# Table of Contents

1  INTRODUCTION ............................................................................................................. 1  
   1.1  Background ........................................................................................................... 1  
   1.2  Purpose and Need .............................................................................................. 1  
   1.3  Plan Conformance ............................................................................................ 1  
   1.4  Identification of Issues ..................................................................................... 1  
      1.4.1 Relevant Issues .......................................................................................... 2  
      1.4.2 Issues Dismissed from Detailed Analysis ................................................ 3  

2  ALTERNATIVES ............................................................................................................ 4  
   2.1  Alternative A – Proposed Action ......................................................................... 4  
      2.1.1 Summary of Proposed Action (Please Refer to Exhibit 1 for a detailed description) ... 4  
   2.2  Alternative B – No Action Alternative .............................................................. 9  
   2.3  Cumulative Actions ......................................................................................... 9  
      2.3.1 Past and Present Actions ......................................................................... 9  
      2.3.2 Reasonably Foreseeable Future Actions .................................................. 10  

3  ENVIRONMENTAL IMPACTS .................................................................................. 10  
   3.1  Issue 1: Visual Resources ................................................................................. 10  
      3.1.1 Affected Environment .............................................................................. 11  
      3.1.2 Alternative A – Effect of Proposed Action on Visual Resources .............. 11  
      3.1.3 Effects of Alternative B – No Action to Visual Resources...................... 12  
   3.2  Issue 2: Public Safety- Recreation .................................................................... 14  
      3.2.1 Affected Environment .............................................................................. 14  
      3.2.2 Alternative A – Proposed Action Effects on Public Safety- Recreation ...... 14  
      3.2.3 Alternative B- No Action Effects on Public Safety- Recreation ................ 14  
   3.3  Issue 3: Public Safety-Traffic ......................................................................... 14  
      3.3.1 Affected Environment .............................................................................. 14  
      3.3.2 Alternative A – Proposed Action Effects on Public Safety- Traffic .............. 15  
      3.3.3 Alternative B- No Action Effects on Public Safety- Traffic ....................... 15  
   3.4  Issue 4: Noise ................................................................................................. 15  
      3.4.1 Affected Environment .............................................................................. 15  
      3.4.2 Alternative A – Proposed Action Effects on Noise Levels ....................... 15  
      3.4.3 Alternative B- No Action Effects on Noise Levels .................................... 16  
   3.5  Issue 5: Soils ................................................................................................... 16  
      3.5.1 Affected Environment .............................................................................. 16  
      3.5.2 Alternative A- Proposed Action Effects on Soils ....................................... 16  
      3.5.3 Alternative B- No Action Effects on Soils ................................................ 17  
   3.6  Issue 6: Threatened, Endangered and Sensitive Species .................................. 17  
      3.6.1 Affected Environment .............................................................................. 17  
      3.6.2 Alternative A- Proposed Action Effects on Threatened, Endangered, and Sensitive Species .................................................................................................... 18  
      3.6.3 Alternative B- No Action Effects on Threatened, Endangered, and Sensitive Species .................................................................................................... 19  
   3.7  Issue 7: Wildlife ............................................................................................. 19  
      3.7.1 Affected Environment .............................................................................. 19  
      3.7.2 Impacts of the Alternative B – No Action .................................................. 20  
      3.7.3 Alternative A – Proposed Action Effects on Wildlife ................................ 20  
   3.8  Issue 8: Vegetation and Forestry .................................................................... 20
3.8.1 Affected Environment ............................................................................................................................. 20
3.8.2 Impacts of the Alternative B – No Action .................................................................................................. 21
3.8.3 Alternative A – Proposed Action Effects on Vegetation and Forestry ............................................... 21

3.9 Issue 9: Mineral Resources .......................................................................................................................... 21
3.9.1 Affected Environment .............................................................................................................................. 21
3.9.2 Impacts of the Alternative B – No Action ............................................................................................... 21
3.9.3 Alternative A – Proposed Action Effects on Mineral Resources ......................................................... 22

4 CONSULTATION AND COORDINATION .................................................................................................. 22
4.1 Summary of Consultation and Coordination .............................................................................................. 22
4.2 Summary of Public Participation .................................................................................................................. 22
4.2.1 Public Comments Analysis ...................................................................................................................... 22
4.3 List of Preparers ........................................................................................................................................... 23

5 REFERENCES ................................................................................................................................................... 24

List of Figures
Figure 1. Vicinity Map
Figure 2. Aerial photo with GPS locations of PEA claims
Figures 3-5. Proposed Progression of Mining and Reclamation in PEA (These Figures are also presented in Exhibit 1, San Pedro Rock Draft Mining and Reclamation Plan).
Figure 6. Viewshed Analysis

List of Tables
Table 1-1. Issues Identified for Detailed Analysis
Table 1-2. Issues Dismissed from Detailed Analysis

Exhibits
Exhibit 1- San Pedro Rock Mining and Reclamation Plan (Proposed Action)
Exhibit 2 - Wildlife Survey Report
Exhibit 3 - Botany Report
Acronyms
PEA – Proposed Expansion Area
BLM – Bureau of Land Management
TFO – Taos Field Office
SPR – San Pedro Rock
MRP – Draft Mining and Reclamation Plan
EA – Environmental Assessment
NEPA – National Environmental Policy Act
RMP – Resource Management Plan
NMSO – New Mexico State Office
FFO – Farmington Field Office
BMPs – Best Management Practices
SWPPP – Storm Water Pollution Prevention Plan
1 INTRODUCTION

1.1 Background

San Pedro Rock, LLC is proposing a mine expansion into three pre-1955 placer claims (Proposed Expansion Area) in association with the operation of its existing San Pedro Rock Mine. The three Proposed Expansion Area claims are labeled San Pedro, Santo Nino, and Oro Grande and are located north of San Pedro Rock, LLC’s existing approximately 22-acre quarry (Figures 1 and 2). The surface and mineral estate of the Proposed Expansion Area (PEA) is located on Bureau of Land Management (BLM) land, administered by the BLM Taos Field Office (TFO). The three claims in the PEA would add an additional 51.667 acres to the existing San Pedro Rock Mine and would provide gravel and aggregate rock used in construction and landscaping to industry and private clientele. Much of aggregate material mined by San Pedro Rock, LLC has been used for landscaping in prominent areas of New Mexico, including around the “Big I” (Interchange at Interstate 40 and Interstate 25 in Albuquerque, New Mexico), as well as up and down the Interstate 25 corridor in the Albuquerque area, Albuquerque Sunport, Kirtland Airforce Base, and along the route of the New Mexico Rail Runner between Albuquerque and Santa Fe.

San Pedro Rock, LLC (SPR) has been in operation since 2005 and purchased the three PEA claims in 2000. Operations within the boundaries of the existing San Pedro Rock Mine have historically been regulated under Hard Rock Locatable Mineral Regulations (CFR 3809). The PEA claims would be regulated under Saleable Mineral (CFR 3600) regulations and BLM directives for processing mineral materials on unpatented placer claims as stated in 43 CFR Subpart 3809.101(Disposal), 43 CFR Subpart 3601 Mineral Materials Disposal.

It should be noted that the development of the Draft Mining and Reclamation Plan (MRP) that would guide development of the PEA has been subject to a variety of complications. Some of the “patented” claims that are within the boundaries of the existing San Pedro Rock Mine were actually unpatented mineral claims within BLM administered surface. Under the belief that the claims were patented when they were purchased by SPR, and operating in good faith, SPR mined out an area that was a BLM trespass, and currently has mine facilities located on BLM surface. These trespasses have been legally settled and SPR is conducting ongoing reclamation and removal of equipment in these areas. Ongoing reclamation would be further enforced as part of a decision on the proposal, and these trespass areas would be completely reclaimed as part of the MRP (Proposed Action).

