

Overview

The lands around Superior, Arizona, and in particular the Oak Flat area above and directly east of the Apache Leap escarpment, have for decades been a popular recreation destination for camping, hiking, rock climbing, OHV driving, and other pursuits. Development of the project, along with pipelines, power lines, and other associated infrastructure, and a large, permanent tailings storage facility in the general vicinity of the mine, would inevitably result in the loss of some of the area's natural features and recreational opportunities. Some recreational opportunities would be permanently lost, while others would be displaced to other parts of the state. This section of the EIS is an effort to quantify, when possible, these anticipated changes.

3.9 Recreation

3.9.1 Introduction

Local, State, and Federal agencies provide opportunities for recreation throughout and adjacent to the project area. Recreation activities range from individual, casual, and dispersed use to organized, permitted events and designated recreation sites, for both motorized and nonmotorized recreation. Typical recreation in the project area includes driving for pleasure/vehicle touring, off-highway vehicle (OHV) use, hiking, rock climbing (including technical climbing and bouldering), camping, wildlife viewing and bird watching, horseback riding, mountain biking, and hunting (bird, small game, and big game).

One specific recreation concern has been the land exchange, and the subsequent loss of the Oak Flat Campground. Resolution Copper would keep the campground open as long as it is safe to do so (this is required by the NDAA), but eventually this area would be closed to public access. Another specific recreation concern is the loss of recreation opportunities and access from the large acreage of the tailings storage facility on Federal land, which for the duration of the mine operations would be closed to all non-mining uses and displace recreation to other locations.

This section discusses the general recreation setting and opportunities, special use activities, management for recreation (Forest Service, BLM, and Arizona State lands), hunting, recreation sites, and recreation opportunities specific to the project footprint, including motorized routes and rock climbing.

3.9.2 Analysis Methodology, Assumptions, and Uncertain and Unknown Information

3.9.2.1 Analysis Area

The spatial analysis area for potential direct and indirect effects on recreation resources includes the following: the East Plant Site and subsidence area, West Plant Site, MARRCO corridor, filter plant and loadout facility, tailings storage facility, transmission line corridors, pipeline corridors, the Silver King alternative (Alternative 4) and proposed pipelines and emergency slurry ponds, the Peg Leg alternative and proposed pipelines (Alternative 5), and the Skunk Camp alternative and proposed pipelines (Alternative 6). The analysis area for potential indirect and cumulative effects also extends to Management Area (MA) 2F of the Globe Ranger District of the Tonto National Forest; Passages 15, 16, 17, and 18 of the Arizona National Scenic Trail; and Game Management Units (GMUs) 24A, 24B, and 37B, as shown in figure 3.9.2-1. The temporal analysis area for direct and indirect effects is divided into three general phases: construction (mine life years 1 through 9), operations (years 6 through 45), and closure/reclamation (years 46 through 51 to 56).

3.9.2.2 Methodology

Recreation activities are interrelated and connected to other natural and social resources and resource uses. Therefore, changes to other resources (e.g., access or scenic resources) can affect recreational opportunities and use. In the following analysis we discuss actions that would alter or change the recreation settings in the analysis area or that

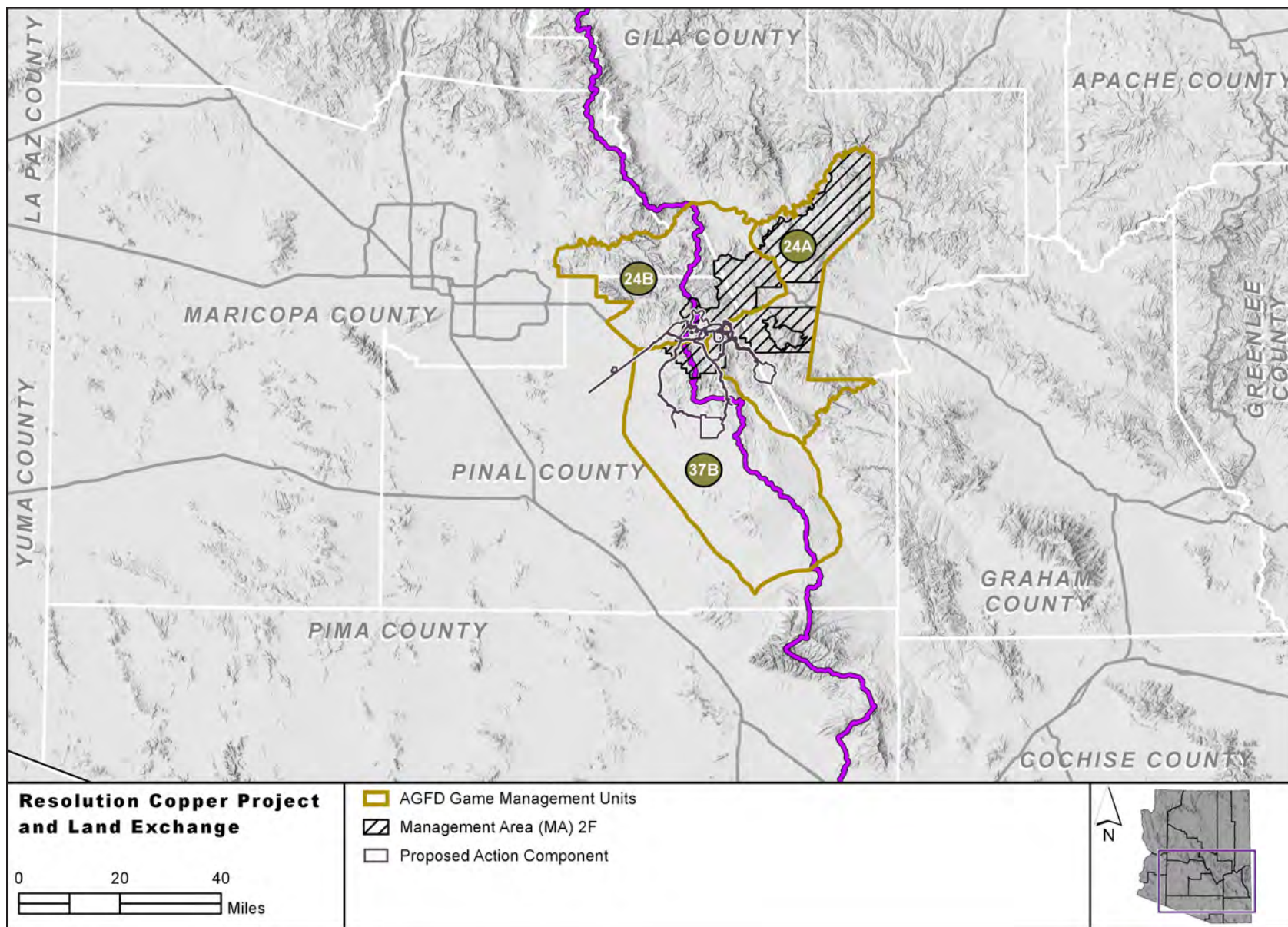


Figure 3.9.2-1. Recreation analysis area

could affect the capacity of that landscape setting to provide certain recreational opportunities. We quantify effects where possible.

Short-term impacts would primarily be associated with the construction of project infrastructure, would last as long as a particular construction activity, and would largely cease after roughly mine year 9. Long-term impacts would primarily be associated with mine operation, closure, reclamation, and post-closure, and depending on the impact, could last from mine year 9 to perpetuity.

3.9.3 Affected Environment

3.9.3.1 Relevant Laws, Regulations, Policies, and Plans

A complete listing and brief description of the legal authorities, reference documents, and agency guidance used in this recreation effects analysis may be reviewed in Newell (2018e).

3.9.3.2 Existing Conditions and Ongoing Trends

General Setting

Major recreational attractions in the analysis area include the Apache Leap escarpment, Oak Flat, Picketpost Mountain, Boyce Thompson Arboretum, Arizona Trail, Queen Creek Canyon, Devil’s Canyon, Hewitt Station Road, Reavis Canyon, Gila River, and Dripping Spring Mountains. A number of developed and dispersed campgrounds, day-use areas, trailheads, roads, and trails exist for both motorized and nonmotorized recreational use in the analysis area. With private funding from multiple sources, the Tonto Recreation Alliance maintains the Hewitt Station OHV trails in cooperation with the Forest Service. Dispersed and developed recreation in the analysis area is managed by the Forest Service, BLM, State of Arizona, Gila County, and Pinal County. Tonto National Forest lands (Globe Ranger District) dominate the northern portion of the analysis area, and BLM lands (Tucson

Primary Legal Authorities Relevant to the Recreation Effects Analysis

- Secretarial Order 3373
- Multiple-Use Sustained-Yield Act of 1960, as amended (16 U.S.C. 528)
- Wilderness Act of 1964 (16 U.S.C. 1131–1136), as amended by the Arizona Wilderness Act of 1984
- National Trails System Act of 1968 (PL 90-543; 16 U.S.C. 1244(a)), as amended by the Arizona National Scenic Trail Act
- National Forest Management Act of 1976 (16 U.S.C. 1600)
- Tonto National Forest Land and Resource Management Plan

Field Office) dominate the southern portion of the analysis area (figure 3.9.3-1).

NFS roads are located throughout the analysis area. Tonto National Forest is currently preparing a draft Supplemental EIS in compliance with the Final Travel Management Rule, which requires that all NFS lands designate roads, trails, and areas for motor vehicle travel. This would restrict off-road motor vehicle use and designate roads and motorized trails open to the public, in addition to designating OHV areas, big-game harvesting retrieval rules, fuelwood collection rules, and dispersed camping rules (U.S. Forest Service 2016f). NFS roads will be shown on the Tonto National Forest Motor Vehicle Use Map. The Motor Vehicle Use Map is anticipated to be released to the public once the Final Supplemental EIS is released and final ROD is signed by the Forest Supervisor.

