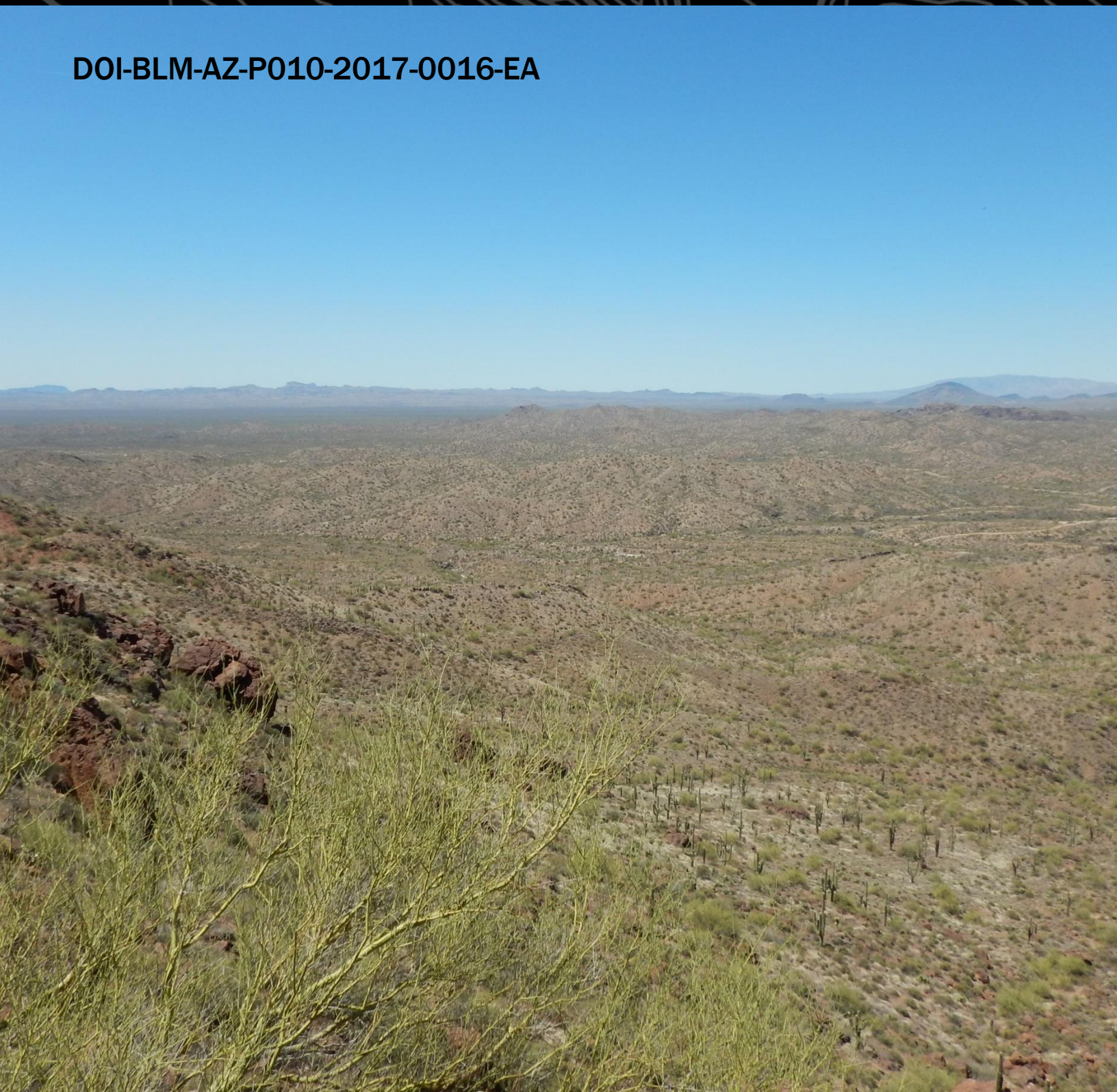
U.S. Department of the Interior
Bureau of Land Management

Vulture Mountains Recreation & Public Purposes Act Lease Area Project

FINAL ENVIRONMENTAL ASSESSMENT

DOI-BLM-AZ-P010-2017-0016-EA



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Final Environmental Assessment

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Vulture Mountains Recreation & Public Purposes Act Lease Area Project

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1.0 INTRODUCTION/PURPOSE AND NEED

1.1 Introduction

On April 26, 2012, the Bureau of Land Management (BLM), Hassayampa Field Office (HFO) received a Recreation & Public Purposes (R&PP) Act Lease application from Maricopa County Parks and Recreation Department (MCPRD) for a public recreation facility on approximately 1,046 acres of BLM-administered lands located in Maricopa County, Arizona. The R&PP Act as amended (43 United States Code [U.S.C.] 869 *et seq*.) allows for State and local governments and nonprofits to apply for the leasing of public lands for the construction and maintenance of facilities such as, but not limited to, schools, fire stations, and parks. The Vulture Mountains R&PP Lease Area Project (VMR Project) would consist of approximately 1,046 acres and would occur within portions of Sections 6, 7, 30, and 31, Township (T) 6 North (N), Range (R) 5 West (W), and Sections 1, 12, and 25 of T. 6 N., R. 6 W., Gila and Salt River Baseline and Meridian (U.S. Geological Survey Vulture Peak, Ariz. 7.5' 1990 and Vulture Mine, Ariz. 7.5' 1990).

The VMR Project is located approximately 75 miles northwest of downtown Phoenix and approximately 6 miles southwest of Wickenburg, in unincorporated Maricopa County (Map 1-1). The VMR Project is situated within the Sonoran Desert, and features the Vulture Mountains (Brown 1994). Recreation in the vicinity of the VMR Project is currently managed by the BLM; the area has limited development with dispersed camping, vault-style restrooms, parking lots, and both motorized and non-motorized travel routes including the Vulture Peak Trail. The MCPRD is proposing a variety of recreation activities including picnic and camping facilities, restrooms, trails and trailheads, off-highway vehicle (OHV) use, developed day-use facilities, and parking areas on two parcels, referred to as the north and south lease areas (VMR Project area).

On December 5, 2017, the Maricopa County Department of Transportation (MCDOT) submitted a road right-of-way (ROW) grant application to the BLM, in accordance with the Federal Land Policy and Management Act of 1976 (FLPMA). The road ROW grant application is for the realignment and widening of Vulture Mine Road in association with the proposed VMR Project. Currently, the road is authorized under the Revised Statute 2477 enacted in 1866 and it cannot be amended. Under the ROW grant application, the two road segments of Vulture Mine Road, totaling approximately 0.9 mile, would be realigned and widened as part of the proposed recreation development and would include the construction of all-weather wash crossings and access points (MCDOT 2018a).

As BLM is a Federal agency, any Federal action decisions made by the agency must comply with the National Environmental Policy Act (NEPA). This Environmental Assessment (EA) includes an analysis of the impacts associated with MCPRD's request for an R&PP lease for recreation developments at two lease areas in the Vulture Mountains and MCDOT's request for a road ROW grant for the realignment and widening of two segments of Vulture Mine Road corresponding to the two parcels. The EA will provide the Authorized Officer, the BLM HFO Manager, with information to aid in the decision-making process.

1.2 Background

Urban growth in and towards the Wickenburg area and all of western Maricopa County has been occurring over the past several decades. The area is popular for both recreational and competitive OHV use and

public use of this area is expected to increase. Establishment of a recreation area with improved recreation facilities will help conserve the outstanding scenic quality of the environment and protect against overuse and abuse as the metropolitan Phoenix area continues to encroach on this area. The proposed facilities would enhance the overall recreation experience for members of the public and improve visitor access. The MCPRD's *Strategic System Master Plan* identified the addition of new regional parks in western Maricopa County as a top priority (MCPRD 2009, 2015).

Currently, "dry" camping is allowed on BLM-administered lands at the existing Vulture Mountain Trailhead turnoff. Camping, combined with OHV use and non-motorized use, has become very popular at this location and, as a result, the pressure on the trailhead and camping area has increased over time. The purpose of the VMR Project is to provide expanded recreational opportunities for the public within the vicinity of the Vulture Mountains.

Vulture Mine Road is a two-lane paved road that is maintained by MCDOT. The current access points from the road to the existing limited recreation sites are inadequate and unsafe. The roadway alignment has numerous curves that do not meet current county roadway design standards. In the past five years, seven crashes have been documented along this portion of Vulture Mine Road, all involving motorcyclists with one fatality. The low water crossing at Box Wash makes Vulture Mine Road impassable during and immediately following large storm events due to the high flow and velocity of water moving across it. This has led to the closure of Vulture Mine Road for several days after a major storm event. An all-weather crossing at Box Wash would reduce MCDOT's operation and maintenance costs, and would prevent the need for traffic closures due to flooding at the crossing (MCDOT 2018a).

A Notice of Realty Action (NORA) was published in the Federal Register, Vol. 81, No. 216 on November 8, 2016. The NORA stated that, "the lands described above will be segregated from all forms of appropriation under the public land laws, including the general mining laws, except for lease under the R&PP Act and leasing under the mineral leasing laws" (78628-78629). Areas with existing valid mining claims within the VMR Project area will be avoided by development to the maximum extent possible. The NORA classified and segregated the lands identified under the proposed VMR Project for an R&PP Act lease and withdraws the availability of the land for new mining claim requests.

1.3 Purpose and Need

The need for the action is established by the BLM's responsibility under FLPMA to respond to a request for an R&PP Act lease that was submitted by MCPRD on April 26, 2012. The BLM is required to respond to MCPRD's lease application in compliance with 43 Code of Federal Regulations (CFR) 2912 and the R&PP Act of 1954 revised in 1996. The BLM is also required to respond under Section 501 of the FLPMA and 43 CFR Part 2800 to MCDOT's road ROW application that was submitted on December 5, 2017.

1.4 Scoping and Issue Identification

The BLM HFO conducted internal interdisciplinary team (IDT) meetings with BLM resource specialists to consider elements of the VMR Project and the local environment. The BLM also completed external scoping for the VMR Project by means of a scoping letter sent to 228 entities including government agencies, nonprofit groups, and the public and by holding a public scoping meeting. The BLM posted the

scoping letter and related information on its website and the 30-day public scoping period was open from June 30, 2017 to July 29, 2017. An open-house style public scoping meeting took place in Wickenburg on July 13, 2017, at the Wickenburg Community Center. There were approximately 39 people in attendance. The BLM received 19 comment letters or emails in response to the scoping letter and public meeting during the scoping period. The BLM's IDT considered scoping comments when developing the list of relevant issues to be analyzed in this EA.

While numerous issues were identified during the scoping process, not all identified issues warrant analysis in this EA. If an issue was determined to be non-substantive, it was not carried forward in the NEPA analysis. All substantive comments have been categorized, listed by resource, and addressed in the respective resource subsections in Chapter 3 of this EA. Substantive comments received from public outreach efforts included issues related to recreation, wildlife, and mining; these comments are noted below:

- How will removal of the curve on Vulture Mine Road create a safer condition if speeds are increased with the straightening of the road?
- How will potential conflicts between motorized and non-motorized users be reduced if they are funneled onto the same trails?
- What will be the impact to other areas once fees are being charged and people that use these areas move to other places?
- How will leasing public lands from the BLM for recreational facilities impact existing mining claims specifically as it relates to maintaining access to existing mining claims, and also about the potential for recreation users to mine existing claims without authorization?
- How will the development of the recreation facilities impact the existing desert race course where the Vulture Mine Race takes place?
- What will be the potential impacts to two wildlife water catchments (numbers 572 and 627)?
- What are the potential impacts to maintaining wildlife connectivity (wildlife movement) in the area?

1.5 Land Use Plan Conformance Statement

The Proposed Action would be in conformance with the approved Bradshaw-Harquahala Resource Management Plan, specifically:

- LR-24 Continue to issue land use authorizations (rights-of-way, leases, permits, easements) on a case-by-case basis and in accordance with resource management prescriptions in this land use plan. and
- LR-25 Under the Recreation & Public Purposes (R & PP) Act, accept applications from State land local governments and non-profit organizations on a case-by-case basis and in accordance with resource management prescriptions in this land use plan. Consider and grant applications that are consistent with resource management objectives and beneficial to the public in accordance with provisions of the R & PP Act.

1.6 Relationships to Statutes, Regulations, Manuals and Other Plans

The FLPMA and its implementing regulations provide the BLM with a legal framework to manage public lands and assess the effects of those management actions. The process for review and authorization of the R&PP lease and the ROW grant, is subject to additional requirements in order to maintain consistency and conformance with other applicable Federal laws, regulations, and policies. Table 1-1 provides a list of the relevant statutes, acts, and authorities that apply to this project.

