)
Widening of existing ranch road	575	5	0.07
<b>TOTAL ACRES DISTURBED BY ROAD IMPROVEMENTS :</b>			<b>0.07</b>

Describe how existing roads will be extended or widened:

The road will be widened using a small dozer or blade. The existing ranch road is approximately 10 ft wide and may need to be modified. Additional coverage is for FA purposes only. Existing roads will not be reclaimed. They will be left open for ranching and freshwater utility access.

List for routes of overland travel:

Description of OVERLAND TRAVEL Routes	Length (ft.)	Width (ft.)	Total Acres (length x width x 0.0000229)
None			
TOTAL ACRES DISTURBED BY OVERLAND TRAVEL :			0

#### G. Support Facilities

Describe (location and size) any support facility disturbances (equipment staging, equipment and material storage and/or lay down areas, vehicle parking, temporary housing and/or trailers) to be created or situated on the site during exploration operations.

If needed, they will be staged within disturbed areas at the Tyrone Mine.

**H. TOTAL ACREAGE TO BE DISTURBED BY PROJECT = 1 \_\_\_\_\_ acres**  
(include all disturbed acreage from drill pads, cuttings disposal pit, new roads, improved roads and overland travel routes)

*Note. Tyrone has added an additional 1 acre of unplanned disturbance contingency. The value provided in the attached financial assurance estimate is for 2.0 acres in total. The planned disturbance still remains at 1.0 acres.*

## SECTION 5 – CHEMICAL USE (§302.D.4)

A. Check any and all chemicals that will be used for this project.

<input checked="" type="checkbox"/> Drilling Mud (i.e., EZ Mud)	Type/Quantity: AMC 206 / 10 gal. per shift
<input checked="" type="checkbox"/> Diesel Fuel	Quantity: 200 gal. per shift
<input checked="" type="checkbox"/> Down-hole Lubricants	Type/Quantity: Rod grease ~ 10 gal.
<input checked="" type="checkbox"/> Lost Circulation Materials	Type/Quantity: Drill paper / 10 bags
<input checked="" type="checkbox"/> Oils/Grease	Quantity: 15w40/ 6 gal./Mystic tube greas
<input checked="" type="checkbox"/> Gasoline	Quantity: 5 gal. per shift for water pumps
<input checked="" type="checkbox"/> Hydraulic Fluid	Quantity: 30 gal.
<input type="checkbox"/> Ethylene Glycol	Quantity: _____
<input checked="" type="checkbox"/> Cement	Type/Quantity: Portland/ 72 per pallet (2 pallets
<input checked="" type="checkbox"/> Water	Source: 4000 gal. water truck
<input checked="" type="checkbox"/> Bentonite	Quantity: AMC GEL 54 bags per pallet (10
<input type="checkbox"/> Fertilizer	Type/Quantity: _____
<input type="checkbox"/> Other	Type/Quantity: _____
	_____
	_____

B. Describe, in detail, a plan for the containment, use and disposal of all chemicals listed above:

Oil and other chemicals will be stored on mobile plastic containment basins. Used oil, oily rags, filters, etc. will be transported to the Tyrone mine oil disposal areas at the heavy-duty truck shop. All other chemicals including aerosols will also be disposed at the Tyrone mine. +

C. Describe where equipment fueling/refueling will occur:

Equipment fueling for light vehicles, pipe trucks, and water trucks will occur within the Tyrone mine shop area. Drill rigs will be fueled on their respective drill sites with a mobile truck bed diesel fuel pump.

D. Describe how hazardous material spills/leaks will be handled:

All spills will be reported immediately to the Tyrone environmental department who will direct communications from that point further.

Spill cleanup materials that will be kept on-site include bentonite clay or cat litter; adsorbent pads, rolls, mats, socks, pillows, dikes, etc.; and drum or barrel for containing contaminated soil/adsorbent materials.

E. Identify spill cleanup materials that will be kept on-site (check all that apply):

☒ Bentonite clay or cat litter

☒ Adsorbent pads, rolls, mats, socks, pillows, dikes, etc.

☒ Drum or barrel for containing contaminated soil/adsorbent materials

☐ Other/list: \_\_\_\_\_

☐ Other/list: \_\_\_\_\_

☐ Other/list: \_\_\_\_\_

F. Applicant/owner/representative agrees to immediately notify the State of New Mexico immediately of any spills of hazardous materials (see page 1 of this application for phone numbers to notify): ☒ Yes ☐ No

## SECTION 6 – GROUNDWATER/SURFACE WATER INFORMATION (§302.D.5)

- A. Provide an estimate of depth to ground water and the total dissolved solids (TDS) concentration.

Depth to groundwater (ft.): 300-600 TDS concentration (mg/L): 250-500

Describe the source of this information:

Referenced the following report Trauger, F.D. 1972. Water resources and general geology of Grant County, New Mexico. Prepared in cooperation with the U.S. Geological Survey, New Mexico State Engineer office, and Grant County Commission. New Mexico State Bureau of Mines and Mineral Resources, Hydrologic Report 2.

- B. Will dewatering activities be conducted: ☐ Yes ☒ No

If yes, please describe:

- C. Is groundwater anticipated to be encountered during exploration: ☒ Yes ☐ No

If **YES**:

Have you completed Form WR-07 (Application for permit to drill a well with no consumptive use of water) and mailed it to the District Office of the State Engineer? ☐ Yes

*Note. WR-07 will be submitted to NMOSE after the MMD inspection*

Have you completed Form WD-08 (Well plugging plan of operations) and mailed it to the District Office of the State Engineer? ☒ Yes

**See Attachment B**

Attachment \_\_\_\_\_ (copies of the completed WR-07 and WD-08 forms)

- D. Exploration Borehole Abandonment

### Dry Boreholes

- ☐ Dry hole abandonment (option 1): 100% bentonite pellets/chips (i.e. HOLEPLUG® manufactured by Baroid Industrial Products), dropped from surface then hydrated in place according to the manufacturer's recommendations, emplaced from total depth to within 12 feet of the original ground surface, followed by 10 feet of neat cement, followed by 2 feet of topsoil/topdressing.

- ☒ Dry hole abandonment (option 2): Neat cement slurry, mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 2 feet of the original ground surface, followed by 2 feet of topsoil/topdressing.
- ☐ Dry hole abandonment (option 3): Cement + 6% bentonite slurry, mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 2 feet of the original ground surface, followed by 2 feet of topsoil/topdressing.
- ☐ Dry hole abandonment (option 4): High-density bentonite clay ( $\geq 20\%$  active solids; i.e. QUIK-GROUT® manufactured by Baroid Industrial Products), mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 12 feet of the original ground surface, followed by 10 feet of neat cement, followed by 2 feet of topsoil/topdressing.
- ☐ Dry hole abandonment (option 5): Other materials / describe and justify use:

### **Wet Boreholes**

- ☒ Wet hole abandonment (option 1): Neat cement slurry, mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 2 feet of the original ground surface, followed by 2 feet of topsoil/topdressing.
- ☐ Wet hole abandonment (option 2): High-density bentonite clay ( $\geq 20\%$  active solids; i.e. QUIK-GROUT® manufactured by Baroid Industrial Products), mixed according to the manufacturer's recommendations, emplaced with a tremie pipe from total depth to within 12 feet of the original ground surface, followed by 10 feet of neat cement, followed by 2 feet of topsoil/topdressing.
- ☐ Wet hole abandonment (option 3): Other sealing material approved by the Office of the State Engineer. Describe and include well plugging plan approval by the State Engineer:

- D. Applicant agrees to contain any water produced from the exploration borehole at the drill site and acknowledges that discharge of this water to a watercourse may be a violation of the Federal Clean Water Act: ☒ Yes ☐ No

E. Is any drilling proposed to occur within the channel of any perennial, intermittent, or ephemeral streams? ☐ Yes ☒ No

F. Is any drilling anticipated to occur within 100 feet of any perennial, intermittent, or ephemeral streams? ☐ Yes ☒ No

## SECTION 7 – RECLAMATION & OPERATION PLAN (§302.D.6 AND 302.I.K)

### A. Salvage/Preservation of Topsoil

Before any grading/blading or similar activities occur in relation to this project, operator agrees to salvage and preserve all topsoil and topdressing for use in future reclamation of this project ☒ Yes ☐ No

Describe how topsoil will be salvaged prior to initiation of exploration activities (check all that apply):

- ☐ N/A – no construction work will occur, therefore no soil salvage is needed.
- ☒ Excavated from drill pads and stored at each drill pad
- ☒ Excavated from road improvements/construction and stored adjacent to road
- ☒ Excavated from mud/fluid pits and storage at each pit
- ☐ Other, describe:

### B. Erosion Control

Describe the best management practices that will be implemented to control erosion:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Silt fencing     | Location: <u>To be determined in the field</u> |
| <input checked="" type="checkbox"/> Straw waddles    | Location: <u>To be determined in the field</u> |
| <input checked="" type="checkbox"/> Straw bales      | Location: <u>To be determined in the field</u> |
| <input checked="" type="checkbox"/> Ditches/swales   | Location: <u>To be determined in the field</u> |
| <input checked="" type="checkbox"/> Berms/dikes/dams | Location: <u>To be determined in the field</u> |
| <input checked="" type="checkbox"/> Sediment basins  | Location: <u>To be determined in the field</u> |
| <input type="checkbox"/> Other or N/A                | Type/Location: _____                           |



C. Wildlife Protection / Noxious Weed Prevention

Will the perimeter of drill pits be fenced to prevent wildlife entrapment? ☒ Yes ☐ No

Proposed pit perimeter fence material:

Temporary plastic tarps over mud pits unless in use. Pits will be backfilled upon completion of drilling.

Describe how the pit perimeter fencing will be installed and secured (i.e., T-posts, wooden stakes, etc.):

Metal panels stand upright by design and stakes will be used to secure tarps.

Will at least one side of the interior of the drill pits be sloped at 3:1 as a ramp for wildlife escape? ☒ Yes ☐ No

If No, will another type of constructed escape ramp be installed? Describe:

Applicant/Owner/Operator commits to pressure-washing or steam-clean all equipment prior to entering the permit area: ☒ Yes ☐ No

D. Reclamation Details

Describe in general how re-contouring or re-establishment of the surface topography will be restored:

Backfill pits, regrade drill sites, and rip if necessary. Roads will be left open for utility and ranching access. All sites will be seeded.

Describe how the reclamation of portals, adits, drilling fluid/mud and/or waste pits, shafts, ponds, roads and other disturbances will be performed:

N/A

Is seeding of the reclaimed areas proposed: ☒ Yes ☐ No

If no, provide a justification as to why no revegetation is needed:

Plant mix to be used in the re-establishment of vegetation:

☐ US Forest Service specified mix applied through broadcast at their recommended rate

☐ BLM specified mix applied through broadcast at their recommended rate

☒ Other:

Plant Name	Seeding Rate (lbs./acre)
Blue grama	1
Sideoats grama	2
Sand dropseed	0.25
Indian ricegrass	2
Purple prairie clover	2
Scarlet globemallow	1

Broadcast applied or drill-seeded: ☒ Broadcast ☐ Drill-seeded

Scarification Methods (check all that apply):

- ☐ Primary tillage to greater than 6-inches depth of all constructed drill pads and roads
- ☐ Secondary tillage of all constructed drill pads and roads, and/or overland travel routes
- ☐ Chain drag or tire drag over seeds in areas used for overland travel
- ☐ Light raking of soil over seeds in areas used for overland travel
- ☐ None
- ☒ Other/describe:

Rip with blade 4-6 inches prior to seeding.

Mulch Use:

- ☐ Certified weed-free straw mulch will be placed over areas that have been tilled/disc'd or ripped at a rate of 2 tons per acre, and will be crimped in place
- ☒ No mulch is proposed

#### E. Reclamation Timeline

Applicant/Owner/Operator commits to reclamation of the disturbed area as soon as possible following the completion or abandonment of the exploration operation, unless the disturbed area is included within a complete permit application for a new mining permit:

- ☒ Yes    ☐ No

Anticipated Start of Reclamation:

- ☐ 0-30 days after completion of drilling
- ☐ 31-60 days after completion of drilling
- ☒ Other/specify: Earthwork will commence asap and seeding in May-October to coincide with precipitation and project completion.

## SECTION 8 – PERMIT FEES AND FINANCIAL ASSURANCE (§302.I.2 AND 5)

- A. Financial assurance must be posted with Mining and Minerals Division prior to approval of this application. The acceptable forms of financial assurance are surety bonds, letters of credit, and certificates of deposit. Provide an estimate of, and an instrument for, the proposed financial assurance required by Subpart 3.

- ☐ Surety Bond  
☐ Letter of Credit  
☐ Cash Account / Certificate of Deposit

☒ Estimated amount of financial assurance: \$67,700 - See Table 1 in attachments

Or

- ☐ Applicant will provide the amount of financial assurance calculated by MMD.

- B. Attach the permit fees as determined pursuant to Subpart 2. The application fee for a minimal impact exploration permit is \$500.00.

- ☐ Money Order/Cashier's Check  
☒ Check

Check Number : 0001059670

Financial Institution: Bank of America N.A.

## SECTION 9 – CERTIFICATION REQUIREMENT (§302.1.3 & 4)

I certify that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals responsible for obtaining the information; I believe the submitted information is true, accurate, and complete. I agree to comply with the reclamation requirements set forth in this permit application and related correspondence, the New Mexico Mining Act and the Rules. Further, I certify that I am not in violation of any other obligation under the New Mexico Mining Act or the Rules adopted pursuant to that Act and I allow the Director to enter the permit area, without delay, for the purposes of conducting inspections during exploration and reclamation.