Further complicating these matters, SPR was initially permitted under hard rock mining regulations (43 CFR 3809) despite mining saleable minerals (aggregate materials), and, in good faith, followed stipulations of their BLM permit. Currently, disturbance on BLM administered lands within the SPR mine is 12.77 acres. This area has been identified as the Former BLM Mining Area in the Draft MRP. SPR is conducting ongoing reclamation in this area, which would be further enforced under the MRP.

In preparation of this Environmental Assessment, the SPR MRP was submitted to BLM Farmington Field Office (FFO) Mining and Minerals Division and BLM TFO in August 2019 (Exhibit 1).

SPR seeks to continue its mining of aggregate materials by expanding its mining operations into the PEA. Currently claims within the existing San Pedro Rock Mine have been depleted of aggregate product and San Pedro Rock Mine is currently not operating due to lack of product. Mining in the PEA on approval of the MRP and subsequent saleable mineral material contract would allow San Pedro Rock Mine to resume operations. SPR seeks to continue to provide variously sized and colored gravel and aggregate materials for landscaping and construction projects in the region by mining in the PEA.
Mining development of the PEA serves as the Proposed Action for this Environmental Assessment (EA). The MRP provides detail on the proposed mining and subsequent reclamation activities in the PEA (Exhibit 1). This EA incorporates by reference the existing Bureau of Land Management Taos Resource Management Plan (2012).
Figure 1
1.2 **Purpose and Need**

The purpose for the Proposed Action is to allow SPR to produce, process, and transfer aggregate product from the PEA for use or sale by SPR in local area projects such as road building, landscaping, and construction. All sales would be subject to a royalty fee as determined by the BLM Mineral Materials Sales Contract.

The BLM needs to respond to the MRP in a manner consistent with its regulatory authority and management objectives outlined in the Taos Resource Area Resource Management Plan (RMP), which recognizes mineral development as a valid use in the PEA. The BLM must provide for mining of aggregate materials on public lands where feasible and consistent with the RMP. BLM policy is to make mineral materials available to the public whenever possible, and wherever environmentally acceptable in accordance with 43 CFR 3600. The design criteria and stipulations stated herein would be used to protect BLM surface estate.

**Decision to be made:**

This Environmental Assessment analyzes two alternatives: the Proposed Action, in which BLM would issue a mining permit allowing SPR to mine aggregate product in the three mineral claims located within the PEA, and the No Action Alternative, in which the BLM would deny SPR a permit to mine aggregate product in the PEA. This EA also discusses the environmental consequences of implementing either alternative.

BLM TFO would decide whether or not to approve or reject the application for aggregate mining under Saleable Minerals Regulations (43 CFR 3600) and the corresponding MRP for SPR’s PEA (Proposed Action), and if so, under what terms and conditions.

1.3 **Plan Conformance**

The site-specific analysis provided in this EA incorporates information contained in the 2012 Bureau of Land Management Taos Resource Management Plan, by reference (USDI BLM).

**Name of Plan:** Taos Resource Management Plan

**Date approved:** May 24, 2012

**Decision:** [page 50, Section 2.2.5.3] “Allow for the exploration and production of saleable minerals to contribute to a stable local and domestic mineral supply while minimizing effects to other resources and resource uses.”

**Decision:** page 52, Section 2.2.5.3] “The San Pedro area would be closed to mineral material disposals, except for within San Lazarus Gulch. Within San Lazarus Gulch, surface disturbance associated with mining operations and facilities, including excavation, stockpiling, and infrastructure, would be limited to 10 non-reclaimed acres.

SPR’s proposal to mine aggregate products from three mineral claims located within the PEA in San Lazarus Gulch is consistent with these decisions.

1.4 **Identification of Issues**

A NEPA meeting was set up between Permits West, Inc. (the representative consultant for SPR) and the TFO to identify any issues and discuss the preparation of this document.
Public scoping thus far has consisted of a 30-day public comment period from August 22 to September 21, 2019. A letter describing the Proposed Action went out to interested parties and was posted on the TFO eplanning.blm.gov website. Five comment letters were received. Based on information received in the comments TFO has identified relevant issues which are analyzed in this EA.

Meetings to discuss the Draft MRP development (Proposed Action) [Exhibit 1] included BLM representatives from the BLM New Mexico State Office (NMSO), TFO, FFO, Paul Parker Construction, Inc., and Permits West, Inc. Discussions during each meeting centered around compliance with the TFO RMP, saleable and locatable mineral regulations, permitting history of San Pedro Rock, overlapping claims and claim ownership, trespass and area of existing disturbance within the mine, county regulations, design features of the MRP, history of mining in the San Pedro area, and anticipated issues.

See section 4.2 for a summary of all public involvement opportunities provided during the development of this analysis.

1.4.1 Relevant Issues

Based on the scoping efforts described above, the issues presented in Table 1.1 have been determined relevant to the analysis of this action:

Table 1-1. Issues Identified for Detailed Analysis

<table>
<thead>
<tr>
<th>RESOURCE</th>
<th>ISSUE STATEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Resources</td>
<td><strong>Issue 1:</strong> How might mining of the PEA impact visual resources for local residents, visitors, and travelers along New Mexico State Road 344?</td>
</tr>
<tr>
<td>Public Safety-Recreation</td>
<td><strong>Issue 2:</strong> The San Pedro Mountains and surrounding areas are experiencing increased dispersed recreation in the form of hikers and ATV enthusiasts. How might recreationists be impacted by development and mining of the PEA?</td>
</tr>
<tr>
<td>Public Safety-Traffic</td>
<td><strong>Issue 3:</strong> The former San Pedro Rock Mine area and PEA is accessed via State Road 344 and Oro Quay Road. These roads are used by residents living in the area. How might traffic associated with mine operation impact roads, businesses, and residents in the area?</td>
</tr>
<tr>
<td>Noise</td>
<td><strong>Issue 4:</strong> Active mining and associated heavy equipment operations in the PEA would result in increased noise levels in the area of the mine. Some of this noise may impact nearby residents.</td>
</tr>
<tr>
<td>Soils</td>
<td><strong>Issue 5:</strong> Soils are shallow and limited in the PEA. Preservation of topsoils during development of the PEA would be critical for reclamation, both interim and long term.</td>
</tr>
<tr>
<td>Threatened, Endangered, and Sensitive Species</td>
<td><strong>Issue 6:</strong> How would development of the PEA impact listed or sensitive species?</td>
</tr>
<tr>
<td>Wildlife</td>
<td><strong>Issue 7:</strong> How would development of the PEA impact wildlife?</td>
</tr>
<tr>
<td>Vegetation, Forestry</td>
<td><strong>Issue 8:</strong> How would development of the PEA impact vegetation and forestry?</td>
</tr>
<tr>
<td>Mineral Resources</td>
<td><strong>Issue 9:</strong> How would the PEA contribute to local mineral materials availability and access?</td>
</tr>
</tbody>
</table>
1.4.2 Issues Dismissed from Detailed Analysis

The issues presented in Table 1.2 below were considered but dismissed from detailed analysis in this EA for reasons provided.