Table 1-1. List of Applicable Federal Laws, Regulations, and Policies

Relevant Authority
American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996)
Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa to 470ee)
Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668–668d)
Executive Order 11593, Protection and Enhancement of the Cultural Environment (May 6, 1971)
Executive Order 11988, Floodplain Management (May 24, 1977, as amended)
Executive Order 13112, Invasive Species (February 3, 1999)
Executive Order 13007, Indian Sacred Sites (May 24, 1996)
Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (November 9, 2000)
Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds (January 10, 2001)
Federal Noxious Weed Act of 1974, as amended
Hazardous Materials Transportation Guides (43 CFR 171–177 and 350–399)
Migratory Bird Treaty Act of 1918 (16 U.S.C. 703–711)
Mining Act of 1872 (30 U.S.C. §§ 22-42)
National Historic Preservation Act of 1966 (NHPA; 16 U.S.C. 470 et seq.)
National Environmental Policy Act of 1970 (42 U.S.C. § 4321)
Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001–3002)
Public Rangelands Improvement Act of 1978 (43 U.S.C. 1901–1908)

1.7 Decisions to be Made

The BLM would decide:

1) Whether to approve, approve with modifications, or deny the Vulture Mountains R&PP Act lease application that would allow MCPRD to develop the VMR Project; and
2) Whether to approve, approve with modifications, or deny the road ROW grant application that would allow MCDOT to realign, make improvements, and maintain Vulture Mine Road.

In addition, the Authorized Officer would decide whether to amend the Wickenburg Community Travel Management Plan in order to make route closures, modifications, and construction of a new travel route. These changes to the Wickenburg Community Travel Management Plan would be necessary in order to support the development of the proposed recreational facilities.

2.0 PROPOSED ACTION AND ALTERNATIVES

This chapter describes and compares the Proposed Action and the No Action Alternative.

2.1 Proposed Action

Under the provisions set forth in the R&PP Act, "approval of leases or conveyances under the act shall not be made unless the lands shall be used for an established or definitely proposed project. A commitment by leasee(s) or conveyee(s) to a plan of physical development, management and use of the lands shall be required before a lease or conveyance is approved." A Plan of Development (POD) was developed by MCPRD (Appendix B) that includes details on the VMR Project (Proposed Action) including the management, maintenance, and construction of new facilities. The R&PP Act lease would give MCPRD the authorization to construct and maintain all recreation facilities, proposed and existing within the VMR Project area, for a term of 25 years with the option to renew upon the term of the lease. MCDOT also developed a POD (Appendix C) that includes details on the VMR Project including the roadway realignment (MCDOT 2018a). The road ROW grant would give MCDOT the authorization to realign and maintain two segments of Vulture Mine Road, totaling approximately 0.9 mile, and add all-weather wash crossings and access points in each of the two lease areas as part of the proposed recreation development.

2.1.1 Recreation Facilities

The VMR Project would consist of two use areas referred to as the north and south lease areas. The proposed recreational improvements in each lease area are summarized below and additional details are provided in the POD (Appendix B). These proposed recreational improvements are compatible with existing and future land uses adjacent to the site and are in compliance with the R&PP Act.

Upon completion of all phases of project development, the north lease area (Maps 2-1, 2-2, and 2-3) would consist of the campground and day-use areas with host sites and would have the following facilities:

- Amphitheater
- Camp sites (59 back-in recreation vehicle [RV] sites and 21 pull-through spaces)
- Entry station
- Equestrian day-use staging area
- Equestrian/group camp area
- Host camp sites (5 sites)
- Internal park roads
- Leach field and well
- Maintenance yard
- Nature based playground
- Nature center
- Non-motorized trails (20 miles)
- Parking spaces (173 vehicle; 6 RV pull-through; and 30 vehicle plus horse trailer spaces)
- Public restrooms (9 freestanding public restroom buildings and one public restroom within the nature center)
- RV dump station

- Shaded picnic tables (15 tables)
- Tent camp sites (10 sites)
- Trailhead
- Well, pump, and tank

Upon completion of all phases of project development, the south lease area (Map 2-4) would serve as the main staging area for OHV day-use and camping and would have the following facilities with host sites:

- Entry station
- Fenced OHV training area
- Leach field, well, pump, and tank
- Open camping areas (3 separate areas for RV group camping)
- Parking (17 spaces; 60 spaces overflow parking)
- Picnic tables
- Ramadas/shaded picnic tables (3 ramadas)
- Restrooms (2 buildings)
- RV dump station

The first phase of development would occur in a 1- to 10-year timeframe and would provide developed day-use facilities at two locations along Vulture Mine Road: the Vulture Peak Day-Use Area (located in the north lease area) and the OHV Day-Use Area and dry camping (located in the south lease area) (Maps 2-3 and 2-4). The second phase of development would occur in a 1- to 15-year timeframe and would include the Vulture Peak Campground (located in the north lease area) located west of Vulture Mine Road (Map 2-2). The camp host sites, RV dump station, water, electrical, and entry station would be constructed at the south lease area in the second phase of development.

The area of disturbance for the development of both the north and south lease areas would be approximately 100 acres. Overall construction is anticipated to disturb approximately 120 acres; however, approximately 20 acres of the initially disturbed land would be revegetated after the construction has been completed. Out of the approximately 1,046 acres of land identified in MCPRD's R&PP Act lease application, approximately 98 acres (9.5 percent) would be developed.

2.1.2 Routes

The *Wickenburg Community Travel Management Plan (TMP) and EA* (BLM 2014) identified a network of designated roads, primitive roads, and motorized and non-motorized trails for public use. With the R&PP Act lease request from MCPRD, certain motorized routes would need to be rerouted in the north lease area. The intention of this reroute would be to allow all trail users continual access to the existing authorized BLM TMP trails surrounding the VMR Project area while diverting them around the park facilities and roadways. Route #40010 and a portion of route #40008 would be closed (Map 3-1). MCPRD is proposing a reroute of equal quality that would connect an existing portion of route #40008 to the southern tip of route #40192. The reroute would be approximately 1.1 miles long and would match the width and surface material of the existing route #40008. In addition, routes #38123, #38128, #38129, and #38176 would be closed; these closures would affect a combined approximately 1.54 miles of routes

(Map 3-1). In the south lease area, route #40220, approximately 0.3 mile, would be closed to protect sensitive resources (Map 3-2).

2.1.3 Fencing

Perimeter fencing around the facilities would be added in both the north and south lease areas as a way to manage the proposed recreational facilities. An estimated 2.0 miles of fencing would be installed around the south lease area and an estimated 4.9 miles of fencing would be installed around the north lease area. For safety reasons, fencing will be added around the perimeter of the OHV skill training areas in the south lease area. Fencing would be approximately 4 to 5 feet high and may be a combination of three-strand wire cattle fencing (non-barbed) and/or rusted steel pipe rail.

2.1.4 Vulture Mine Road Realignment and Widening and Internal Park Roads

Vulture Mine Road improvements would consist of realigning and widening approximately 0.9 mile of the two-lane roadway, and the construction of two bridge structures and entrances to the north and south lease areas (Maps 2-5 and 2-6). All of the roadway work would be built according to the MCDOT's Roadway Design Manual (MCDOT 2018b). The posted speed along this portion of Vulture Mine Road would continue to be 40 miles per hour (mph). The realigned Vulture Mine Road would have two 12-foot-wide lanes and paved shoulders with variable width from 5 to 7 feet. The portion of Vulture Mine Road would be widened from 38 feet to 66 feet to provide left- and right-turn lanes for the entrance into the north lease area. The realigned roadway segment associated with the north lease area would be 0.7 mile and include an all-weather crossing over Box Wash. Approximately 34.80 acres of ROW acquisition would be needed for this segment of Vulture Mine Road realignment. The roadway improvements at the south lease area would extend for 0.2 mile. This segment of Vulture Mine Road would be widened from 38 feet to 50 feet to construct left- and right-turn lanes for the entrance into the south lease area. Approximately 3.3 acres of ROW acquisition would be needed for the roadway widening segment at the south lease area. Approximately 3.9 miles of internal park roads would be constructed, along with three at-grade wash crossings. Internal park roads would also have two 12-foot-wide lanes with 5-foot-wide shoulders and posted speed limits ranging from 15 to 30 mph. Total permanent disturbance associated with realignment of the two segments of Vulture Mine Road and the internal park roads would be approximately 38.8 acres. Additionally, two segments of Vulture Mine Road (collectively approximately 1.85 acres) as well as the existing disturbed land southeast of Vulture Mine Road (approximately 1.26 acres) would be restored to a natural native state.

Construction for both Vulture Mine Road and the internal park roads is expected to last approximately 300 days. The Vulture Mine Road realignment segment would need 86,718 cubic yards of fill material to build and the widening segment would have a 2,465 cubic yard surplus. The balance of material is expected to be obtained from the park development earthwork, such as the maintenance yard in the north lease area. The overall project is anticipated to be close to a cut/fill earthwork balance.

2.1.5 Utilities

All new utilities are anticipated to be installed underground along the roadways, within the existing roadway prism, during roadway construction activities. Electricity would be phased in as connections to

local utility company infrastructure are made. Initial electrical needs would be met via solar-generated power. Water needs would be met via a well and pump facility in both the north and south lease areas. It is anticipated that an 8-foot-wide area of disturbance would occur when waterlines are connected from the well and pump facilities to the waterlines located in the roadway prism. The area of disturbance would be allowed to grow back with natural desert vegetation. Waste disposal needs would be met via the septic tanks located below the restroom facilities. These tanks would use septic lines to push waste to the septic fields; the septic lines would also be installed within the existing roadway prism during roadway construction. Connection lines to the leach fields would initially create a temporary 8-foot-wide area of disturbance, however, the land would be allowed to return back to its natural desert vegetation once the lines have been buried.

2.1.6 Standard Operating Procedures and Best Management Practices

MCPRD and MCDOT would include Standard Operating Procedures (SOPs) and Best Management Practices (BMPs) as design features to minimize environmental impacts. These SOPs and BMPs include:

- Facilities would be designed and developed away from Sonoran desert tortoise habitats and previously disturbed areas would be reclaimed. During construction and operations of the recreational area, the "Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects" (Arizona Game and Fish Department [AGFD] 2014) would be followed.
- The following measures from the *Recommended Standard Mitigation Measures For Projects In Sonoran Desert Tortoise Habitat* (AIDTT 2008) would also be implemented as part of the Proposed Action to minimize potential impacts to BLM sensitive species:
    - To the extent possible, project activities would be scheduled when tortoises are inactive (typically November 1 to March 1).
    - A desert tortoise protection education program would be presented to all employees, inspectors, supervisors, contractors, and subcontractors who carry out proposed activities at the project site.
    - Areas of new construction or disturbance would be flagged or marked on the ground prior to construction. All construction workers would strictly limit their activities and vehicles to areas that have been marked. Construction personnel would be trained to recognize markers and understand the equipment movement restrictions involved.
    - Project features that might trap or entangle desert tortoises, such as open trenches, pits, open pipes, etc. would be covered or modified to prevent entrapment.
- MCPRD would establish, as part of its operations plan, educational outreach on the Sonoran desert tortoise in conjunction with the proposed nature center.
- Prior to construction of new travel routes, the alignment would be cleared of desert tortoises. Any tortoises found in the new travel routes would be carefully moved out of the path and released unharmed. All tortoise shelter sites in the path would be examined and once verified empty, rendered unusable, or avoided.
- To the extent possible, vegetation clearing activities would be conducted outside of the migratory bird nesting season (March 1 – August 1) to avoid potential destruction of active migratory bird nests or disturbance to nesting birds. If vegetation clearing activities are required for construction during the bird-nesting season, Maricopa County would perform a clearance survey to check the area for active nests. Any active nests encountered would be avoided until the birds have fledged.

- MCPRD has adopted the BLM Phoenix District Office's (PDO's) Integrated Weed Management Plan (BLM 2015), which would be utilized on site during and after the construction of the development.
- The following measures would reduce visual impacts within the characteristic landscape.
    - Materials and surface treatments should repeat and/or blend with the existing form, line, color, and texture of the landscape.
    - Grouped structures would all be painted the same color or use materials that complement the surrounding landscape to reduce visual complexity and color contrast.
    - Select exterior finish, color, and texture of buildings and other structures to blend with the characteristic landscape. Paint colors would be specified to blend in with the existing landscape colors as closely as possible. Colors shall be selected in coordination with the BLM.
    - Control nighttime lighting at facilities by using shielded and down-casting fixtures and control motion detection switches using full-shielded, full-cutoff, and down-casting fixtures.
    - Low-profile structures would be chosen whenever possible to reduce their visibility.
    - Installation of non-native gravel and asphalt pavement would be avoided where possible to reduce color and texture contrasts with the existing landscape.
    - Existing rocks, vegetation, and drainage patterns would be preserved to the maximum extent possible.
    - Signage and markers would be minimized whenever possible. Reverse sides of signs and mounts would be painted or coated to reduce color contrasts with the existing landscape. Markers would be only as tall as necessary to be seen by the intended viewer and those along roads would be installed parallel to travel on the road. The use of reflective, yellow, or white signs/markers would be avoid whenever possible.