Signature of Permittee or Authorized Agent: \_\_\_\_\_

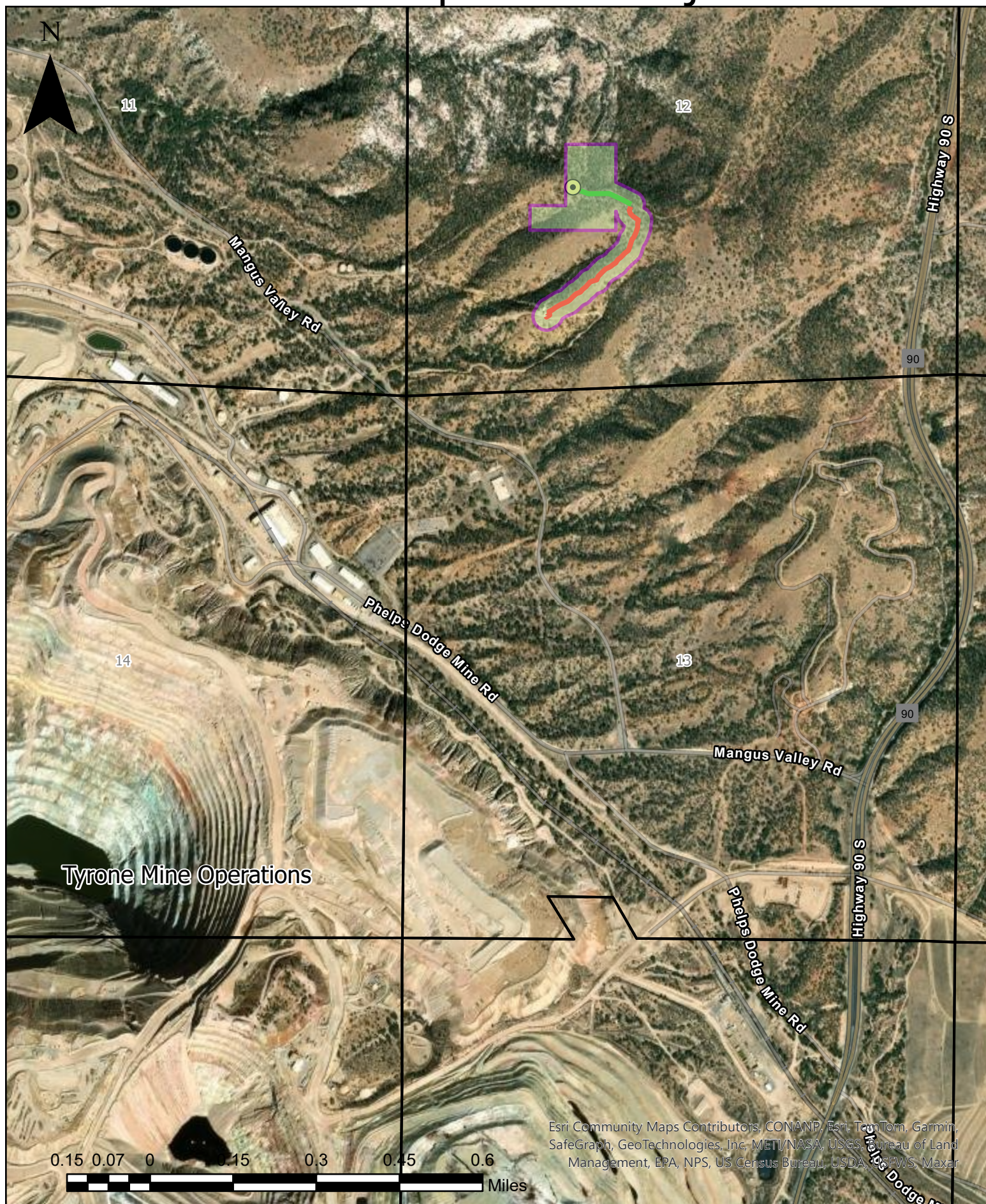
Name (type or print): \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_



# Little Burros Exploration Project

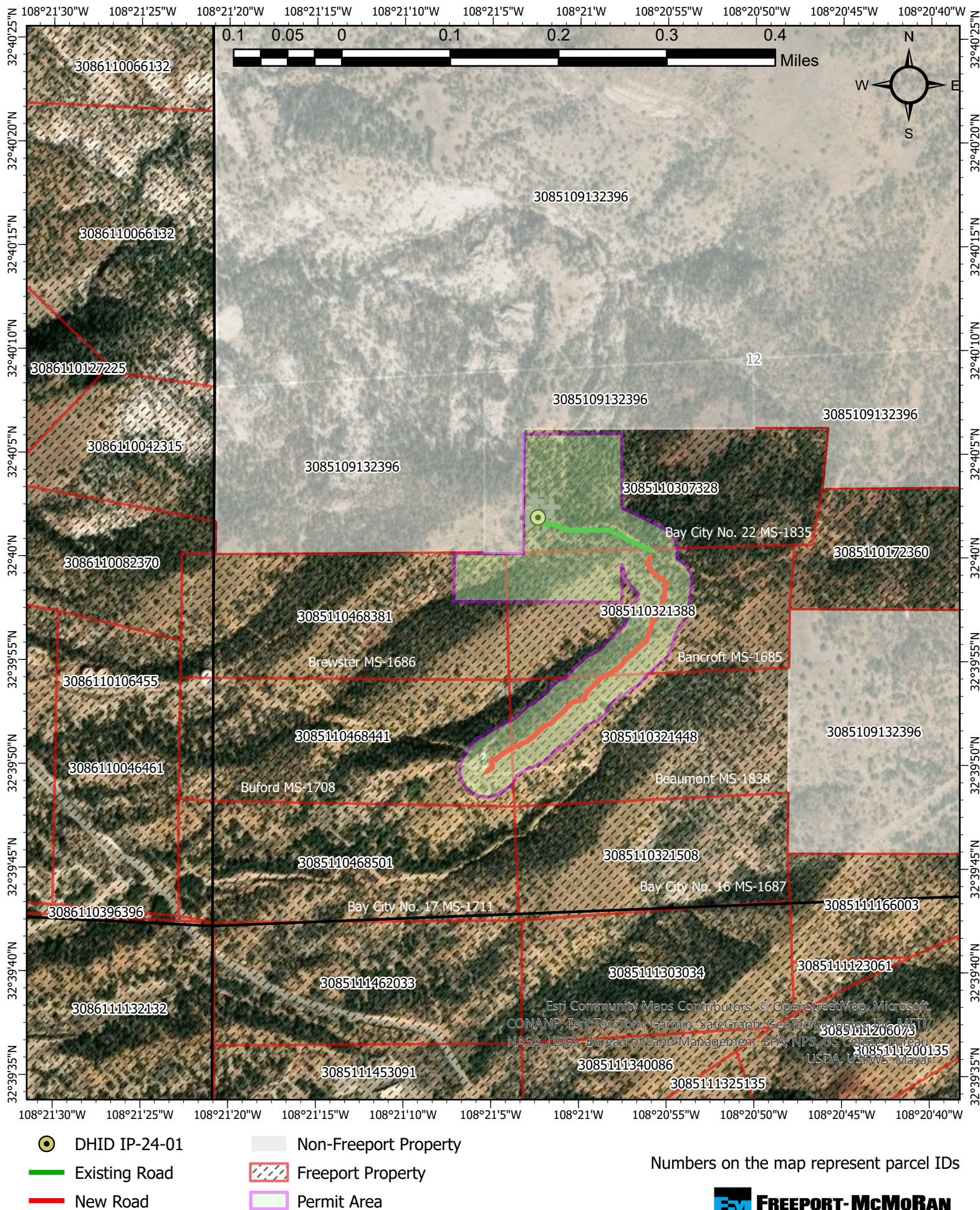


## Legend

- Permit Area
- Existing Road
- DHID IP-24-01
- New Road



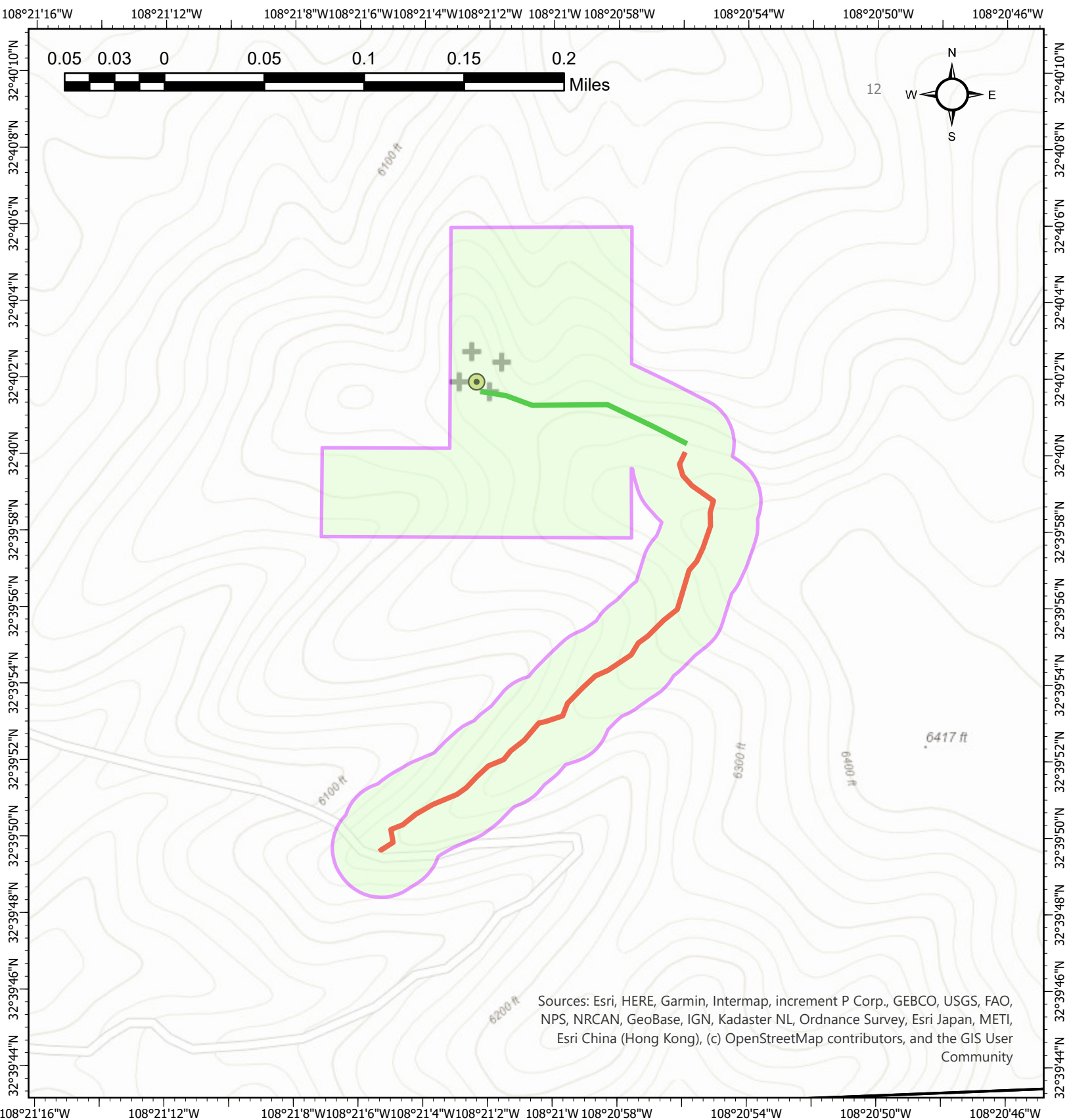
# Little Burros Exploration - Property Ownership





# Little Burros Exploration Project

NE Of Tyrone Mine Operations, NM



- DHID IP-24-01
- Drill Pad Corners
- Existing Road
- Permit Area
- New Road



Figure 3



<b>Table 1. 2025 Financial Assurance (FA) Cost Estimate for Exploration</b> <b>Drilling Project: Little Burros-Tyrone</b>				
<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Rate (\$/unit)</b>	<b>Total Cost (\$)</b>
Surface Reclamation Cost (1st acre)	acre	1.00	\$ 8,900	\$ 8,900
Drill Road & Pad Reclamation	acre	1.00	\$ 4,900	\$ 4,900
Plug and Abandon Exploration Drill Holes	ft	3,850	\$ 14	\$ 53,900
<b>Total FA</b>				<b>\$ 67,700</b>
<i>Note.</i> Planned disturbance is estimated at 1 acre. An additional 1 acre has been provided for unplanned disturbances contingent to field fitting, borrow areas, and reclamation.				



# Biological Evaluation

## Little Burros Exploration Project

Tyrone Mine | June 3, 2025

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Appendix C: IPaC and Bison-M Reports

# 1. Introduction

Freeport-McMoRan Tyrone Inc. (Tyrone) is planning an exploration project to identify available mineral resources adjacent to the existing Tyrone Mine. The project includes one drill pad approximately 100x100 ft in area, construction of one new access road extending approximately 1540 ft, and the maintenance of two existing access roads currently used to service utilities and ranching activities. Disturbance is estimated at 0.8 acres. Figures have been provided with the Part 3 Minimal Impact Exploration permit application to the Mining and Mineral Division for review and processing. The purpose of this document is to summarize the screening analysis used to determine the “potential to occur” of Special-Status animal species and any potential critical habitat in the project area. Special-Status plant species will be screened, surveyed, and summarized in a separate report. For this report, Special-Status species include:

- 1) Species listed or proposed for listing as threatened or endangered under the Endangered Species Act (ESA) by the U.S. Fish and Wildlife Service (USFWS) that have the potential to occur within the project area as identified by the USFWS Information, Planning, and Consultation (IPaC) tool (Appendix C);
- 2) Species protected under the Bald and Golden Eagle Protection Act (BGEPA); and
- 3) Species designated as state threatened or endangered by the New Mexico Department of Game and Fish (NMDGF) as identified by the Biota Information System of New Mexico (BISON-M) for Grant County (Appendix C) and field surveys conducted by third party consultants contracted by Tyrone.

## 2. Project Area



The 190-acre project area is located approximately 8 miles south of Silver City, NM in Grant County, 18 miles southeast of the Gila River and adjacent to the greater Burro Mountain Region of the Gila National Forest. The project area is located within Section 12 of Township 19 South and Range 15 West in the Little Burro Mountain range. The proposed permit boundary of the project adjoins the Tyrone Mine permit boundary to the northeast and is accessible via the Mangas Valley Road.

### 2.1. Physiographic

The project area extends from the foothills to the mid slopes of the Little Burro Mountains within the Basin and Range province elevations ranging from 5,900 ft to 6,200 ft.

### 2.2. Climate

Historical climate records from the Fort Bayard, NM weather station provide long term averages for temperature and precipitation. This region is characterized by warm summers (73 ° F average temperature in July, the hottest month), mild winters (39° F average temperature in January, the



coldest month), and low precipitation. The average annual precipitation in Silver City is approximately 16 inches, falling primarily as rain during the monsoon season from July to October. Snow typically falls between November and March (WRCC, 2025).

### 2.3. Surface Water

The project area lies to the west of the Continental Divide and is located within the Upper Gila-Mangas Subbasin (Hydrologic Unit Code [HUC8] 15040002). It is intersected by a few ephemeral drainages or arroyos, but no intermittent or permanent water bodies or streams are present within the planned disturbance.

The IPaC screening tool indicated a potential overlap with a wetland designated as Riverine habitat (R4SB3J) by the National Wetland Inventory (NRWI) classification system. As noted on the IPaC report, the NRWI data being shown “may be out of date” as field conditions are not consistent with this designation (See Appendix A for photographs). The drainage indicated does not contain water for extended periods nor does it possess hydric soils or support hydrophytic plant communities.



### 2.4. Soil

Soils were assessed using the National Resource Conservation Service (NRCS) Web Soil Survey mapping tool. Within the project area soils are predominantly Gaddes-Santa Fe-Rock outcrop complex with 15 to 45 % slopes and Lonti gravelly loam with 15 to 35 % slopes. Additional soils within the area are Santa Fe-Rock outcrop complex with 1 to 25 % slopes.

The Gaddes, Santa Fe, Lonti, and Santana soil and rock complexes are well-draining units, derived from igneous, metamorphic, and sedimentary rock. They are characterized by gravelly, sandy, and or loamy profiles with Lonti having higher clay content in the intermediate horizons. They are common soil complexes in the southern region of the state and extend anywhere from 4 to 80 inches until reaching paralithic bedrock. Their settings include slopes, hillslopes, and mountainflanks, and summits.

### 2.5. Vegetation

The project area is classified as the transition zone between the semi-arid grassland and the Madrean Evergreen Woodland, where the Upper Gila Mountains meets the Chihuahuan Desert (Westland, 2024). Recent site visits confirmed that these classifications are fitting. See Appendix A for representative site photographs.

Stands of beargrass (*Nolina microcarpa*), side-oats grama grass (*Bouteloua curtipendula*), and various oak species (*Quercus* spp.) dominate the vegetative cover in the project area. Alligator juniper (*Juniperus deppeana*), pinion pine (*Pinus edulis*), and broom snakeweed (*Gutierrezia sarothrae*) are less abundant but also common throughout. More sparsely distributed species such as common sotol (*Dasylirion wheeleri*) and banana yucca (*Yucca baccata*) are also present.

## 3. Methods

### 3.1. Special Status Species Identification

The potential to occur for Special-Status Species was analyzed using various screening tools, prior studies, and recent wildlife surveys. Section 4 provides the results of the three following designations:

- 1) Species listed or proposed for listing under the ESA) by the USFWS that have the potential to occur within the project area as identified by the IPaC tool;
- 2) Species protected under the (BGEPA); and
- 3) Species designated as state threatened or endangered by the NMDGF as identified by the BISON-M for Grant County and field surveys conducted by third party consultants contracted by Tyrone.