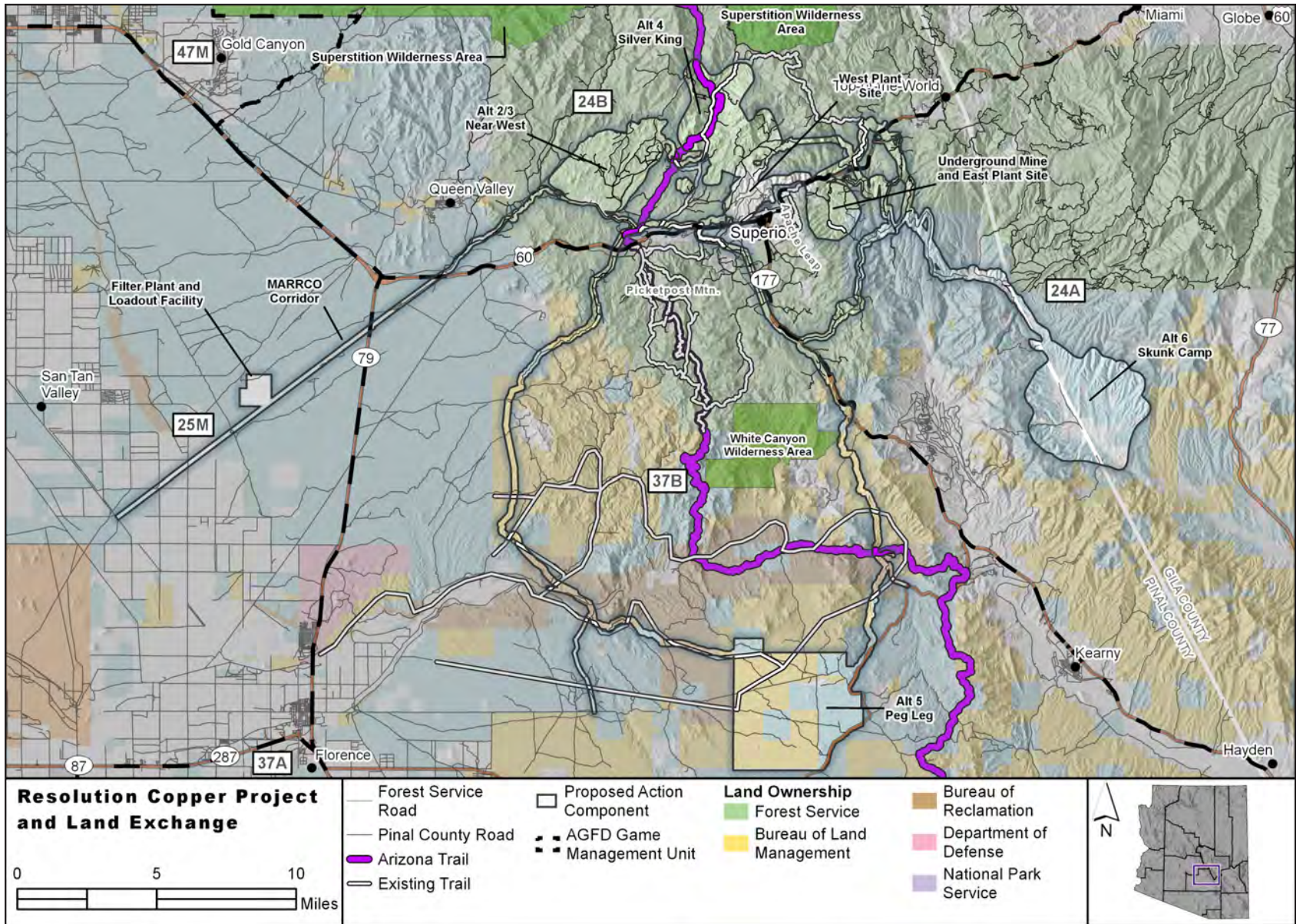


Figure 3.9.3-1. Existing recreation setting overview

The Gila-Pinal Scenic Road is a designated Scenic Byway, running along U.S. 60 from Superior to Miami, Arizona. ADOT designated the Gila-Pinal Scenic Road as a scenic road on June 20, 1986. The route travels throughout the Sonoran Desert life zone at the desert floor and moves upward through four biotic communities. Riparian woodlands are found along the many features such as Queen Creek, Arnett Creek, and Pinto Creek (America’s Scenic Byways 2018).

The Legends of Superior Trails (LOST) are located along U.S. 60, providing a connection from the Arizona Trail to Superior. A portion of LOST is on lands owned by Resolution Copper. LOST is 6 miles long (with a few short side trails) and includes interpretive signage along the route (U.S. Forest Service 2013a).

Pinal County has proposed features and designations in their 2007 Open Space and Trails Master Plan, some of which would occur within the analysis area. OHV trails, trail corridors, as well as planned or proposed open space designations are intended to provide reception opportunity and connectivity throughout Pinal County. In addition, a local user group has proposed a recreation plan that coincides with part of the analysis area; this plan features new trailheads, motorized roads, motorized trails, and non-motorized trails (figure 3.9.3-2).

Special Use Activities

The Tonto National Forest manages its special use permit pursuant to 36 CFR 251, and the analysis area is used by a number of permitted recreation and commercial special use activities. Recreation events are commercial activities requiring temporary, authorized use of NFS land. Commercial activities may consist of outfitter and guide services, filming, photography, or campground management. Commercial activity on Tonto National Forest lands occurs when an entry or participation fee is charged by the applicant, and the primary purpose is the sale of a good or service. Most of these applicants offer guided tours that provide the safety, knowledge, and experience of qualified guides with quality equipment, while others provide in-demand equipment and basic instruction for visitors to explore on their own. Activities include hiking, camping, climbing, canyoneering, horseback riding, jeep tours,

motorcycle riding, utility task vehicle (UTV), OHV, and ATV tours, road biking, and mountain biking. Each company follows strict operating procedures, safety practices, and Forest Service regulations to protect the environment. Additionally, group recreation events may also require a special use permit (U.S. Forest Service 2013b).

Recreation Opportunity Spectrum

The recreation setting varies on the Tonto National Forest lands throughout the analysis area, illustrated by the different recreation opportunity spectrum (ROS) classifications that occur within the analysis area: semiprimitive nonmotorized, semiprimitive motorized, roaded natural, and urban. Table 3.9.3-1 and figure 3.9.3-3 give an overview of the ROS in the analysis area.

Table 3.9.3-1. Recreation opportunity spectrum acreages

ROS Class	Acres in the Analysis Area
Semiprimitive nonmotorized	5,576
Semiprimitive motorized	21,226
Roaded natural	10,213
Urban	10,180

Note: Acreages may not total due to rounding and/or unclassified lands; acreages that are common among alternatives are not double-counted.