2.2 No Action Alternative

Under the No Action Alternative, BLM would retain management of the VMR Project area. No new recreational facilities would be developed and the maintenance and general upkeep of the existing facilities would remain under management of the BLM. Vulture Mine Road would remain authorized under the Revised Statute 2477. No realignment or widening of the roadway would occur.

2.3 Alternatives Considered but Eliminated From Detailed Analysis

The conveyance of the land from BLM to MCPRD was considered; however, under the 2010 Bradshaw-Harquahala ROD/RMP, the land is not available for disposal. Therefore, this alternative was not considered for detailed analysis.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

The following information describes the affected (existing) environment in the VMR Project area and presents the potential effects of the No Action Alternative and the VMR Project/Proposed Action. Measures to avoid or minimize impacts have also been identified and are listed at the end of each resource discussion. Direct, indirect, and residual impacts are described in this chapter and cumulative impacts are addressed in Chapter 4. Potential impacts are described in terms of duration, intensity, type, and context. Definitions of impact terms are provided below.

In this document, the terms "effect" and "impact" are used synonymously. Effects fall into two categories:

- ***Direct:*** caused by the action, same time and place.
- ***Indirect:*** caused by the action, but later in time or further in distance, but are still reasonably foreseeable.

For the purposes of this analysis, duration of the impact is defined as follows:

- ***Short-term*****:** impacts that would be less than 10 years in duration.
- ***Long-term*****:** impacts that would be 10 years or greater in duration.

For the purposes of this analysis, intensity or severity of the impact is defined as follows:

- ***Negligible*****:** changes would not be detectable and/or measureable. The resource would be essentially unchanged or unaltered.
- ***Minor*****:** changes would be detectable, localized, and/or measurable. The resource would be slightly changed or altered.
- ***Moderate*****:** changes would be clearly detectable, measurable, and/or have an appreciable effect on the resource. The resource would be notably changed or altered.
- ***Major*****:** changes would be readily detectable, and/or have a severe effect on the resource. The resource would be substantially changed or altered.

For the purposes of the type of impact is defined as follows:

- ***Adverse:*** impacts that would have a detrimental effect to a resource.
- ***Beneficial:*** impacts that would have a positive effect to a resource.

Context is the setting within which an impact is analyzed:

- ***Local:*** within and immediately adjacent to the VMR Project
- ***Regional:*** remaining area outside of the VMR Project, but within the Vulture Mine RMZ.

For any given resource, the definition of the magnitude of effect may be more specific to the resource and is noted in the appropriate section of the chapter. Descriptions of potential impacts are provided in each resource by alternative.

3.2 General Setting

The VMR Project would be located in the Vulture Mountains approximately 7 miles southwest of Wickenburg in a gently sloping upper bajada zone. Elevations range from 2,080 to 2,500 feet above mean

sea level. The Vulture Mountains are surrounded by the Hassayampa Plain to the south, the Aguila Valley to the north and northwest, and the Hassayampa River to the east. The Hassayampa River is the primary drainage in the area, and it is located approximately 9 miles east of the VMR Project.

Vegetation found in the VMR Project area is in the Arizona Uplands subdivision of the Sonoran Desertscrub biotic community. The Arizona Uplands Subdivision consists primarily of low mountains, hills, and bajadas. Annual precipitation ranges between 8 and 17 inches, approximately half of which falls in the summer months. The Arizona Uplands are a cactus-rich plant community with species of cholla (*Cylindropuntia* spp.), prickly pear (*Opuntia* spp.), saguaro (*Carnegiea gigantea*), California barrel cactus (*Ferocactus cylindraceus*), and pincushion cactus (*Mammillaria spp*.). Woody plants consist primarily of blue palo verde (*Parkinsonia florida*), velvet mesquite (*Prosopis velutina*), ocotillo (*Fouquieria splendens*), catclaw acacia (*Senegalia greggii*), and ironwood (*Olneya tesota*) (Brown 1994).

Photograph 3-1. Typical vegetation within the south lease area

In 1863, a prospector named Henry Wickenburg discovered gold in the Vulture Mountains, approximately 7 miles southwest of the present day Town of Wickenburg. Within one year of the discovery of gold at the Vulture Mine, a supply base was built on the banks of the Hassayampa River to service Vulture and other mines that were springing up in the area. The town was called Wickenburg in honor of Henry, and in a short time the town had a population of 200. Based on the most current available U.S. Census Bureau data, Wickenburg had approximately 790 businesses as of 2012 and a population estimate of 7,409 as of July 2017 (U.S. Census Bureau 2018).

3.3 Resources Considered for Analysis

3.3.1 Supplemental Authorities

Appendix 1 of BLM's NEPA Handbook (H-1790-1) identifies supplemental authorities that contain requirements specified by statute or executive order and must be considered in all BLM environmental documents (BLM 2008). Table 3-1 identifies the presence or absence of resource elements in the VMR Project area subject to the supplemental authorities and the rationale for those resources that need additional analysis in the EA.

Table 3-1. Additional Analysis Determination for Resources/Uses Subject to Supplemental Authorities

Resource/Use*	Additional Analysis Determination
Air Quality	The VMR Project would be located within the 8-hour non-attainment area for ozone (O_3). All other regulated pollutants within the VMR Project area are in attainment. During the construction of recreation facilities and roads, there would be short-term, localized minor increases in vehicle emissions and particulates (fugitive dust). MCDOT and MCPRD would be required to obtain any county or State-required air quality permits. The permits would likely minimize construction-caused increases in particulates (i.e., dust abatement measures) and equipment emissions (i.e., requirements for muffler systems). Once in operation, there will be long-term negligible increases in emissions from vehicle traffic (public and employee) into and out of the VMR Project area. No additional analysis is warranted.
Areas of Critical Environmental Concern	A portion of the north lease area lies within the Vulture Mountain Area of Critical Environmental Concern (ACEC) (Map 3-7). The ACEC was designated for the conservation of raptor species and as a scenic landmark. Section 2.4.2.2.3.1 of the 2010 Bradshaw-Harquahala RMP specifically prohibits "…the creation of new recreation sites." No new recreational facilities would be constructed within the portion of the ACEC that overlaps the VMR Project area. No additional analysis is warranted.
Cultural Resources	Seven cultural resource sites were identified within the south lease area during surveys of the approximately 1,046-acre Area of Potential Effect (APE) (Terlep 2017). On June 16, 2017, the BLM initiated consultation under the National Historic Preservation Act (NHPA) with the Arizona State Historic Preservation Office (SHPO) (BLM 2017). On July 7, 2017 the BLM received concurrence from the SHPO that two sites were eligible for listing on the National Register of Historic Places (NRHP) (SHPO 2017). Based on revisions to the VMR Project, updated consultation information was provided to the SHPO on August 8, 2018 with the determination of eligibility on the five remaining sites and determination of effect for the two eligible sites (Terlep 2017). On August 15, 2018, the BLM received concurrence from SHPO, including the following: 1. The SHPO concurred with the BLM's determination of site eligibility (that the remaining five sites were not individually eligible under the NRHP); and 2. The SHPO concurred with the BLM's determination that the VMR Project would have "no adverse effect" to the two eligible sites within the APE (BLM 2018). The BLM has worked with MCPRD to develop physical protection measures that will ensure integrity of one of the eligible sites. The site will be enclosed within fencing and the existing route open to motorized use will be closed (route #40220) (Map 3-2). The other eligible site is on public land and private land. The MCPRD will work with Vulture Mine to improve the existing fencing along the Vulture Mine Road in order to deter motorized use on route #40102 that may impact the eligible site. No additional analysis is warranted.

Resource/Use*	Additional Analysis Determination
Environmental Justice	There are no disproportionately low income or minority populations within the VMR Project area.
Farmlands (prime or unique)	There are no U.S. Department of Agriculture designated prime or unique farmlands within the VMR Project area.
Floodplains	Within the north lease area, there is a Federal Emergency Management Agency (FEMA) designated 100-year floodplain (FEMA Flood Insurance Rate Map [FIRM] Panel 04013C0315L). No recreation facilities would be constructed within the floodplain. The proposed Vulture Mine Road realignment would impact the existing topography within the designated 100-year floodplain by excavation or inserting new material, but the realignment is not anticipated to raise the level of the floodplain downstream of the proposed drainage work on the roadway. No additional analysis is warranted.
Invasive Plant Species and Noxious Weeds	Known weed populations within the VMR Project area include red brome (*Bromus rebens*); other invasive or noxious weed species may also be present. Any invasive plant and noxious weed populations would be managed in compliance with the PDO's Integrated Weed Management Plan (2015) which is incorporated by reference. No additional analysis is warranted.
Migratory Birds	The predominant vegetation community within the VMR Project area is Sonoran desertscrub. Typical migratory birds that may occur in this habitat type include: ash-throated flycatcher (*Myiarchus cinerascens*), Crissal thrasher (*Toxostoma crissale*), Costa's hummingbird (*Calypte costae*), and loggerhead shrike (*Lanius ludovicianus*). Under the Proposed Action, the construction of new roads and recreational facilities would result in approximately 100 acres of permanent surface disturbance and vegetation removal. Within the 1,046-acre VMR Project area, this would result in an approximately 10 percent reduction in habitat for migratory birds. Due to past and existing uses (e.g., placer mining, OHV use, and an unauthorized airstrip), the wildlife habitat in the south lease area is low quality. Increased motor vehicle traffic along the Vulture Mine Road between State Route 60 and the north/south lease areas would likely increase displacement of migratory birds along the road corridor. Individuals would be displaced into adjacent habitats. There would also be potential for increased vehicle collisions with migratory birds along Vulture Mine Road, especially between October and April. As the Sonoran desertscrub community is common regionally, species would likely be displaced into other available habitat within or adjacent to the VMR Project area. This impact is adverse, minor and long-term. No additional analysis is warranted.
Native American Religious Concerns	On June 22, 2017, the BLM initiated consultation with Tribes that have an affiliation with the VMR Project area (i.e., the Hopi Tribe, Pueblo of Zuni, Yavapai-Apache Nation, Yavapai-Prescott, and Salt-River Pima-Maricopa Indian Community). To date, no Tribe has identified that the VMR Project would affect access to any sacred site within the VMR Project area. Government-to-government consultation will continue with these Tribes through project implementation in order to ensure that access to any sacred site is not adversely impacted. No additional analysis is warranted.
Threatened or Endangered Species, Wild and Scenic Rivers, Wilderness	The U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) decision support system was accessed to obtain a species list for the VMR Project area on September 4, 2018. There is no suitable habitat for any threatened or endangered species within the VMR Project area. There is no proposed or designated critical habitat in the VMR Project area. There are no Congressionally-designated wild and scenic river or wilderness within the VMR Project area. No additional analysis is warranted
Wastes, Hazardous or Solid	During the construction of recreation facilities and roads, there is the potential for accidental spills from equipment or motorized vehicles. MCPRD and MCDOT would follow their respective agency's hazardous materials procedures during the construction and operation and maintenance of the VMR Project (MCPRD 2018, MCDOT 2018a). No additional analysis is warranted.

Resource/Use*	Additional Analysis Determination
Water Quality (Surface/Ground)	There are no perennial surface water features within the VMR Project area. During the winter or episodes of monsoonal rains, there may be intermittent streams or standing pools of water. During construction of recreation facilities and roads, BMPs would be followed in order to ensure that any surface water is not adversely affected. No project activity would be anticipated to impact groundwater. No additional analysis is warranted.
Wetlands/Riparian Zones	There are small intermittent drainages within the VMR Project area that may support some riparian vegetation. Other than an ephemeral wash crossing of a road in the north lease area, and a bridge crossing of the Vulture Mine Road, there would be no alteration to the function of these drainages. If any drainage is determined to be a Waters of the United States, MCDOT and/or MCPRD would be required to obtain a Section 404 permit from the U.S. Army Corps of Engineers prior to ground disturbing activities. No wetlands are present in the VMR Project area. No additional analysis is warranted.