Table 1-2. Issues not Analyzed in Detail

<table>
<thead>
<tr>
<th>ISSUE STATEMENT</th>
<th>RATIONALE FOR DISMISSING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Quality/Air Resources</td>
<td>SPR would maintain current New Mexico Environment Department Air Quality GCP2 Permit for mining equipment emissions. Design features of Draft MRP incorporate plans for fugitive emissions and dust control.</td>
</tr>
<tr>
<td>Areas of Critical Environmental Concern (ACEC)</td>
<td>There are no ACECs within or adjacent to the project area.</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>A Class III cultural resources survey was conducted in the PEA in December 2014 (Bogges, 2015). Two archaeological sites and four isolated occurrences were encountered during the investigation. Neither of the sites was recommended to be eligible for nomination to the National Register of Historic Places.</td>
</tr>
<tr>
<td>Environmental Justice</td>
<td>There are no minority communities or populations in the project area.</td>
</tr>
<tr>
<td>Farmlands, Prime or Unique</td>
<td>There are no prime or unique farmlands located within or adjacent to the project area.</td>
</tr>
<tr>
<td>Floodplains</td>
<td>The project area is not located in a floodplain.</td>
</tr>
<tr>
<td>Invasive or Non-native Plant Species</td>
<td>Design features of MRP incorporate plans for noxious weed control.</td>
</tr>
<tr>
<td>Native American Religious Concerns</td>
<td>There are no Native American religious monuments or locales located within or adjacent to the project area.</td>
</tr>
<tr>
<td>Wastes, Hazardous or Solid</td>
<td>Design features of the MRP incorporate plans to handle solid and/or hazardous wastes.</td>
</tr>
<tr>
<td>Water Quality- Surface and Groundwater</td>
<td>An EPA approved Storm Water Pollution Prevention Plan (SWPPP) would be in place prior to any surface disturbance within the PEA. SPR would submit a Notice of Intent to EPA for coverage under EPA Region 6 Construction General Permit.</td>
</tr>
<tr>
<td>Wetlands/Riparian Zones</td>
<td>There are no wetlands or riparian areas located within or adjacent to the project area.</td>
</tr>
<tr>
<td>Wild and Scenic Rivers</td>
<td>There are no Wild and Scenic Rivers located within or adjacent to the project area.</td>
</tr>
<tr>
<td>Wilderness Study Areas</td>
<td>There are no Wilderness Study Areas located within or adjacent to the project area.</td>
</tr>
</tbody>
</table>
2 ALTERNATIVES

2.1 Alternative A – Proposed Action

The Draft San Pedro Rock Mining and Reclamation Plan (Exhibit 1) describes the Proposed Action in detail. The following description of the Proposed Action summarizes the proposed mining and reclamation operations of the Draft MRP.

2.1.1 Summary of Proposed Action (Please Refer to Exhibit 1 for a detailed description)

The PEA would be mined in two phases: Phase I and Phase II. A total of 9.50 acres would be mined from Phase I and a total of 9.90 acres would be mined from Phase II (Figures 3 through 5, these Figures are also found in Exhibit 1, MRP). No mining will occur outside of San Lazarus Gulch per TFO RMP directives found on page 52, Section 2.2.5.3 of the TFO RMP. The actual area to be mined (approximately 19.40 acres) would be much less than the total acreage of the claims (approximately 51.67 acres). This is because much of the area within the claims has been historically mined and is lacking the aggregate material that SPR is seeking to produce; some unique features (e.g. Castle Rock) within the claims will be excluded from mining activity, and the steepness of the terrain, particularly in the eastern portions of the claims, would present engineering difficulties as far as accessing deposits on higher slopes.

The mining would occur in designated blocks. Mining in blocks and phases would allow SPR to keep multiple pits open at one time to access different types and colors of aggregate material. During both phases of mining, contemporaneous reclamation of depleted pits would occur to ensure that there would be no more than 10 acres of surface disturbance associated with mining of the PEA at any one time. Reclaimed areas would take a minimum of two years to be reclaimed and released. Areas under reclamation would be considered removed from the amount of acreage being actively mined.

SPR would develop pits and haul roads within the PEA to facilitate aggregate mining. Sorting, crushing, and stockpiling of aggregate material would take place on private patented lands south of the PEA. Only topsoils and overburden would be stored in the PEA for easy access during contemporaneous reclamation activities.

Pits opened during Phase I and Phase II mining would be no more than 300 x 300 feet (2.06 acres). Depth of pits would range from three feet to ten feet deep. Pits would be constructed using backhoes and excavators. Berms would be placed around the outside of pits to ensure rilling and erosion of pit sides is avoided. Berms would also provide some safety protection for vehicles and equipment moving around pit edges. High walls would be no more than 10 feet and would be brought to a slope of no more than 3:1 when the pit is closed in preparation for reclamation. All mining of pit surfaces would be in compliance with Mine Safety and Health Administration (MSHA) regulations (30 CFR Part 46).

Phase I and Phase II operations would occur within San Lazarus Gulch and the bordering eastern slopes of San Lazarus Gulch, as well as slopes above the northwestern portions of San Lazarus Gulch valley. The valley floor of San Lazarus Gulch has been impacted significantly by historic mining in the area and is covered with a thick layer of soil and overburden. Consequently, sparse aggregate product is available in this area.

Phase I mining is anticipated to last approximately 10 years, during which time at total of approximately 9.50 acres would be mined from Blocks A, B, and C. During mining of Phase I, contemporaneous reclamation would occur in depleted pits, such that more pits could be opened for mining while keeping disturbed mining acreage under 10 acres. At the end of Phase I, approximately half of the Phase I pits will be under reclamation. SPR would then be able to move into Phase II and open up approximately 4 acres of
new pits. Phase II would last approximately 10 years, during which time a total of approximately 9.90 acres would be mined for aggregate material from blocks D, C, and E. During mining of Phase II, contemporaneous reclamation would occur within depleted Phase II pits and would continue to occur in any remaining Phase I pits, such that by the end of year 20, approximately half of Phase II pits and all of Phase I pits would be under reclamation. In years 20 plus (post mining), the remaining, pits, haul roads, and other disturbed areas within the PEA would be reclaimed and mining would cease in the project area.

A conservative estimate of 17,000 tons of aggregate material would be produced from the PEA per year.
Figure 3.
Figure 4.
Figure 5.
During years 1-3 of Phase I, and while mining operations are being conducted in Phase I, the Former BLM Mining Areas located south of the PEA would continue to be reclaimed. The area would be contoured and graded, and then topsoil would be applied. The area would then be seeded and mulched. Locally sourced, clean topsoils may need to be brought in for the purposes of reclaiming this area. Old equipment and debris from former mining operations would be removed, including removal of any contaminated soils.

Subsequent mining or reclamation phases beyond Phase II (years 20+) would require an amendment to the MRP and would be dependent on reclamation success, product demand, and desirable product location within the PEA.

Design features of the Proposed Action that would address all aspects of mine development are detailed in Exhibit 1, Section 1.3 Proposed Operations of the MRP. Details of reclamation are addressed in Exhibit 1 Section 2.0 Reclamation and Revegetation.

2.2 Alternative B – No Action Alternative

Under the No Action Alternative, there would be no BLM surface disturbing activities as a result of mining development within the PEA. This alternative serves as a baseline analysis for environmental affects analysis as described in 40 CFR 1502.14 (d).

Under this alternative SPR would not be issued a BLM Mineral Sales Contract for aggregate mineral mining in the PEA. A Finding of No Significant Impact (FONSI) would not be issued by the BLM for the Proposed Action and the MRP Mining and Reclamation Plan would not be approved. The PEA would not be mined for aggregate materials.

Reclamation activities, however, would continue on the 12.77-acre Former BLM Mining Area in order the resolve the past trespass occurrence.

2.3 Cumulative Actions

A cumulative impact, as defined in 40 CFR 1508.7, is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other action. The relevant past, present, and reasonably foreseeable actions discussed below are considered “cumulative actions,” which when viewed with the Proposed Action or alternatives could result in the cumulative impacts disclosed in Chapter 3.