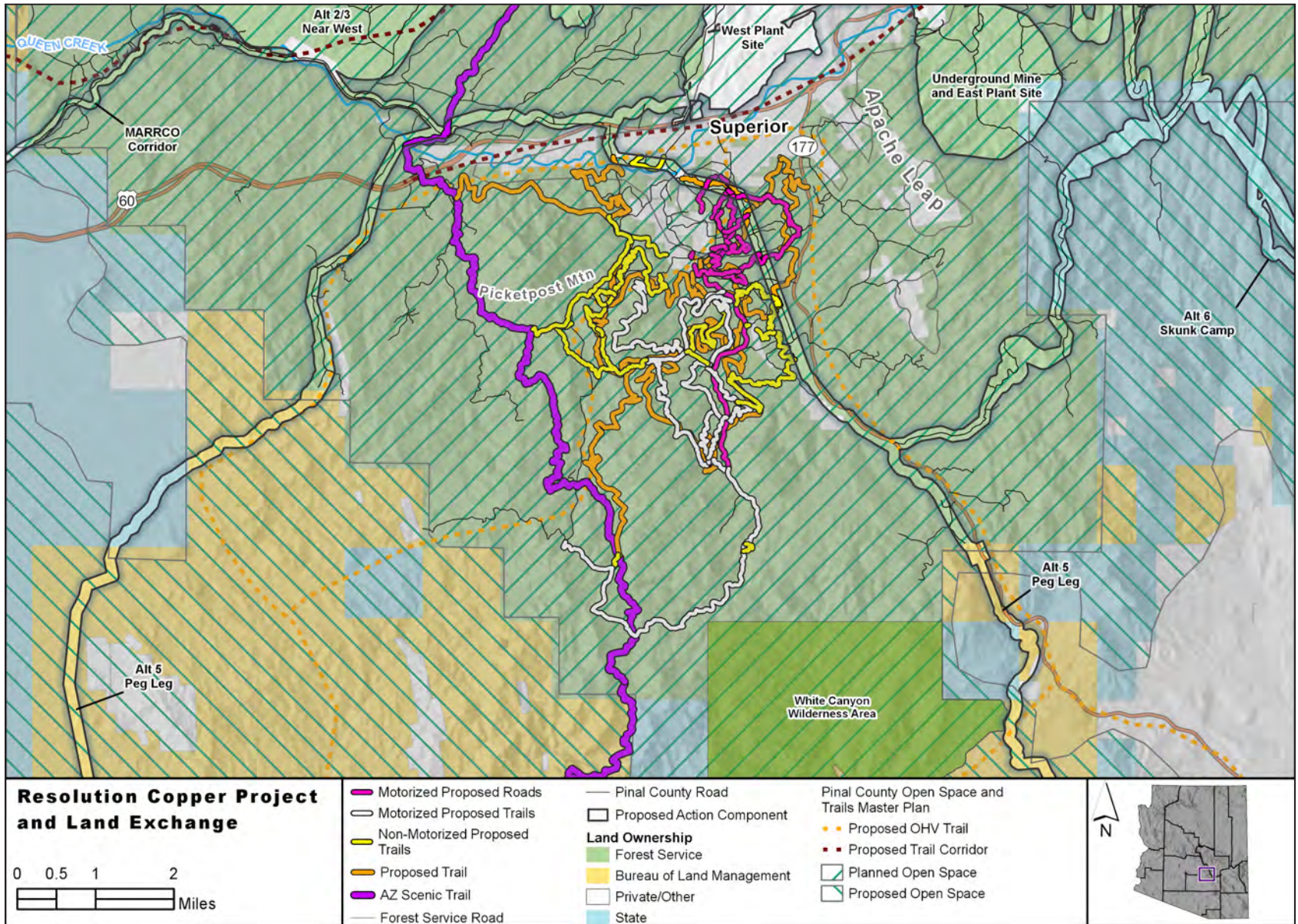


Figure 3.9.3-2. Proposed recreation setting overview

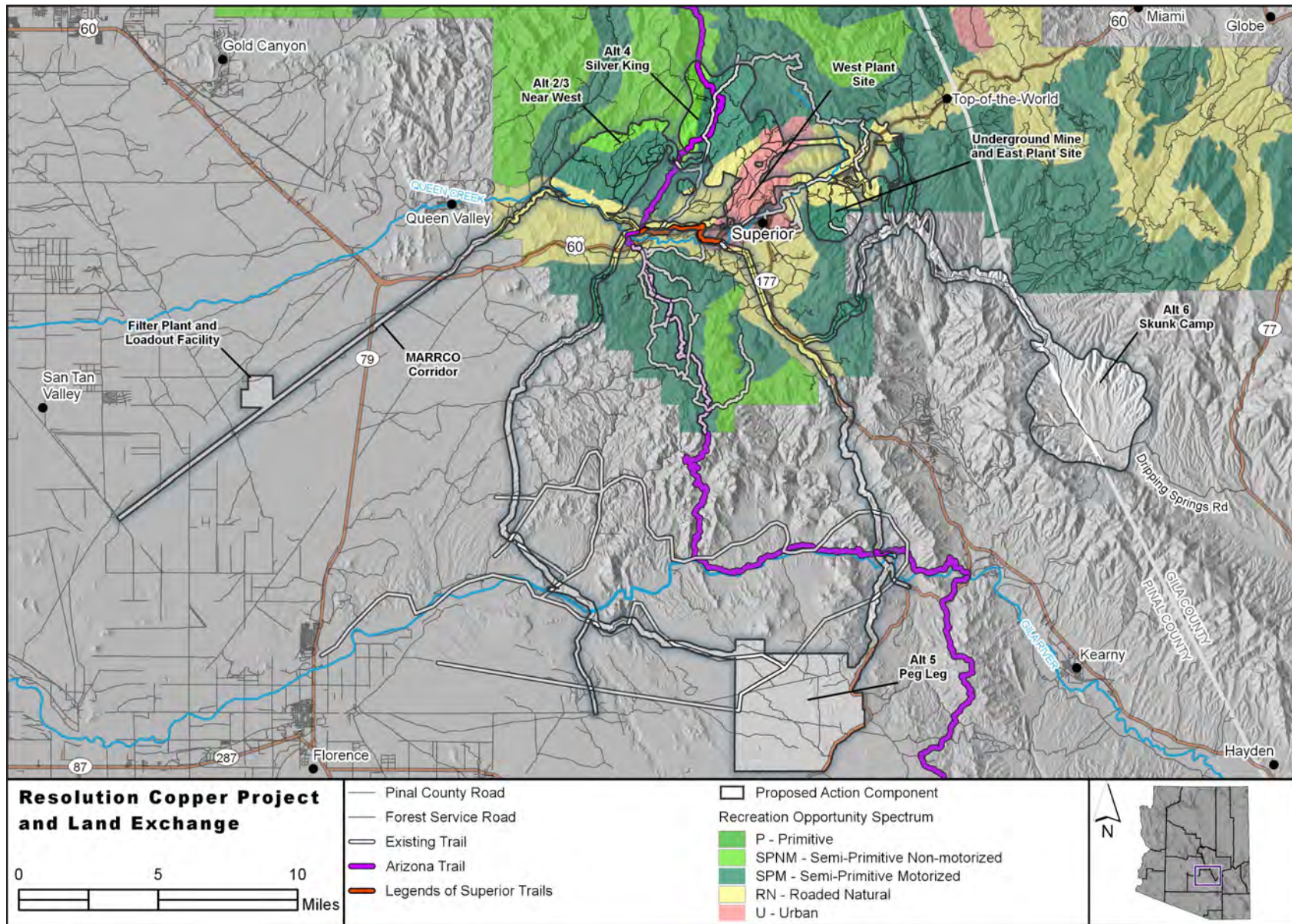


Figure 3.9.3-3. Existing recreation opportunity overview

BLM Recreation Management

The BLM currently uses an outcomes-focused recreation management framework that focuses on targeted outcomes gained from visitors engaging in recreational experiences (see BLM Handbook H-8320-1, “Planning for Recreation and Visitor Services” (Bureau of Land Management 2014)). The BLM-managed public lands provide visitors with a wide variety of outdoor recreation opportunities (activities and settings) to attain desired experiences and personal benefits. Public lands are designated as a Special Recreation Management Area (SRMA) or Extensive Recreation Management Area (ERMA). ERMAs constitute all public lands outside specially or administratively designated areas (e.g., National Land Conservation System units or ACECs, respectively), typically areas where recreation is non-specialized, dispersed, and does not require intensive management. Recreational activities are typically subject to fewer restrictions in ERMAs. There are no SRMAs in the analysis area; the nearest SRMA is the Gila River SRMA, located 10 miles to the east. All BLM-managed lands within the analysis area are managed as ERMAs.

Similar to the Forest Service, special recreation permits are another tool the BLM uses to manage recreational use of public lands. Special recreation permits are authorizations that allow for commercial, competitive, and group recreation uses of BLM-managed public lands and related waters.

BLM routes are located within the analysis area. These routes are used similar to the frequency and conditions as described for NFS routes. The BLM Tucson Field Office is currently preparing a draft travel management plan to designate roads, trails, and areas for motor vehicle travel (i.e., open, limited, or closed).

State Trust Land

Arizona State Trust land is present throughout portions of the analysis area. ASLD lands are not public lands; they are lands managed by ASLD to generate revenue for State purposes. However, recreational uses are allowed by permit and are open to hunting and fishing with a

valid license. Recreation (such as hiking, camping, or motorized travel) may be allowed with a recreational permit available through the ASLD. However, some trails (such as the Arizona Trail) are available for public use without a permit.

Hunting

Hunting opportunities are available on public lands and lands managed by the ASLD within the analysis area, including AGFD GMUs 24A, 24B, and 37B (see figure 3.9.2-1). Hunted species vary greatly due to the high diversity of habitat in the analysis area, from Sonoran desertscrub to chaparral and conifer forests on the highest elevations. Commonly hunted species include but are not limited to: mule deer (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virginianus*), javelina (*Pecari tajacu*), mountain lion (*Puma concolor*), black bear (*Ursus americanus*), bighorn sheep (*Ovis canadensis nelsoni*), cottontail rabbit (*Sylvilagus audubonii*), dove (*Zenaida asiatica* [white-winged]; *Streptopelia decaocto* [collared]), and Gambel’s quail (*Callipepla gambelii*) (Arizona Game and Fish Department 2018b, 2018c, 2018d). Hunting primarily occurs in the fall and winter.

Hunting is permitted throughout most of the analysis area under AGFD laws and rules, established in ARS 17, Chapter 3, “Game and Fish,” Article 17-309. It is unlawful for a person to discharge a firearm within 0.25 mile of an occupied farmhouse or other residence, cabin, lodge, or building without permission of the property owner or resident. Specifically, hunting is not permitted within 0.25 mile of occupied private parcels throughout the unit(s).

Recreation Sites

ARIZONA NATIONAL SCENIC TRAIL

The Arizona Trail, which is more than 800 miles long, was designated a national scenic trail in a 2009 amendment to the 1968 National Trails System Act (Arizona Trail Association 2018). The National Trails System Act of 1968, as amended, establishes national scenic trails to

provide maximum outdoor recreation potential and for the conservation and enjoyment of scenic, historic, natural, or cultural qualities of the areas which they traverse. The Arizona Trail is a primarily primitive, nonmotorized long-distance route that preserves and showcases the unique and diverse scenic, natural, historic, and cultural treasures of Arizona and our nation. The Arizona Trail experience provides opportunities for quality recreation, self-reliance, and discovery within a corridor of open space defined by the spectacular natural landscapes of the state (U.S. Forest Service 2018b).

Four trail “passages” are located within the analysis area, stretching from the Tortilla Mountains in the south to the Superstition Mountains in the north (see figure 3.9.3-1). The four passages of the Arizona Trail total approximately 84 miles of trail through the analysis area. These are Passage 15 – Tortilla Mountains; Passage 16 – Gila River Canyons; Passage 17 – Alamo Canyon; and Passage 18 – Reavis Canyon.

APACHE LEAP SPECIAL MANAGEMENT AREA

The Apache Leap SMA straddles the Apache Leap escarpment, covering 839 acres (figure 3.9.3-4; also see figure 2 of “Apache Leap Special Management Area Management Plan”), and was established in 2017 (U.S. Forest Service 2017c). The plan components form strategic direction programmatic in nature and do not authorize specific projects or activities. The plan may constrain the agency from authorizing or carrying out certain projects and activities within the SMA or dictate the manner in which they may occur. The plan would not regulate use by the public but may guide future project or activity decisions that regulate use by the public under 36 CFR Part 261 Subpart B (prohibitions in areas designated by orders). Future proposed actions within the Apache Leap SMA would be subject to the appropriate level of environmental review and analysis, public involvement, and pre-decisional administrative review procedures.