*See BLM Handbook H-1790-1 (January 2008) Appendix 1 *Supplemental Authorities to be Considered*. Supplemental Authorities determined to be not present or present/not affected need not be carried forward or discussed further in the document. Supplemental Authorities determined to be present/may be affected may be carried forward in the document.

3.3.2 Resources or Uses Other Than Supplemental Authorities

BLM specialists have evaluated the potential impact of the Proposed Action or No Action Alternative on resources other than those covered by the supplemental authorities, and have documented their findings in Table 3-2.

Table 3-2. Additional Analysis Determination for Other Resources/Uses

Resource/Use*	Additional Analysis Determination
BLM Sensitive Species (animals)	Carried forward for analysis, see Section 3.6.
BLM Sensitive Species (plants)	There are no BLM sensitive plant species within the VMR Project area.
Fire Management	There would be no impact to fire suppression activities within the VMR Project area.
Forest Resources	There are no forest resources within the VMR Project area.
General Wildlife	The predominant vegetation community within the VMR Project area is the Sonoran desertscrub. Wildlife species that occur in this habitat type include: mule deer (*Odocoileus hemionus*), javelina (*Pecari tajacu*), Gambel's quail (*Callipepla gambelii*), and bobcat (*Lynx rufus*). Under the Proposed Action, the construction of new roads and recreational facilities would result in approximately 100 acres of permanent surface disturbance and vegetation removal. Within the 1,046-acre VMR Project area, this would result in an approximately 10 percent reduction in habitat for wildlife species. Due to past and existing uses (e.g., placer mining, OHV use, and an unauthorized airstrip), the wildlife habitat in the south lease area is low quality. Increased motor vehicle traffic along the Vulture Mine Road between State Route 60 and the north/south lease areas would likely increase displacement of wildlife along the road corridor. Individuals would be displaced into adjacent habitats. There would also be potential for increased vehicle collisions with wildlife along Vulture Mine Road, especially between October and April. As the Sonoran desertscrub community is common regionally, many species would likely be displaced into other available habitat within or adjacent to the VMR Project area. The proposed development in the north lease area would occur within one of three linkage zones that were identified in an Arizona Missing Linkages report (Beier and Majka 2007). The proposed recreation facilities would not prohibit wildlife movement through the area, though animals would likely avoid some areas when there are high levels of human activity. The realignment of Vulture Mine Road and construction of a bridge crossing over Box Wash would likely have a beneficial impact on wildlife movement by providing a safe wildlife crossing

Resource/Use*	Additional Analysis Determination
	underneath the roadway. There are two (man-made) wildlife water developments located in the vicinity of the north lease area. The day-use area on the east side of Vulture Mine Road would be approximately 0.25 mile from the other wildlife water development. The campground area on the west side of Vulture Mine Road would be more than 0.5 mile from the nearest wildlife water development. The location of the proposed recreation facilities would comply with Arizona statute, which prohibits camping within 0.25 mile of a wildlife water development. The impact is adverse, minor and long-term. No additional analysis is warranted.
Lands and Realty	Carried forward for analysis, see Section 3.7.
Lands with Wilderness Characteristics	There are no lands with wilderness characteristics within the VMR Project area.
Livestock Grazing	There are two grazing allotments within the VMR Project area, the Garcia and Jones allotments. Both are under permit by Sand Arroyo Ranch. On June 20, 2017 the BLM notified the permittee of the pending R&PP lease application. The notification was in accordance with 43 CFR 4110.4(b), and was sent to the permittee because the R&PP lease could affect the area available for grazing and access to existing range improvements. Portions or all of the R&PP units may be fenced to exclude livestock, which could affect the amount of available forage. There are several existing range improvements within the north lease area, including a corral and windmill that may be within the proposed fencing. The grazing area within the Garcia Allotment (approximately 51,845 acres) would decrease by 838 acres (approximately 1.6 percent), and the grazing area within the Jones Allotment (approximately 27,503 acres) would decrease by 207 acres (approximately 0.8 percent). Any range improvement within the VMR Project area that would no longer be accessible by the permittee would be relocated outside the VMR Project area. The removal of livestock grazing from the two allotments may have negligible beneficial impacts to wildlife habitats and potentially a negligible adverse impact to grazing in the long-term. The reduction in area available for grazing and use of range improvements would be addressed when the BLM completes the new environmental analysis for the term grazing permits, which is anticipated in fiscal year 2019. No additional analysis is warranted.
Minerals	Carried forward for analysis, see Section 3.8.
Paleontological	There are no paleontological resources within the VMR Project area.
Recreation	Carried forward for analysis, see Section 3.4.
Socioeconomics	The construction of developed recreation facilities would be expected to have negligible beneficial impacts on the population in the town of Wickenburg. In the long-term, there could be an increase in sales of camping supplies, clothing, food, groceries, and gasoline purchased along primary travel routes to the facilities. Potential economic benefits to the surrounding communities were described in the Vulture Mountains Cooperative Recreation Management Area Master Plan (MCPRD 2012). No additional analysis is warranted.
Soils	During the construction of the recreation facilities and roads, BMPs in the VMR Project design would address potential increases in soil erosion. During road construction, MCDOT may use straw bales or other measures to absorb rainfall and minimize potential for soil loss. All temporary use areas and shoulders of roads would be seeded with native forbs to minimize erosion potential and lessen the amount of permanent vegetation loss. No additional analysis is warranted.
Transportation and Travel Management	Carried forward for analysis, see Section 3.5.
Vegetation	The predominant vegetation community within the VMR Project area is the Sonoran desertscrub. Typical plant species that occur include: saguaro cacti interspersed with cholla cacti, California barrel cacti, blue palo verde, brittlebush (*Encelia* sp.), velvet mesquite, and catclaw acacia. The construction of the recreational facilities and improvements to Vulture

Resource/Use*	Additional Analysis Determination
	Mine Road would result in approximately 100 acres of permanent surface disturbance and vegetation removal. Within the 1,046-acre VMR Project area, this would result in an approximately 10 percent reduction of this vegetation community and associated wildlife habitat. The Sonoran desertscrub community is the most common vegetation type within the VMR Project area and within central Arizona. The removal of livestock grazing from the two allotments in the VMR Project area may have negligible beneficial impacts to vegetation resources (and wildlife habitat) in the long-term. The VMR Project would result in a long-term, minor reduction in this vegetation type and associated wildlife habitat. No additional analysis is warranted.
Visual Resource	Carried forward for analysis, see Section 3.9.
Wild Horses and Burros	There are no herd management areas within the VMR Project area.

*Resources or uses determined to be not present or present/not affected need not be carried forward or discussed further in the document. Resources or uses determined to be present/may be affected may be carried forward in the document.

3.4 Recreation

3.4.1 Affected Environment

Recreation facilities in the VMR Project area are currently managed by the BLM and include dispersed 'dry' camping, vault-style restrooms, unpaved parking areas, and both motorized and non-motorized routes. The popular Vulture Peak Trail is located just to the east of Vulture Mine Road adjacent to the north lease area. Within the south lease area, the Vulture Mine airstrip (unauthorized) provides a staging area for the Vulture Mine Off-Road Challenge, which is a permitted OHV race event. Numerous motorized and non-motorized routes are also present adjacent to the VMR Project area.

Recreation management is often viewed in terms of the setting of an area, which can be broken down into three components and evaluated by the BLM based on the recreation opportunity spectrum. These setting components can directly relate to a person's recreation experience. The physical setting refers to how natural or developed an area is and ranges from a primitive wilderness type setting, all the way to an urban experience. The level of crowding is referred to the social setting, and ranges from complete solitude to 'people seem to be everywhere'. The last setting component is the overall operations of the area, which considers how apparent management controls are, such as presence of signing, staff presence, or charging of fees to use the site. Currently, the VMR Project area provides a physical setting of a landscape partially modified by roads, trails, and scattered areas of surface disturbance, but none of these elements overpower natural landscape features. The VMR Project area has what would be considered predominately a semi-primitive motorized and roaded-natural recreation experience given the presence of vehicular traffic on Vulture Mine Road, the relative proximity to Wickenburg, and the volume of people potentially encountered along the trails. The operational setting is slightly lower on the spectrum given that signs directing visitor use are present but there are little controls on recreation use and a fee is not required.

3.4.1 Environmental Consequences

Direct and Indirect Impacts of the Proposed Action

During project construction of the day-use area in the north lease area, the existing recreation facilities would be closed, causing recreationists to temporarily seek other locations for dry camping, picnicking,

and hiking. Similarly, recreationists using the south lease area would be temporarily displaced during construction in that location. Construction in the north and south lease areas would occur in phases, making the displacement of recreationists minimal and temporary. Motorists would be delayed during the Vulture Mine Road realignment and widening construction activities. Once construction is completed, the improvements to Vulture Mine Road would provide an all-weather crossing of the wash, which would provide continuous access for recreationists traveling to the recreation facilities as well as providing safer roadway conditions.

Visitation to the VMR Project area would increase due to the improvements under the Proposed Action. Potential increases to visitation would likely occur from future population growth in Maricopa County, specifically from the Phoenix metropolitan area. As the population in the vicinity steadily increases, increased visitation to the area is likely to occur.

The prominent recreation activities that would occur under the Proposed Action would include hosted campgrounds with water, electricity, and RV dump stations, ramada/shaded picnic day-use, nature center, and an OHV Skilled Training Area. The Proposed Action would add defined locations where these activities can occur. Fees would be charged for use of the developed recreation facilities in both the north and south lease areas because of the amenities that would be provided. The fees would be similar to fees charged at other comparable recreation facilities managed by the MCPRD. The entrance fees would also have to meet the Federal Lands Recreation Enhancement Act requirements, which prohibits fees being charged for certain areas such as areas where no facilities are provided. The recreation experience with the implementation of the Proposed Action would be more closely associated with a roaded-natural to rural recreation experience given the number and variety of developed recreation facilities, accommodations for larger groups of users, and the presence of management controls such as camp host, fencing, and the required entrance fee.

Current recreation users of the VMR Project area who do not want to pay the entrance fees may move into other areas within the BLM HFO without fees. These users would disperse to other areas most likely within the two Recreation Management Zones (RMZs) that offer a similar physical setting with minimal recreation facilities. The potential resource impacts to these other areas would be negligible because of the large area that the two RMZs encompass and the expansive network of travel routes within the RMZs that would accommodate the dispersed use by recreationists relocating from the VMR Project area.

Due to Arizona Game and Fish Department and BLM regulations which do not allow hunting to occur within proximity to recreation developments, the north and south lease areas would no longer be available for these activities. The development of recreation facilities would likely displace large game into areas outside the lease areas. Hunters would also be displaced into surrounding areas that would continue to be available for hunting.

Therefore, the Proposed Action would have short-term, direct and indirect, minor, adverse impacts and long-term, direct and indirect, major, beneficial impacts to recreation use from the construction and operation and maintenance of the recreation facilities and improvements to Vulture Mine Road.

Measures to Avoid or Minimize Adverse Impacts

No measures are recommended for the Proposed Action to minimize adverse impacts to recreation.

Direct and Indirect Impacts of the No Action Alternative

The No Action Alternative would have no direct impacts to recreation use within the VMR Project area because the area would continue to be used by the public for recreational purposes. However, indirect impacts under the No Action Alternative would occur from the anticipated population increases in the vicinity and the associated potential increased use of the VMR Project area. The increase in use would potentially result in the degradation of the existing facilities. Maintenance activities would increase along with the increased use of the existing facilities. Additionally, more user-defined areas would occur as increased use of the existing facilities forces the recreating public onto adjacent areas not designated as recreational sites. The No Action Alternative would have long-term, indirect, minor, adverse impacts to recreation use due to potential increased use and degradation of the existing facilities. Under the No Action Alternative, the lease areas would continue to be available for hunting, a long-term and beneficial impact.

3.5 Transportation and Travel Management

3.5.1 Affected Environment

Vehicular access to the VMR Project area is from Vulture Mine Road, a two-lane paved road. The roadway provides a permanent and year-round connection between U.S. Highway 60 in Wickenburg and Interstate 10 near Tonopah (via Aguila Road and 335th Avenue). Vulture Mine Road is classified as a rural, minor arterial providing mobility through rural areas (MCDOT 2018a).

The Wickenburg Community Travel Management Plan (TMP) (BLM 2014) encompasses the VMR Project area. BLM defines and categorizes its travel routes into three categories, roads, primitive roads, and trails, and designates each of the travel routes as open, limited, and closed. Within the 2014 Wickenburg Community TMP, there are 763 routes that cover 589.5 miles; 10 routes that cover 4.98 miles are included in the north lease area and 7 routes that cover 2.87 miles in the south lease area (BLM 2014) (Maps 3.1 and 3.2).