2.3.1 Past and Present Actions

The Proposed Action is located in an area that has been mined for more than two centuries. Early records of mining in the area come from the journals of Fray Dominguez who, while surveying the missions of New Mexico in 1776, developed a map showing the village of San Pedro at the location of a mine. Gold was discovered in the nearby Ortiz Mountains in 1833, followed by discovery of the New Placers in the San Pedro Mountains in 1839.

Historical records indicate that from 1904 to 1967, 273,129 tons of ore was produced from the San Pedro mine yielding 16,549 ounces gold, 304,625 ounces silver, and 7,476 tons of copper. In addition to gold, silver, and copper, the San Pedro Mountains are also known for their mineral formations including quartz, chlorite, calcite, pyrite, chalcopyrite, among others (Atkinson and Marsh, 2012).

During early mining of the San Pedro Mountains, there were no environmental laws to protect natural resources from mining activity or to ensure reclamation, revegetation, and removal of mining debris. As a result, the San Pedro Mountains and neighboring small mountain ranges bear the scars of historic mining practices. These scars on the land include old roads, test pits, shafts, adits, waste rock piles, debris piles, old mining equipment, trash dumps, weedy openings, and closed but un-reclaimed tracts of land that are
visually inconsistent with the wooded slopes of the mountains. Much of this disturbance is on private patented claims.

Currently, there are over 200 active placer and lode claims within the San Pedro Mountains (BLM, 2019). The estimated total disturbance of these claims taken from Google Earth imagery is approximately 156 acres. Many of these are small claims that are owned by individuals; however, some are larger and have resulted in large areas of disturbance on the landscape. Many of the smaller mines are abandoned or inactive mines; those located on state or public lands have recently or are currently being safeguarded (closed to human entry, but left open for wildlife use) by the New Mexico Energy, Minerals, and Natural Resources Department’s Abandoned Mine Lands Program (NMEMNRD, 2018).

The BLM TFO has conducted 114 acres of forest thinning activities in the San Pedro Mountains in conjunction with the Abandoned Mine Lands Program.

Santa Fe County Open Space and Trails Program San Pedro Open Space is proposing a 160-acre open space development located approximately 2 miles west of the Proposed Action. A current management plan defines goals and timelines for developing the property (SFCO-OST, 2016).

As a result of historic mining activity in the San Pedro Mountains, the natural landscape has been irreversibly altered. Views of shafts and adits, tailings piles, and other historic mining remnants are an embedded part of the history and culture of the area. These historic remnants of a mining landscape have, in some cases, been purposely left in place to illustrate the history of mining in New Mexico.

The Proposed Action would add approximately 19.4 additional acres to the cumulative impact of historic and current mining pressure in the San Pedro Mountains. This additional cumulative impact to the natural and historic mining landscape of the San Pedro Mountains would persist for the life of the mine, and until all disturbed areas associated with the Proposed Action are successfully reclaimed to a post mining land use of wildlife habitat and grazing.

2.3.2 Reasonably Foreseeable Future Actions

Foreseeable future actions include continued closing and safeguarding of historic mining areas within the San Pedro Mountains. Other active patented lode and/or placer claims may continue to be developed, or may cease being active, depending on supply and demand of product and other factors. Areas targeted for recreational development in the San Pedro Mountains may undergo trail and facilities construction and ultimately result in increased visitation by recreationists. Housing developments and residences in the San Pedro community would continue to be constructed and/or lived in.

Dispersed recreation, including hiking, ATV, and shooting activities would continue in the area. Some of these activities would bring an increased human presence to the landscape of the San Pedro Mountains and would ultimately result in further impacts and changes to the natural landscape, as well as changes in native plant and animal communities that would occur there in the absence of the steady march of human encroachment.

3 ENVIRONMENTAL IMPACTS

This chapter describes (1) the affected environment, specifically the existing or baseline conditions relevant to each issue identified in Table 1-1, followed by (2) a description of the direct, indirect, and cumulative impacts projected to result from each alternative.

3.1 Issue 1: Visual Resources

Visual Resource Management (VRM) is conducted in accordance with BLM Handbook 8411 as follows:
### 3.1.1 Affected Environment

The Proposed Action occurs within the BLM VRM Class III zone. The objective of VRM Class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract the attention of the casual observer but should not dominate the view. However, every attempt should be made to minimize the impact of activities through careful location, minimal disturbance, and repeating the basic landscape elements of color, form, line, and texture.

The San Pedro Mountains in the area of the Proposed Action are rugged and compact, with steep slopes, talus fields, and rocky protrusions including the prominent Oro Quay Peak just north of the Proposed Action area. The slopes are forested with pinyon pine (*Pinus edulis*), juniper (*Juniperus* spp.), and smaller stands of ponderosa pine (*Pinus ponderosa*), white fir (*Abies concolor*), and Douglas fir (*Pseudotsuga menziesii*), giving the casual observer an overall view of a forested mountain landscape. The mountain forest character of the San Pedro Mountains also includes visual impacts of historic mining practices. There are only a few larger mining areas that may detract the attention of the casual observer away from a forested mountain view; and this would only be possible from a distance or a high elevation point.

Other visual impacts in the Proposed Action area include homes, fencing, paved roads, dirt roads, power lines, and other features associated with a rural residential area.

### 3.1.2 Alternative A – Effect of Proposed Action on Visual Resources

The Proposed Action would result in both short-term and long-term direct visual impacts to the natural landscape of San Lazarus Gulch and surrounding San Pedro Mountains.

Long term impacts would include removal of vegetation and subsequent open pit scars on the landscape within mine blocks (Figures 3 through 5). These long-term visual impacts would not be visible from any location on State Road 344 or New Mexico 14 (Turquoise Trail National Scenic Byway) [Figure 6] but could be visible to anyone recreating within view of the PEA on nearby BLM lands particularly along...
higher slopes and ridgelines. The PEA is within a valley and out of the direct line of site of most nearby residences. A view shed analysis of the project indicates that mining activity in the PEA could be visible from at least two residences that are in the direct line of sight of San Lazarus Gulch on higher slopes south of State Road 344 and Oro Quay Road (Figure 6, views A and B). The Proposed Action would not impact ridgelines or peaks and all proposed mining areas would be well below this visual horizon (Figures 3 through 6).

Despite concurrent and long-term reclamation efforts outlined in the MRP, the mining blocks, regardless of what stage of mining or reclamation they are in, would result in a disruption of line, form, and color within the general setting of the San Pedro Mountains. This is because reclaimed areas would be seeded with vegetation that will be substantially different from a mature pinyon-pine forest.

Short-term visual impacts would be visible on a daily basis as long as active mining is taking place. These short-term (daily) impacts would be visible to a larger set of viewers (travelers along State Road 344, recreationist in the area, and nearby residences, and businesses). These short-term impacts include the presence of equipment and truck traffic into and out of the mine, dust plumes generated by excavation, equipment use, and truck traffic on haul roads within the mine and on Oro Quay Road. These short-term impacts would be present during operating hours (7:00 a.m. to 3:00 p.m., Monday through Friday), but would subside after closing at 3:00 p.m., on weekends, and during mine closures (e.g. holidays). Their frequency and intensity would be dependent on sales contracts that the mine would be servicing. However, no more than two to three trucks per day (max fifteen trucks per week) would be entering and exiting the mine during the life of the mine. This limitation would reduce the amount of truck traffic and fugitive dust in the area. The operator of the PEA would apply water to roads from a private well or water source to reduce the visual impact of fugitive dust plumes when necessary.