No mining activities are proposed within the SMA. However, authorized activities under the NDAA include installing seismic monitoring equipment, as well as signage and other public safety notices, and operating an underground tunnel and associated workings between the

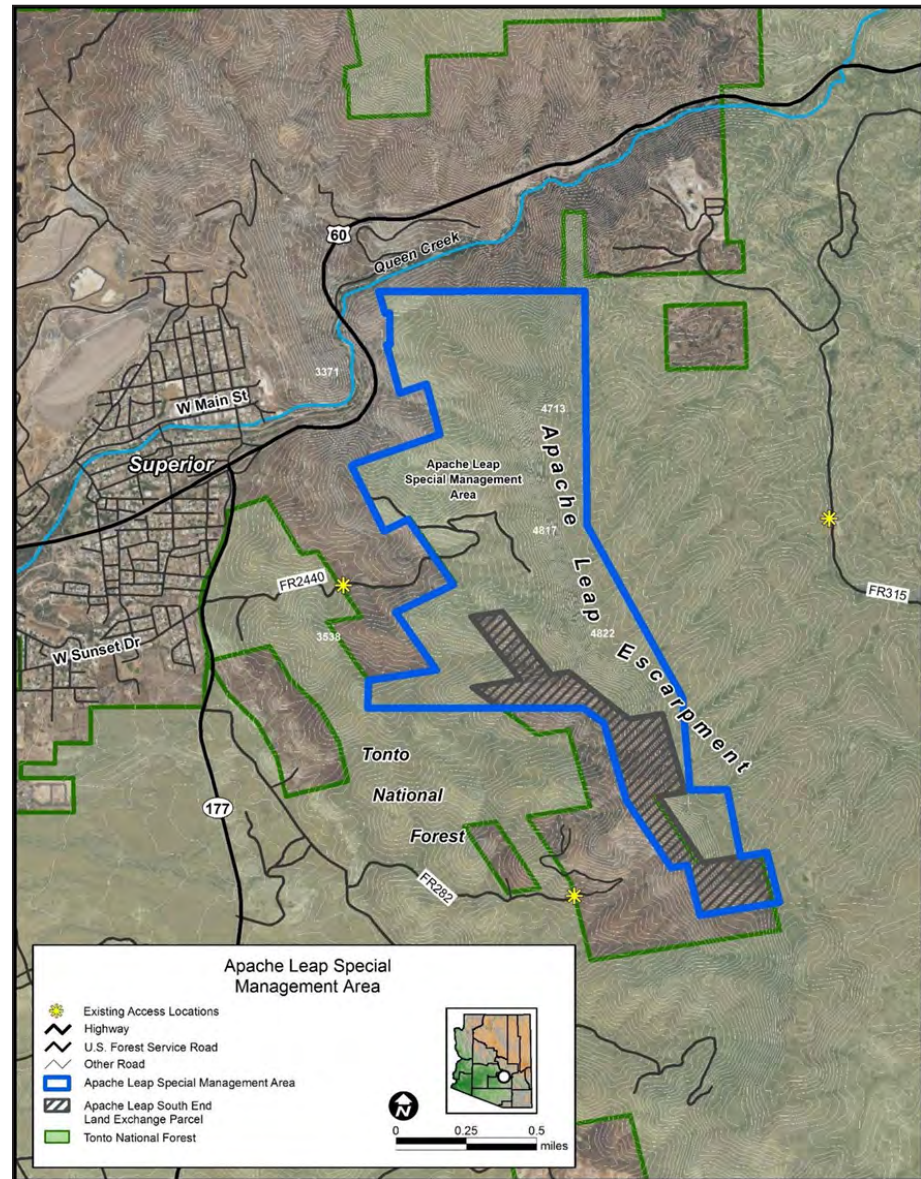


Figure 3.9.3-4. Overview of Apache Leap Special Management Area

East Plant Site and West Plant Site, which would extend beneath the Apache Leap escarpment.

OAK FLAT CAMPGROUND

The Tonto National Forest manages the Oak Flat Campground, which provides approximately 20 campsites (available first come, first served) and two vault toilets (U.S. Forest Service 2018c). The campground is situated along the Gila-Pinal Scenic Road in the rolling hills near Devil's Canyon (figure 3.9.3-5) and hosts a large stand of mature oak trees that provide natural shade. The surrounding area is known for its numerous recreational bouldering opportunities. Families and individuals like to come to this site for its natural desert beauty and rock climbing. Oak Flat Campground is also an important birding destination and considered an eBird "hotspot" with approximately 183 different species reported by birders to eBird (Arizona Game and Fish Department 2018e).

Mine Area and Associated Infrastructure

MOTORIZED ROUTES

The analysis area comprises portions of both the Mesa and Globe Ranger Districts. Generally, recreation opportunities in these areas are the same, ranging in elevation from a low point of approximately 1,500 feet along the western boundary of the analysis area (the terminus of the MARRCO corridor) up to the high point of the analysis area, King's Crown Peak (north of the East Plant Site) at approximately 5,500 feet. Commonly used NFS roads within the analysis area are described here (see also figure 3.9.3-1).

NFS Road 2440—**NFS Road 2440**, also known as the Cross Canyon Road, extends approximately 1.75 miles from SR 177 on the east side of Superior, Arizona, into the western portion of the Apache Leap SMA. The road is gated at its junction with private land approximately 0.5 mile from SR 177. Public users park at this gate and walk the roadbed, through the private land parcel owned by Resolution Copper, for the remaining 1.25 miles to enter the western portion of the Apache Leap

SMA. From various points along this route, users leave the roadway and travel overland farther into the Apache Leap SMA for dispersed recreation opportunities.

Resolution Copper holds a permit for the use of NFS Road 2440 to access two groundwater monitoring wells (MB-03 and QC-04) within the Apache Leap SMA, as permitted by the Resolution Copper pre-feasibility plan (U.S. Forest Service 2010b). Resolution Copper conducts minimal maintenance on the road to provide the level of access necessary to collect monitoring data and maintain the wells.

NFS Road 282—**NFS Road 282** extends approximately 1.75 miles from SR 177 toward the southwestern portion of the Apache Leap SMA. The road is gated at its junction with private land. Users park vehicles at this gate and access the southwestern portion of the Apache Leap SMA on undesignated user-created routes that cross private lands.

U.S. 60/Queen Creek Corridor—Users access the northern and northwestern portion of the Apache Leap SMA from several undesignated nonmotorized access routes that originate along U.S. 60 east of Superior, Arizona. Users navigate the steep slopes to climb out of the Queen Creek drainage and can also access the Apache Leap SMA to the south via undesignated trails. Access from these points requires users to cross private (owned by Resolution Copper) lands to enter the area. Scenic driving is also common along this corridor, which is designated as the Gila-Pinal Scenic Road.

NFS Road 315—**NFS Road 315** is the primary access into Oak Flat and the Oak Flat Campground. Several undesignated parking areas along NFS Road 315 provide access to the eastern portion of the Apache Leap SMA. Users travel overland on multiple, nonmotorized undesignated user-created routes to the top of the Apache Leap escarpment. These routes provide the primary access for rock climbing in the Apache Leap area, as well as Lower Devil's Canyon, Hackberry Canyon, and the Refuge.

NFS Road 357/NFS Road 650 (aka Hewitt Station Road/Happy Camp Road)—NFS Road 357 and NFS Road 650 are the primary access to the Tonto National Forest lands north of Superior and south of the

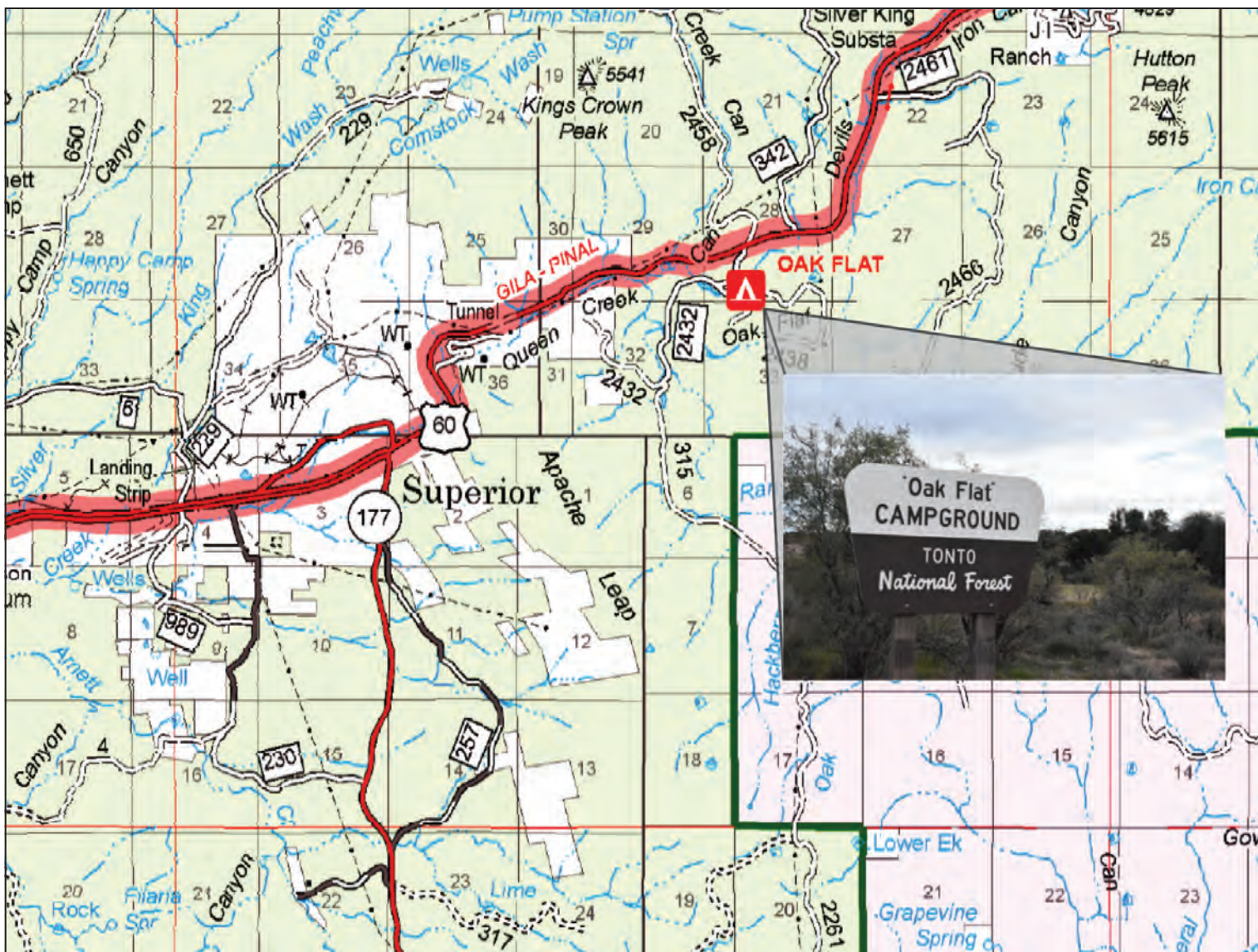


Figure 3.9.3-5. Location of Oak Flat Campground

Superstition Wilderness. These routes are often combined with other nearby routes to form a loop, popular for OHV users; however, access via NFS Road 357 has been restricted by gated entry at the private property boundary. These routes also provide the primary access to the Arizona Trail, and lead to trailheads to the popular Roger's and Reavis Canyon trails.