3.5.2 Environmental Consequences

Direct and Indirect Impacts of the Proposed Action

During the construction of the realignment and widening of Vulture Mine Road, an increase in travel time for motorists would occur because of the presence of slower moving construction vehicles and an increase in the number of workers' vehicles. The road realignment segment and the two bridges would be constructed while maintaining traffic on the existing alignment of Vulture Mine Road. Once construction is completed, this section of the road would meet current roadway design standards and sight distance would be improved to achieve a 40-mph posted speed. This would eliminate the need for the posted advisory speed of 20 mph and would create a safer condition because of the greater sight distance. The new Box Wash bridge would provide an all-weather crossing of the wash, which would reduce MCDOT's operation and maintenance costs and avoid the need for restrictions on vehicular traffic due to storm events at this location. The day-to-day operation of the Proposed Action would not detrimentally impact local traffic or access to the surrounding areas.

During construction, routes within the VMR Project area would experience some restrictions due to localized project activity in order to protect public safety. The development of the north lease area facilities would result in closure of routes #38129, #38123, #38128, #38176, and #40010, which would be approximately 2.50 miles (32 percent) of the total miles of existing routes within the VMR Project area (Map 3-1). With the exception of route #40010, the other four routes are dead-ended routes that do not provide connectivity to other areas. A 1.59-mile portion of route #40008 would be realigned and connected to route #40192. This would allow users to bypass the developed facilities within the north lease area. The reroute would be approximately 1.1 miles long and would match the width and surface material of the existing route #40008. There would be no changes to the Vulture Peak Trail (route #17143); however, the existing access point would become a part of the development for the nature center and day-use facilities.

In the south lease area, route #40220 (approximately 0.25 mile) would be closed to protect sensitive resources. Routes #40101, #40102, #40103, #40197, #40206, #40219, and #40216 would cross through the south lease area and would be realigned at the time of construction of the recreation facilities (Map 3.2). Where fences are installed in both the north and south lease areas, pass-through gates would allow for continued access and travel on those routes not closed as noted (MCPRD 2018).

The Proposed Action would not alter the motorized and non-motorized uses of the existing routes on travel routes outside of the VMR Project area or funnel these uses onto the same route. Within the north lease area, the Proposed Action would add approximately 3.70 miles of non-motorized trails, eliminating any potential conflicts on these new trails within the campground and day-use areas.

Therefore, the Proposed Action would have short-term, direct and indirect, minor, adverse impacts and long-term, direct and indirect, minor, beneficial impacts to transportation and travel management from the construction and operation of the recreation facilities and the improved portion of Vulture Mine Road. Because of the changes that would be created by the Proposed Action from the route closures, route modifications, and construction of a new travel route, the 2014 Wickenburg Community TMP would need to be amended.

Measures to Avoid or Minimize Adverse Impacts

No measures are recommended for the Proposed Action to minimize adverse impacts to transportation and travel management.

Direct and Indirect Impacts of the No Action Alternative

The No Action Alternative would result in no change to the existing transportation and travel network. Portions of Vulture Mine Road would continue to flood during major storm events, resulting in closure of the road to motorists. The access point to the existing recreation facilities would continue to be inadequate, and the horizontal alignment of the road would not meet current design standards. Therefore, the No Action Alternative would have short- and long-term, direct and indirect, moderate, adverse impacts to transportation and travel management.

3.6 BLM Sensitive Species (Animals)

3.6.1 Affected Environment

The VMR Project would be located within the Sonoran Desert Ecoregion, which encompasses 55 million acres in southern Arizona, southeastern California, northern Baja California, and northwestern Sonora (Marshall et al. 2000). The Sonoran Desert Ecoregion is an arid region with high summer temperatures and mild winters. At a finer ecological scale, the VMR Project area occurs within the Sonoran Desertscrub Biotic Community. The Sonoran Desertscrub Biotic Community is considered to be comprised of two subdivisions, the Lower Colorado River Valley subdivision and the Arizona Uplands subdivision, which are identified based on their particular floral and faunal associations (Turner and Brown 1994). The VMR Project area is located within the Arizona Uplands subdivision of the Sonoran Desertscrub Biotic Community, which is topographically complex and has a diverse plant community that is dominated by paloverde trees and numerous cacti interspersed with a variety of shrubs.

Table D-1 in Appendix D lists the BLM sensitive species for the HFO and identifies the potential presence of each species in the VMR Project area. There are four BLM sensitive species that are known to occur in the VMR Project area: the gilded flicker (*Colaptes auratus*), golden eagle (*Aquila chrysaetos*), peregrine falcon (*Falco peregrinus*), and Sonoran desert tortoise (*Gopherus agassizii*). Suitable cliff nesting habitat for golden eagles and peregrine falcons is located within the Vulture Mountains ACEC to the east of the VMR Project area. Other BLM sensitive species that have a low potential to occur in the VMR Project area (i.e., Monarch butterfly [*Danaus plexippus*] and seven species of bats) are not likely to be impacted by the Proposed Action. Therefore, the discussion in this EA focuses on the gilded flicker and Sonoran desert tortoise.

Gilded Flicker

The gilded flicker is a resident species in Sonoran desertscrub habitats and is closely tied to the presence of saguaro cacti, which provide cavities for nesting (Corman 2005). This bird forages on the ground and feeds mainly on ants, though it will also eat other insects, berries, and seeds. The gilded flicker has been documented in the VMR Project area and, based on the moderate density of saguaro cacti in the north and south lease areas, this species likely nests throughout the VMR Project area.

Sonoran Desert Tortoise

The Sonoran desert tortoise occurs on rocky slopes and bajadas in Sonoran and Mojave desertscrub throughout southern and western Arizona. In Sonoran desertscrub, desert tortoises occur most often in paloverde-mixed cacti vegetation communities in areas with boulders and rock outcrops (Arizona Interagency Desert Tortoise Team [AIDTT] 1996). These formations offer shelter sites, which are an important component and limiting factor of desert tortoise habitat. While rocky slopes are the preferred habitat of the Sonoran desert tortoise, tortoises may also be present in low densities on lower bajadas and along washes where suitable shelter sites are present (Grandmaison et al. 2010). Sonoran desert tortoises are herbivorous and consume a variety of annual and perennial grasses, forbs, and succulents.

The BLM has assessed the habitat potential for desert tortoises on BLM lands statewide, and has categorized tortoise habitat areas according to 1) importance of the habitat to maintaining viable populations, 2) resolvability of conflicts, 3) tortoise population density, and 4) population status (stable,

increasing, or decreasing). Based on these criteria, the BLM developed three habitat categories, from Category I (the most valuable and protected habitat) to Category III (the least valuable and protected habitat), and has designated BLM lands with tortoise habitat potential to one of these three categories. The BLM's goals for Category II habitat areas are to maintain stable, viable populations and halt further declines in tortoise habitat values (BLM 1988). The VMR Project area is located within an area that has been designated as Category II desert tortoise habitat.

There is suitable habitat for the Sonoran desert tortoise within the north and south lease areas. The BLM has documented tortoise sign in several areas within the north lease area, but outside of the proposed fenced area where recreation facilities would be constructed. Sonoran desert tortoises are more likely to occupy the rocky slopes surrounding the proposed recreation facilities and focus their activities in these areas, though tortoises could potentially be found anywhere throughout the VMR Project area.

MCDOT requested a survey for tortoises and potential shelter sites within the proposed new ROW for the realigned portion of Vulture Mine Road in the north lease area. A 100 percent pedestrian survey was conducted within the proposed new MCDOT ROW on May 26, 2017. No Sonoran desert tortoises or suitable shelter sites were observed during the survey.

3.6.2 Environmental Consequences

Direct and Indirect Impacts of the Proposed Action

Gilded Flicker

Construction of the proposed recreation facilities would result in short-term direct impacts to gilded flickers. Under the Proposed Action, the construction of new roads and recreational facilities would result in approximately 100 acres of permanent surface disturbance and vegetation removal. This would result in an approximately 10 percent reduction in breeding and foraging habitat for the gilded flicker within the 1,046-acre VMR Project area. Individuals that lose part or all of their home ranges could relocate to other nearby habitats, increasing competition for food or nest cavities with gilded flickers that may have territories in the surrounding area. There could also be an increase in foraging habitat within the VMR Project area if ant populations increase along with the increased human use of the site.

Noise and visual disturbance from human activities including vehicle and OHV use within the proposed recreation facilities and along the "open" and "limited" routes in the surrounding area could disturb the foraging and breeding activities of gilded flickers. Individuals may alter their habitat use within the VMR Project area and/or shift their home ranges away from these sources of disturbance. Individuals could also be hit or run over by vehicles/OHVs within the park or during off-road travel in the surrounding travel network since they forage mainly on the ground.

Therefore, with implementation of the SOPs and BMPs (refer to Section 2.6.1), there would be short- and long-term, direct and indirect, minor, adverse impacts to gilded flickers from the Proposed Action.

Sonoran Desert Tortoise

Construction of the proposed recreation facilities would result in short-term direct impacts to Sonoran desert tortoises, including injury or harm to individuals during ground-disturbing construction activities.

Under the Proposed Action, the construction of new roads and recreational facilities would result in approximately 100 acres of permanent surface disturbance and vegetation removal. This would result in an approximately 10 percent reduction of suitable habitat for the Sonoran desert tortoise within the 1,046-acre VMR Project area. Individuals that lose part of their home ranges could shift their habitat use or relocate to other nearby habitats, increasing competition for food or shelter sites in the surrounding area. Construction activities and subsequent ground disturbance within the VMR Project area would increase the potential for introduction or spread of invasive species, which could degrade the current habitat conditions for Sonoran desert tortoises.

Development of the proposed recreation facilities would result in habitat fragmentation for desert tortoises occurring in the immediate vicinity of both lease areas and the construction of new roadways within the park would result in an ongoing threat to tortoises that attempt to cross them. The realignment of Vulture Mine Road and construction of a bridge crossing over Box Wash would improve connectivity for wildlife by providing a safe crossing underneath the roadway, which could also benefit tortoises in this area to some extent.

While collecting or shooting Sonoran desert tortoises is illegal, both of these activities have been documented as threats to tortoise populations and there may be an increased risk of these threats with increased human activity in the VMR Project area. As described below, MCPRD would provide educational outreach to park visitors to reduce the potential for these impacts to occur and to enhance public understanding and appreciation of Sonoran desert tortoises.

MCPRD has identified SOPs and BMPs that would be implemented as part of the Proposed Action to reduce the potential adverse impacts to Sonoran desert tortoises and other wildlife. SOPs and BMPs that would specifically address potential impacts to the Sonoran desert tortoise are included in Section 2.1.6. The BLM has also identified measures that would need to be implemented as part of the Proposed Action to minimize potential impacts to the Sonoran desert tortoise (Section 2.1.6).

Therefore, with implementation of the proposed SOPs, BMPs, and mitigation measures, there would be short- and long-term, direct and indirect, minor, adverse impacts to Sonoran desert tortoises from the Proposed Action.

Measures to Avoid or Minimize Adverse Impacts

No measures are recommended for the Proposed Action to minimize adverse impacts to the gilded flicker and Sonoran desert tortoise.

Direct and Indirect Impacts on Gilded Flicker and Sonoran Desert Tortoise from the No Action Alternative

Under the No Action Alternative, no new recreational facilities would be developed and the maintenance and general upkeep of the existing facilities would remain under management of the BLM. No improvements to Vulture Mine Road would occur. Motorized recreation would continue along washes and other designated routes in the VMR Project area. Therefore, there would be short- and long-term, direct and indirect, negligible, adverse impacts to gilded flicker and Sonoran desert tortoises from the No Action Alternative.

3.7 Lands and Realty

3.7.1 Affected Environment

This section describes existing land use conditions in the VMR Project area. Land use is assessed here by analyzing current land activities, land ownership, and land use designations in adopted plans and policies. An assessment of land use must also consider legal guarantees or limitations such as those provided by easements, deeds, rights-of-way (ROWs), claims, leases, licenses, and permits. BLM-administered lands are not zoned, but they may also be encumbered by easements, ROWs, mining claims, and permits. Other than grazing and mining leases, special recreation permits, and the ROW grant for Vulture Mine Road, there are no easements, or other ROWs, permits or leases within the VMR Project area administered by BLM.