The long-term visual impacts described above would be reduced over time during the process of reclamation; however, successful re-vegetation may take up to three years or more for each reclaimed parcel. During reclamation, vegetation communities would be changed from the existing mature pinyon-juniper woodland to shrubs, forbs, and grasses. Again, the form, line, and color of the landscape would be altered from its pre-mining condition even with reclamation. Successful reclamation would result in reducing the scar of mining and would eventually result in the integration of vegetation communities between mined and unmined areas, lessening the overall visual impact.

Long-term impacts from the Proposed Action include contour and vegetation changes to the landscape due to mining and subsequent reclamation. Steep slopes supporting pinyon forest would be replaced by milder slopes with a seed mix suitable for wildlife and grazing, including grasses, shrubs, and subshrubs. Some seed trees will be left in place within the PEA to promote volunteer tree species. Reclamation goals in the PEA will be designed to repeat the basic landscape elements of color form, line, and texture as closely as possible; however, it will take many years for a forested landscape to develop.

3.1.3 Effects of Alternative B – No Action to Visual Resources

Due to the area within the PEA and the surrounding landscape being actively mined for over two hundred years, the view of the landscape in the San Pedro Mountains has already been altered. The alterations include un-reclaimed barren areas, debris and waste rock piles, two track roads, shafts, adits, and mining equipment. Many of these locations, like the PEA are out of the line sight of travelers through the area. In general, the view of the ridgelines and peaks of the San Pedro Mountains have remained in their natural state and visual impacts to these horizon areas are minimal, except for several larger mine scars to the east and west of San Pedro Rock Mine and the PEA. These visual conditions would remain the same if the Proposed Action is not approved.
Figure 6. Viewshed analysis of Proposed Action. PEA elevation ranges from 7,700 feet to 7,400 feet.
3.2 Issue 2: Public Safety- Recreation

3.2.1 Affected Environment

The San Pedro Mountains surrounding the PEA is not a developed recreation area, but there is some dispersed recreation in the form of hiking and ORV use. A small area approximately 1.75 miles west of the project area has become a destination for recreational target shooting.

Santa Fe County’s Open Space, Parks, and Trails program in the process of developing the San Pedro Open Space area, located within two miles of the PEA (SFOSTP 2018).

In recent years, in an effort to protect the public and provide important wildlife habitat, the New Mexico Energy, Minerals, and Natural Resources Department Abandoned Mine Lands program has worked to safeguard approximately 100 hazardous abandoned mine/openings/features throughout the San Pedro Mountains, some of which occur within the PEA (NMEMNRD, 2018).

It is possible that recreationists using the San Pedro Mountains area could inadvertently or purposely travel across the PEA boundaries. ORV enthusiasts reportedly use undesignated trails or two tracks around the San Pedro Mountain area. Most access for ATVs is from the Golden, New Mexico side of the San Pedro Mountains.

3.2.2 Alternative A – Proposed Action Effects on Public Safety- Recreation

Implementation of the Proposed Action could potentially create a hazardous environment for hikers or ATV enthusiasts who inadvertently or purposely cross in the PEA mining area. Direct hazards include unstable terrain and open pits, as well as collisions with heavy equipment or truck traffic. Indirect impacts include exposure to airborn dust and emissions from equipment.

To protect the public from trespass, whether accidental or purposeful, SPR would mark the boundaries and corners of the PEA with No Trespassing signs or Active Mine Boundary signs. SPR would sign the corners and the boundaries of the PEA prior to any mining activity.

3.2.3 Alternative B- No Action Effects on Public Safety- Recreation

Recreation use would remain the same or possibly increase in the project area if the No Action alternative was implemented. Currently, no trespassing signs are posted at the south entrance to the San Pedro Rock mine and the PEA boundaries are not designated or signed to alert the public. There are a number of open shafts, pits, and adits, as well as old mining debris within the PEA that could pose safety hazards to recreationists.

3.3 Issue 3: Public Safety-Traffic

3.3.1 Affected Environment

San Pedro Rock Mine and the PEA are accessed using State Road 344, which is a New Mexico Department of Transportation (NMDOT) maintained road with a roadway functional class of major collector, and Oro Quay Road which is a Santa Fe County Road. Approximately three to four residences and the San Pedro Substation of the Edgewood Volunteer Fire Department share the use of Oro Quay Road. Travelers and residents accessing Interstate 40 and Edgewood to the south, and New Mexico Highway14 to the north regularly use State Road 344. The San Pedro neighborhood is made up of over fifty homes and at least one business (Oro Quay Camp).

Historically, San Pedro Rock Mine produced approximately 35,000 tons of aggregate product per year, with between three to ten haul trucks per day leaving and entering the mine between 2005 and 2010 (Holmes, 2020). For the past four years, the mine has only been operating intermittently, which has resulted in less haul truck traffic using Oro Quay Road and State Road 344.
3.3.2 Alternative A – Proposed Action Effects on Public Safety- Traffic

Truck and vehicle traffic from workers in the vicinity of the PEA are expected to increase with implementation of the Proposed Action. An estimated two to three haul trucks would be hauling product off site during mine operation hours (Monday through Friday 7:00 a.m. to 3:00 p.m.), with a maximum of fifteen trucks per week hauling off site. This increase in haul truck traffic and worker traffic can result increased chances for accidents along State Road 344 and Oro Quay Road.

SPR would maintain and upgrade Oro Quay Road as needed if there is any haul truck damage during mining activity in the PEA. All trucks and vehicles, as well as operators of haul trucks would be properly permitted with the NMDOT Motor Vehicle Division. Haul trucks would not be overfilled and would be covered to keep aggregate material from spilling on to roadways. No haul trucks would be allowed to leave San Pedro Rock Mine during local school bus loading and unloading hours. SPR would ensure that all access roads, including Oro Quay Road and the entry to State Road 344 are suitably engineered to Santa Fe County specifications for haul trucks and other heavy equipment associated with mine production.

3.3.3 Alternative B- No Action Effects on Public Safety- Traffic

If the No Action Alternative were implemented, the current amount of traffic would remain the same and haul truck and mine worker traffic would not increase. Trucks and vehicles traveling along State Road 344 would continue to incrementally damage roadways. This damage would likely be somewhat less than that imposed by regular haul truck traffic concurrent with mining in the PEA.

3.4 Issue 4: Noise

3.4.1 Affected Environment

Current noise impacts in the Proposed Action area are limited to human activity at residences, wind, traffic along State Road 344, and gunfire at a nearby recreational shooting range. Historically, San Pedro Rock Mine impacted noise levels in the area by producing approximately 35,000 tons of aggregate product per year, and running between three to ten haul trucks per day to and from the mine between 2005 and 2010. For the past four years, the mine has only been operating intermittently, which has resulted in less noise generated by mining activity in the area.

3.4.2 Alternative A – Proposed Action Effects on Noise Levels

Noise is generally defined as unwanted sound that disrupts normal activities or that diminishes the quality of the environment. It is usually caused by human activity that adds to the natural acoustic setting of a locale. Mining activity and the operation of heavy equipment in the PEA would produce maximum noise levels in the immediate vicinity of the activity (within 50 feet) in the range of 90-120 A-weighted decibels (dBA). As comparison, gunfire at the shooting range located 1.75 miles west of the Proposed Action emits noise levels in the range of 160 dBA at 50 feet. Noise levels from mining activity in the PEA reaching residents is expected to be greatly reduced from the 90-120 dba level due to its location of 0.75 miles up the valley from the nearest residence. However, during certain weather or operating conditions, some noise could be expected to reach residences and local travelers along State Road 344. The PEA is located within a narrow valley surrounded by tall ridgelines, approximately 1.3 miles from State Road 344 and approximately 0.75 miles from the nearest residence.