NFS Road 342—**NFS Road 342** is a popular OHV route that may also be used in conjunction with NFS Road 650 for a loop route accessed from U.S. 60 (see figure 3.9.3-1).

ROCK CLIMBING

The analysis area includes unique geological features that offer bouldering as well as technical, sport, traditional (“trad”), and top-rope rock climbing opportunities (Karabin Jr. 1996; Oliver 2017). Before 2004, the public could drive vehicles and park unimpeded along the Magma Mine Road and the area that is now the East Plant Site to access climbing areas in Oak Flat and Apache Leap. A portion of this area is now closed to public access due to safety concerns; however, limited parking is still available along the Magma Mine Road near Euro Dog Valley, the Mine Area, and Apache Leap. Resolution Copper has been working with local climbing groups since 2004 to establish legal access to their private lands that would still be available for climbing. A final agreement was signed that keeps the Pond and Atlantis climbing areas, which are on Resolution Copper–owned property, perpetually open for public use. Figure 3.9.3-6 illustrates the known climbing opportunities in the analysis area.

Oak Flat and Euro Dog Valley

The Oak Flat bouldering area is 0.5 to 1 mile southwest of Oak Flat Campground, east of Magma Mine Road (NFS Road 315) (see figure 3.9.3-6) and is managed by the Forest Service. Euro Dog Valley, Oak Flat East, and Oak Flat West all offer freestanding boulders and small cliff-lined canyons, with over 1,000 documented boulder routes and problems. The Phoenix Bouldering Contest and Phoenix Boulder Blast

were held in Oak Flat from 1989 through 2004, and various other climbing and/or bouldering competitions have been held in this area as recently as 2016, including the Queen Creek Boulder Competition. These events drew competitive climbers from all over the world.

Mine Area

The Mine Area is immediately south of the East Plant Site and east (above) Apache Leap (see figure 3.9.3-6) and is on lands owned by Resolution Copper. Public access to the Mine Area has been limited since operations resumed at the former Magma Mine in the mid-2000s. Public users are not permitted beyond the security gate along Magma Mine Road. The Mine Area contains over 100 documented short sport routes (25–50 feet). Some portions of the Mine Area (nearest U.S. 60) are available to registered users.

Devil's Canyon

Northern Devil's canyon is located north of U.S. 60 (see figure 3.9.3-6). Upper Devil's Canyon is accessed from Oak Flat Campground by way of NFS Road 2438. Lower Devil's Canyon is accessed from Oak Flat Campground by way of NFS Road 315. There are over 400 documented climbing routes in Devil's Canyon, with a mixture of sport and trad routes on walls (including the 200-foot tall Nacho Wall), as well as numerous freestanding pinnacles and towers.

Apache Leap

Apache Leap contains many of the tallest climbing routes in the Queen Creek area. Climbing opportunities consist of mostly traditional routes, but also 80 bolted routes and 16 boulder problems. Popular established routes include the Lectra Area, Lost Horizon, Rim Gym, Staging Area, Punk Rock, Headstone, Citadel, The Draw, Musicland Wall, Geronimo Area, Skyscraper Area, and The Fin (Queen Creek Coalition 2015). Climbing routes in the Apache Leap area are accessed by way of Magma Mine Road (NFS Road 315). The majority of these routes are located on the escarpment (see figure 3.9.3-6) and are accessed from parking areas

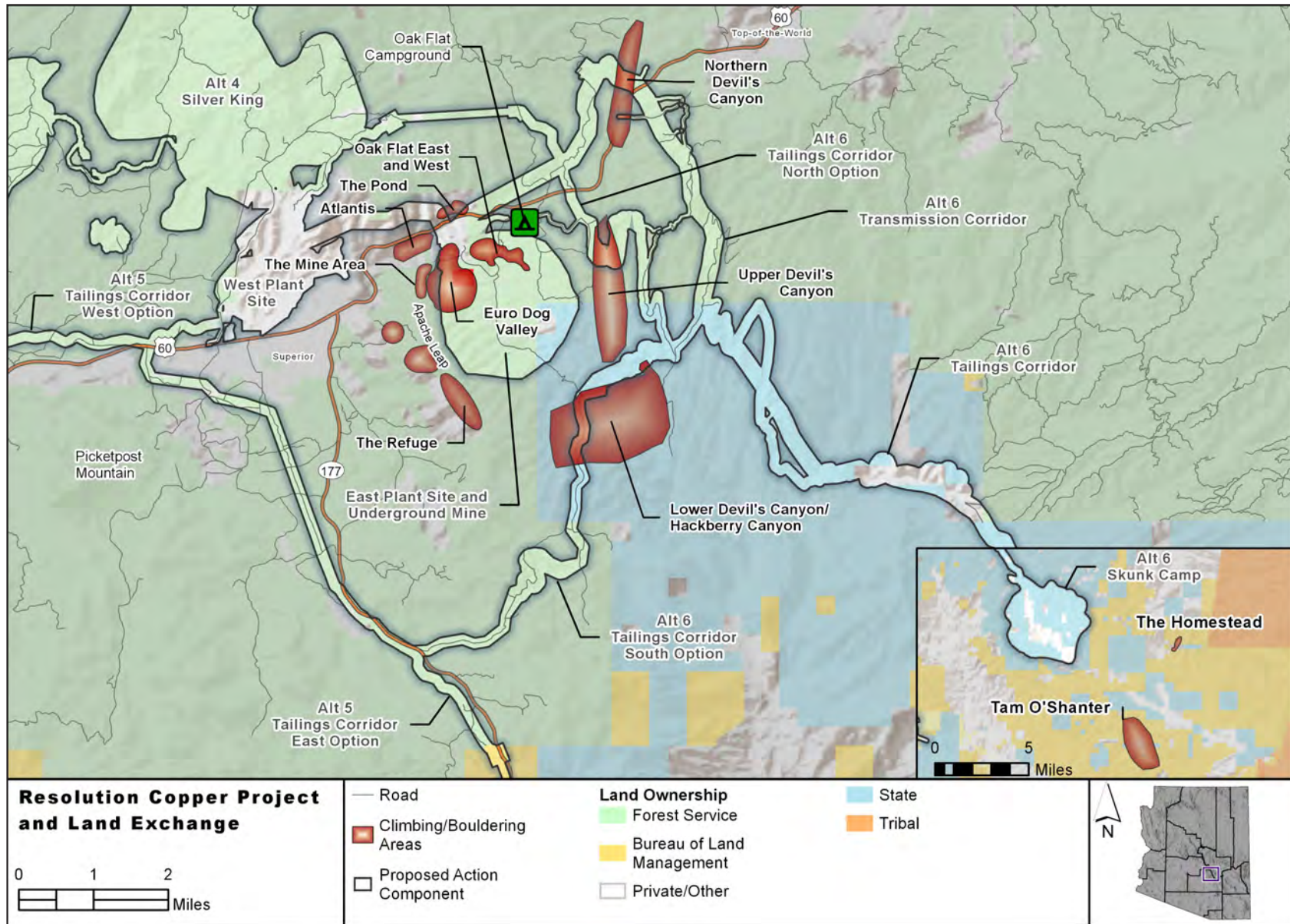


Figure 3.9.3-6. Climbing opportunities overview

on NFS Road 315. Climbers hike to the east side of the Apache Leap SMA via overland undesignated routes and rappel into the climbing areas. Other areas in the central portion of the Apache Leap SMA, including a popular route called The Fin, are accessed via NFS Road 2440 and overland undesignated routes (U.S. Forest Service 2017c).

Resolution Copper Private Land (Queen Creek Canyon)

Generally, popular sport, crack, and crag climbing routes are available along or accessed from U.S. 60 northbound from the bridge and underground tunnel, north to the top of the canyon (a stretch of approximately 2 miles). The Pond and Atlantis can be accessed from within Queen Creek Canyon, along U.S. 60 (see figure 3.9.3-6). These areas, along with the Mine Area and other climbing areas containing established climbing routes, are on Resolution Copper property and now require that users register and sign a waiver via a free, online registry to gain legal access (Resolution Copper 2018). Parking is located along U.S. 60 at various pull-offs along the highway, particularly on the north side of the tunnel.

3.9.4 Environmental Consequences of Implementation of the Proposed Mine Plan and Alternatives

Impacts that occur under more than one alternative are discussed under the first applicable alternative and are then referenced under other pertinent alternatives.

3.9.4.1 Alternative 1 – No Action

Under the no action alternative, the project would not be developed, and existing recreational uses would continue under current conditions. The settings, landscape, recreation sites, roads, and trails within the analysis area would continue to be affected by current conditions and ongoing actions. Oak Flat would remain open to public use. Routine maintenance

of NFS roads, the Arizona Trail, and other recreation resources would continue.

Access to public land in the area would continue; rock climbing and bouldering opportunities in the Mine Area, Euro Dog Valley, and Oak Flat would remain available. Recreation opportunities in the analysis area would continue to be managed consistent with the ROS setting indicators and objectives of the forest plan. Hunting opportunities would not change in the analysis area. Motorized routes would not be closed as a result of any Resolution Copper mining activities, subject to existing rights and permits.

3.9.4.2 Impacts Common to All Action Alternatives

Impacts that would occur under each of the action alternatives are presented in this section. Regardless of action alternative, the principal adverse impact on recreational users of public lands as a result of the proposed action or alternatives would be through closure of lands to public access, meaning both direct loss of recreational use of the lands themselves and potential loss of access to adjacent lands because movement across these areas would become prohibited. Other impacts on recreational users may occur through increased traffic, increased noise, changes to the scenery or visual qualities of certain areas, and other mine-induced effects. Such effects are noted in the following text and addressed in greater detail in the portions of chapter 3 relevant to each of those resources.

A number of existing Resolution Copper–owned properties in the recreation analysis area are, by and large, already closed to public access: these include the privately held portions of the East Plant Site, the West Plant Site, and the filter plant and loadout facility. Thus, in the impact analyses presented in the sections that follow, loss of access to or across these private lands is not considered as a change from current, existing conditions. However, potential expansion of any of these facilities onto Tonto National Forest or other public lands as a result of project approval is considered a change from current conditions and thus an impact. So, too, is potential development of new facilities or physical alteration of lands that would result in closure of lands to recreational

use or through-access, such as construction at any of the tailings storage facility locations or development of the anticipated subsidence area at Oak Flat.