In addition to the land uses noted above, there is also an unauthorized airstrip within the south lease area, west of Vulture Mine Road. The airstrip is not listed on the Federal Aviation Administration (FAA) sectional aeronautical charts, which are the primary navigational reference information used by the visual flight rules (VFR) pilot community and updated every six months (FAA 2018). The unauthorized airstrip was constructed in conjunction with Vulture Mine. The BLM, Arizona Department of Forestry, and Embry Riddle Aeronautical University have not had any use of, nor do they have a future need for, the airstrip. The Recreation Aviation Foundation indicated that it has been actively used since 1984 by pilots touring the Vulture Mine and exploring the nearby sites (Spencer 2017). Mining claims and R&PP leases supersede the consideration of aircraft use at this location since the airstrip is not authorized. The airstrip has been used to stage the Vulture Mine Off-Road Challenge permitted under the SRP noted above.

The Bradshaw-Harquahala RMP was approved by the ROD dated April 22, 2010 and provides management guidance for the public land and resources under the BLM's jurisdiction. The document guides the management of approximately 896,100 acres of Federal surface and mineral estate administered by BLM in central and western Arizona in Maricopa, Yavapai, and La Paz counties. The Bradshaw-Harquahala RMP delineated the Vulture Mine and Wickenburg Community RMZs within the Hassayampa Management Unit. A portion of the north lease area lies within the Vulture Mountain ACEC, which was designated for the conservation of raptor species and as a scenic landmark. Section 2.4.2.2.3.1 of the RMP specifically prohibits "…the creation of new recreation sites" in the ACEC. No new recreational facilities would be constructed within the portion of the ACEC that overlaps the north lease area.

3.7.2 Environmental Consequences

Direct and Indirect Impacts of the Proposed Action

The Proposed Action would be in conformance with existing land use plans and would not prohibit other permitted uses to occur over the long-term. The issuance of a lease under the R&PP Act and the granting of ROW for the Proposed Action are allowable land uses under FLPMA. As of November 8, 2016, the effective date of the NORA, the VMR Project area was segregated from any future mineral and mining claim entries. Under the segregation, no new rights-of-way can be considered by the BLM within the north or south lease areas. Existing mining leases would not be impacted because surface jurisdiction and mineral ownership would not change. Development of the recreation facilities and roadway realignment/widening would not prohibit other permitted uses such as mineral operations and the one

SRP. Indirect land use impacts are not anticipated because the Proposed Action would not substantially induce or reduce regional growth to the extent that it would change off-site land uses.

Therefore, the Proposed Action would have short-term, direct and indirect, minor, adverse impacts and long-term, direct and indirect, negligible, adverse impacts to land use and realty from the construction and operation of the recreation facilities and improvements to Vulture Mine Road.

Measures to Avoid or Minimize Adverse Impacts

No measures are recommended for the Proposed Action to minimize adverse impacts to lands and realty.

Direct and Indirect Impacts of the No Action Alternative

Under the No Action Alternative, no construction of recreation facilities or improvements/widening of Vulture Mine Road would take place. There would be no additional impacts on lands and realty beyond those associated with the current uses of the VMR Project area.

3.8 Minerals

3.8.1 Affected Environment

The General Mining Law of 1872, as amended, opened public lands of the United States to mineral acquisition and allowed for the location and maintenance of mining claims by the public. As a result, BLM-managed lands are available for the exploration and development of mineral resources, unless otherwise set aside or removed from operation under the Mining Law. There are no leasable (such as oil and gas) or salable (such as sand and gravel) mineral resources within the VMR Project area. However, the BLM database indicates numerous locatable mining claims and development within the VMR Project area. The Vulture Mountain area has historically been mined since the 1800s and includes the well-known Vulture Mine, which was the most productive gold mine in the history of Arizona Territory (Terlep 2017). Currently, there are 19 mineral operations and 4 claimants within the north and south lease areas. There are four active mineral operations on approximately 57 acres (7 percent) of the 839-acre north lease area (Map 3-3). The 207-acre south lease area has 15 active mineral operations covering 129 acres (62 percent) (Map 3-4) (BLM 2017). There are no mineral exploration notices or mine plan of operations within the footprint of the VMR Project area.

3.8.2 Environmental Consequences

Direct and Indirect Impacts of the Proposed Action

The NORA issued for the Proposed Action provided notification of the segregation of the lands within the VMR Project area from all forms of appropriation under the public lands laws, including the general mining laws. With the approval of the VMR R&PP lease, 860 acres of BLM-administered lands would not be available for the exploration and development of mineral resources. In the south lease area, proposed recreation facilities would overlap existing mining claims; there would be no overlap of proposed recreation facilities in the north lease area or within the portion of Vulture Mine Road that would be realigned/widened. Access would continue to be provided to all mining claims under the Proposed Action. The Proposed Action cannot interfere with or inhibit the development of any ore deposits associated with active locatable mining claims. Any recreation facilities and/or internal park roads in the south lease area

would be removed by MCPRD prior to any mining activities. Increased use of the area as a result of the Proposed Action could increase the potential for recreation users to visit mining claims. The public has the conditional right to cross mining claims or sites for recreational and other purposes and to access BLM-administered lands beyond the claim boundaries. However, anyone who does not have valid rights to a mining claim may be considered in trespass if they were to undertake mining activities and can be held liable for trespass damages. In addition, trespassers may be fined and sentenced to a term in jail (BLM 2016).

The Proposed Action cannot legally impede mineral operations in the north or south lease areas that have preexisting mining claims if those resources become economically viable to develop. Although the Proposed Action would segregate the lease areas from any future mineral and mining claim entries, those areas without mining claims may be because of their limited mineral potential. Therefore, the Proposed Action would have direct and indirect, negligible, adverse impacts to mineral resources.

Measures to Avoid or Minimize Adverse Impacts

No measures are recommended for the Proposed Action to avoid or minimize adverse impacts to mineral resources.

Direct and Indirect Impacts of the No Action Alternative

Under the No Action Alternative, no construction of recreation facilities or improvements/widening of Vulture Mine Road would take place. The BLM would have to reclassify the lands and in doing so the segregation would be lifted. The VMR Project area would be open to future mineral and mining claim entries.

3.9 Visual Resources

3.9.1 Affected Environment

The term "visual resources" refers to the composite of basic terrain, geologic, and hydrologic features; vegetative patterns; and built features that influence the visual appeal of a landscape. The BLM uses the Visual Resource Management (VRM) System to classify and manage visual resources on lands under its jurisdiction. The VRM System involves inventorying scenic values, establishing management objectives for those values through the resource management planning process, and then evaluating proposed activities to determine whether they conform to the management objectives (BLM 1984). The BLM's VRM System incorporates scenic quality, viewer sensitivity, and distance zones to identify visual resource inventory (VRI) classes. These classes represent the relative value of the existing visual landscape, as well as the visual resource baseline from which to measure impacts that a proposed project may have on these values. In its planning process, the BLM weighs visual and competing resource values and designates the VRM classes, with associated management class objectives for a given area's visual setting. Map 3-5 shows the VRM classes designated by the HFO within the VMR Project area (BLM 2010).

Visual resources are a function of geology, climate, and historical processes and are influenced by topographic relief, vegetation, water, wildlife, and land use. The visual resources analysis area for this EA was determined to be a 5-mile radius from the VMR Project area, which is the limit of the middleground distance zone. The analysis area lies within the Basin and Range physiographic province and is

characterized by steep, narrow, isolated mountain ranges—generally on a north-south axis—separated by wide, flat, sediment-filled valleys or basins (U.S. Environmental Protection Agency 2010). This province reaches into Oregon and Idaho to the north and extends south through California, Nevada, and Utah and into Arizona, New Mexico, and western Texas. The landscape in the northeastern portion of the analysis area occurs within a transition zone between the Basin and Range and Colorado Plateau provinces. The resulting topography in the northeastern portion consists of broken and scattered landforms and geologic features.

The northern portion of the VMR Project area is characterized by rugged and undulating landforms with distinctive rock outcrops at higher elevations, and the southern portion consists of broader and more softly rolling landforms as the transition to the Hassayampa Plain begins. Vegetation throughout consists of sparsely dispersed grasses, clusters of creosote bush and cholla cactus, distinctive forms of mature saguaro cactus, and linear bands of palo verde along washes that meander through the area. Development also contributes to the landscape character of the VMR Project area and includes recreation day-use facilities, surface mineral extraction, improved and unimproved dirt roads, and isolated range improvements.

The existing landscape character and condition of the analysis area are identified in terms of general landforms, vegetation, built features, and land use by visual analysis units (VAUs). The VAUs for this analysis are based on scenic quality rating units (SQRUs) delineated and evaluated as part of the 2011 HFO VRI which are based on common landform patterns and features, vegetation communities and patterns, built features, land use patterns, scarcity, and/or surface water resources within the Basin and Range province. Two VAUs are identified within the VMR Project area: Vulture Mountains and Hassayampa Plains (Map 3-6). The Vulture Mountains VAU scenic quality rating is 17.5 or scenic quality B value, which accounts for the varied landforms, variations in color as well as diverse vegetative communities. The Hassayampa Plains VAU scenic quality rating is 8.5 or scenic quality C value, which accounts for limited landform variety as well as various cultural modifications throughout. Scenic quality rating rationale for both VAUs are further documented in the 2011 HFO VRI (BLM 2011).

Key sensitive viewing platforms or key observation points (KOPs) were selected within and adjacent to the VMR Project area that represent viewing locations where the public would view the proposed project both from a stationary (e.g., scenic overlook) or a linear (e.g., roadway or trail) location (Map 3-7). The KOPs that were selected include Vulture Peak Trail summit (stationary) (KOP 1), Box Wash (stationary) (KOP 3), and Vulture Mine Road (linear) (KOPs 2 [north] and 4 [south]). For the Vulture Mine Road linear platform, the two segments of the road located in the north and south lease areas are evaluated as two separate KOPs and not just from a single viewing location.

Visual sensitivity reflects attitudes and perceptions held by people regarding the landscape and, in general, reflect the public's level of sensitivity for noticeable change to the landscape. The visual sensitivity level for the visual resource analysis area is identified as high and is associated with the high amount of use and public interest associated with the visual setting and abundant recreation opportunities in the analysis area (BLM 2010).

3.9.2 Environmental Consequences

An analysis of visual dominance, scale, and contrast was used in determining to what degree the Proposed Action would attract attention and the relative change in character as compared to the existing characteristic landscape and its inherent scenic quality[1]. The amount of visual contrast created by a project is directly related to the amount of attention that is drawn to a project feature in the landscape. Potential changes in the viewshed from sensitive viewing locations were also evaluated and characterized. Finally, the analysis of visual impacts was used in the determination of conformance of the BLM's VRM objectives where the Proposed Action would occur on BLM-administered lands.

Direct and Indirect Impacts of the Proposed Action

Visual impacts are defined as the change to the visual environment resulting from the introduction of modifications to the landscape. Construction of the Proposed Action would result in temporary impacts from the construction activities and the associated fugitive dust that would be generated, the equipment and vehicles moving in and out of the project area, and the stockpiling of materials. The construction activities would introduce forms, colors, and textures that would temporarily attract attention; however, these are elements and activities that are currently allowed in the analysis area associated with roadway maintenance and improvements, as well as surface mining activities. Removal of vegetation and initial site grading would expose lighter-colored soils that would introduce contrast in line and color with the existing setting. These construction-related impacts would create a subtle degree of change in the characteristic landscape in the immediate foreground[2] area along Vulture Mine Road and Box Wash, and there would be a subtle or minor degree of change in the middleground area from the Vulture Peak Trail summit because of the distance of construction activities, existing surface disturbance, and absorption capacity of the landscape when viewed from this location. Therefore, the effects from the Proposed Action would range from negligible to minor short-term direct impacts on visual resources.

The landscape character and scenic quality within the immediate foreground areas from the Proposed Action would appear to be slightly altered. Within the foreground and middleground would be essentially unchanged since the Proposed Action would introduce elements currently common in the VMR Project area and surrounding vicinity. The proposed site facilities and associated improvements, as well as roadway improvements along Vulture Mine Road, would be visually subordinate in the setting and repeat elements commonly found within the existing landscape. Overall, the landscape would appear noticeably altered due to the addition of restroom buildings and ramada structures, bridges, roadway cut slopes, and developed camp sites associated with recreation facilities and with roadway improvements. Internal roads, would be similar to existing features already present within the immediate foreground and

[1]Scenic or visual quality is the visual appeal of a landscape. The landscape is measured in terms of its distinctiveness (or memorability), scarcity, and variety of the landform, vegetation, water, color, adjacent scenery, and cultural modifications (i.e., man-made features) and how well these features fit together. The relative scenic quality (A, B, or C) is assigned to a landscape by rating the scenic quality evaluation key factors of landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications on a numerical scale. Landscapes considered to have the highest scenic value have a scenic quality rating of A; those with a rating of C are considered to be a more common, less distinct landscape (BLM 1986a).