### 3.2. Special Status Species Screening

Using the lists generated from the above sources, a screening analysis was performed to evaluate the potential for these species to occur within the project area and to determine the presence or absence of designated or proposed critical habitat. These determinations were based on the IPaC and BISON-M reports, recent wildlife surveys near the project area, and a review of a prior biological evaluation for the Tyrone Peak Exploration project area. The habitat between Tyrone Peak and the Little Burro project areas are contiguous and the natural site features are analogous. A copy of the summary table from the Tyrone peak evaluation is provided in Appendix B. The Tyrone peak evaluation was based on the following:

- The natural history and known geographical and elevational ranges of the species.
- Results of BISON-M species occurrences for Grant County
- Other occurrence records in published or grey literature, including citizen science data
- Data provided by the USFWS Critical Habitat Portal online mapping tool

The criteria used to determine the potential of occurrence of each species included in this screening analysis are defined as follows:

**Present:** The species has been observed to occur with the project area, the project area is within the known range and distribution of the species, and habitat characteristics required by the species are present.

**Possible:** There are no known records of the species within the project area, but the known, current distribution of the species includes the project area and the required habitat characteristics of the species appear to be present in the project area. Given the uncertainty associated with the species identification and accuracy of the location of observations from citizen science databases, observations associated with citizen science databases are evidence that a species is possible within the project area.

**Unlikely:** The known, current distribution of the species does not include the project area, but the distribution of the species is close enough such that the project area may be within the dispersal or foraging distance of the species, and they may show up as transients. The habitat characteristics required by the species may be present in the project area.

**None:** The project area is outside of the known distribution of the species, or the habitat characteristics required by the species are not present.

## 4. Potential for Species to Occur

### 4.1. ESA-Listed Species

The potential for the eight ESA listed Special-Status Species to occur within the project area are summarized below. Of the eight species identified by the [IPaC](#) tool, six have a potential to occur of **None**, one is **Unlikely**, and one is **Possible**.

Birds			
Species	Listing Status	Potential to Occur	
Mexican Spotted Owl ( <i>Strix occidentalis lucida</i> )	Threatened	None	No suitable habitat present
Yellow-billed Cuckoo ( <i>Coccyzus americanus</i> )	Threatened	Unlikely	No suitable habitat
Fishes			
Chihuahua Chub ( <i>Gila nigrescens</i> )	Threatened	None	No suitable habitat present
Gila Topminnow (incl. Yaqui) ( <i>Poeciliopsis occidentalis</i> )	Endangered	None	No suitable habitat present
Gila Trout ( <i>Oncorhynchus gilae</i> )	Threatened	None	No suitable habitat present
Loach Minnow ( <i>Tiaroga cobitis</i> )	Endangered	None	No suitable habitat present
Spikedace ( <i>Meda fulgida</i> )	Endangered	None	No suitable habitat present
Insects			
Monarch Butterfly ( <i>Danaus plexippus</i> )	Proposed threatened	Possible	Occasional transient and potential foraging

### 4.2. BGEPA-Listed Species

Information regarding bald and golden eagles is not available at this time using the IPaC tool however, they have been identified in previous screenings on the nearby exploration projects mentioned in Section 3.2. Both the bald (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) have been observed foraging over nearby reclamation units during both the spring and winter months (Marshall, 2025). Due to the proximity of these sitings to the proposed project location, the potential to occur for both BGEPA-Species is **Possible**. Given the nature of the exploration activities and the habitat only being suitable for intermittent foraging, encounters with these species in this area would be unlikely or short in duration. Particularly for the bald eagle, the project area occurs near active human disturbances (Mangas Valley Road and the Tyrone Mine) and lacks vegetation preferred for nesting. The project area also lacks large cliffs where the golden eagle prefers to nest. Nesting surveys will verify these assumptions prior to the initiation of ground disturbing activities.

### 4.3. New Mexico State-Listed Species

A list of New Mexico State-Listed Species was generated using the [BISON-M](#) tool managed by NMDGF. Search results were narrowed down threatened and endangered species known to occur in Grant County, NM. The results showed a potential of 46 species to occur, and the determinations were made based on Table 1 in Appendix B (Extracted from Westland, 2024) the NMDGF species booklets, and recent wildlife surveys near the project area. Two species have the potential to occur of **Possible**, 19 are **Unlikely**, and 16 are **None**. Species previously identified in Sections 4.1 and 4.2, were excluded from the following summary.

<b>Birds</b>			
<b>Species</b>	<b>Listing Status</b>	<b>Potential to Occur</b>	
Common Ground Dove ( <i>Columbina passerine</i> )	Endangered	Unlikely	Outside of typical distribution and elevation
Buff-collared Nightjar ( <i>Antrostomus ridgwayi</i> )	Endangered	None	Lack of preferred habitat
Lucifer Hummingbird ( <i>Calothorax lucifer</i> )	Threatened	Unlikely	Lack of preferred habitat
Costa's Hummingbird ( <i>Calypte costae</i> )	Threatened	Unlikely	Uncommon in NM
Broad-billed Hummingbird ( <i>Cynanthus latirostris</i> )	Threatened	Unlikely	Lack of preferred habitat
White-eared Hummingbird ( <i>Basilinna leucotis</i> )	Threatened	Unlikely	Lack of preferred habitat
Neotropic Cormorant ( <i>Phalacrocorax brasilianus</i> )	Threatened	None	No suitable habitat present
Brown Pelican ( <i>Pelecanus occidentalis</i> )	Endangered	None	No suitable habitat present
Common Black Hawk ( <i>Buteogallus anthracinus</i> )	Threatened	Unlikely	Lack of preferred habitat
Elegant Trogon ( <i>Trogon elegans</i> )	Endangered	Unlikely	Lack of preferred habitat
Gila Woodpecker ( <i>Melanerpes uropygialis</i> )	Threatened	Unlikely	Lack of preferred habitat
Aplomado Falcon ( <i>Falco femoralis</i> )	Endangered	Unlikely	Marginally suitable habitat
Peregrine Falcon ( <i>Falco peregrinus</i> )	Threatened	Unlikely	Lack of preferred habitat
Northern Beardless-Tyrannulet ( <i>Camptostoma imberbe</i> )	Endangered	None	Outside of known geographic range
Thick-billed Kingbird ( <i>Tyrannus crassirostris</i> )	Endangered	None	No suitable habitat present
Southwestern Willow Flycatcher ( <i>Empidonax traillii extimus</i> )	Endangered	None	No suitable habitat present
Bell's Vireo ( <i>Vireo bellii</i> )	Threatened	Unlikely	Lack of preferred habitat
Gray Vireo ( <i>Vireo vicinior</i> )	Threatened	Unlikely	Rarely detected in NM
Yellow-eyed Junco ( <i>Junco phaeonotus</i> )	Threatened	Possible	Potentially suitable habitat for overwintering
Baird's Sparrow ( <i>Centronyx bairdii</i> )	Threatened	Unlikely	Lack of preferred habitat
Abert's Towhee ( <i>Melospiza aberti</i> )	Threatened	Unlikely	Lack of preferred habitat
Varied Bunting ( <i>Passerina versicolor</i> )	Threatened	Unlikely	Potentially suitable habitat for breeding only
<b>Fishes</b>			
Gila Chub ( <i>Gila intermedia</i> )	Endangered	None	No suitable habitat present
Headwater Chub ( <i>Gila nigra</i> )	Candidate	None	No suitable habitat present
Roundtail Chub ( <i>Gila robusta</i> )	Endangered	None	No suitable habitat present
<b>Insects</b>			
Nokomis Silverspot ( <i>Speyeria (Argynnis) nokomis</i> )	Threatened	Unlikely	Sitings in Pinos Altos, but habitat is drier than preferred
<b>Mammals</b>			
Lesser Long-nosed Bat ( <i>Leptonycteris yerbabuenae</i> )	Threatened	Unlikely	Outside of the known range, but may occasionally forage
Spotted Bat ( <i>Euderma maculatum</i> )	Threatened	Possible	Potentially suitable habitat for foraging
Mexican Gray Wolf ( <i>Canis lupus baileyi</i> )	Endangered	Unlikely	Outside of Zone 1
Grizzly Bear ( <i>Ursus arctos</i> )	Threatened	None	Considered extinct in NM
<b>Amphibians</b>			
Chiricahua Leopard Frog ( <i>Lithobates chiricahuensis</i> )	Threatened	None	No suitable habitat present
Lowland Leopard Frog ( <i>Lithobates yavapaiensis</i> )	Endangered	None	No suitable habitat present and likely extirpated from NM

<b>Mollusks</b>			
Gila Springsnail ( <i>Pyrgulopsis gilae</i> )	Threatened	None	Outside of highly restricted geographic range
New Mexico Hot Springnail ( <i>Pyrgulopsis thermalis</i> )	Threatened	None	Outside of highly restricted geographic range
<b>Reptiles</b>			
Gila Monster ( <i>Heloderma suspectum</i> )	Endangered	Unlikely	No known records and project is on limit of its range
Northern Mexican Gartersnake ( <i>Thamnophis eques</i> )	Endangered	None	No suitable habitat present
Narrow-headed Gartersnake ( <i>Thamnophis rufipunctatus</i> )	Endangered	None	No suitable habitat present

## 5. References Cited

BISON-M. 2025. Species Booklets. Santa Fe, New Mexico: Biota Information System of New Mexico [BISON-M]. Retrieved from <https://www.bison-m.org/>

Marshall, Bryce, L., and L.G. Marshall. 2025. Tyrone Mine Avian and Wildlife Survey Report: No.1 Stockpile, 2 Dam, 3 Dam, Copper Mountain and USNR Reclamation Units, Spring 2024 and Winter 2025, Tyrone, New Mexico. Biome, Ecological & Wildlife Research. Flagstaff, Arizona. 34 pp.

Western Regional Climate Center (WRCC). 2025. Ft Bayard, New Mexico Period of Record Monthly Climate Summary [database]. Retrieved from <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?nm3265>

Westland Engineering & Environmental Services (Westland). 2024. Tyrone Peak Biological Evaluation. Project Number 269.20. Tucson, AZ. 67 pp.

U.S. Fish & Wildlife Service. 2025. Information for Planning and Consultation (IPaC): IPaC Resource List. Retrieved from <https://ipac.ecosphere.fws.gov/>



## Appendix A: Site Photographs



**Photo 1.** Utility access road and general site overview (southwestward)



**Photo 2.** New access road location (northeastward)





**Photo 3.** New access road location (southwestward)



**Photo 4.** Existing ranch road leading to drill pad (northwestward)





**Photo 5.** Drill pad location (northwestward)



**Photo 6.** Typical vegetation in ephemeral drainages (southwestward)

## Appendix B: Table 1: ESA Listed Species Summary



Table 1. ESA-Listed Special-Status Species Potential to Occur in the Project Area

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b>AMPHIBIANS</b>					
<b><i>Lithobates chiricahuensis</i></b>  Chiricahua leopard frog	Threatened (USFWS 2002a, USFWS 2012b); designated critical habitat (USFWS 2012b).	Breeds in perennial to semi-permanent montane aquatic environments including cattle tanks, creeks, cienegas, pools, rivers, springs, lakes and reservoirs (USFWS 2011). Larvae are obligate on aquatic habitats whereas adults are primarily aquatic but also utilize terrestrial habitats (USFWS 2012b). May disperse from occupied habitat one mile overland, three miles along intermittent drainages, and five miles along permanent water courses, or some combination thereof (USFWS 2012b).  Elevation: 3,200–8,890 ft (USFWS 2012b).	Occurs in Arizona and New Mexico, U.S. and Sonora, Chihuahua and Durango, Mexico (USFWS 2012b).	In New Mexico, this species distribution occurs in the southwestern portion of the state throughout the Gila National Forest as well as the Peloncillo, Animas, Big Hatchet, and Alamo Hueco Mountains (BISON-M 2022). Based on work conducted between 1994 and 1999, 41 sites containing this species were recorded; 33 were located north of Interstate ten and eight were located in southwest New Mexico (USFWS 2002a). However, surveys conducted in 2000 found only eight of 34 sites from the original 41 to have populations of this species (USFWS 2002a).	<b>None.</b>  The Project Area does not contain suitable habitat. A previous environmental assessment for the adjacent Little Rock Mine, which is only three miles from the Project Area, included intensive surveys in 2010 and concluded that no surface water features within a 5-mile radius were potential habitat (BLM 2015). The nearest suitable habitats of the Gila and Mimbres Rivers are outside of the dispersal capabilities of this species. Additionally, the Project Area contains no water features that would contain year-round suitable habitat for populations of CLF. No historical records of the species are within the vicinity of the Project Area with the nearest occurrence being approximately 8 miles away (UNM Herpetological Collections accessed 1/23/2024) (UofA Herpetological Collections accessed 1/23/2024).  There is no designated critical habitat in the Project Area (Appendix A).

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b>BIRDS</b>					
<p><i>Coccyzus americanus</i> (western Distinct Population Segment)</p> <p><i>Yellow-billed cuckoo</i></p>	Threatened (USFWS 2014a); designated critical habitat (USFWS 2021a).	<p>Most commonly found in lowland riparian woodlands where Fremont cottonwood, willow, velvet ash, Arizona walnut, mesquite, and tamarisk are dominant (USFWS 2013c). Also utilizes drier woodlands including mesquite bosques, drainages in desert scrub and desert grassland with a tree component, and Madrean evergreen woodlands in perennial, intermittent or ephemeral drainages (USFWS 2020b). This species typically occurs at elevations less than 6,600 ft amsl (AGFD 2011c). Western yellow-billed cuckoos may migrate along riparian corridors and surrounding upland vegetation (Hughes 2020).</p> <p>Elevation: Typically below 6,600 ft (AGFD 2011c).</p>	<p>This species is a long-distance neotropical migrant (Hughes 2020). At the species level, breeds throughout temperate North America south to Mexico and the Greater Antilles (Hughes 2020). The western DPS breeds west of the Continental Divide and the watershed boundary between the Rio Grande and Pecos River and the Chihuahuan Desert. The USFWS considers the historical breeding range to include southern British Columbia, Canada and in Washington, Idaho, Nevada, Oregon, Utah, western Colorado, southwestern Wyoming, California, Arizona, western New Mexico, and Texas, U.S. Breeding range extends into the Cape Region of Baja California Sur, Sonora, Sinaloa, western Chihuahua and northwestern Durango, Mexico (USFWS 2014a). Winters in South America, east of the Andes and typically south of the Amazon Basin in southern Brazil, Paraguay, Uruguay, eastern Bolivia and northern Argentina (USFWS 2014a).</p>	<p>Occurs throughout the state where suitable habitat is present and is considered rare to fairly common. Breeding areas include the San Juan, Dry Cimarron, Rio Grande, Pecos, Mora, Canadian, San Francisco, and Gila valleys (BISON-M 2018h, accessed January 2021). Most common in the south and along major drainages (eBird 2021).</p>	<p><b>Unlikely.</b></p> <p>The Project Area does not contain riparian habitat preferred by this species. However, the Project Area contains Madrean evergreen woodlands in ephemeral drainages, providing marginal habitat. Citizen science records show this species has been recorded near the Project Area (eBird 2024). Due to marginal habitat within the Project Area, which consists of only small ephemeral drainages, it is unlikely that this species occurs within the Project Area. Cuckoo may traverse the site during migration from more suitable habitat within New Mexico or while foraging.</p> <p>There is no designated critical habitat in the Project Area (<b>Appendix A</b>).</p>