Noise levels associated with mining in the PEA are expected to be amplified in the immediate vicinity of the PEA due to the topography in the area, especially during certain weather conditions. These noise levels may impact mine workers and wildlife.

Noise emitted from haul truck activities in the project area and along Oro Quay Road and State Road 344 will likely be heard by local residents and travelers along State Road 344. Haul truck noise levels are in the range of 90 decibels within 50 feet, which is reasonably loud. This truck noise would be intermittent
throughout the day during hours of operation (7:00 a.m. to 3:00 p.m., Monday through Friday). The maximum number of trucks would be three per day, depending on the need for material for local or regional projects, but would generally be less two trucks per day. Santa Fe County Land Sustainable Land Development Code (2016) allows between 55 dBA or 5 dBA above ambient, whichever is less over a 30-minute period from the property line. Noise associated with active mining (e.g. heavy equipment and processing) would not normally result in noise at this level due to the location of the PEA 0.75 miles from the closest resident and 1.3 miles from State Road 344. The sound of southwesterly winds common in this region would mask sounds of the mining operations in the PEA on many days of the year. Haul trucks moving along Oro Quay Road and State Road 344 would exceed this level at 90 dBA from 50 feet, but these noise levels would be short term and would last much less than 30 minutes.

Jake brake use is prohibited on Oro Quay Road and State Road 344 between mileposts 16 and 17. There would be no blasting in the PEA.

3.4.3 Alternative B- No Action Effects on Noise Levels

Current ambient noise levels derived from human activity at residents, traffic, wind and other natural sounds would remain the same if the No Action alternative is implemented.

3.5 Issue 5: Soils

3.5.1 Affected Environment

Soil resources in the project area are limited and fragile. Within the PEA, soil units are comprised of Wandurn-Alchonzo -Rubble land complex, 35-90 percent slopes and Cotchiti extremely cobbly loam, 15-35 percent slopes. The Wandurn soils occur on the flanks of mountains and were formed in slope alluvium and colluvium derived from monzonite. These soils are well drained with a high runoff class. Capacity of the most limiting layer to transmit water (Ksat) is very low to moderately low. Depth to water table is more than 80 inches. There is no frequency of flooding or ponding. Available water storage profile is low. The Alchonzo soils are also found on mountain flanks and were formed in alluvium and colluvium derived from monzonite. These soils are well drained with a very high runoff class. Ksat is very low to moderately low. Depth to water table is more than 80 inches and available water storage in profile is very low. There is no frequency of ponding or flooding. Available water storage in profile is low (NRCS 2019).

The Cochiti soils are found at the bases of mountains and were formed in slope alluvium and colluvium derived from monzonite. These soils are found on 15-35 percent slopes, have a high runoff class and are well drained. Ksat is moderately low to moderately high. Depth to water table is more than 80 inches and there is no frequency of ponding or flooding (NRCS 2019).

Due to historic mining practices in the area, soils have been mixed, compacted, and redistributed over much of the PEA. These soil disturbances are especially evident in the western half of the PEA in the valley bottom of San Lazarus Gulch.

3.5.2 Alternative A- Proposed Action Effects on Soils

Implementation of the Proposed Action would affect soils. During mining, topsoils would be removed from areas designated for excavation and mineral extraction. These topsoils would be stockpiled, berm, and interim seeded for later use in reclamation. However, some losses to topsoils would be unavoidable due to compaction and mixing from the use of heavy equipment, and wind and water erosion. During reclamation, closed pits would be filled in with overburden and would then be contoured and graded. After contouring, topsoils would be applied in preparation for seeding. Some additional topsoils may need to be brought in to provide adequate substrate for seeding. During reclamation, losses to soils from wind and water erosion may occur, but these losses are expected to be minimal with the implementation of Best Management
Practices (BMPs), which include berming the base of slopes, using the method of extreme surface roughening to create pockets for soils, mulching, and seeding reclaimed areas immediately after application of top soils.

SPR would employ BMPs to ensure only minimal losses of topsoils in the project area. Soils removed from pit surfaces prior to mining would be stockpiled within the PEA in a protected area, bermed, and interim seeded until they are needed for reclamation. A SWPPP would be in place for the PEA and berms or other barriers would be implemented in all areas where the erosional effects of water could result in soil movement off site. During reclamation, closed pits would be contoured, graded, and sloped to provide an adequate substrate for topsoil application and minimize wind and water erosion. Reclaimed areas would be seeded and mulched immediately following topsoil application. Re-application of seed and additional mulching would take place if the first reclamation efforts do not take.

3.5.3 Alternative B- No Action Effects on Soils

With the implementation of the No Action alternative, soils within the PEA would remain as is and would not be subjected to further mixing, compaction, and loss from the erosional effects of wind and water. Soils that have already been mixed, compacted and redistributed from historic mining practices would remain in their existing state, which may include further losses from the erosional effects of wind and water across existing mining related disturbed surfaces.

3.6 Issue 6: Threatened, Endangered and Sensitive Species

3.6.1 Affected Environment

According to the U.S. Fish and Wildlife Service’s Information, Planning, and Conservation website, there are four federally listed species that have potential to occur in Santa Fe County. These species are yellow-billed cuckoo (*Coccyzus americanus*), Mexican spotted owl (*Strix occidentalis lucida*), southwestern willow flycatcher (*Empidonax traillii extimus*), and New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) [USFWS-IPaC, 2019]. The New Mexico Department of Game and Fish Biota Information System of New Mexico lists ten (10) wildlife species as state threatened or endangered (in addition to the five that are already federally listed) for Santa Fe County (BISON-M, 2019) (Exhibit 2). The New Mexico Energy, Minerals, and Natural Resources Department Endangered Plant program lists four (4) plants as endangered for Santa Fe County (NMEMNRD 2019).

The BLM NMSO and the TFO also maintain sensitive and special status plant and animal species lists; some of these species are also listed as threatened or endangered by the State of New Mexico (BLM-NMSO 2018) (BLM-TFO 2012).

**Federal and State Listed Species**

Of the eighteen (18) federal and state listed threatened and endangered wildlife species, two state listed species have potential to occur in the Proposed Action area.

The two state listed species with potential to occur in the project area are the gray vireo (*Vireo vicinior*), and the spotted bat (*Euderma maculatum*). These two species have habitat needs consistent with those found in the PEA.

The gray vireo is a State of New Mexico threatened species. This small, gray migratory bird breeds in the southwestern United States, northern Mexico, and Baja California Norte, Mexico. Wintering range is Baja California Sur, Mexico, coastal and lowland areas of Sonora, Mexico, and north in southwestern Arizona. Within New Mexico, the species is found throughout the state west of the Great Plains and uses several habitat types. In central New Mexico, where the PEA is located, the gray vireo typically uses one seed juniper (*Juniperus monosperma*) savannahs at 1676 – 2134 m (5500 – 7000 ft) for its breeding habitat.
While the project area is slightly above the elevational boundaries of known breeding locations, there are small areas of juniper savannah habitats, particularly in the central portion of the PEA. The spotted bat is also a State of New Mexico threatened species. This bat is known to occur in a variety of habitats but is most often detected in forested areas with cliff or cave areas for roosting (NMDGF BISON-M, 2017). Due to the mountainous forest habitat, rocky crevices, and presence of adits and shafts in the PEA, it is possible that this species could occur within the project area.

No other state listed species are expected to occur in the project area due to lack of suitable habitat and no federally listed species are expected to occur in the PEA due to lack of suitable habitat (Exhibit 2).