[2] The immediate foreground distance zone is defined as the area up to 0.25 mile from the VMR Project area or the KOPs, the foreground distance zone is the area from 0.25 mile to 0.5 mile, and the middleground is considered to be from 0.5 to 5 miles.

foreground areas and would most likely not attract attention. Within the middleground of the VMR Project area, the magnitude of change to the existing landscape character and scenic quality would be subtle and the characteristic landscape would appear to be intact given the distance and location of the viewer in relation to the recreation facilities and road improvements; the distance would reduce the visibility of the Proposed Action. The development of recreation facilities and associated internal roads would create opportunities for people to park or access previously inaccessible areas of the landscape. This could result in damage to native vegetation and additional resource damage, such as increased erosion and route development from undesignated OHV uses, which may potentially lower the scenic quality in these areas.

The Proposed Action would not result in a reduction in the scenic quality classification of the VAUs (i.e., from a scenic quality rating of B to a rating of C) within the analysis area due to the relatively small size and scale of the Proposed Action in relation to the area encompassed by the VAUs. The Proposed Action would not result in a change of acres of any scenic quality classification within the HFO.

Casual observers, such as recreationists, at the Vulture Peak Trail summit (KOP 1) would have unobstructed views of the Proposed Action associated with the north lease area, located in the middleground from the summit where most viewers are anticipated to view the landscape. The magnitude of change in the setting in the middleground from this KOP would be low because the Proposed Action would be visually subordinate to other elements and patterns in the landscape when viewed from this distance. There are no views of the south lease area recreation facilities from this stationary KOP.

Along Vulture Mine Road (KOP 2) in the vicinity of the north lease area, the magnitude of change in the landscape in the immediate foreground views would be low. The proposed project components such as recreation facilities, roadway bridges and cut slopes would generally be visually subordinate to other features in the landscape, especially in comparison to the scale of the landforms within this area of the Vulture Mountains. The casual observer on Vulture Mine Road would have a partially obstructed view of the recreation facilities associated with the north lease area. The landscape character and scenic quality would appear to be slightly altered, and the landscape character would remain intact when viewed from this linear platform.

Along Vulture Mine Road (KOP 4) in the vicinity of the south lease area, the change in the landscape in the immediate foreground would appear unaltered. Traveling in either direction views of the recreation facilities would be obstructed by the existing landforms. The fencing and widening of Vulture Mine Road associated with Proposed Action would be visually compatible with other features in the landscape, especially in comparison to the existing surface disturbance and development associated with surface mining activities adjacent to the south lease area. The change to the landscape character and scenic quality would be negligible, and the landscape character would remain intact when viewed from this portion of the Vulture Mine Road linear platform.

Casual observers, such as recreationists, within Box Wash (KOP 3) in the vicinity of the campground area in the north lease area would have partially obstructed views of the Proposed Action. The magnitude of change in the landscape in the immediate foreground would not be readily detectable by the casual observer. The Proposed Action would generally be visually compatible with other features in the

landscape, and would often be visually screened by the terrain and vegetation within Box Wash. The change to the landscape character and scenic quality would be negligible, and the landscape character would remain intact when viewed from this stationary platform.

The landscape character and scenic quality within the immediate foreground areas from the Proposed Action would be appear to be slightly altered; however, within the foreground and middleground, the characteristic landscape would be essentially unchanged. There would be no change in the scenic quality of the landscape. Views from the selected KOPs would also appear essentially unaltered because of the weak contrast that would be created by the Proposed Action. Therefore, with the implementation of the mitigation measures (Section 3.9.3), the construction and maintenance and operation of the Proposed Action would result in short- and long -term, direct and indirect, negligible to minor, adverse impacts on visual resources.

Proposed Action Conformance with BLM VRM Objectives

The BLM has developed measurable standards for managing the visual resources of its administered lands. As previously noted, management classes with established objectives have been identified for the project area's visual resources as part of the RMP process. Based on the contrast rating evaluation (BLM 1986b), the magnitude of impacts determines whether or not the Proposed Action would be in conformance with the established objectives. The contrast rating and environmental factors worksheets for each KOP assessing BLM-administered lands are included in Appendix E, along with photorealistic simulations. It was determined that the Proposed Action would create weak visual contrast overall and would conform to current BLM VRM classes at each KOP (Table 3-3).

Table 3-3. BLM VRM Conformance by KOP—Proposed Action

Key Observation Number and Name	VRM Class	BLM Acres Visible[1]	Contrast Rating	Conformance
KOP 1 – Vulture Peak Trail Summit	II	58	Weak	Meets
	III	94	Weak	Meets
KOP 2 – Vulture Mine Road – North Lease Area	II	48	Weak	Meets
	III	21	Weak	Meets
KOP 3 – Box Wash	II	1	Weak	Meets
	III	89	Weak	Meets
KOP 4 - Vulture Mine Road – South Lease Area	III	98	Weak	Meets
Total Acres of Noncompliance	**II**	**0**	**-**	**-**
	III	**0**		

Table Abbreviations: KOP = key observation point; VRM = Visual Resource Management.
[1]Based on bare earth GIS analysis.

Measures to Avoid or Minimize Adverse Impacts

No measures are recommended for the Proposed Action to avoid or minimize adverse impacts to visual resources.

Direct and Indirect Impacts of the No Action Alternative

Under the No Action Alternative, no recreation facilities or Vulture Mine Road improvements would be implemented. More user-defined areas would occur as increased use of the existing facilities forces the recreating public onto adjacent areas not designated as recreational sites resulting in larger areas of

disturbance and the degradation of the characteristic landscape. The No Action Alternative would have localized, short- and long-term, direct and indirect, minor, adverse impacts visual resources.

3.10 Residual Effects

3.10.1 Proposed Action

With the implementation of the design features, BMPs, and SOPs, no mitigation measures would be needed to reduce adverse impacts to recreation use, transportation and travel management, lands and realty, and mineral resources as a result of the Proposed Action. There would be residual effects to BLM sensitive species and visual resources that would remain after mitigation has been applied to the Proposed Action. Under the Proposed Action, approximately 100 acres of permanent surface disturbance and vegetation removal would occur. This would result in an approximately 10 percent reduction of suitable habitat for the gilded flicker and Sonoran desert tortoise within the 1,046-acre VMR Project area. It is expected that even with effective implementation of mitigation measures, there would be residual impacts associated with presence of built features in the characteristic landscape. This would result in an unavoidable, long-term, adverse impact to the existing landscape character and inherent scenic quality of the setting.

3.10.2 No Action Alternative

There would be no adverse unavoidable impact to recreation, transportation and travel management, BLM sensitive species, lands and realty, minerals, and visual resources as a result of the No Action Alternative.

4.0 CUMULATIVE IMPACTS

The determination of what past, present, and reasonably foreseeable future actions to consider in the impact analysis is based on the resources being affected by the VMR Project. A cumulative effect is defined under NEPA as "the change in the environment which results from the incremental impact of the action, decision, or project when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other action." "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR Part 1508.7). Past, present, and reasonably foreseeable future actions that incrementally add to the potential adverse or beneficial cumulative impacts of the Proposed Action and No Action alternatives are considered in this EA. The intent of this analysis is to capture the total effects of several actions over time that would be missed by evaluating each action individually.

4.1 Cumulative Effects Analysis Area and Timeframe of Effects

The BLM NEPA Handbook H-1790-1 (2008a) recommends that geographic (spatial) and time (temporal) boundaries be established for cumulative effects analysis. Each resource has a defined cumulative effects study area (CESA) for the Proposed Action and No Action alternatives. The geographic area of the CESA would be a 5-mile radius from the fence around the north and south lease area facilities and from the Vulture Mine Road improvements. The 5-mile radius CESA is based on the average OHV design criteria recommendation for recreation trail use (National Off-Highway Vehicle Conservation Council 2006) and is the anticipated area of effect for local area gilded flickers and Sonoran desert tortoise. From a visual perspective, management activities beyond this distance may be visible, but not likely to attract attention or dominate the characteristic landscape. The CESA represents 88,682 acres, of which the VMR Project area would be 1.2 percent of the CESA. The BLM manages 59 percent of the CESA area, the Arizona State Land Department manages 24 percent, and 17 percent is privately owned. Map 4-1 shows the CESA boundary in relationship to the VMR Project area. In terms of timeframe, the cumulative effects analysis is considered over a 25-year time period, which would be the term of the R&PP Act Lease.

4.2 Past and Present Actions

In order to understand the contribution of past actions to the cumulative effects of the Proposed Action and No Action alternatives, this analysis relies on current environmental conditions as a proxy for the impacts of past actions. Existing conditions reflect the aggregate impact of prior human actions and natural events that have affected the environment and could contribute to cumulative effects. The cumulative effects analysis does not attempt to quantify the effects of past human actions by adding up all prior actions on an action-by-action basis. By looking at current conditions, the residual effects of past human actions and natural events are captured, regardless of which particular action or event contributed those effects. The CEQ issued an interpretive memorandum on June 24, 2005 regarding analysis of past actions, which states, "agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions."

4.3 Reasonably Foreseeable Future Actions

Reasonably foreseeable future actions are actions that have existing decisions, funding, or formal proposals or that are highly probable. These actions are not connected to the Proposed Action and No Action alternatives. They are projections being made so that future effects, cumulative and otherwise, can be estimated, as required by NEPA. Specific projects within the CESA have not been identified. Other reasonably foreseeable future actions and management activities occurring in the CESA which area highly probable include livestock grazing, range improvements, vegetation management, dispersed recreation, road improvements, mining, community development associated with Wickenburg, utility and infrastructure projects, and potentially addition of special designation areas and SRPs. Other disturbances that are ongoing include wildland fire and establishment and spread of noxious weeds and invasive plant species.

4.4 Cumulative Impacts on Resources

For this analysis, cumulative resource impacts for the CESA are the combined direct and indirect effects of the present and reasonably foreseeable future actions, in addition to the direct and indirect impacts of the Proposed Action and No Action alternatives, respectively. The levels of direct and cumulative impacts are categorized as major, moderate, or minor based on the same thresholds defined in Section 3.1. If the results of the analysis of direct or indirect impacts were considered to be none or negligible as a result of the Proposed Action and No Action alternatives, there would be no measurable contribution to a cumulative effect therefore, no cumulative effects analysis for the respective resource/use has been done.

Based on the analysis of direct and indirect impacts, short-term, minor, adverse impacts may occur from the construction the Proposed Action for a resource/use. It is unlikely that all of the reasonably foreseeable future actions would be built as the same time as the Proposed Action. Similarly, it is unlikely that the construction activities of these future actions would occur sequentially so that there would be continuous construction activities for a substantial period of time. Therefore, there would be no measurable contribution of the Proposed Action's short-term, minor, adverse impacts to the resource/use's respective cumulative impacts, and no cumulative effects analysis for the respective resource/use has been done.

Based on the analysis of direct and indirect impacts, neither the No Action Alternative nor the Proposed Action would have long-term, minor, moderate, or major direct or indirect effects on lands and reality, within the VMR Project area. There would be no measurable contribution to the resource/use's respective cumulative impacts; therefore there is no cumulative effects analysis for these resources/uses. The analysis of direct and indirect impacts from the No Action Alternative and the Proposed Action are provided in Chapter 3; refer to the specific resource subsection for detailed information.

At the end of each resource description of the cumulative impacts below, concluding statements of impacts are provided. The alternative's magnitude, duration, and intensity, direct and indirect impacts are restated, followed by a similar summary of total cumulative impacts, which includes consideration of the direct and indirect alternative's effects. A statement on the contribution of the alternative's impacts to the cumulative impacts is made as well.

4.4.1 Recreation

The VMR Project lies in the Vulture Mine and Wickenburg Community RMZs within the Hassayampa Special Recreation Management Area. The objectives of the Vulture Mine and Wickenburg Community RMZs are to provide the public with diverse recreational opportunities, such as motorized and non-motorized trails, camping, and equestrian, hunting, hiking, biking, and OHV use recreation opportunities (BLM 2010). Approximately 78 percent of the VMR Project would be located within the Vulture Mine RMZ and 22 percent within the Wickenburg Community RMZ.

The types of projects or actions that could contribute to impacts to recreation use include utility, infrastructure, mining, wildland fire, and community development. Infrastructure and community development have generally resulted in a loss of dispersed, more primitive recreation opportunities and changes to a more urban recreation experience. The expansion of residential areas would potentially add more developed recreation facilities. In combination, past, present, and reasonably foreseeable future actions would result in long-term, direct and indirect, minor to moderate, adverse impacts on recreation use that overall would reduce scenic quality and notably transform the characteristic landscape.