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b><i>Falco femoralis septentrionalis</i></b>  <b><i>Northern aplomado falcon</i></b>	Endangered (USFWS 1986); no critical habitat; non-essential experimental population (USFWS 2006a).	<p>Within the U.S., this species uses coastal prairies, desert grasslands, oak woodlands and riparian gallery forest (Keddy-Hector, Pyle, and Pattern 2017). This species has historically occurred in relatively flat and open habitats (USFWS 2014c). Builds nests in large trees, cliffs, utility poles, artificial platforms or on the ground when elevated nest sites are not available (Keddy-Hector, Pyle, and Pattern 2017). This species is expected to use similar habitat year-round (Keddy-Hector, Pyle, and Pattern 2017).</p> <p>Elevation: In southwestern U.S., most common from 3,300–4,900 ft (AGFD 2001c).</p>	This species is mostly non-migratory, although local nomadic movement may occur (Keddy-Hector, Pyle, and Pattern 2017). The septentrionalis subspecies occurs in New Mexico and Texas, U.S. and the Mexican states of Chihuahua, northwestern Chiapas, western Campeche, Oaxaca, San Luis Potosi, Tabasco, and Vera Cruz (USFWS 2014c).	Occasional in the southern portion of the state; rare and local, mainly in grassland-shrubland areas at lower elevations (BISON-M 2017a).	<p><b>None.</b></p> <p>The Project Area contains oak woodlands and thus may have suitability for this species. However, any occurrences of this species would be very rare, and individuals would belong to experimental non-essential populations. The Project Area contains a very small area of marginally suitable habitat that has a very low use probability for this species. The nearest citizen science record of this species is approximately 40 miles away (eBird 2024) and occurred in 2009.</p> <p>This species does not have designated critical habitat.</p>

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b><i>Strix occidentalis lucida</i></b>  <b><i>Mexican spotted owl</i></b>	Threatened (USFWS 1993a); designated critical habitat (USFWS 2004).	<p>Prefers old-growth mixed conifer or pine-oak forests, or such forests with complex structure. Also uses narrow canyons with cliffs and conifer or riparian woodlands (Gutiérrez, Franklin, and Lahaye 2020). In Arizona, canyon habitats typically contain Madrean evergreen oak or Madrean pine-oak woodlands (Wise-Gervais 2005). In forested areas, nests in large trees whereas in canyon habitats, will nest in trees, caves or on rocky ledges (USFWS 2012c). Primarily forages for rodents in a range of forest or woodland habitats, but diet also includes lagomorphs, bats, birds, reptiles and arthropods (AGFD 2005, Gutiérrez, Franklin, and Lahaye 2020, USFWS 2012c). This species has large home ranges, with single owls in Arizona utilizing an average of 1,600 acres and pairs an average of 2,000 acres (AGFD 2005). Migration is variable within areas and among years (AGFD 2005, Gutiérrez, Franklin, and Lahaye 2020). When winter movements do occur, this species may move locally, primarily to lower elevations and more open sites with pinyon pine-juniper woodlands, open mountain shrub habitat, conifer forests or deciduous riparian trees (AGFD 2005, Gutiérrez, Franklin, and Lahaye 2020).</p> <p>Elevation: 2,720–10,000 ft (AGFD 2005).</p>	This species is primarily non-migratory, although there may be some short distance (12 to 30 miles) or altitudinal movement (Gutiérrez, Franklin, and Lahaye 2020). Occurs patchily in Colorado, Utah, Arizona, New Mexico and western Texas. Range extends from the international border southward along the Sierra Madre Occidental and Oriental to Michoacán (Gutiérrez, Franklin, and Lahaye 2020, USFWS 2012c).	Occurs in summer and winter throughout the state, except for in the eastern plains. They are more abundant in the south. Some of the larger populations are found in the Gila National Forest and Sacramento Mountains (Ganey et al. 2014, New Mexico Avian Conservation Partners 2017).	<p><b>Unlikely.</b></p> <p>The Project Area is within the known distribution of this species. The Project Area does not contain habitat preferred by this species of old growth mixed conifer forests, forests with complex structure, or narrow canyons with cliffs and conifer or riparian woodlands (Gutiérrez, Franklin, and Lahaye 2020). The Project Area does contain open mountain shrub habitat that this species could use as wintering (trees (AGFD 2005, Gutiérrez, Franklin, and Lahaye 2020)). This species has a very large home range of 1,600-2,000 acres (AGFD 2005) and could possibly be encountered during foraging. Given this species' large home range and the chance of winter movement to lower elevations, there is a chance of encountering this species, but would be unlikely.</p> <p>There is no designated critical habitat in the Project Area. There are no known citizen science records of this species within the project area (eBird 2024).</p>

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b>FISH</b>					
<b><i>Gila nigrescens</i></b> <b><i>Chihuahua chub</i></b>	Threatened (USFWS 1983); Proposed critical habitat (USFWS 1980).	Inhabits deep pools with undercut banks and other forms of cover such as downed trees and overhanging vegetation (BISON-M 2021a). These stream are typically small to medium in size (BISON-M 2021a).	Southern New Mexico and the state of Chihuahua, Mexico (BISON-M 2021a).	This species historically occurred in New Mexico within the Mimbres River from Grant County to Luna County but is currently confined to Moreno Spring and an approximately 15 km stretch of the Mimbres River (BISON-M 2021a; Accessed December 29, 2022). This stretch begins at the confluence of Allie Canyon (BISON-M 2021a). A population was discovered in 2008 within the Mimbres River near Cooney Place and Monument Canyon (Osborne 2019).	<b>None.</b>  The Project Area does not contain suitable habitat (deep pools). This species is not expected to occur in the Project Area.
<b><i>Poeciliopsis occidentalis</i></b>  Gila topminnow (including Yaqui)	Endangered (USFWS 1967); no critical habitat.	Occurs in springs, cienegas, permanent and intermittent streams and the margins of large rivers. Prefers warm, shallow and slow-moving water but can occur in lentic habitats or lotic habitats with moderate current. Additionally, favors areas with algal mats or debris along stream margins (USFWS 1998).  Elevation: Below 5,000 ft (AGFD 2001a).	Occurs in the Gila, Concepción and Yaqui river basins of Arizona and New Mexico, U.S. and Sonora, Mexico (Cobble 1995, USFWS 1998).	In New Mexico, this species has historically been found in the Gila River at Frisco Hot Springs (Sheffer et al. 1997) and San Francisco River drainage, although this species may be extirpated in New Mexico (Paroz et al. 2006). In 1989, the Gila topminnow was stocked in a pond on the NMDGF Red Rock Wildlife Management Area (NMDGF 1996); however, the effort was unsuccessful.	<b>None.</b>  The Project Area does not contain suitable habitat (springs, cienegas, permanent and intermittent streams, and the margins of large rivers). This species is not expected to occur in the Project Area.
<b><i>Oncorhynchus gilae</i></b>  Gila trout	Threatened (USFWS 1967, USFWS 2006b); no critical habitat.	Inhabits perennial montane streams in coniferous and mixed woodland, montane coniferous forest, and subalpine forests (USFWS 2003). These streams area characterized by high flow variability but with low turbidity and high dissolved oxygen. Spawns in areas with flow over substrates of coarse sand or gravel. Juveniles likely use areas with slow current such as stream margins, side channels or shallow bars. Subadults favor riffle habitats whereas adults prefer pool habitats (USFWS 2003).  Elevation: 5,400–9,200 ft (USFWS 2003).	Arizona and New Mexico, U.S. (USFWS 2003).	In New Mexico, this species historically occurred in the headwater streams of the Gila and San Francisco rivers. As of 2001, there were documented populations in Grant, Catron, and Sierra counties, New Mexico (USFWS 2002b). Three streams within Grant County were known to contain populations of the Gila trout (McKnight Creek, Sheep Corral Canyon, and Black Canyon). Gila trout were introduced into McKnight Creek (USFWS 1993b).	<b>None.</b>  The Project Area does not contain suitable habitat (perennial montane streams). This species is not expected to occur in the Project Area.



Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b><i>Rhinichthys</i></b> <b>[=Tiaroga] cobitis</b>  Loach minnow	Endangered (USFWS 2012a); designated critical habitat (USFWS 2012a).	Typically inhabits swift, small to large perennial streams where it uses interstitial spaces or lee areas of primarily cobble substrates for resting and spawning (USFWS 2012a). However, slow, silty streams are occasionally used (Minckley and Marsh 2009, , p. 174). Adults are often found in areas with coarse, filamentous algae (Minckley and Marsh 2009, p. 174, USFWS 2012a).  Elevation: Below 8,000 ft (USFWS 2012a).	Endemic to the Gila River Basin in Arizona and New Mexico, U.S. (USFWS 2012a).	In New Mexico, the species is found in the Gila River and its tributaries including the West, Middle, and East forks of the Gila River (Paroz and Propst 2007); the San Francisco and Tularosa Rivers and their tributaries in Catron County (Propst 2007); Blue River and its tributaries, including Dry Blue, Campbell Blue, Pace, and Frieborn Creeks (Catron County) and Dry Blue Creek, and Blue Rivers and some of their tributaries (Carter 2008, Clarkson et al. 2008, USFWS 2012a).	<b>None.</b>  The Project Area does not contain suitable habitat (perennial streams). This species is not expected to occur in the Project Area.
<b><i>Meda fulgida</i></b>  Spikedace	Endangered (USFWS 2012a); designated critical habitat (USFWS 2012a).	Inhabits shallow riffles with sand, gravel, and rubble substrates of moderate to large perennial streams (USFWS 2012a).  Elevation: 1,620–4,500 ft (AGFD 2013c).	Endemic to the Gila River Basin in Arizona and New Mexico, U.S. (USFWS 2012a).	In New Mexico, this species is found in the mainstem Gila River, as well as in the lower end of the West, Middle, and East forks of the Gila River, and Mangas Creek within Hidalgo, Grant, and Catron counties (BISON-M 2017k).	<b>None.</b>  The Project Area does not contain suitable habitat (moderate to large perennial streams). This species is not expected to occur in the Project Area.

Table 2. BGEPA-Listed Special-Status Species Potential to Occur in the Project Area

Species Name	Federal Status	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<i>Aquila chrysaetos</i> Golden eagle	Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c)	<p>Range-wide, breeds in a wide variety of open habitats, with nests typically on cliffs, and avoids heavily forested areas (Katzner et al. 2020). In Arizona, prefers pinyon-juniper woodlands and Sonoran desertscrub (Driscoll 2005). Constructs large nests on cliff ledges, rock outcrops, tall trees or, rarely, transmission towers (Driscoll 2005). Golden eagles are known to forage within 4.4 miles of the nest (Tesky 1994), generally in open habitats where prey is available (Katzner et al. 2020). Primarily feeds on small mammals (greater than 80% of prey items) but also consumes birds, reptiles and fish (Katzner et al. 2020). In the western U.S. average territory size ranges from 22 to 55 square miles (AGFD 2002b).</p> <p>Elevation: In Arizona, typically breeds between 1,300–9,000 ft (Driscoll 2005).</p>	This species is a short to medium-distance partial migrant with a Holarctic distribution (Katzner et al. 2020). In North America, primarily breeds in western portion of the continent from Alaska to central Mexico. Northern most populations are typically migratory. Year-round and non-breeding populations occur from central Saskatchewan to British Columbia, Canada and south throughout its range and sparsely in the eastern U.S. (Katzner et al. 2020).	In New Mexico, Golden Eagles breed locally in suitable habitat throughout the state (Katzner et al. 2020, Parmeter, Neville, and Emkalns 2002).	<p><b>Possible.</b></p> <p>There are no large cliffs near the Project Area that this species prefers for nesting, though power transmission lines are located nearby which the species uses rarely for nesting (Katzner et al. 2020). Citizen science records show detections for this species approximately 3.5 miles from the Project Area (eBird 2024, accessed 1/24/24). The Project Area contains open habitat which this species can use to forage (Katzner et al. 2020). This species has a very large territory size and an encounter would likely be short in duration.</p>
<i>Haliaeetus leucocephalus</i> Bald Eagle	Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c)	<p>Breeding is concentrated in coastal areas, along rivers, lakes or reservoirs. Typically breeds in forested areas with edge habitat within 1.3 miles of aquatic habitats suitable for foraging. Prefers areas of shallow water and shorelines for fishing and hunting wide variety of waterfowl, and small aquatic and terrestrial mammals. Fish are preferred prey, but carrion is used extensively whenever encountered. Nests away from human disturbance in large trees and rarely on cliff ledges or on the ground when trees are absent. Winters primarily in coastal areas or along major river systems with adequate prey availability and large trees for perching (Buehler 2020a).</p> <p>Elevation: In Arizona, 460–7,930 ft (AGFD 2011a).</p>	Migratory behavior varies among populations and age groups (Buehler 2020). Breeds south of the tundra throughout Canada and the U.S., excluding Hawaii. Additionally, small breeding populations occur in Baja California, Sonora and Chihuahua, Mexico (Buehler 2020a). Winter range appears to be expanding as populations increase in size. Most populations are year-round residents with only the northern most populations in Alaska, U.S. and Canada withdrawing southward or to coastal areas (Fink et al. 2018).	In New Mexico, bald eagles are present casually to occasionally in summer, but they migrate and winter almost statewide, although there is limited breeding in New Mexico (Buehler 2020).	<p><b>Unlikely.</b></p> <p>The range of this species overlaps with the Project Area and citizen science records show detections for this species approximately 3.5 miles from the Project Area (eBird 2024, accessed 1/24/24). However, no large bodies of water are present within the Project Area. The Project Area occurs near large human disturbance unpreferred by the species for nesting, New Mexico State Road 90 and the Tyrone mine. Given the lack of preferred habitat and continued disturbance within the area, it is unlikely that this species will occur.</p>

Table 3. NMDGF-Listed Special-Status Species Potential to Occur in the Project Area

Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b>AMPHIBIANS</b>				
<i>Lithobates yavapaiensis</i> Lowland leopard frog	Occur in a variety of perennial to near perennial waters in desert grasslands to pinyon juniper biotic communities (AGFD 2006). Inhabits large rivers, streams, canals, cienegas, cattle tanks or other aquatic features (Rorabaugh 2008). Can survive in semi-permanent aquatic systems by retreating into deep mud cracks, mammal burrows, or rock fissures, but large pools are required for adult survival and reproductive efforts (Bureau of Reclamation 2016).  Elevation: In Arizona, from 480–6,200 ft (AGFD 2006).	Historic range included Arizona, California, Nevada, New Mexico, U.S. and extreme northeastern Baja California, northern Sonora, and possibly northwestern Chihuahua, Mexico (AGFD 2006, Bureau of Reclamation 2016). Current range is restricted to southern Arizona and adjacent portions of Sonora (Bureau of Reclamation 2016).	Is thought to be extremely rare and likely extirpated in the state. A 1995 survey of 72 potential locations in the state, including six historical sites that had not been surveyed in the past 10 years, resulted in no observations. Populations are now believed to be extirpated or occurring in very low numbers (BISON-M 2019b).	<b>None.</b>  There is no suitable aquatic habitat in the Project Area and this species is likely extirpated from the state.
<b>BIRDS</b>				
<i>Melospiza aberti</i> Abert's towhee	Occupies riparian areas with cottonwood-willow woodlands, mesquite bosque, marshes and mixed exotic-native vegetation within the lower Sonoran life zone. Prefers a dense understory (Tweit and Finch 1994). Most abundant in low-elevation riparian vegetation with cottonwood, willows and mesquite or dry washes with dense thickets. Additionally, utilizes areas with dense stands of tamarisk, patches of dense shrubs along irrigation ditches or run-off retention ponds in agricultural areas and densely vegetated suburban areas (Corman 2005a). Occurs in the same habitat year-round (Tweit and Finch 1994). In its New Mexico range, this species uses thickets of seepwillow and other riparian habitats.  Elevation: In Arizona and neighboring states, generally below 4,300 ft (Corman 2005a).	Non-migratory. The core of their range is in Arizona, but also extends into adjacent portions of southeastern California, southwestern New Mexico, southeastern Nevada, and extreme southwestern Utah, U.S. Additionally, there are populations just south of the international border in Baja California and Sonora, Mexico (Corman 2005a, Tweit and Finch 1994).	Found along portions of the Gila River from the Arizona border to Mogollon Creek in Grant County, and at the San Simon Cienega in Hidalgo County where suitable habitat exists (BISON-M 2018a, Tweit and Finch 2020).	<b>Unlikely.</b>  Citizen science records show a detection of this species approximately 3.5 miles from the Project Area (eBird 2024, accessed 1/24/24). Though cattle tanks do occur near the Project Area, the Project Area does not contain suitable habitat of dense riparian vegetation. This species may occur as a vagrant.
<i>Centronyx bairdii</i> [recently changed from <i>Ammodramus bairdii</i> ] Baird's sparrow	Utilizes prairie habitats. Winters in areas of dense and expansive grasslands, with only a minor shrub component (Green et al. 2020). In southern New Mexico, this species prefers areas with denser grass cover than surrounding areas (BISON-M 2019a).  Elevation: 3,900-6,570 ft (BISON-M 2019a).	Nests in the Dakotas, Montana, and Minnesota, as well as the Canadian provinces of Alberta, Manitoba, and Saskatchewan. Winters primarily in northern Mexico, although some may be found in southern Texas, New Mexico, and Arizona (BISON-M 2019a, Green et al. 2020).	Species migrates in the eastern and extreme southern areas of the state, where it is considered rare to uncommon (BISON-M 2019a, Green et al. 2020).	<b>Unlikely.</b>  Although citizen science records show a detection of this species approximately 6.5 miles from the Project Area (eBird 2024, accessed 1/24/24), this species is considered rare to uncommon in the state. The Project Area is too wooded and does not contain the species' preferred habitat of dense and expansive grasslands.

Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b><i>Vireo bellii</i></b>  Bell's vireo	<p>Breeds in a wide variety of dense shrubby habitats, often near water, particularly in arid environments, including riparian scrub along drainages, successional riparian vegetation, brushy fields, mesquite brushlands, chaparral and young forests and woodlands (Kus et al. 2020). In New Mexico, they characteristically occurs near riparian habitat and dense shrubland or woodland along lowland stream courses (Kus et al. 2020). In the southeast and southwest parts of the state, most nests occur in willow, seepwillow, or hackberry (Kus et al. 2020)</p> <p>Elevation: In Arizona, breeds 120–5,120 ft (Averill-Murray and Corman 2005).</p>	<p>A neotropical migrant (Kus et al. 2020). Breeds throughout the central and southwestern U.S. including Arizona, Arkansas, California, Colorado, Illinois, Indiana, Kentucky, Louisiana, Michigan, Missouri, Nebraska, Nevada, New Mexico, North Dakota, Ohio, Oklahoma, South Dakota, Texas, Utah, Wisconsin, and Wyoming. Additionally, breeds in northern Mexico in Baja California, Baja California Sur, Chihuahua, Coahuila, Durango, Nuevo Leon, San Luis Potosi, Sinaloa, Sonora, Tamaulipas, and Zacatecas. The wintering range is less well known but includes Baja California Sur and south along the Pacific Slope from Sonora through Oaxaca, El Salvador, Honduras and Nicaragua (Kus et al. 2020). There are scattered winter records throughout the southern U.S. portion of the breeding range and in Florida (Kus et al. 2020).</p>	<p>Considered a common and widespread summer resident in southern parts of the state (Bailey 1928, Hubbard 1978). There are known populations in the lower Gila Box, San Simon Cienega, and Guadalupe Canyon.</p>	<p><b>Unlikely.</b></p> <p>Citizen science records show a detection of this species approximately 3.5 miles from the Project Area (eBird 2024, accessed 1/24/24). However, due to the lack of preferred nesting habitat and the project area being located above the nesting elevation of this species, it is unlikely this species occurs.</p>

Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<p><b><i>Cynanthus latirostris</i></b></p> <p>Broad-billed hummingbird</p>	<p>Utilizes a wide variety of habitats across its range including riparian forest, thorn forest, tropical deciduous forest, pine-oak forest and successional or disturbed habitats (Powers and Wethington 2020). In New Mexico, occurs along drainages with riparian habitat (Powers and Wethington 2020). Additionally, uses densely vegetated washes with mesquite, netleaf hackberry, juniper or oaks, parks and residential areas (Corman 2005b). There is no information on habitat use during migration. Winters in habitats outside of the U.S. (Powers and Wethington 1999).</p> <p>Elevation: Range-wide 490–9,840 ft (Powers and Wethington 2020). In Guadeloupe Canyon, New Mexico, breeds at approximately 4,480 ft (Powers and Wethington 2020).</p>	<p>A partial migrant, with the northern most populations withdrawing southward (Powers and Wethington 1999). Breeds in southeastern Arizona, extreme southwestern New Mexico and rarely in southwestern Texas, U.S. Range extends southward into Mexico in eastern Sonora, western Chihuahua, Sinaloa, extreme western Durango, Nayarit, west Zacatecas, Aguascalientes, Jalisco, Guanajuato, Querétaro, Hidalgo, Colima, Michoacán, México D. F., northern Guerrero, northern Puebla, extreme western Vera Cruz, Oaxaca, extreme southwestern Chiapas, San Luis Potosí, extreme western Tamaulipas, and extreme southern Nuevo León (Powers and Wethington 1999). During the winter, most individuals leave the U.S., northern Sonora and Nuevo León (Corman 2005b, Powers and Wethington 1999).</p>	<p>Dependent on riparian habitat in extreme southwest portion of the state in the Peloncillo and Guadeloupe Mountains in Hidalgo County (Powers and Wethington 1999). Have also been vagrant sightings of this species in Hidalgo, Doña Ana, and Sierra counties (BISON-M 2020a).</p>	<p><b>Unlikely.</b></p> <p>The Project Area does not contain this species' preferred nesting habitat of drainages with riparian features. This species is rarely encountered in New Mexico outside of the Peloncillo and Guadeloupe Canyon (Powers and Wethington 1999). Citizen science records show a detection of this species approximately 9 miles from the Project Area (eBird 2024, accessed 1/24/24).</p>



Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<i>Antrostomus</i> [=Caprimulgus] <i>ridgwayi</i>  Buff-collared nightjar	<p>Prefers arid and densely vegetated areas and is often found in ravines, washes or rocky canyons (Bowers and Dunning 1997). Buff-collared nightjars do not build nests and instead lay eggs directly on the ground (Bowers and Dunning 1997). There is no information about habitat use during migration and this species winters in habitats outside of the U.S. (Bowers and Dunning 1997).</p> <p>Elevation: Across range, has been detected from sea-level to 7,870 ft (Bowers and Dunning 2020).</p>	<p>Migratory behavior of this species is poorly understood, but it is a suspected partial migrant with the northern most populations likely migratory (Bowers and Dunning 1997). Breeding range includes southeastern Arizona and extreme southwestern New Mexico, U.S. Breeding range extends southward into Mexico through eastern Sonora, western Chihuahua, Sinaloa, western Durango, south on the Pacific Slope to Oaxaca, northern Guerrero, Morelos, central Chiapas, and central Vera Cruz. Additional breeding populations occur in central Guatemala, west-central Honduras, and possibly central Nicaragua. Winter range is similar to the breeding range except the northern most populations withdraw from the US, north and central Sonora, Chihuahua and Durango (Bowers and Dunning 1997).</p>	<p>Detected in extreme southwestern portion of the state in of Hidalgo and Doña Ana counties (BISON-M 2017c).</p>	<p><b>None.</b></p> <p>The Project Area does not contain the preferred habitat of arid and densely vegetated areas and is often in ravines, washes or rocky canyons. Citizen science records show a detection of this species approximately 23 miles from the Project Area along the Gila River (eBird 2024, accessed 1/24/24).</p>
<i>Buteogallus</i> <i>anthracinus</i>  Common black hawk	<p>Is associated with swamps, marshes, flooded forests, coastal plains, mangroves, and riparian areas with perennial water. In the southwestern U.S. they are an obligate riparian species (Schnell 2020). In Arizona, this species occurs along perennial and intermittent streams with perennial pools in drainages with sycamores, Arizona alder, Fremont cottonwood, Arizona cypress, Arizona walnut, Goodding's willow, velvet ash, velvet mesquite or tamarisk. Hunts for arthropods and small vertebrates including fish, frogs, snakes, and lizards from streamside perches. High branches, rock ledges, sandbars or streamside rocks are used as foraging perches (Schnell 2020). U.S. populations are migratory and winter in Mexico or further south (Schnell 2020). Migratory habitat is insufficiently known, but this species is generally believed to follow riparian corridors (Sadoti 2010).</p> <p>Elevation: In Arizona, 1,800–7,000 ft (Averill-Murray and Corman 2005).</p>	<p>A partial migrant. Migratory breeding populations in extreme southern Utah and Nevada, Arizona, New Mexico and western Texas in the U.S. and eastern Sonora, western Chihuahua, western Durango, and eastern Nayarit. Resident from Sinaloa and Tamaulipas and south, primarily along the coasts to Ecuador, Columbia, and Venezuela in northern South America. Occasional individuals have been reported overwintering in southern Arizona (Schnell 2020).</p>	<p>Found along the Gila, San Francisco, and Mimbres rivers in the southwest quadrant of the state, as well as along the Rio Hondo in the southeast. It occasionally nests along the Rio Grande as far north as Albuquerque, and in the Canadian River and Upper Pecos drainages. (AGFD 2013a, Averill-Murray and Corman 2005).</p>	<p><b>Unlikely.</b></p> <p>Citizen science records show a detection of this species approximately 3.5 miles from the Project Area (eBird 2024, accessed 1/24/24). The Project Area does not contain suitable habitat (swamps, marshes, flooded forests, coastal plains, mangroves, and riparian areas with perennial water). Cattle tanks and ephemeral drainages provide the opportunity for this species to fly over the site while foraging or migrating, although this is unlikely.</p>

Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b><i>Columbina passerine</i></b>  Common ground dove	Inhabit arid, open woodlands in the early stages of forest development, including pine woods, hammocks, lake shores, forest edges, coastal dunes, mesquite flats, river bottom woodlands, deserts, desert scrublands, oak scrublands, and savannas (Bowman 2020). Also found in human landscapes, especially irrigated farm fields and residential neighborhoods.  Elevation: 1,000 to 6,000 ft in New Mexico (BISON-M 2017d).	Ranges from southern California to southern Florida, with populations occurring through Central and South America. Normally resident throughout breeding range, but vagrants north of range not uncommon. May move from interior to coastal areas; comparison of breeding and winter distributions suggest some movement southward from northern portions of range, but most movement into existing breeding areas (Bowman 2020).	Formerly was most regularly found in the southern part of the state at Las Cruces in the Rio Grande drainage and near Carlsbad (BISON-M 2017d).	<b>Unlikely.</b>  There is potentially suitable habitat in the Project Area. However, the Project Area is outside of the species' typical distribution and is above its typical elevation range. Citizen science records show a detection of this species approximately 18.5 miles from the Project Area (eBird 2024, accessed 1/24/24).
<b><i>Calypte costae</i></b>  Costa's hummingbird	Breeds in Sonoran and Mojave desertscrub, coastal scrub, chaparral and tropical deciduous forest (Baltosser and Scott 1996). In Arizona, this hummingbird occurs in upland desertscrub, desert washes and in riparian vegetation associated with springs or intermittent streams (Corman 2005c). During migration, this species uses xeric habitats but also is known to travel along drainages, which may be more mesic than habitats used during breeding (Baltosser and Scott 1996). Arizona populations may travel westward to summer in chaparral and costal scrub of California and Baja California (Baltosser and Scott 1996).  Elevation: In Arizona, typically 100–4,700 ft, but occasionally up to 7,800 ft (Corman 2005c).	A partial migrant (Baltosser and Scott 1996). Migratory breeding populations occur in east-central California, southern Nevada, Arizona and extreme southwestern New Mexico and Sonora, Mexico. Resident breeding populations occur in southern California, southwestern Arizona and in Baja California, Baja California Sur and northwestern Sonora, Mexico. Wintering populations occur in southern Sonora, Sinaloa and Nayarit (Baltosser and Scott 1996).	Uncommon and sporadic breeder in the southwest and south-central mountains, and is most commonly found in Guadalupe Canyon and in side canyons along the lower Gila River from Cliff south (BISON-M 2017e).	<b>Unlikely.</b>  The Project Area contains some suitable habitat for the species (ephemeral drainages, upland desertscrub), though is uncommon and sporadically found in New Mexico. Citizen science records show a detection of this species approximately 9 miles from the Project Area (eBird 2024, accessed 1/24/24).

Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<i>Trogon elegans</i> Elegant trogon	<p>Most common tropical deciduous forest (Williams 2011) but uses a wide variety of habitats including semi-arid pine-oak woodland, xeroriparian areas in thornscrub, thorn forest, pine and pine-oak forests, riparian woodlands, montane rainforest and plantations (Kunzmann, Hall, and Johnson 1998). Habitat use in New Mexico is poorly known, but in Arizona, this species breeds in canyons with large sycamores and Madrean pine-oak woodlands and, less frequently, in lower elevation canyons with sycamores and adjacent slopes with scattered oaks, pinyon pine or juniper (Corman 2005d). There is no information on migration habitat (Kunzmann, Hall, and Johnson 1998, Williams 2011).</p> <p>Elevation: Range not well known in New Mexico. In Arizona, typically 3,400–6,800 ft (AGFD 2014) but have been observed above 7,000 ft (Corman 2005d).</p>	<p>A partial migrant, with only the northern most populations withdrawing southward (Kunzmann, Hall, and Johnson 1998, Williams 2011). Breeds from southeastern Arizona and southwestern New Mexico, U.S. south through Mexico from Sonora and Chihuahua along the Pacific Slope and from Tamaulipas and Nuevo León to southern Oaxaca. Additionally, occurs in southeastern Guatemala, El Salvador, western Honduras, Nicaragua and northwestern Costa Rica (Kunzmann, Hall, and Johnson 1998). During the winter, U.S. and northern Sonora populations withdraw southwards (Williams 2011).</p>	<p>Scattered records in Guadalupe Canyon and is also described as rare in the Peloncillo and Animas mountains (BISON-M 2017f, Kunzmann et al. 2020).</p>	<p><b>Unlikely.</b></p> <p>The Project Area does not contain this species' preferred breeding habitat (canyons with sycamores), but the species can be found in a wide variety of habitats. Occurrence within the Project Area is expected to be very rare and short. Citizen science records show a detection of this species approximately 9 miles from the Project Area (eBird 2024, accessed 1/24/24).</p>
<i>Melanerpes uropygialis</i> Gila woodpecker	<p>Occurs in desert areas with large cacti or trees, dry subtropical forests, riparian woodlands and residential areas (Edwards and Schnell 2000). In Arizona, this species is most common in upland areas of Sonoran Desert with abundant saguaros, paloverde, mesquite, and ironwood. Is present, but less common in low desert areas and washes where there are few to no saguaros. Commonly nests in riparian woodlands with Fremont cottonwood, Goodding's willow, mesquite, or sycamores. Generally tolerant of some types of human activities and utilizes residential and rural areas (Bradley 2005). They utilize similar habitat throughout the year (Edwards and Schnell 2000).</p> <p>Elevation: In Arizona, 150–4,800 ft (Bradley 2005). In New Mexico, 3,000–5,000 ft (BISON-M 2018b).</p>	<p>Non-migratory, although short-distance local movements may occur (Edwards and Schnell 2000). Found in Arizona, California, Nevada and New Mexico, U.S. and the Mexican states of Aguascalientes, Baja California, Baja California Sur, Chihuahua, Durango, Jalisco, Nayarit, Sinaloa, Sonora and Zacatecas (Edwards and Schnell 2000).</p>	<p>Present only in extreme southwest part of the state, in Grant and west Hidalgo counties (Edwards and Schnell 2000). Primarily found in the lower Gila Valley in both Grant and Hidalgo counties, Guadalupe Canyon, San Simon Cienega, drainages of the Animas and Peloncillo Mountains, and Bitter Creek in western Grant County (BISON-M 2018b, Edwards and Schnell 2000).</p>	<p><b>Unlikely.</b></p> <p>While the species is known to occur in Grant County, the Project Area does not contain suitable desert habitat. Citizen science records show a detection of this species approximately 9 miles from the Project Area (eBird 2024, accessed 1/24/24).</p>

Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<i>Vireo vicinior</i> Gray vireo	<p>Preferred breeding habitat includes pinyon pine-juniper woodlands, oak scrub and chaparral in arid mountain ranges and high plains (Barlow, Leckie, and Baril 2020). In Arizona and New Mexico, occurs in chaparral-juniper and dwarf conifer forests, as well as sites with Graves oak (<i>Quercus gravesii</i>), mixed piñon, and madrone (<i>Arbutus</i> spp.; (Barlow, Leckie, and Baril 2020). Occasionally occurs in chaparral dominated slopes and Madrean evergreen oak woodlands with only scattered pinyon pine or junipers (Corman 2005e). Habitat used during migration is likely similar to the breeding and wintering habitats. In Arizona, wintering habitat includes lowland Sonoran desertscrub and rocky canyons in desert mountains. Elsewhere in the wintering range this species uses Chihuahuan desertscrub and lowland riparian areas with willow and cottonwood near springs or intermittent streams (Barlow, Leckie, and Baril 2020).</p> <p>Elevation: Typically breeds 3,500–6,800 ft (Corman 2005e), winters much lower (Barlow, Leckie, and Baril 2020).</p>	A short-distance migrant (Barlow, Leckie, and Baril 2020). Breeds from central and southern Utah and western Colorado, south to southern Nevada, Arizona, and New Mexico, U.S. Isolated populations also breed in southern California, Baja California, western Texas, U.S. and in Mexico in northwestern Coahuila and possibly north-central Durango. Wintering range is poorly known, but this species has been reported from south-central Arizona, western Sonora, Baja California Sur and western Texas (Barlow, Leckie, and Baril 2020).	Rare summer residents of the Gila National Forest and only in the state during the warmer months. Has been recorded in central and western counties east to Pecos, western San Miguel County, and Gran Quivara National Monument, eastern Socorro County, the Silver City area, the foothills of the Magdalena, Manzanita, and Sandia mountains and in the southeast in the Guadalupe Mountains and in eastern Otero County (BISON-M 2017i).	<p><b>Unlikely.</b></p> <p>The Project Area contains oak scrub the species could use as summer migrants to New Mexico. However, this species is rarely detected in New Mexico, and thus it is unlikely to occur in the Project Area. Citizen science records show a detection of this species approximately 7 miles from the Project Area (eBird 2024, accessed 1/24/24).</p>
<i>Calothorax lucifer</i> Lucifer hummingbird	<p>Range-wide, this species primarily occurs in arid habitats including desertscrub, densely vegetated dry washes, lava fields, volcanic hills, rocky slopes but occasionally uses deciduous riparian woodland (Scott 1994). Little is known about habitat use in New Mexico. There is no information on migratory habitat and this species winters outside of the U.S. (Scott 1994). However, individuals have been reported from feeding stations in drainages dominated by sycamores, Madrean evergreen oak woodlands or pine-oak forest during the presumably post-breeding period (Corman 2005f).</p> <p>Elevation: Range-wide 2,625–7,220 ft (Scott 1994).</p>	Migratory behavior is poorly understood, but this species is likely primarily migratory (Scott 1994). There are sparse breeding populations in southeastern Arizona, extreme southwestern New Mexico and the Big Bend region of Texas, U.S. The breeding range extends along the Sierra Madre Occidental and Oriental in northeastern Sonora, Chihuahua, Durango, Coahuila and Nuevo Leon to the Central Plateau and possibly as far south as Puebla (Scott 1994). Winters in central and southwestern Mexico in Jalisco, Guanajuato, Querétaro, Guerrero, Oaxaca, Colima, Michoacán and Morelos (Scott 1994).	A rare breeder and sparse visitor to the mountain ranges in the southwestern portion of the state including Post Office Canyon in the Peloncillo Mountains. Has also been recorded in the Peloncillos at Clanton Canyon and Skeleton Canyon (BISON-M 2018c).	<p><b>Unlikely.</b></p> <p>The Project Area does not contain this species' preferred habitat (desertscrub, densely vegetated dry washes, lava fields, volcanic hills, rocky slopes) but does contain habitat wherein this species is rarely recorded (Madrean Evergreen Woodland). Citizen science records show a detection of this species approximately 9 miles from the Project Area (eBird 2024, accessed 1/24/24). Given how rarely this species is detected in New Mexico and the lack of preferred habitat, this species is not likely to be encountered in the Project Area.</p>

Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b><i>Pelecanus occidentalis</i></b>  Brown pelican	Primarily warm coastal marine and estuarine environments year-round. Generally rare inland, but regular post-breeding visitor to inland waters in the southwestern U.S. (Shields 2020) Very little is known about the habitat use of this species in New Mexico.  Elevation: Unknown for New Mexico.	Pacific coast from southern California south to central Mexico (including Gulf of California), Honduras, Costa Rica, Panama, Galápagos Islands, Colombia, and southern Ecuador. On the Atlantic, this species is found in the Gulf of Mexico, and Caribbean coasts from Maryland south around Florida and west to southern Texas; from southern Veracruz, Mexico, east to northern Honduras. Also found in the Bahamas, Greater and Lesser Antilles, Trinidad and Tobago, Venezuela, and Colombia. Also inland at Lake Okeechobee, Florida and Salton Sea, California (Shields 2020)	Rare post-breeding vagrant to water bodies across the state (BISON-M 2017b).	<b>None.</b>  There is no suitable inland water habitat in the Project Area to support this species. Citizen science records show a detection of this species approximately 19.5 miles from the Project Area in Bill Evans Lake (eBird 2024, accessed 1/24/24).
<b><i>Phalacrocorax brasilianus</i></b>  Neotropic cormorant	Inhabits a wide variety of wetlands in fresh, brackish, or saltwater. In coastal areas, this species remains close to the shore in sheltered bays, inlets, estuaries, lagoons, rock outcrops, and islands. Inland, occupies broad slow-flowing rivers, mountain streams, lakes, marshes, swamps, and reservoirs. Habitat requirements include water deep enough for diving and elevated perches in trees and shrubs (Telfair II and Morrison 2020)  Elevation: across range, found from sea-level to 16,400 ft in the Andes (Telfair II and Morrison 2020).	Breeding resident throughout lowland South America and Aruba. Largely resident in Central America to northwestern Mexico, and north to Gulf Coast of United States from Texas to Louisiana, with inland breeding colonies established in Louisiana, Mississippi Delta, southern Florida, southwestern Arkansas, southeastern and north-central Oklahoma, central Kansas, eastern South Dakota, southern New Mexico, south-central Arizona, and southern, eastern, north-central, and western Texas (Telfair II and Morrison 2020). Nonbreeding range is similar to breeding range (Telfair II and Morrison 2020)	Found throughout the state in areas with suitably large bodies of water (BISON-M 2018d).	<b>None.</b>  There is no suitable inland water habitat in the Project Area to support this species. Citizen science records show a detection of this species approximately 19.5 miles from the Project Area in Bill Evans Lake (eBird 2024, accessed 1/24/24).

Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b><i>Camptostoma imberbe</i></b>  Northern beardless tyrannulet	<p>Occurs in arid to semi-humid brushy areas, thickets and forest edges, commonly along streams and dry washes (Tenney 2000). In New Mexico, irregular and uncommon in lowland riparian woodland and adjacent scrub (Tenney 2000). Also uses mesquite bosque and intermittent foothill drainages or dry washes with mesquite and netleaf hackberry (Corman 2005g). Migration habitat use is poorly known but has been reported in areas with desertscrub. Wintering habitat is similar to breeding habitat and includes lowland riparian woodland and adjacent habitats, chaparral and mesquite (Tenney 2000).</p> <p>Elevation: Poorly known for New Mexico. In Arizona, breeds 1,920–4,600 ft (Corman 2005g).</p>	<p>A partial migrant, with northern-most populations being short-distance migrants (Tenney 2000). Breeds locally in southcentral and southeastern Arizona, extreme southwestern New Mexico and in south Texas along the Rio Grande Valley. Range extends southward from U.S. populations through Mexico to Guatemala, although is absent from western Sonora, northwestern Sinaloa, the north Central Plateau, and the highlands of southeastern Chiapas. Also occurs in El Salvador, Honduras, Nicaragua and Costa Rica (Tenney 2000). Winter range is the same as the breeding range with only a portion of the populations in the northern-most extent of the range withdrawing (Tenney 2000).</p>	<p>Breeds irregularly in Guadalupe Canyon in extreme southwest Hidalgo County. Occasionally may occur in the Animas Mountains and north into southern Grant County (BISON-M 2017j)</p>	<p><b>None.</b></p> <p>The Project Area is outside of the known geographic range and is an irregular and rare visitor to the state. Citizen science records show the nearest detection of this species approximately 28 miles from the Project Area (eBird 2024, accessed 2/8/24).</p>
<b><i>Falco peregrinus anatum</i></b>  American peregrine falcon	<p>Breeds in a wide range of open habitats (White et al. 2002). Prefer steep cliffs that overlook woodlands and riparian areas. Habitat selection is mainly driven by the abundance of prey (birds and occasionally bats). They dive from cliffs to ambush prey. Usually forages within 9 miles of the nest site, but foraging distances of 15 miles are common (Luensmann 2010). Can be found in less optimal habitats, such as small, broken cliffs or cliffs in xeric areas, when preferred habitat is not available. Will roost on tall buildings when prey is abundant (AGFD 2002a). In Arizona, this species is most often found in forested regions from pinyon pine-juniper and evergreen oaks to ponderosa pine and mixed conifer, to cold-temperate desertscrub and Sonoran desertscrub (AGFD 2002a, Burger 2005). Migratory and overwintering habitats are diverse and include similar habitats to those used during breeding and areas devoid of cliffs (White et al. 2002).</p> <p>Elevation: In Arizona, 400–9,000 ft (AGFD 2002a).</p>	<p><i>F. peregrinus</i> occurs on every continent except Antarctica (White et al. 2002). The <i>anatum</i> subspecies is a partial migrant and breeds throughout North America south of the tundra, excluding coastal Pacific Northwest, to northern Mexico (White et al. 2002). Winter range includes portions of the breeding range where prey is abundant year-round and extends south through Central America and South America through Chile (AGFD 2002a, White et al. 2002).</p>	<p>They pass through the state during migration from March-May and there are isolated breeding records throughout the state (White et al. 2002).</p>	<p><b>Unlikely.</b></p> <p>No cliff habitat is present near the Project Area for breeding. Given the large forage range for the species, 15 miles, a flyover is possible and would likely be a brief encounter. Citizen science records show the nearest detection of this species approximately 44 miles from the Project Area (eBird 2024, accessed 2/8/24).</p>



Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b><i>Empidonax traillii extimus</i></b>  Southwestern willow flycatcher	Breeds in successional stands of dense riparian vegetation composed of trees and shrubs along rivers or lakes (AGFD 2002c, USFWS 2013a). Migrates along riparian habitats, including those with shorter or more sparse vegetation or smaller patches than would be suitable for nesting (USFWS 2013a). They are a long-distance neotropical migrant and winters in habitats outside of the U.S. (Sedgwick 2020).  Elevation: In Arizona, 75–9,180 ft (AGFD 2002c).	They are a long-distance neotropical migrant (Sedgwick 2020). Breeds in Arizona, California, Colorado, New Mexico, Nevada, Texas and Utah, U.S. Winters in southern Mexico and south to northern South America (USFWS Sedgwick 2020, 2013a).	Populations occur along the Rio Grande and Gila River drainages, with much smaller populations at isolated locales in the San Juan, upper Canadian, Zuni, San Francisco, Mimbres, and Pecos river drainages (NMDGF 2018). Historical breeding records are also known from the Canadian, Chama, San Francisco, San Juan, and Zuni River drainages. Species occurs widely throughout the state during migration (BISON-M 2018g).	<b>None.</b>  There is no suitable riparian habitat with dense riparian vegetation in the Project Area. There is no designated critical habitat in the Project Area. Citizen science records show the nearest detection of this species approximately 24 miles from the Project Area (eBird 2024, accessed 2/8/24).
<b><i>Tyrannus crassirostris</i></b>  Thick-billed kingbird	Prefers low elevation gallery forest and edge habitats in tropical deciduous forest. The gallery forest may be surrounded by subtropical thorn scrub, desertscrub or oak woodland (Lowther, Pyle, and Patten 2020). Habitat use in New Mexico is poorly understood, but in Arizona, breeds in broad drainages at the edges of riparian woodland with large sycamores or cottonwoods. Also uses areas with tall cottonwoods around manmade ponds. Frequently forages in adjacent brushy areas (Corman 2005h) including oak-pine woodland or mesquite grassland (AGFD 2010). Winters in habitats outside of the U.S. Migratory habitat is unknown but is expected to be similar to that used for breeding (Lowther, Pyle, and Patten 2020).  Elevation: Range-wide, occurs below 6,070 ft (Lowther, Pyle, and Patten 2020).	A partial migrant with only the northernmost populations withdrawing southward (Lowther, Pyle, and Patten 2020). Breeds from southeastern Arizona and extreme southwestern New Mexico, U.S. and south along the Pacific Slope of Mexico from eastern Sonora and western Chihuahua to Guerrero, México D.F., Morelos, southern Puebla, and central Oaxaca. Winters from southeastern Sonora, through the remainder of the breeding range to southwestern Chiapas. Rarely found as far south as Guatemala (Lowther, Pyle, and Patten 2020).	Occurs in Hidalgo County in extreme southwestern New Mexico, including Antelope Wells and the foothills of the Animas Mountains (BISON-M 2017m, Lowther, Pyle, and Patten 2020).	<b>None.</b>  There is no suitable tropical forest habitat in the Project Area and this species an uncommon visitor to the state. Citizen science records show the nearest detection of this species approximately 24 miles from the Project Area (eBird 2024, accessed 2/8/24).

Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<p><i>Hylocharis leucotis</i></p> <p>White-eared hummingbird</p>	<p>Breeds in pine, pine-oak and mixed conifer forests particularly in edge habitats or clearings (Arizmendi et al. 2015). In Arizona, this species occurs in forested mountain canyons and in shrubby, previously burned or otherwise disturbed areas. These habitats may include broadleaf or coniferous trees such as Arizona sycamore, bigtooth maple, Gambel's or Madrean evergreen oak, pines, Douglas Fir or locust (Corman 2005j). Arizona populations winter in habitats outside of the U.S. (Arizmendi et al. 2015).</p> <p>Elevation: In Arizona, 4,900–8,400 ft (Corman 2005j). In New Mexico, 5,000–7,000 ft (BISON-M 2020b).</p>	<p>Is a partial migrant, with the northern most populations withdrawing southward (Arizmendi et al. 2015). Breeds from southeastern Arizona, U.S. and southward through highlands of Mexico, Guatemala, El Salvador, Honduras and Nicaragua (Arizmendi et al. 2015, Corman 2005j). May also breed in portions of New Mexico and Texas (Arizmendi et al. 2015). During the winter, this species withdraws from the U.S. and Sonora, Chihuahua and Nuevo León, Mexico (Arizmendi et al. 2015).</p>	<p>Verified only as migrants in the state and was found summering in the Animas Mountains in the mid-1970s. Subsequently, it was reported from two sites in the Peloncillo Mountains. In 1993, at least four individuals were at two sites in the Piños Altos Mountains, and individuals were reported from two sites in the Sangre de Cristo Mountains (BISON-M 2020b, eBird 2021).</p>	<p><b>Unlikely.</b></p> <p>The Project Area does not contain the preferred habitat (broadleaf or coniferous trees such as Arizona sycamore, bigtooth maple, Gambel's or Madrean evergreen oak, pines, Douglas Fir or locust) but does fall into the elevation range this species prefers and contains edge and disturbed habitat. Given the rarity in the state, it is unlikely to occur in the site. Citizen science records show the nearest detection of this species approximately 26 miles from the Project Area (eBird 2024, accessed 2/8/24).</p>
<p><i>Passerina versicolor</i></p> <p>Varied bunting</p>	<p>Range-wide, they breed in densely vegetated areas with desertscrub, thornscrub, scrubby woodlands, forest edges, and overgrown clearings (Groschupf and Thompson 2020). Habitat use in New Mexico is poorly described. However, in Arizona, most breeding records are from arid slopes adjacent to drainages with mesquite and netleaf hackberry and from areas with dense Sonoran desertscrub (Corman 2005i). During migration habitat use is similar to that used for breeding (Groschupf and Thompson 2020). They winter in habitats outside of the U.S. (Groschupf and Thompson 2020).</p> <p>Elevation: In Arizona, breeds between 1,350–5,100 ft (Corman 2005i). In New Mexico, 3,000–5,000 ft (BISON-M 2017n).</p>	<p>Is a partial migrant (Groschupf and Thompson 2020). Breeding range includes south-central and southeastern Arizona, southern New Mexico and southern Texas, U.S. The range extends southward to northern Michoacán, Mexico and locally in Guatemala. During the winter, northern populations withdraw southward and this species can be found in Mexico from southern Sonora on the Pacific Slope, Guanajuato in the interior and northern Tamaulipas and eastern Nuevo León on the Atlantic Slope and southward through the breeding range (Groschupf and Thompson 2020). There is some evidence that they may be expanding northward into Arizona and New Mexico (Groschupf and Thompson 2020).</p>	<p>Occurs in southern part of the state near the Carlsbad Caverns in Hidalgo County and the Guadalupe Mountains. Vagrants have also been detected in west-central portions of the state (BISON-M 2017n, Groschupf and Thompson 2020).</p>	<p><b>Unlikely.</b></p> <p>The Project Area is outside of the known geographic range, the site may contain woodland habitat this species may utilize for breeding, though the Project Area occurs at a higher elevation than this species is typically found. There is evidence that the species is expanding its range northward. Citizen science records show the nearest detection of this species approximately 18 miles from the Project Area along the Gila River (eBird 2024, accessed 2/8/24).</p>

Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<i>Junco phaeonotus</i> Yellow-eyed junco	Utilizes open conifer forest, ponderosa pine forest, pine-oak forests, scrubby or brushy areas, pastures or other fields. During the winter, may move to lower elevations sites with oak-pine woodland, oak-woodland or chaparral (Corman 2005k).  Elevation: Range-wide, occurs between 3,940–11,480 ft (Sullivan 2018).	Typically non-migratory (Sullivan 2018). The range extends from southeastern Arizona and extreme southwestern New Mexico, U.S. and southward into Mexico. In Mexico, this species in a two-pronged distribution from northeastern Sonora and western Chihuahua, and western Nuevo León and southwestern Tamaulipas, south to central Oaxaca. Also found in Chiapas, and adjacent southwestern Guatemala (Sullivan 2018).	Fairly common in southwestern part of the state in the Animas Mountains of Hidalgo County (Sullivan 2018). There have also been some detections of this species in the Big Hatchet Mountains of Hidalgo County and the Piños Altos Mountains in Grant County (BISON-M 2018i, Sullivan 2018).	<b>Possible.</b>  The Project Area has overwintering habitat preferred by this species (oak woodland or chaparral). Citizen science records show the nearest detection of this species approximately 3.5 miles from the Project Area along Burrow Mountain Road (eBird 2024, accessed 2/8/24).
<b>FISH</b>				
<i>Gila robusta</i> <sup>2</sup> Roundtail chub	Inhabits cool to warm water streams and rivers (USFWS 2015b). Typically found in largest and deepest pools of middle to large streams and is considered to be less associated with dense cover than other chub species (AGFD 2015, Minckley and Marsh 2009). Young-of-the-year favor slow, shallow water associated with vegetated shorelines (USFWS 2015b).  Elevation: 1,210–7,220 ft, most common between 2,000–5,000 ft (AGFD 2015, Minckley and Marsh 2009).	Note: The distribution described below reflects USFWS description of the proposed DPS and not the current understanding of the species complex. Historically from The Bill Williams, Gila, Little Colorado, Salt and Verde river drainages in Arizona and New Mexico. At the full species level: In the U.S.: the Colorado River basin in Arizona, Colorado, New Mexico, Utah and Wyoming (USFWS 2015b). In Mexico: Rio Yaqui and Piaxtla in Sonora (AGFD 2015).	Found in Rio Arriba, San Juan, and New Mexico counties (BISON-M 2018f).	<b>None.</b>  The Project Area does not contain suitable habitat (perennial water). This species is not expected to occur in the Project Area.

<sup>2</sup> Proposed threatened status withdrawn because the it did not meet the definition of a species under the Act (USFWS 2017). USFWS determined that *G. nigra* and *G. intermedia* should be subsumed into *G. robusta*.

Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b>MAMMALS</b>				
<b><i>Leptonycteris curasoae yerbabuenae</i></b>  [Note: This taxa has been elevated to full species status as <i>L. yerbabuenae</i> (ITIS 2019, accessed December 2, 2019)]. <sup>3</sup>  Lesser long-nosed bat	Occurs in thornscrub or Sonoran desertscrub and through semi-desert grasslands and into oak woodlands or deciduous forest where columnar cacti and agaves are present (AGFD 2011b, Medellín 2016). Roosts in caves, abandoned mines, vegetation and occasionally old buildings (AGFD 2011b, USFWS 2018b). Forages at night on nectar and pollen of columnar cacti and agaves (AGFD 2011b, USFWS 2018b). In some portions of its range, fruits of cacti are commonly consumed. Additionally, this species readily finds and utilizes hummingbird feeders. Sometimes bypass foraging areas close to roost sites in favor of distant areas and have been documented travelling greater than 40 miles from known roosts.  Elevation: Range-wide, reported as high as 8,530 ft but is typically found below 5,905 ft (Medellín 2016).	In the U.S.: southern Arizona and extreme southwestern New Mexico. Outside the U.S.: south from the U.S. border through Mexico (including Baja), Guatemala, El Salvador, and Honduras (NatureServe 2021). Note that USFWS (2018b) indicates that the range outside of the U.S. only extends as far south as southern Mexico.	Southwestern portions of the state in the Animas and Peloncillo mountains of Hidalgo County (Cole and Wilson 2006, Richardson 2007, USFWS 2016).	<b>Unlikely.</b>  The Project Area contains suitable evergreen Madrean woodlands habitat and one partially reclaimed mine feature that could provide roosting habitat ( <b>Appendix C</b> , photo 10). However, this Project Area is outside of the known range of the species. It is unlikely that this species occurs in the Project Area, but may occasionally utilize the area to forage.
<b><i>Canis lupus baileyi</i></b>  Mexican gray wolf	Occurs in sparsely to densely forested mountainous terrain or adjacent grasslands where prey is abundant. Prey species include cervids, peccaries, lagomorphs and rodents (USFWS 2015a). Are sensitive to disturbance  Elevation: 3,000–12,000 ft (AGFD 2001b). In New Mexico, 4,000-9,000 ft (BISON-M 2021b).	The <i>baileyi</i> subspecies occurs in Arizona and New Mexico, U.S. and Sonora, Mexico (USFWS 2015a).	They has been translocated into the Gila National Forest (Mexican Wolf Interagency Field Team 2020). The non-essential experimental population boundaries are south of I-40 and is divided into management zones. Zone 1: Initial releases and translocations can occur into Apache-Sitgreaves National Forests, and the Tonto Basin Ranger District of Tonto National Forest. Zone 2: Areas outside of Zone 1, south of I-40 and east of Hwy 60/89 and 93, I-10 and I-19 allows for natural dispersal and occupancy. Initial releases allowed on private and tribal land with approved management agreements. Translocations and release of pups less than 5-months old allowed on Federal lands. Zone 3: Areas south of I-40 and west of Hwy 60/89 and 93, I-10 and I-19. Within Zone 3 no releases or translocations are allowed but can be occupied by naturally dispersing individuals (USFWS BISON-M 2021b, 2015a).	<b>Unlikely.</b>  The Project Area is outside of the Zone 1 management zone. Due to the low population density of this species and the developed nature of the Project Area, it is not anticipated that a Mexican gray wolf will occur in the Project Area. If this species occurred within the Project Area, it would be considered part of the non-essential experimental population. Because the non-essential experimental population is, by definition, not essential to the continued existence of the species, the effects of proposed actions on the non-essential experimental population will generally not rise to the level of jeopardizing the continued existence of the species.

<sup>3</sup> Delisted due to recovery (USFWS 2018a).



Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<b><i>Euderma maculatum</i></b>  Spotted bat	<p>Occurs in a wide-range of vegetation types including desertscrub, pinyon-juniper woodlands, ponderosa pine forests, mixed conifer forest, canyon bottoms, riparian areas, fields, pastures, and sub-alpine meadows. Roost in cracks and crevices of rock cliffs and in caves. They are generally solitary but may roost or hibernate in small groups. Foraging ranges may be large and up to 25 miles from their roost sites. Primarily consume moths. Are rarely caught in nets, potentially due to rarity, high flight patterns or sensitivity to light and sound. In Arizona, this species is most commonly captured near water or along canyon rims. It is unknown if this species is migratory. In Arizona, they appear active year-round (Luce, Chambers, and Herder 2005).</p> <p>Elevation: In Arizona, 110–8,670 ft (AGFD 2003).</p>	<p>Occurs in British Columbia, Canada and the U.S. states of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Texas, Washington, and Wyoming. Range extends south from U.S. populations to Durango and Queretaro, Mexico (AGFD 2003, Hammerson 2015).</p>	<p>Documented from Bernalillo, Catron, Cibola, Doña Ana, Eddy, Grant, Lincoln, Los Alamos, Otero, Rio Arriba, Sandoval, San Juan, Santa Fe, Valencia, and Socorro counties. In 2006, this species was observed in Grant County at the following locations: near the Gila River at Lichty Farm, near Buckhorn, Big Burro Mountains, and near Santa Fe at Black Canyon Campground (BISON-M 2017I).</p>	<p><b>Possible.</b></p> <p>The Project Area contains potentially suitable woodland habitat and is within the known range of this species (BISON M 2024). Some small rocky outcrops of approximately 5-10 feet tall were noted within the Project Area that are likely not large enough for long term roosting. Preferred roosting habitat (rock cliffs and caves along canyon rims) were not observed within the Project Area but likely occur within the forage range of this species. Cattle tanks occur near the Project Area which could draw species in for water and forage.</p>
<b>REPTILES</b>				
<b><i>Thamnophis rufipunctatus</i></b>  Narrow-headed gartersnake	<p>Are strongly associated with pool and riffle habitats in clear, rocky streams habitats in Petran Montane Conifer Forest, Great Basin Conifer Woodland, Interior Chaparral and the Arizona Upland subdivision of Sonoran Desertscrub. Occasionally utilizes lake shoreline habitats (USFWS 2014b). They primarily preys on fish species (USFWS 2014b). Bank-line vegetation is an important habitat component and this species favors areas with shrub- and sapling-sized plants for thermoregulation (USFWS 2014b). Been documented using site up to 656 ft away from the floodplain for hibernation (USFWS 2014b). Typically surface active between March and November with air temperatures of 52° to 89° F (USFWS 2014b).</p> <p>Elevation: 2,300-8,000 ft (USFWS 2014b).</p>	<p>Occurs in Arizona and New Mexico (USFWS 2014b).</p>	<p>Confined to the Catron, Grant, and Hidalgo counties where it reaches the easternmost edge of its distribution, where it uses suitable rocky rivers and streams of the San Francisco and Gila River drainages. Expected to exist within the San Francisco River drainage at low densities. Individuals have been recently detected in Saliz Creek, Whitewater Creek, Diamond Creek, and Dry Blue Creek near the Arizona border in Catron County (New Mexico Game and Fish Department 2020).</p>	<p><b>None.</b></p> <p>There is no suitable habitat (clear, rocky streams habitats in Petran Montane Conifer Forest, Great Basin Conifer Woodland, Interior Chaparral and the Arizona Upland subdivision of Sonoran Desertscrub) in the Project Area or within dispersal range. While two cattle tanks do occur near the Project Area, they do not contain the necessary habitat for this species. There are no known records of this species within 40 miles of the Project Area (UNM Herpetology collections, UA Herpetology collections, iNaturalist). There is no proposed critical habitat in the Project Area.</p>

Species Name	Known Suitable Habitat	Total Range	Distribution in New Mexico	Potential to Occur
<i>Thamnophis eques megalops</i>  Northern Mexican gartersnake	Strongly associated with water due to its primarily aquatic prey base and is heavily dependent on fish species. Occurs near or in ponds, cienegas, lowland river riparian forests and woodlands, and upland stream gallery forests. Avoids steep mountain canyons. Most abundant in densely vegetated habitat. Associated with a variety of biotic communities including Sonoran Desertscrub, Semidesert Grasslands, Interior Chaparral, Madrean Evergreen Woodland and into the lower reaches of Petran Montane Conifer Forest (AGFD 2012, USFWS 2013b). May be found up to one mile (or more) away from water, using terrestrial habitat for brumation, digestion, or for thermoregulatory needs such as developing young (Jeff Servoss, USFWS pers. comm. to D. Cerasale, April 18, 2016).  Elevation: 130-8,497 ft (USFWS 2014b) but is most common below 5,000 ft (AGFD 2012).	Occurs in Arizona and New Mexico, U.S. (USFWS 2014b). Although it is poorly known, the range extends into Mexico and is thought to include Sonora, Chihuahua, Durango, Coahuila, Zacatecas, Guanajuato, Nayarit, Hidalgo, Jalisco, San Luis Potosí, Aguascalientes, Tlaxcala, Puebla, México, Michoacán, Oaxaca, Veracruz, and Querétaro (AGFD 2012).	The status in the state is uncertain, although it is possible that this species may occur in Mule Creek (USFWS 2014d), and there is proposed critical habitat for this species in Gila River and Duck Creek, although portions of these areas are being considered for exclusion (USFWS 2020a); however, it is likely extirpated.	<b>None.</b>  There is no suitable habitat (ponds, cienegas, lowland river riparian forests and woodlands, and upland stream gallery forests) in the Project Area or within dispersal range. While two cattle tanks do occur near the Project Area, they do not contain the necessary habitat for this species. There are no known records of this species within 180 miles of the Project Area (UNM Herpetology collections, UA Herpetology collections, iNaturalist). There is no designated critical habitat in the Project Area.
<i>Heloderma suspectum</i>  Gila monster	Inhabit desert and mesquite-grassland, but also pine- oak forest, tropical deciduous forest, and thorn forest. It is usually found in rocky foothill regions and avoids open flats. It typically inhabits the lower slopes of mountains and nearby outwash plains, especially in canyons and arroyos where water is at least periodically present (Beck 2009). In some areas, they also frequent irrigated farmlands that adjoin those habitat types. Cover in such areas often includes boulders, rock crevices, downed vegetation, and litter (AGFD 2013b).  Elevation: 3,800-6,400 ft (Beck 2009).	Occupies the southern areas of Utah, Nevada, California, and New Mexico. The most southern population lives in the Sonoran desert of Mexico near the towns of Alamos Guayamas and Ortiz (AGFD 2013b, Beck 2009).	Peripheral in the state, reaching the eastern edge of its range in the southwest, where it is known from Hidalgo, Grant, Luna and perhaps Doña Ana counties (BISON-M 2018e). Most common at the Redrock Wildlife Area on the Gila River west of the Big Burro Mountains (BISON-M 2018e).	<b>Unlikely.</b>  The Project Area contains suitable habitat but is near the eastern limit of its known geographic range. No known records of this species within five miles of the Project Area (UNM Museum of Southwest Biology Herpetology collections, iNaturalist, UofA Herpetology COlllections)
<b>MOLLUSCS</b>				
<i>Pyrgulopsis gilae</i>  Gila springsnail	Inhabits cool springs and brooks, but a few have also been found in a nearby thermal spring. Occurs in mud, debris, and vegetation. Typical habitat is a rivulet about 3 ft wide and grown up with watercress ( <i>Nasturtium officinale</i> ) (BISON-M 2017h).  Elevation: Unknown.	Endemic to New Mexico (BISON-M 2017h).	Limited to a series of thermal springs along the Gila River in Grant County in the East and West Forks. Has also been observed along Beaver Creek, Mimbres District and in the Black Range District (BISON-M 2017h).	<b>None.</b>  Project Area is outside of the highly restricted geographic range.
<i>Pyrgulopsis thermalis</i>  New Mexico springsnail	Inhabits waters as warm as 38°C but is more common where temperatures are 33-35°C. Occupies substrates in areas of steep or even vertical rock, covered with thin sheets of water. Also found in minor spring flows on algal film and crusts of lime-depositing algae. Likely also occurs in dense grasses and sedges bordering the springs (BISON-M 2019d).  Elevation: Unknown.	Endemic to New Mexico (BISON-M 2019d).	Restricted to a series of thermal springs along the Gila River in Grant County (BISON-M 2019d).	<b>None.</b>  Project Area is outside of the highly restricted geographic range.