The following project components that are common to all action alternatives are considered in the impact analyses: tailings storage facility including fence line boundary; subsidence area; East Plant Site expansion onto Tonto National Forest lands; MARRCO corridor; and conveyance of the Oak Flat Federal Parcel to Resolution Copper through the NDAA-mandated land exchange. It should be noted that tailings pipelines corridors and power transmission line corridors, though part of mine facilities under any alternative, are not considered in this analysis as closed to public crossing or other access.

Components or differing configurations of components that are unique to one or more alternatives are described and addressed in the portions of the analysis specific to each alternative.

Effects of the Land Exchange

The land exchange would have significant effects on recreation. The Oak Flat Federal Parcel would leave Forest Service jurisdiction, and with it myriad recreational opportunities currently available and used by the public. The Oak Flat bouldering area offers freestanding boulders and small cliff-lined canyons with over 1,000 documented boulder routes and problems. The area has held various bouldering and climbing competitions as recently as 2016 and the Phoenix Bouldering Contests and Phoenix Boulder Blasts through 2004; all climbing and bouldering areas would be lost when the Oak Flat Federal Parcel transfers out of Federal ownership. Additional recreational activities that would be lost include camping at the Oak Flat Campground, picnicking, and nature viewing. The campground currently provides approximately 20 campsites and a large stand of native oak trees. It also is boasted as an important birding destination with approximately 183 different species reported by birders.

The offered lands parcels would enter either Forest Service or BLM jurisdiction. The eight parcels would have beneficial effects; they

would become accessible by the public and would be managed by the Federal Government for multiple uses, which could include recreational activities. Some parcels, specifically Cave Creek, Tangle Creek, and Turkey Creek, all have trails leading directly into them. Under Federal management, these parcels could provide an extension of current recreational activities in those areas. Specific uses would be identified by the respective agency upon conduction of the land exchange; however, the Forest Service and BLM have the capacity to also plan for dispersed, developed, and wilderness recreation opportunities on the offered lands parcels.

Forest Plan Amendment

The Tonto National Forest Land and Resource Management Plan (1985b) provides guidance for management of lands and activities within the Tonto National Forest. It accomplishes this by establishing a mission, goals, objectives, and standards and guidelines. Missions, goals, and objectives are applicable on a forest-wide basis. Standards and guidelines are either applicable on a forest-wide basis or by specific management area.

A review of all components of the 1985 forest plan was conducted to identify the need for amendment due to the effects of the project, including both the land exchange and the proposed mine plan (Shin 2019). A number of standards and guidelines (18) were identified applicable to management of recreation resources. None of these standards and guidelines were found to require amendment to the proposed project, either on a forest-wide or management area-specific basis. For additional details on specific rationale, see Shin (2019).

While standards and guidelines were not found to require amendment, the project would have effects on the recreation resources within the Tonto National Forest by modifying the acres under ROSs. Table 3.9.4-1 lists the acres of the project footprint that would fall within each ROS category within each of the affected management areas. Also shown is the percentage this acreage represents of the total ROS category in each management area. Overall, for the semi-primitive category most likely to be affected by mining impacts (note there is no primitive acreage within

Table 3.9.4-1. Effect of the project on the recreation opportunity spectrum within Management Areas 2F and 3I (acres)

Management Area/ROS*	Alternative 2 and 3	Alternative 4	Alternative 5 (East Option)	Alternative 5 (West Option)	Alternative 6 (North Option)	Alternative 6 (South Option)
2F						
R	-	-	-	-	-	-
RN	1,488 (1.5%)	1,950 (2%)	1,849 (1.9%)	1,325 (1.4%)	1,612 (1.7%)	1,926 (2%)
SPM	2,012 (<1%)	5,548 (2.4%)	986 (<1%)	1,173 (<1%)	1,665 (<1%)	1,617 (<1%)
SPNM	-	3 (<1%)	1,209 (1.8%)	-	2 (<1%)	2 (<1%)
U	1,126 (8.6%)	1,829 (14%)	-	1,153 (8.8%)	1,261 (9.6%)	1,209 (9.2%)
3I						
R	-	-	-	-	-	-
RN	727 (1.1%)	128 (<1%)	128 (<1%)	128 (<1%)	128 (<1%)	128 (<1%)
SPM	3,276 (2.6%)	-	-	-	-	-
SPNM	-	-	-	-	-	-
U	-	-	-	-	-	-

Note: Table presents acres of project footprint within each ROS, and percentage of that ROS that could be changed by the project (in parentheses)

* ROS classifications: R = roaded, RN = roaded natural, SPM = semiprimitive motorized, SPNM = semiprimitive nonmotorized, U = urban

these management areas), changes range up to 2 percent for MA 2F (non-motorized category), and up to 2.6 percent for MA 3I (motorized category). Implementation of the project would require amending the forest plan by changing the percentages of areas with semi-primitive ROS categories within management areas 2F and 3I.

Summary of Applicant-Committed Environmental Protection Measures

A number of environmental protection measures are incorporated into the design of the project that would act to reduce potential impacts on recreation. These are non-discretionary measures and their effects are accounted for in the analysis of environmental consequences.

Applicant-committed environmental protection measures by Resolution Copper include the following:

- Developing traditional and sport climbing open to the public on Resolution Copper property outside of the mining footprint through agreement with Queen Creek Coalition. Further detail can be found on the Queen Creek Coalition website and the agreement with REI.
- Developing a concentrate pipeline corridor management plan to reestablish crossing on the Arizona Trail after construction. Further detail can be found in the Concentrate Pipeline Corridor Management Plan (M3 Engineering and Technology Corporation 2019b).

To prevent exposure of the public to geological hazards, Resolution Copper would use fencing, berms, locking gates, signage, natural barriers/steep terrain (25 to 30 percent or greater), and site security measures to limit access roads and other locations near areas of heavy recreational use.

General Setting

It is possible that users could be displaced or opportunities for public recreation activities could be diminished in portions of the action alternatives area where public access is restricted. The subsidence area (approximately 1,560 acres of NFS lands, prior to the land exchange) would be lost for public access in perpetuity. Based on current knowledge, the steep and unstable slopes of the subsidence area are projected to be unsafe for future public access.

The removal of covering vegetation during pre-mining and mining operations would have an indirect impact on adjacent recreational users in the analysis area from diminishing the quality of the recreational setting. The recreation setting would be changed as a result of the visual contrast these activities introduce to the existing landscape. Although the sight of mining activities may not affect some recreational users (e.g., hunting or OHV driving), those seeking the features of a natural setting may see the change to the existing landscape as an obstacle to their chosen recreation activity.

Mining-related activities associated with each alternative (East Plant Site, subsidence area, power lines, and West Plant Site [where permitted by private landowners]) would lead to increased traffic (including large trucks) on U.S. 60 (the Gila-Pinal Scenic Road) during construction and delivery of heavy equipment. This additional activity would change the experience for some visitors driving on the scenic road, and it would affect visitor safety when visitors encounter these activities. As many as 44 round-trip truck traffic shipments would occur per day. Major deliveries requiring road shutdown would be coordinated to reduce the amount of time closures consistent with current Resolution Copper practices. However, the increase in heavy-truck traffic is expected to contribute to increased traffic noise and intermittent traffic slowdowns on this scenic portion of U.S. 60. The recreation experience for those visitors and locals who currently use U.S. 60 and the Gila-Pinal Scenic Road would change due to the increase in large truck traffic.

Special Use Activities

Existing permitted outfitter and guide services for recreation or hunting would continue to operate throughout the analysis area but would no longer be permitted to use areas within the East Plant Site (including Oak Flat), and, depending upon the alternative, the proposed tailings storage facility and tailings corridors would not be permitted in areas that are closed to public access. Future special uses would be considered on a case-by-case basis as applications are received. Special use activities are not analyzed in the following text for each alternative; supporting analysis is in the project record.

Recreation Opportunity Spectrum

A direct loss of acreage available for recreation activities would occur under all action alternatives. Each of the action alternatives would result in the direct removal of differing amounts of acres from public entry, which represents the area that would be enclosed by perimeter fencing for public safety purposes. It is assumed that all areas on NFS land (and certain ASLD, BLM, and private lands), other than that excluded for safety around the subsidence area, would eventually be opened to public access post-mining. The subsidence area (approximately 1,560 acres of NFS lands, prior to the land exchange) would be lost for public access in perpetuity. Based on current knowledge, the steep and unstable slopes of the subsidence area are projected to be unsafe for future public access. However, the exact area and timing of opening areas to public access would need to be evaluated at the end of mining activities. While not anticipated, some areas (other than the subsidence area—e.g., pipelines, rail lines, or power lines) may be not be safe for public access, while others may require public access restrictions until reclamation activities have been successfully completed.

In addition to the direct loss of acreage available for recreation activities and opportunities, a change from the existing undeveloped nature of the analysis area (semiprimitive settings) and surrounding area to a more developed, industrialized setting would occur under all action alternatives. During construction, active mining and operations, and closure and final reclamation, the affected areas would not be compatible

with the established setting indicators for any of the ROS settings present.

The industrialized setting of the East Plant Site would include increased industrial noise, mine-related traffic, and equipment operation (including backup alarms). Traffic, construction, and equipment operation within the project area would result in increased noise, ranging from 80 to 30 dBA at the fence line surrounding mining operations. A noise level of 80 dBA is comparable to the sound of a forklift or front-end loader from 50 feet away. A noise level of 30 to 40 dBA is comparable to the sound of a quiet suburban area at night (Tetra Tech Inc. 2019).

Although these increased noise levels associated with operations would not be readily apparent to motorized recreational users over the sound of their personal vehicles, sounds during mine operations may be audible to campers, hikers, mountain bikers, and equestrians from the fence line surrounding mining operations or along access roads. In particular, campers using dispersed sites in close proximity to mining operations and daytime visitors to Apache Leap could be impacted by increased noise levels resulting from facility operations. However, the degree of impact from noise on dispersed recreation is largely dependent on timing, terrain shielding, open landscapes, and mining noise attenuation and dispersion.