Proposed Action Contribution to Cumulative Impacts

The Proposed Action would establish a recreation area with improved recreation facilities that would enhance the overall recreation experience for members of the public. The types of recreation facilities and opportunities that would be provided by the Proposed Action is that associated with a regional park and would service the Town of Wickenburg's need for a regional park in close proximity to the residents. Cumulatively, effects of the Proposed Action, when combined with past, present, and reasonably foreseeable future actions, would result in long-term, direct and indirect, moderate, beneficial cumulative impacts on the recreation use. The Proposed Action would have a moderate contribution to the cumulative effects on recreation use. Given the small lease area compared to the surrounding lands, the reduction in area available for hunting would be long-term but negligible.

No Action Alternative Contribution to Cumulative Impacts

The No Action Alternative would have indirect impacts created that would potentially result in the degradation of the existing facilities. Additionally, more user-defined areas would occur as increased use of the existing facilities forces the recreating public onto adjacent areas not designated as recreational sites. Cumulatively, effects of the No Action Alternative, when combined with past, present, and reasonably foreseeable future actions, would result in long-term, direct and indirect, minor to moderate adverse cumulative impacts on the recreation use. The No Action Alternative would have a negligible contribution to the cumulative effects on recreation use.

4.4.2 Transportation and Travel Management

Infrastructure and community development would be the types of projects or actions that could contribute to impacts to transportation and travel management and would generally improve the transportation network within the CESA. Motorized and non-motorized routes would continue to be constructed to meet the demand for increased recreation use in the CESA. In combination, past, present, and reasonably foreseeable future actions would result in long-term, direct and indirect, moderate, beneficial impacts on transportation and travel management.

Proposed Action Contribution to Cumulative Impacts

With the implementation of the Proposed Action, a portion of Vulture Mine Road would be improved to meet current roadway design standards with sufficient sight distance to achieve a 40-mph posted speed. The two new all-weather crossing of the wash, would not restrict vehicular traffic due to a storm event at this location. The Proposed Action would not alter the motorized and non-motorized uses of the existing routes on travel routes outside of the VMR Project area. However, once the recreation facilities have been fully built, their operation will result in increased traffic along the Vulture Mine Road between State Route 60 and the north/south lease areas. Increased traffic would be greatest between October and April. Within the north lease area, the Proposed Action would add non-motorized trails eliminating any potential conflicts on these new trails within the campground and day-use areas. Cumulatively, effects of the Proposed Action, when combined with past, present, and reasonably foreseeable future actions, would result in long-term, direct and indirect, moderate, beneficial cumulative impacts on transportation and travel management. The Proposed Action would have a minor contribution to the cumulative effects on transportation and travel management.

No Action Alternative Contribution to Cumulative Impacts

The No Action Alternative would result in no change to the existing transportation and travel network. Road closures would continue to occur along portions of Vulture Mine Road because of flooding and the roadway geometry would continue to create safety issues. Cumulatively, effects of the No Action Alternative, when combined with past, present, and reasonably foreseeable future actions, would result in long-term, direct and indirect, moderate, beneficial cumulative impacts on the transportation and travel management. The No Action Alternative would have a negligible contribution to the cumulative effects on transportation and travel management.

4.4.3 BLM Sensitive Species (Glided Flicker and Sonoran Desert Tortoise)

The types of projects or actions that could contribute to impacts to gilded flickers and Sonoran desert tortoises include livestock grazing, community development, OHV use, utility and infrastructure development, and vegetation management. Livestock grazing may spread invasive plants and altered the cover and composition of plant communities used by wildlife. Community development, roads, and infrastructure development would potentially consume useable habitat and fragment large blocks of habitats into smaller isolated ones. The extent of future residential and commercial development that may occur on private or State Trust lands within the CESA, or mining activities on these lands or on BLM lands, is not currently known. These activities could reduce the amount of suitable habitat for the Sonoran desert tortoise and gilded flicker, as well as increase disturbance to these species from development and/or mining activities or increased recreational use. Approximately 59 percent of the lands within the CESA for these special status species are federally-managed. In combination, past, present, and reasonably foreseeable future actions would result in long-term, direct and indirect, minor, adverse impacts on gilded flickers and Sonoran desert tortoises because the majority of the CESA would have measures implemented by the BLM to minimized potential effects to these special status species and their respective habitats.

Proposed Action Contribution to Cumulative Impacts

In the long-term, the Proposed Action would have minor, direct and indirect, adverse effects to gilded flickers and Sonoran desert tortoises and their respective suitable habitat. Cumulatively, the effects of the Proposed Action, when combined with past, present, and reasonably foreseeable future actions, would result in long-term, direct and indirect, minor, adverse cumulative impacts on gilded flickers and Sonoran desert tortoises due to the potential of further habitat disturbance and fragmentation. The Proposed Action would have a negligible contribution to the cumulative effect on these two special status species.

No Action Alternative Contribution to Cumulative Impacts

There would be no contribution to cumulative impacts on gilded flickers and Sonoran desert tortoises and their respective suitable habitat because the No Action Alternative would result in negligible impacts. As such, impacts to these two special status species for the No Action Alternative is not analyzed for cumulative impacts.

4.4.4 Visual Resources

Mining and utility, infrastructure, and community development would be the types of projects or actions that could contribute to impacts to visual resources. These actions have generally resulted in a transformation of the natural landscape to a more developed setting when viewed during both day and night conditions over the long-term. In addition wildland fire would also create a substantial change in the characteristic landscape for decades depending on the scale and intensity of the wildfire. The expansion of residential areas would expand the footprint of developed areas through the addition of structures, roads, and electrical distribution lines. The expanded developed area would be particularly evident during night time conditions, when lighting would extend for substantial distance from the area. Impacts of the combined actions would be perceived as strongest where viewed from sensitive viewing platforms, traditional areas identified by Native American tribes, and from wilderness and wilderness study areas. The implementation of the respective visual management objectives for BLM-administered lands within the CESA would help to implement measures to reduce adverse impacts. In combination, past, present, and reasonably foreseeable future actions would result in long-term, direct and indirect, minor to moderate, adverse impacts on visual resources that overall would reduce scenic quality and notably transform the characteristic landscape.

Proposed Action Contribution to Cumulative Impacts

The landscape character and scenic quality within the immediate foreground areas from the Proposed Action would be appear to be slightly altered; however, within the foreground and middleground, the characteristic landscape would be essentially unchanged. Views from the sensitive viewing platforms would also appear essentially unaltered because of the weak contrast that would be created by the Proposed Action. Cumulatively, effects of the Proposed Action, when combined with past, present, and reasonably foreseeable future actions, would result in long-term, direct and indirect, minor to moderate, adverse cumulative impacts on the visual resources. The Proposed Action would have a negligible contribution to the cumulative effects on visual resources because of the relatively small scale, weak contrast, and localized impact of the recreation facilities and roadway improvements.

No Action Alternative Contribution to Cumulative Impacts

Under the No Action Alternative, more user-defined areas would occur as increased use of the existing facilities forces the recreating public onto adjacent areas not designated as recreational sites resulting in larger areas of disturbance and the degradation of the characteristic landscape. Cumulatively, effects of the No Action Alternative, when combined with past, present, and reasonably foreseeable future actions, would result in long-term, direct and indirect, minor to moderate, adverse cumulative impacts on the visual resources. The No Action Alternative would have a negligible contribution to the cumulative effects on visual resources.

5.0 PERSONS, GROUPS, AND AGENCIES CONSULTED

5.1 List of Preparers

The following individuals were involved in the preparation of this EA:

Table 5-1. Bureau of Land Management

Name	Title	Project Expertise
Brian Buttazoni	PDO Planning & Environmental Specialist	NEPA Compliance
Chris McLaughlin	Archaeologist	Culture Resources, Tribal Consultation
Codey Carter	Wildlife Biologist	General Wildlife, BLM Sensitive Species (Animals), Migratory Birds, Vegetation
Rem Hawes	Field Manager	Reviewer
Tammy Pike	Outdoor Recreation Planner	Recreation Planning/Visual Resources
Tyler Lindsey	Realty Specialist	Lands, Reality, ROW Agreements

Table 5-2. Maricopa County Parks and Recreation Department

Name	Title	Project Expertise
R.J. Cardin	Director	Reviewer
Ken Vonderscher	Planning and Development Manager	Site And Park Amenity Development
Lauren Bromley	Parks & Open Space Planner	Research, Public Communications
Jennifer Waller	Operations Manager	Reviewer
Jennifer Johnston	Westside Superintendent	Reviewer
Jessica Bland	Park Supervisor	Reviewer

Table 5-3. Maricopa County Department of Transportation

Name	Title	Project Expertise
Dennis Smith	Right-of-Way	Right of Way agent
Frank Hakari	MCDOT Project Manager	Project Manager
Hugh Davidson	Archaeologist	Cultural Resources
Joe Pinto	Environmental Program Branch Manager	NEPA Compliance, Biological Resources
Karl Rockwell	Senior Civil Engineer	Roadway and Site Grading
Marinela Papa-Konomi	Environmental Lead	NEPA Compliance
Marty Robbins	Civil Engineer	Roadway Design

Table 5-4. Logan Simpson

Name	Title	Project Expertise
Chris Bockey	Senior Environmental Planner	Visual Resources
Diane Simpson-Colebank	Senior Environmental Planner	NEPA Compliance/Visual Resources
Erick Laurila	Principal Investigator	Cultural Resources
Ian Tackett	Senior Biologist	Biological Resources, Noxious and Invasive Weeds
Patricia R. McCabe	Senior Environmental Planner	NEPA Compliance/Quality Assurance
Roy Baker	Senior GIS Analyst	GIS Analysis
Tina Hart	Archaeologist	Cultural Resources
Vicki Casteel	Technical Editor	Editor and 508-compliance

5.2 Public Review

The "draft" EA had been made available to the public for review and comment for 30-days between November 20 and December 19, 2018. The BLM sent notification of this document's availability to approximately 230 individuals, organizations, or agencies by postcard or email. All comments have been reviewed and categorized by the BLM. Although not required for an EA by regulation, an agency may respond to and summarize *substantive* and *timely* comments received as a part of this Final EA in an appendix (BLM 2008). The BLM has provided responses to public comments in Appendix A.

5.3 Tribes, Individuals, Organizations or Agencies Consulted

The BLM consulted the following public agencies and officials, Tribes, and non-BLM persons during the development of this EA:

Government Officials and Agencies

- AGFD
- Town of Wickenburg
- Maricopa County
- SHPO

Tribes

- Hopi Tribe
- Pueblo of Zuni
- Salt River Pima-Maricopa Indian Community
- Yavapai-Apache Tribe
- Yavapai-Prescott Tribe

5.3.1 Public Contacts

A complete scoping contact list is available upon request. Those individuals and companies with mining claims or grazing permits were sent (by certified mail) a copy of the NORA and were notified regarding the segregation of lands identified for a R&PP lease. Of the 11 NORA letters that were sent out, the BLM received one letter of concern regarding maintaining access to their mining claims and mining of their claims without authorization.

5.3.2 Government Officials and Agencies Coordination

BLM has coordinated with numerous agencies (listed above), including the SHPO as required under Section 106 of the NHPA. Issues identified through consultation with other agencies are addressed in detail in the respective resource sections in Chapter 3 of this EA. The AGFD provided comments through the scoping process and recommend that the EA address potential impacts to State species identified with Arizona's State Wildlife Action Plan and develop means to avoid, minimize, or mitigate for these impacts. The AGFD also asked the BLM to consider the importance of hunting within the VMR Project area.

In addition to those individuals/companies mentioned above with mining claims or grazing permits, a copy of the NORA was sent (by certified mail) to the Maricopa County Board of Supervisors, the three representatives from District 13 in the Arizona House of Representatives, the Governor of Arizona, and Arizona's three Congressional representatives. The BLM also sent notice to the Federal Lands Hunting, Fishing, and Shooting Sports Roundtable regarding the VMR project.

5.3.3 Tribal Coordination

On June 22, 2017, the BLM initiated consultation with Tribes that have an affiliation with the VMR Project (i.e., the Hopi Tribe, Pueblo of Zuni, Yavapai-Apache Nation, Yavapai-Prescott, and Salt-River Pima-Maricopa Indian Community). To date, no Tribe has identified that the VMR Project would affect access to any sacred site within the VMR Project area. Government-to-government consultation will continue with these Tribes through project implementation in order to ensure that access to any sacred site is not adversely impacted. Copies of these letters and responses can be found in the administrative record for this project located at the BLM HFO.

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