## Appendix C: IPaC and Bison-M Reports

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

Grant County, New Mexico



## Local office

New Mexico Ecological Services Field Office

☎ (505) 346-2525

📅 (505) 346-2542

2105 Osuna Road Ne

NOT FOR CONSULTATION



# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
  2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Birds

NAME	STATUS
Mexican Spotted Owl <i>Strix occidentalis lucida</i> Wherever found There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/8196">https://ecos.fws.gov/ecp/species/8196</a>	Threatened
Northern Aplomado Falcon <i>Falco femoralis septentrionalis</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/1923">https://ecos.fws.gov/ecp/species/1923</a>	<a href="#">EXPN</a>
Yellow-billed Cuckoo <i>Coccyzus americanus</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>	Threatened

## Fishes

NAME	STATUS
Chihuahua Chub <i>Gila nigrescens</i> Wherever found There is <b>proposed</b> critical habitat for this species. <a href="https://ecos.fws.gov/ecp/species/7156">https://ecos.fws.gov/ecp/species/7156</a>	Threatened
Gila Topminnow (incl. Yaqui) <i>Poeciliopsis occidentalis</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/1116">https://ecos.fws.gov/ecp/species/1116</a>	Endangered
Gila Trout <i>Oncorhynchus gilae</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/781">https://ecos.fws.gov/ecp/species/781</a>	Threatened
Loach Minnow <i>Tiaroga cobitis</i> Wherever found There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/6922">https://ecos.fws.gov/ecp/species/6922</a>	Endangered

Spikedace Meda fulgida

Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/6493>

## Insects

NAME

STATUS

Monarch Butterfly Danaus plexippus

Proposed Threatened

Wherever found

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/9743>

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

## Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act <sup>2</sup> and the Migratory Bird Treaty Act (MBTA) <sup>1</sup>. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their nests, should follow appropriate regulations and implement required avoidance and minimization measures, as described in the various links on this page.

The [data](#) in this location indicates that no eagles have been observed in this area. This does not mean eagles are not present in your project area, especially if the area is difficult to survey. Please review the 'Steps to Take When No Results Are Returned' section of the [Supplemental Information on Migratory Birds and Eagles document](#) to determine if your project is in a poorly surveyed area. If it is, you may need to rely on other resources to determine if eagles may be present (e.g. your local FWS field office, state surveys, your own surveys).

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds  
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds  
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC  
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

Bald and Golden Eagle information is not available at this time

## Bald & Golden Eagles FAQs

### **What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?**

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply).

### **Proper interpretation and use of your eagle report**

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

### **How do I know if eagles are breeding, wintering, or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **Interpreting the Probability of Presence Graphs**

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

***How is the probability of presence score calculated? The calculation is done in three steps:***

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

**Breeding Season ()**

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort ()**

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

**No Data ()**

A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

## Migratory birds

The Migratory Bird Treaty Act (MBTA) <sup>1</sup> prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior [authorization](#) by the Department of Interior U.S. Fish and Wildlife Service (FWS). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The FWS interprets the MBTA to prohibit incidental take.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>



- Measures for avoiding and minimizing impacts to birds  
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC  
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

Migratory bird information is not available at this time

## Migratory Bird FAQs

**Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Avoidance & Minimization Measures for Birds](#) describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the [Bald and Golden Eagle Protection Act](#) and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

**Why are subspecies showing up on my list?**

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that

subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering, or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Bald and Golden Eagle Protection Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

## Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

### Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

#### ***How is the probability of presence score calculated? The calculation is done in three steps:***

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

### Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

### No Data ()

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

## Facilities

### National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

### Fish hatcheries

There are no fish hatcheries at this location.

### Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

[R4SB3J](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

### **Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### **Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



## Federal or State Threatened/Endangered Species Grant

<u>Taxonomic Group</u>	<u># Species</u>	<u>Taxonomic Group</u>	<u># Species</u>
Amphibians	2	Mammals	4
Birds	25	Molluscs	2
Fish	8	Reptiles	3
Lepidoptera; moths and butterflies	2		

**TOTAL SPECIES: 46**

<u>Common Name</u>	<u>Scientific Name</u>	<u>NMGE</u>	<u>USFWS</u>	<u>Critical Habitat</u>	<u>SGCN</u>	<u>Photo</u>
<a href="#">Lesser Long-nosed Bat</a>	Leptonycteris yerbabuenae	T			Y	<a href="#">View</a>
<a href="#">Spotted Bat</a>	Euderma maculatum	T			Y	<a href="#">View</a>
<a href="#">Mexican Gray Wolf</a>	Canis lupus baileyi	E	E		Y	<a href="#">View</a>
<a href="#">Grizzly Bear</a>	Ursus arctos		T			No Photo
<a href="#">Common Ground Dove</a>	Columbina passerina	E			Y	<a href="#">View</a>
<a href="#">Yellow-billed Cuckoo (western pop)</a>	Coccyzus americanus occidentalis		T	Y	Y	<a href="#">View</a>
<a href="#">Buff-collared Nightjar</a>	Antrostomus ridgwayi	E				No Photo
<a href="#">Lucifer Hummingbird</a>	Calothorax lucifer	T			Y	<a href="#">View</a>
<a href="#">Costa's Hummingbird</a>	Calypte costae	T			Y	<a href="#">View</a>
<a href="#">Broad-billed Hummingbird</a>	Cynanthus latirostris	T			Y	<a href="#">View</a>
<a href="#">White-eared Hummingbird</a>	Basilinna leucotis	T				<a href="#">View</a>
<a href="#">Neotropic Cormorant</a>	Phalacrocorax brasilianus	T			Y	<a href="#">View</a>
<a href="#">Brown Pelican</a>	Pelecanus occidentalis	E				<a href="#">View</a>
<a href="#">Bald Eagle</a>	Haliaeetus leucocephalus	T			Y	<a href="#">View</a>
<a href="#">Common Black Hawk</a>	Buteogallus anthracinus	T			Y	<a href="#">View</a>
<a href="#">Mexican Spotted Owl</a>	Strix occidentalis lucida		T	Y	Y	<a href="#">View</a>
<a href="#">Elegant Trogon</a>	Trogon elegans	E			Y	<a href="#">View</a>
<a href="#">Gila Woodpecker</a>	Melanerpes uropygialis	T			Y	<a href="#">View</a>
<a href="#">Aplomado Falcon</a>	Falco femoralis	E	E		Y	<a href="#">View</a>
<a href="#">Peregrine Falcon</a>	Falco peregrinus	T			Y	<a href="#">View</a>
<a href="#">Northern Beardless-Tyrannulet</a>	Campostoma imberbe	E			Y	<a href="#">View</a>
<a href="#">Thick-billed Kingbird</a>	Tyrannus crassirostris	E			Y	<a href="#">View</a>
<a href="#">Southwestern Willow Flycatcher</a>	Empidonax traillii extimus	E	E	Y	Y	<a href="#">View</a>

## Federal or State Threatened/Endangered Species Grant

<u>Common Name</u>	<u>Scientific Name</u>	<u>NMGE</u>	<u>USFWS</u>	<u>Critical Habitat</u>	<u>SGON</u>	<u>Photo</u>
<a href="#">Bell's Vireo</a>	Vireo bellii	T			Y	<a href="#">View</a>
<a href="#">Gray Vireo</a>	Vireo vicinior	T			Y	<a href="#">View</a>
<a href="#">Yellow-eyed Junco</a>	Junco phaeonotus	T			Y	<a href="#">View</a>
<a href="#">Baird's Sparrow</a>	Centronyx bairdii	T			Y	<a href="#">View</a>
<a href="#">Abert's Towhee</a>	Melospiza aberti	T			Y	<a href="#">View</a>
<a href="#">Varied Bunting</a>	Passerina versicolor	T			Y	<a href="#">View</a>
<a href="#">Gila Monster</a>	Heloderma suspectum	E			Y	<a href="#">View</a>
<a href="#">Northern Mexican Gartersnake</a>	Thamnophis eques	E	T	Y	Y	<a href="#">View</a>
<a href="#">Narrow-headed Gartersnake</a>	Thamnophis rufipunctatus	E	T	Y	Y	<a href="#">View</a>
<a href="#">Chiricahua Leopard Frog</a>	Lithobates chiricahuensis		T	Y	Y	<a href="#">View</a>
<a href="#">Lowland Leopard Frog</a>	Lithobates yavapaiensis	E			Y	<a href="#">View</a>
<a href="#">Gila Chub</a>	Gila intermedia		E	Y	Y	<a href="#">View</a>
<a href="#">Headwater Chub</a>	Gila nigra		C		Y	<a href="#">View</a>
<a href="#">Chihuahua Chub</a>	Gila nigrescens	E	T		Y	<a href="#">View</a>
<a href="#">Roundtail Chub (lower Colorado River populations)</a>	Gila robusta	E	C		Y	<a href="#">View</a>
<a href="#">Spikedace</a>	Meda fulgida	E	E	Y	Y	<a href="#">View</a>
<a href="#">Loach Minnow</a>	Rhinichthys cobitis	E	E	Y	Y	<a href="#">View</a>
<a href="#">Gila Trout</a>	Oncorhynchus gilae	T	T		Y	<a href="#">View</a>
<a href="#">Gila Topminnow</a>	Poeciliopsis occidentalis occidentalis	T	E		Y	<a href="#">View</a>
<a href="#">Gila Springsnail</a>	Pyrgulopsis gilae	T			Y	No Photo
<a href="#">New Mexico Hot Springsnail</a>	Pyrgulopsis thermalis	T			Y	No Photo
<a href="#">Nokomis Silverspot</a>	Speyeria (Argynnis) nokomis nokomis		T			No Photo
<a href="#">Monarch</a>	Danaus plexippus		P			<a href="#">View</a>

# Attachment B



## STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER

*District 3 Office, Deming, NM*

Elizabeth K. Anderson, P.E.  
STATE ENGINEER

321 W. Spruce  
Deming, New Mexico 88030  
Phone: (575) 546-2851  
FAX: (575) 546-2290

January 22, 2025

Freeport-McMoRan Tyrone Mining LLC  
P.O. Box 571  
Tyrone, New Mexico 88065



BY: .....

Greetings:

This office is in receipt of your letter on January 17, 2024 wherein you request a variance from New Mexico Administration Code 19.27.4.30.C by establishing an approved plugging procedure.

Upon review of your proposed plugging procedure, it is determined that the proposed procedure involves cementing any necessary exploratory wells by grouting via a tremie line from the bottom up to the surface utilizing a pressure grout pump and cutting off the well head at or just below land surface after plugging. Said cement grout will entail 5 gallons of water per 94-pound sack of Portland Type I/II cement to be mixed onsite with no additives. As this plan would meet artesian well plugging requirements, it is acceptable and therefore your variance is granted, subject to the following conditions:

1. All wells, drill holes shall be plugged and abandoned immediately after sampling of minerals by a licensed well driller.
2. A plugging record shall be filed with the OSE by the driller within 30 days of plugging.
3. Plugging of all exploratory wells shall entail placing grout tremie line from the bottom up to the surface. Grout shall be placed with a pressure grout pump and the well head shall be cut-off at or just below land surface after plugging. Cement grout shall consist of 5 gallons of water per 94-pound sack of Portland Type I/II cement mixed onsite with no additives.
4. Should Artesian conditions be encountered, the applicant must file a Well Plugging Plan of Operations for review and approval.

All necessary requirements placed on Freeport-McMoRan by the New Mexico Environment Department, or any other administrative agency related to the plugging of any exploratory wells shall be met.

This variance shall remain in effect until further notice from the Office of the State Engineer and shall be limited to the emergency plugging of exploratory wells located within the Tyrone Mining Facility that would immediately impact mining operations.

If further discussion would be beneficial, please advise.

Sincerely,

Lloyd R. Valentine III  
District 3 Manager

By: 

Jake Vega  
Water Resources Professional II

JV:jv  
Encl: Approved Permit  
cc: State Engineer

Freeport-McMoRan Inc.  
Attention: Accounts Payable  
333 N Central Ave, Room 23.306  
Phoenix, AZ. 85004



RETURN SERVICE REQUESTED

Check No. 0001059670  
Check Date 06/04/2025  
Check Amount \$500.00  
Vendor No. 0000805500  
Payment Reference No. 20609670621899



OD-000012 0003 0003 000032

STATE OF NEW MEXICO  
NM ENRGY MNRLS & NAT RES DPT  
1220 S SAINT FRANCIS DR  
SANTA FE, NM 87505-4225

PLEASE DIRECT ANY INQUIRIES  
TO THE AP HELP DESK:  
AP@FMI.COM

Invoice Date	Invoice Number	PO#/Freeport Site/ Description	Invoice Amount	Discount Amount	Net Amount
06/02/2025	06022025SL	FM Tyrone Mining LLC IP Part 3 Exploration Permit	\$500.00		\$500.00
TOTAL					\$500.00



↓ PLEASE FOLD ON PERFORATION AND DETACH HERE ↓

VERIFY THE AUTHENTICITY OF THIS MULTI-TONE SECURITY DOCUMENT.

CHECK BACKGROUND AREA CHANGES COLOR GRADUALLY FROM TOP TO BOTTOM.

FREEPORT MINERALS CORPORATION  
333 NORTH CENTRAL AVE  
PHOENIX, AZ 85004-2121



0001059670

June 04, 2025

64-1278/611  
VOID AFTER 180 DAYS  
PAY IN US DOLLARS



Amount: \*\*Five Hundred dollars and 00 cents\*\*

\*\*\$500.00\*\*

Pay to  
the  
order of

STATE OF NEW MEXICO  
NM ENRGY MNRLS & NAT RES DPT

Bank of America N.A.  
Atlanta, Dekalb County, Georgia

  
AUTHORIZED SIGNATURE

⑈0001059670⑈ ⑆061112788⑆ 3299998445⑈