Mining operations lighting would result in changes to the nighttime recreational setting on lands surrounding the East Plant Site by increasing sky glow and direct visible glare both from facilities and vehicles; design features would minimize the impact but would not eliminate it (Dark Sky Partners LLC 2018). These changes may contribute to displacement of dispersed, nonmotorized recreation activities and opportunities from lands within and surrounding the analysis area.

The location of the new power line corridors between Oak Flat Substation, East Plant Site, West Plant Site, and the MARRCO corridor would be the same under all action alternatives. During and following construction, the presence of a new power line would contribute to diminishing the recreation setting (classified as roaded natural) along the power line corridor but would be consistent with the management

objectives for the area. The impacts on ROS that are specific to each alternative are discussed in the following text.

Hunting

Hunting opportunities (for both big and small game) could be displaced by mining activities. This would be a minor impact on hunting overall and would not completely eliminate hunting opportunities in the affected GMUs, since the areas within GMUs that are outside of the alternatives' footprints would remain available for hunting, subject to applicable laws and regulations. Resolution Copper would post signs in accordance with the laws and regulations for hunting to indicate the areas that would be closed to hunting to accommodate mining activities. Nonetheless, impacts on individual hunters may be moderate or even major if public use of an individual hunter's preferred hunting grounds is eliminated. As shown in a recent AGFD report (Arizona Game and Fish Department 2018c), hunter valuation surveys found that a moderate to high number of hunters found the areas west of Superior, Arizona, to be of high value for hunting mule deer, white-tailed deer, javelina, quail, dove, and predator species.

In addition, human presence and mining activities would likely cause some wildlife species to temporarily avoid these areas. Many of the wildlife species being hunted would likely not be present during mining activities due to increased noise, light, and human activity. Following mining activities, disturbed areas would return to preexisting conditions to the extent practicable. It is expected that wildlife would no longer avoid areas but return to the extent that the native habitats return. Active impacts on hunting would cease and hunting opportunities would likely improve over time as wildlife habitats return to disturbed areas. Mining activities would not avoid hunting seasons in some instances and there would be site-specific, localized, moderate impact on individual hunters (or hunting groups and outfitters) during mining activities if their preferred access is temporarily or permanently closed or restricted. This impact would not extend to hunting overall, but could represent a long-term obstacle to an individual hunter's preferred access to a particular area. Coordination with the AGFD would attempt to avoid and minimize

these impacts. The number of Arizona hunting permits that are issued in individual GMUs would not change as a result of any of the action alternatives being implemented. The availability to hunt in the analysis area's GMUs and the number of hunting permits per GMU would not be affected under any action alternative. Further, hunter days would not change under any alternative, since hunting could persist elsewhere in the GMU. Hunting is not analyzed for each alternative.

Recreation Sites

There would be no direct impacts on designated wilderness as a result of any of the action alternatives. Visitors to the Superstition Wilderness would have foreground and background views of the East Plant Site from trails and overlooks, which would be similar to the existing views of the East Plant Site but with a larger visual effect. The most affected views would be from the several trails that provide both motorized and nonmotorized access to mountain and ridgetop summits and would afford direct, superior (from above and oriented downward), and unadulterated views of mining operations (e.g., north of Superior or north of Oak Flat). Similarly, views from Apache Leap and Picketpost Mountain would have unadulterated views of the East Plant Site. Although the location and size of the different elements of the project vary by alternative, because of the distance and angle of views, the impacts on the public visiting the wilderness, Apache Leap, and Picketpost Mountain would be similar for all action alternatives. Views of the East Plant Site would contribute to a slightly more diminished sense of solitude and primitive setting for some wilderness visitors (see Section 3.11, Scenic Resources).

Activities from mine operations that produce sound (as described in Section 3.4, Noise and Vibration) would be noticeable to users of adjacent dispersed recreation areas. The degree of impact from noise on the recreation setting is largely dependent on the chosen recreation activity, terrain shielding, open landscapes, and mining noise dispersion.

Because recreationists would no longer have access to the lands within the areas of mining operations, it is likely that increased use would occur on other nearby lands that provide similar experiences, depending upon

the recreational user type. A minor to moderate increase in user activity would be expected to occur in recreational use areas similar to those displaced by the project elsewhere in the Globe Ranger District, as well as on other Federal, State, and County lands.

Under all alternatives, Passage 18 of the Arizona Trail, as well as several other proposed trail corridors (Logan Simpson Design Inc. 2007), would be crossed by the new slurry line that would be constructed within the MARRCO corridor. Crossing of the Arizona Trail would interfere with the nature and purposes of the Arizona Trail. Each alternative discussion presented here provides a relative degree to which each alternative interferes with the Arizona Trail. There would be short-term impacts on trail users during construction activities when disturbance precludes use for safety reasons (e.g., active grading, transport of heavy equipment, active construction), but these would only occur during the activity, and when conditions are safe for hikers, cyclists, and equestrian users, the impact would cease. Contractors would provide necessary detours or signage for Arizona Trail user awareness during these activities. The recreation setting for this portion of Passage 18 would not change. This area of Passage 18 that is intersected by the MARRCO corridor is previously disturbed, including the railroad corridor, parking lot, and Hewitt Station Road.

Motorized Recreation

Under all alternatives, certain NFS roads would be closed to public use, either because the route would be covered or removed as a result of the construction of the East Plant Site or the West Plant Site, or because the route would no longer be safe for the public to use (e.g., the subsidence area), or both. In many cases, the route is crossed by a linear feature such as the MARRCO corridor or the power line corridor and would be closed during construction, and after that time only closed for brief periods of maintenance when not safe for public use. Site-specific impacts on motorized recreation would occur but would cease when the route is safe for public use. Table 3.9.4-2 presents the NFS roads that would be impacted under all action alternatives.

Table 3.9.4-2. National Forest System roads that would be impacted under all action alternatives

NFS Road No.	Distance (miles)	Location
2432	0.78	East Plant Site/Subsidence area
2433	0.23	East Plant Site/Subsidence area
2434	0.29	East Plant Site/Subsidence area
2435	0.28	East Plant Site/Subsidence area
2438	0.32	East Plant Site/Subsidence area
315	2.28	East Plant Site/Subsidence area
3153	1.19	East Plant Site/Subsidence area
3791	0.01	East Plant Site/Subsidence area
1933	0.07	MARRCO corridor
229	0.01	MARRCO corridor
2396	0.01	MARRCO corridor
252	0.01	MARRCO corridor
293	0.01	MARRCO corridor
3454A	0.01	MARRCO corridor
3454C	0.01	MARRCO corridor
357	0.40	MARRCO corridor
8	0.01	MARRCO corridor
1010	0.37	West Plant Site
229	1.10	West Plant Site
229	1.07	Silver King Mine Road realignment
2401	0.01	Silver King Mine Road realignment

Site-specific and localized moderate impact on individual motorized users (or groups or permitted guides/outfitters) during mining activities would occur if their preferred access is temporarily or permanently closed or restricted. Indirect impacts of the loss of routes shown in table 3.9.4-2 include changes in how users must reach destinations (i.e., a change to a user’s recreation experience). If closed, a given route’s destination may still be reachable but from a different ingress point and potentially a sequence of connected but much longer routes. This impact would not extend to motorized recreation in the analysis area overall but could represent an obstacle or change to an individual motorized user’s preferred access to a particular area.

Rock Climbing

Rock climbing opportunities at Euro Dog Valley, Oak Flat, and portions of the Mine Area would be lost under all action alternatives. Table 3.9.4-3 provides a breakdown of the climbing opportunities that would be lost under all alternatives due to the development of the East Plant Site.

The loss of Euro Dog Valley and Oak Flat would be a major, long-term impact on the climbing opportunities of central Arizona, particularly bouldering. There are no other developed climbing areas that are as specific to bouldering and that offer as numerous opportunities as Euro Dog Valley and Oak Flat in the analysis area; the nearest bouldering opportunities that even come close to the bouldering opportunities that are available at Euro Dog Valley and Oak Flat are located in northwest Phoenix (Icecapades and South Mountain); Prescott, Arizona; and Mount Lemmon near Tucson.

3.9.4.3 Alternative 2 – Near West Proposed Action

The analysis for potential impacts on recreation resources of Alternative 2 where implemented only applies to the tailings storage facility location; all other project components and activities and their potential to impact recreation resources remain identical to those described earlier in this section under “Impacts Common to All Action Alternatives.”

Table 3.9.4-3. Climbing resources that would be lost under all action alternatives

Climbing Area	Roped Climbing Routes	Boulder Problems
Oak Flat (East and West)	Sport routes: 2	Boulder problems: 527
	Trad routes: 0	Top-rope boulder problems: 268
	Top-rope routes: 3	Total: 795
	Aid routes: 0	
	Total: 5	
Euro Dog Valley	Sport routes: 37	Boulder problems: 179
	Trad routes: 8	Top-rope boulder problems: 99
	Top-rope routes: 2	Total: 278
	Aid routes: 1	
	Total: 48	
The Mine Area	Sport routes: 100	Boulder problems: 41
	Trad routes: 27	Top-rope boulder problems: 0
	Top-rope routes: 23	Total: 41
	Aid routes: 0	
	Total: 150	

Source: Oliver (2017)

General Setting

The tailings storage facility would be located in an area of the Tonto National Forest that experiences high use (particularly during the fall and winter seasons) for both dispersed and motorized recreation. All public access would be eliminated on approximately 7,788 acres, the area to be fenced surrounding the tailings storage facility and tailings corridor, the borrow area, the East Plant Site, land exchange boundary, and subsidence area. Though the analysis area has a long history of mining, the current recreation setting would change in the tailings storage facility and immediately adjacent lands. Activities involving hiking or driving to ridgetops increase the likelihood that the tailings storage facility would be visible and change the recreation setting. The Arizona Trail is approximately 1 mile east of the tailings storage facility, paralleling the eastern boundary of the tailings storage facility for 3 miles. Dispersed

recreation activities would be temporarily affected as noises, visual disturbances, and/or the presence of other humans could detract from their chosen recreation opportunities and activities. Recreation users who seek opportunities for solitude commonly seek areas where they would be less likely to see other humans.