**BLM Sensitive and TFO Special Status Species**

The TFO manages for sensitive and special status plant and animal species throughout its resource area (BLM-TFO, 2012). Some of these species are also federal or state listed species and have been addressed in the previous sections. TFO special status species with potential to occur in the Proposed Action area include: long-eared myotis (*Myotis velifer*), pale-Townsend’s big-eared bat (*Corynorhinus townsendii pallescens*), small-footed myotis (*Myotis ciliolabrum*), fringed myotis (*Myotis thysanodes*), long-legged myotis (*Myotis volans*), Yuma myotis (*Myotis yumanensis*), and big free-tailed bat (*Nyctonomops macrotis*).

All of the TFO special status bat species have potential to occur in the project area, particularly due to the presence of mining shafts and adits (Exhibit 2, San Pedro Rock Mine Wildlife Survey Report). At least one sensitive species, the pale-Townsend’s big-eared bat has been documented in shaft and adit habitat in the San Pedro Mountains (NMEMNRD, 2018).

The BLM NMSO also maintains a sensitive species list (2018). Species from this list with potential to occur in the project area include the monarch butterfly (*Danaus plexippus*), the Mexican whip-poor-will (*Caprimulgus arizonae*), the pinyon jay (*Gymnorhinus cyanocephalus*), and Virginia’s warbler (*Leiothlypis virginiae*). The monarch butterfly could potentially occur in the Proposed Action area if there are milkweed plants available. Milkweed plants are host plants for the caterpillar of the monarch butterfly. Several species of milkweed could occur within the project area (Nabhan, Buckley, and Dial 2015). The nearby Sandia Mountains represent the northern range for the Mexican whip-poor-will, and this species is known to utilize pinyon-woodland situated along rocky slopes like that found in the PEA (BISON-M, 2018). The pinyon jay is known from southern Santa Fe County and is a specialist of pinyon forests; suitable habitat in the form of pinyon forest is present within the project area. The Virginia’s warbler may occur within the project area, as suitable habitat in the form of pinyon-juniper woodlands with a shrubby oak component and steep draws preferred by this species are present (BISON-M, 2018) (Exhibit 2).

**3.6.2 Alternative A- Proposed Action Effects on Threatened, Endangered, and Sensitive Species**

Impacts to listed, special status, and sensitive species from the Proposed Action include loss of approximately 19.4 acres of mature pinyon-juniper forest, rock outcrop, and meadow habitat, disturbances caused from mining activity, equipment and vehicle noise, and human presence. Loss of individual wildlife could come from collisions with vehicles or mining equipment, and entrapment in adits or shafts that are currently open but become blocked or closed during mining operations. Loss of nesting, denning, and burrowing habitat would occur within the PEA during mine development. Wildlife may be temporarily or permanently displaced from the project area and foraging and migration movement patterns may be disrupted or altered if the Proposed Action is implemented.

Improvements for some wildlife may occur with the reconstruction and reclamation of San Lazarus Gulch. The drainage would be restored with meanders, pools, and drops that would store water from precipitation events and provide more water to support bank vegetation growth. Surface water, other than runoff from precipitation events, is absent from San Lazarus Gulch. Providing meanders and constructing pools along
the San Lazarus drainage would slow runoff, improve wildlife water availability, and provide a source of water for vegetation regrowth in the PEA.

Recently some historic shafts and adits in the area have been closed to human entry but left open for wildlife, particularly bats, by the Abandoned Mines Safeguarding Project which was conducted by the NMEMNRD Division of Mining and Minerals Abandoned Mine Land Program (NMEMNRD, 2018). Some of these shafts and adits may have alternate openings that lead into the PEA. Inadvertent closure of these shafts and adits during mining operations may entrap some terrestrial wildlife that use these alternate openings for denning sites.

Impacts to state listed and sensitive species from mining in the PEA would be unavoidable if the Proposed Action is implemented. Noise from mining activities may disrupt behaviors of resident species and the stripping of the surface to access mining material would remove nesting, roosting, and foraging habitat for state listed or sensitive species that may be present. The impacts to these species would be temporary but ongoing during the life of the mine. Some species may easily be able to move onto adjacent and undisturbed habitats. Individuals of some species, particularly nesting birds, may become deceased due to stripping of vegetation and excavation of pits, particularly if these activities occur during nesting season.

In the long-term, habitat in the PEA would be restored, and possibly improved for wildlife through reclamation. Reducing the slopes of San Lazarus Gulch would provide for greater soil conservation and slow runoff and erosion. Less slope means improved surface area for forbs and grasses that would be seeded and that would volunteer. Reconstruction of the stream channel of San Lazarus Gulch would provide improved available water resources and enhance bank vegetation. Leaving seed trees in place and seeding with a wildlife forage mix would eventually provide valuable habitat for sensitive or listed species occurring in the area, and volunteer recruitment of more individuals of listed and sensitive species may occur.

3.6.3 Alternative B- No Action Effects on Threatened, Endangered, and Sensitive Species

If Alternative B, the No Action alternative is implemented, no impacts from mining of the PEA to listed or sensitive species would occur in the Proposed Action area. There would be no loss of 19.4 acres of habitat and no risk of wildlife collisions from mining equipment or vehicles associated with mine operations. No disruptions to foraging, migration, and movement patterns resulting from human activity associated with mine development would occur. The habitat and existing conditions of the PEA would remain as they currently are.

3.7 Issue 7: Wildlife

3.7.1 Affected Environment

The PEA is located in the San Pedro Mountains which is part of a series of small mountain ranges that lie between the Jemez Mountains to the northwest, the Sangre de Cristo Mountains to the northeast, and the Sandia/Manzano Mountains to the south and west. These wooded, mountainous habitats, while limited in size, likely facilitate the dispersal of young between the larger mountain ranges for more reclusive terrestrial species such as mountain lion, bobcat, gray fox, and black bear that are limited to higher elevations and have a difficult time moving through lower elevation habitats fragmented by roads, residential areas, and dispersed development.

The protective topography and mature pinyon forests within the PEA also provide refuge for a number of migratory and resident bird species, including raptors such as red-tailed hawk and American kestrel. The San Pedro Mountains are positioned within a migration corridor for raptors that use the southern portion of the Rocky Mountain Flyway. Raptor research stations are located approximately 40 miles southwest of the project area in the Manzano Mountains and a historic research site is located approximately 15 miles southwest, in the Sandia Mountains (Hawkwatch International, 2015). Typically, raptors use thermals during migration that form in the “gulfs” of air along mountain ranges that occur within the Central Flyway.
These thermals help large birds who travel long distances to soar, thus conserving energy when migrating between breeding and wintering destinations.

### 3.7.2 Impacts of the Alternative B – No Action

If the Proposed Action is not implemented and SPR is denied a Mineral Materials contract, impacts to wildlife from active mining in the PEA would not occur. However, wildlife would not benefit in the long term from post-mining land use improvements incorporated into reclamation. These improvements would include creating pools in San Lazarus Gulch for water access, seeding with native forage species, and closing historic mining roads to prevent access by motorized vehicles and improving seclusion of wildlife habitat.

### 3.7.3 Alternative A – Proposed Action Effects on Wildlife

Impacts to wildlife inhabiting or using the PEA would be unavoidable if the Proposed Action is implemented. The presence of mining equipment and the stripping of vegetation to access mining material would remove nesting, roosting, and foraging habitat for wildlife and would result in wildlife avoiding the area and/or changing foraging, breeding, and movement patterns. Wildlife living in the Proposed Action area would be impacted by the loss of 19.4 acres of forage, nesting, denning, and cover areas. Loss of pinyon and juniper trees and surface vegetation would likely result in changes in the distribution, abundance, and diversity of wildlife living in the area of the PEA. Adjacent habitats may temporarily see an increase in wildlife abundance as wildlife moves away from mining areas. The impacts to wildlife would be temporary but ongoing during the life of the Proposed Action. Wildlife that are typically found in forested habitats may not return to the area for many years since volunteer trees would take decades to mature into the closed canopy forest that currently exists in portions of the PEA. Some wildlife species may easily be able to move onto adjacent and undisturbed habitats. Individuals of some species, particularly nesting birds, and fossorial mammals such as pocket gophers and ground squirrels may become deceased due to collisions with heavy equipment during mining and excavation activities and stripping of vegetation.

In the long-term, habitat in the PEA would be restored, and possibly improved for wildlife through reclamation. Reducing the slopes of San Lazarus Gulch would provide for greater soil conservation and slow runoff and erosion. Less slope means improved surface area for forbs and grasses that would be seeded and that would volunteer. Reconstruction of the stream channel of San Lazarus Gulch would provide improved available water resources and enhance bank vegetation. Leaving seed trees in place and seeding with a wildlife forage mix would eventually provide valuable habitat for a variety of wildlife species.

### 3.8 Issue 8: Vegetation and Forestry

#### 3.8.1 Affected Environment

The Proposed Action area is mapped as coniferous and mixed woodland and montane coniferous forests (Dick-Peddie, 1993). The PEA is primarily wooded with pinyon pine, rocky mountain juniper (*Juniperus scopulorum*), one seed juniper (*Juniperus monosperma*), ponderosa pine, and the occasional white fir. Shrubs and subshrubs include species such as mountain mahogany (*Cercocarpus montanus*), Bigelow’s rabbitbrush (*Eriocamnia nauseosa* var. *bigelovii*), Gambel oak (*Quercus gambeli*), wavyleaf oak (*Quercus undulata*), and three-leaf sumac (*Rhus trilobata*), among others. Native grasses include species such as blue grama (*Bouteloua gracilis*), side-oats grama (*Bouteloua curtipendula*), sand dropseed (*Sprobolus cryptandrus*), and Indian rice grass (*Achnatherum hymenoides*). An inventory of plants observed in the PEA during a 2015 botanical survey is presented in Exhibit 3.

There are existing disturbances to native plant communities from historic mining practices in the PEA. Introduction of noxious weeds and removal of forest, shrubs, and native grasses and forbs in historic mining areas have resulted in changes to vegetation distribution, diversity and abundance within historic mining
areas of the PEA. One New Mexico Department of Agriculture noxious weed, the Siberian elm (*Ulmus pumila*) is present within the project area (Witte, 2016).

### 3.8.2 Impacts of the Alternative B – No Action

Vegetation in the project area would remain if the No Action Alternative is implemented. The mature pinyon-juniper and montane coniferous forests would remain as is, and approximately 19.4 acres of grasses, shrubs, and trees would not be removed from the landscape to access aggregate minerals. Vegetation in areas that have been disturbed from historic mining practices would remain as is and would not be reclaimed with a native mix of vegetation suitable for wildlife and grazing.

### 3.8.3 Alternative A – Proposed Action Effects on Vegetation and Forestry

If the Proposed Action is implemented, there would be a removal of approximately 19.4 acres of native vegetation. The removal of the vegetation would be temporary, lasting until reclamation of mined areas is complete and vegetation has regrown to an acceptable diversity, height and abundance and approved by the authorized officer for release from bond. However, the reclaimed areas would not support the same vegetation community that is currently within the project area. There would be a substantial loss of forested area, which would be replaced by a shrub and grass community suitable for wildlife and grazing. Volunteer trees from purposely reserved seed trees, and including native tree species in the reclamation seed mix would eventually re-populate the PEA, but re-growth of a mature forest would likely take decades depending on climatic factors and precipitation and may not have the same canopy closure as is current present in the PEA.

The pinyon forest habitat type in southern Santa Fe County is currently suffering large scale infestation from tree pests such tree scale insects, and in recent years, bark beetle (*Scolytinae* sp.). Recent surveys of indicate that scale and bark beetle infestation have not impacted the PEA, probably because the area is at a higher elevation than surrounding infested areas. When removing trees from the Proposed Action area in preparation for aggregate extraction, it will be important to remove felled trees off site so as not to encourage pests to inhabit the area. Any cut trees should be cut to no more than three inches above the ground.

### 3.9 Issue 9: Mineral Resources

#### 3.9.1 Affected Environment

SPR has provided a local source of minerals for construction, landscaping, and road and highway projects since 2005. Natural aggregates are a basic raw material used for residential, business, and government construction projects. The aggregates industry is a significant contributor to the economic well-being of New Mexico communities by collectively generating millions of dollars of annual sales and employing thousands of skilled workers. SPR is a valued component of the East Mountain area businesses and contributes to the overall economic well-being of Santa Fe and Bernalillo Counties, where most of the aggregate from the San Pedro Rock mine are used. Having a local source for aggregate materials keeps costs down for buyers and reduces haul truck impacts to roads, traffic, public safety, and environment.

#### 3.9.2 Impacts of the Alternative B – No Action

If the No Action alternative is implemented there would be a greatly reduced supply of aggregate materials from the San Pedro Rock quarry. This reduction in local aggregate materials may result in other aggregate companies opening pits in the area and/or an increase in the cost of aggregate material for residents and communities due to increased hauling distance. Local economies would not receive the tax benefits of an aggregate industry and local jobs in the aggregate industry would be reduced.
3.9.3 Alternative A – Proposed Action Effects on Mineral Resources

The Proposed Action, if implemented, would provide a local source of aggregates for cities and communities in the Santa Fe and Bernalillo County area. It would provide skilled job opportunities and contribute to local economies. It would allow San Pedro Rock, LLC to develop their minerals on public land and ensure that the post-mining land use for the mine would be reclaimed to BLM standards for wildlife and grazing.

4 CONSULTATION AND COORDINATION

4.1 Summary of Consultation and Coordination

During the preparation of this analysis the BLM New Mexico State Office, BLM TFO, and BLM Farmington Field Office worked with Paul Parker Construction and Permits West, Inc. to provide input on the preparation of the proposed action (Draft MRP-Exhibit 1). The primary issue during these consultation and coordination events was to determine whether the PEA should be permitted under 3809 Locatable Minerals (which was how the previous operation at Sand Pedro Mine, LLC was permitted), or under 3600 regulations for Salable Materials (sand gravel, crushed rock). The latter would require that material mined from the PEA would be subject to a royalty and would be limited to no more than 10 acres of disturbed mining area per the TFO RMP. The project design features, and area of mining and reclamation outlined in the Draft MRP (Exhibit 1), are consistent with the RMP and have adequately addressed environmental impacts that will result from the development of the PEA.

4.2 Summary of Public Participation

The BLM TFO sent San Pedro Mine Project Summary letter to the San Pedro Neighborhood Association and other potentially interested parties in August 2019 during a 30-day initial comment period. Five responses were received including one from the San Pedro Neighborhood Association and Turquoise Trail Regional Alliance.

Based on the information received in these comments, the TFO has identified the relevant issues and they have been presented and analyzed in this EA or are addressed in the design features of the Proposed Action (Draft MRP-Exhibit 1). The primary concerns indicated in responses of commenters included:

1. Impacts from noise to San Pedro Neighborhood Association
2. Impacts to air quality to San Pedro Neighborhood Association
3. Impacts to Water Quality
4. Impacts to Roadway Safety
5. The size and scope of the Proposed Action

The public will have the opportunity for further input during the 30-day public comment period associated with posting of the EA on eplanning.blm.gov.

4.2.1 Public Comments Analysis

[This section to be completed following public comment review of the draft Environmental Assessment]
4.3 **List of Preparers**

The following people contributed to the preparation and review of this Environmental Assessment:

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5 REFERENCES


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