The changes to public motorized access could permanently change the OHV use patterns in the area, subject to Federal, State, and local OHV and traffic laws and regulations. New private access roads would be signed and would be closed to the public, but illegal OHV use may not be entirely preventable on the new access roads. Existing and new OHV users may be drawn to the tailings storage facility and tailings corridor through curiosity and interest in mining. Design features such as locked gates and signage indicating road status would decrease the magnitude of these impacts. Illegal and/or unauthorized use of access roads would be enforceable by Forest Service law enforcement, or other local jurisdiction law enforcement (e.g., County or State).

Recreation Opportunity Spectrum

The Alternative 2 tailings storage facility, borrow area, and tailings pipeline corridor would result in the direct removal of up to approximately 4,994 acres of Tonto National Forest lands from public entry, which represents the area that would be enclosed by perimeter fencing for public safety purposes. Access to lands within the perimeter fence would be closed to the public for safety concerns from perimeter fence construction through closure and final reclamation.

None of the tailings storage facility would occur within the semiprimitive nonmotorized setting. Approximately 4,239 acres of the tailings storage facility would be within the semiprimitive motorized setting, and approximately 664 acres within the roaded natural setting; these areas would be unavailable for public use. Figure 3.9.3-3 shows the ROS settings that would be impacted by all action alternatives. The ground disturbance and installation of facilities associated with the tailings storage facility and tailings corridor would result in a change from the existing undeveloped, semiprimitive nonmotorized and motorized recreation setting on lands surrounding the tailings storage

facility to a developed setting, visible from superior views for miles in all directions. People currently use these areas for a wide variety of recreation activities. This change would result in a reduction of approximately 13 percent of the available semiprimitive nonmotorized setting, 17 percent of the available semiprimitive motorized setting, and 5 percent of the available roaded natural setting within the Globe Ranger District. While most of these lands would still be available for these uses after closure of the mine, the recreation opportunity available to the public would change. For instance, once deemed safe, reclaimed tailings facilities could become opened to non-motorized or motorized recreation. The proposed borrow area would also be closed to the public, representing a loss of approximately 90 acres of semiprimitive motorized areas.

The activities proposed under Alternative 2 would represent a change to the existing recreational setting; however, it is anticipated that changes would be consistent with the designated ROS classification of semiprimitive motorized.

Recreation Sites

Visitors to the Superstition Wilderness, Picketpost Mountain, and Apache Leap would have foreground and background views of the Alternative 2 facilities from trails and overlooks, and the recreation setting from certain site-specific views would change if the tailings storage facility were visible. The tailings storage facility would be located 3.75 miles from the Superstition Wilderness, 3 miles from Picketpost Mountain, and 5.25 miles from Apache Leap.

In the Passage 18 segment, 0.07 mile of the proposed tailings pipeline corridor would intersect the Arizona Trail, interfering with the nature and purpose of Passage 18 of the Arizona Trail. The intersection of the Arizona Trail occurs in two separate locations, approximately 4 miles north of the beginning (i.e., trailhead) of Passage 18, and approximately 14 miles south of the ending of Passage 18, where the Arizona Trail transitions to another passage at the southern boundary of the Superstition Wilderness.

The area of these intersections is in highly variable topography. At the point of intersections with Alternative 2, the Arizona Trail is located on the bottom of drainages associated with Potts and Whitford Canyons, flanked by steep canyon walls on all sides in an area that is relatively undisturbed, but does show signs of motorized uses and mining activities, such as traffic on NFS Road 982. NFS Road 982 shares the same point of intersection with the proposed Alternative 2 tailings corridor as the Arizona Trail. This area is currently managed under the ROS classification of semiprimitive motorized.

Because Alternative 2 would result in substantial interference with the nature and purpose of the Arizona Trail, Resolution Copper is proposing substantial design features. Resolution Copper would construct an “overpass” for the tailings corridor that would span the Arizona Trail, as shown on Figure 3.0-1h of the GPO. Recreation access along Passage 18 would be maintained during construction, and the span would not impede Arizona Trail access during operation or maintenance. There would be short-term impacts on trail users during construction activities when disturbance precludes use for safety reasons (e.g., active grading, transport of heavy equipment, active construction), but these would only occur during the activity, and when conditions are safe for hikers, cyclists, and equestrian users, the impact would cease. Contractors would provide necessary detours or signage for Arizona Trail user awareness during these activities. Because the area is managed by the Tonto National Forest as semiprimitive motorized, the activities proposed under Alternative 2, while representative of a change to the recreation setting, would not change the setting in a manner that would change the recreation setting of Passage 18.

Motorized Recreation

The tailings storage facility would intersect 27 NFS roads. Appendix K of the GPO provides a breakdown of the NFS roads that would be impacted by Alternative 2. Not all NFS roads impacted by project activities would be rerouted. However, where motorized access along connecting roads would be interrupted by the tailings storage facility,

roads would be rerouted to maintain connectivity across the landscape. More detail can be found in Section 3.5, Transportation and Access.

Rock Climbing

There are no known or documented climbing resources within the proposed Alternative 2 tailings storage facility or along the tailings corridor; opportunities to develop new climbing resources would not be available. This tailings facility location would not have additional impacts on climbing resources outside of the impacts common to all.

3.9.4.4 Alternative 3 – Near West Ultrathickened

The impacts would be the same as described under Alternative 2.

3.9.4.5 Alternative 4 – Silver King

General Setting

The recreation setting is similar to that described under Alternative 2. The area currently experiences slightly less use than Alternative 2 and 3 because access (both nonmotorized and motorized) requires traveling farther distances or more difficult routes than Alternatives 2 and 3.

Recreation Opportunity Spectrum

A total of approximately 3 acres of tailings storage facility, fence line, and tailings pipeline corridor would be within semiprimitive nonmotorized settings, approximately 4,654 acres within the semiprimitive motorized setting, and approximately 528 acres within the roaded natural setting; these areas would be unavailable for public use. In addition, approximately 566 acres of urban areas (or unclassified areas) would be unavailable for public use. Figure 3.9.3-3 shows the ROS settings that would be impacted by all action alternatives. The ground disturbance and installation of facilities associated with the tailings storage facility and tailings corridor would result in a change from the existing undeveloped, semiprimitive nonmotorized and

motorized recreation setting on lands surrounding the tailings storage facility to a developed setting, visible from superior views for miles in all directions. People currently use these areas for a wide variety of recreation activities. This change would result in a reduction of approximately 17 percent of the available semiprimitive nonmotorized setting, 16 percent of the available semiprimitive motorized setting, and 7 percent of the available roaded natural setting within the Globe Ranger District. While most of these lands would still be available for these uses after closure of the mine, the recreation opportunity available to the public would change. After mine closure and reclamation, it is anticipated that the ROS value of semiprimitive nonmotorized would be restored to the Silver King area to the extent practical. The proposed borrow area would also be closed to the public, representing a loss of approximately 90 acres of semiprimitive motorized areas.

The activities proposed under Alternative 4 would represent a change to the existing recreational setting; however, it is anticipated that changes would be consistent with the designated ROS classification of semiprimitive motorized.

Recreation Sites

Visitors to the Superstition Wilderness, Picketpost Mountain, and Apache Leap would have foreground and background views of the tailings storage facility from trails and overlooks, and the recreation setting from certain site-specific views would change if the tailings storage facility were visible. The tailings storage facility would be located approximately 0.6 mile from the southern boundary of the Superstition Wilderness, 4 miles from Picketpost Mountain, and 1.95 miles from the north end of Apache Leap.

The Arizona Trail is located within the Alternative 4 proposed tailings storage facility. This would result in substantial interference to the nature and purpose of the Arizona Trail. Implementation of Alternative 4 would require 3.05 miles of the Arizona Trail to be closed and relocated to an area that would be safe for public use, which would meet the intent of the National Trails System Act and fulfill the nature and purpose of the Arizona Trail. Relocation of the Arizona Trail would require

identification, environmental studies, and construction to replace the approximately 4 to 5 miles of existing trail that would be impacted under Alternative 4. The new construction would require a different trailway approach and exit in addition to the 3.05-mile direct loss of Arizona Trail. A temporary route may be required for Arizona Trail through-hikers for approximately 1 to 2 years until a permanent reroute location is identified, studied, and designated. In addition to the Arizona Trail, the Silver King alternative also intersects multiple other proposed NFS trail corridors.

Motorized Recreation

The tailings storage facility would intersect 26 NFS roads. Not all NFS roads impacted by this alternative would be rerouted. However, where motorized access along connecting roads would be interrupted by the tailings storage facility, roads would be rerouted to maintain connectivity across the landscape. More detail can be found in Section 3.5, Transportation and Access.

Rock Climbing

There are no known or documented climbing resources within the Alternative 4 tailings storage facility or along the tailings corridor; opportunities to develop new climbing resources would not be available. This tailings facility location would not have additional impacts on climbing resources outside of the impacts common to all.

3.9.4.6 Alternative 5 – Peg Leg

General Setting

The majority of the tailings storage facility and tailings corridor for this alternative would be located on BLM-administered lands that experience low to moderate dispersed recreation. Recreation is generally concentrated on lands adjacent to the Gila River, north of where the tailings storage facility would be located. BLM-administered lands within and adjacent to the tailings storage facility are managed as an

ERMA, where typically recreation is non-specialized, dispersed, and does not require intensive management. All public access would be eliminated on 10,781 acres (6,484 acres of which is BLM-administered and open to public recreation), the area to be fenced surrounding the tailings storage facility. The remaining 4,267 acres located within the fenced area of the tailings storage facility are private and Arizona State Trust lands. The Arizona Trail is located approximately 2 miles east of the tailings storage facility, roughly paralleling the eastern boundary of the tailings storage facility for approximately 4 miles. Recreational users that seek opportunities for solitude commonly seek areas where they would be less likely to see other humans. Dispersed recreation activities would be temporarily affected as noises, visual disturbances, and/or the presence of other humans could detract from their chosen recreation opportunities and activities during the approximately 50-year mine life.

Only 7.7 miles of the east pipeline corridor and 8.8 miles of the west pipeline corridor would be located on Tonto National Forest land south of the town of Superior, where they pass east and west of Picketpost Mountain and Boyce Thompson Arboretum. This area of the Tonto National Forest experiences high-use dispersed and motorized recreation and nonmotorized use on the LOST trails. The main segment of the LOST trails would be crossed by the west pipeline corridor and would include impacts similar to those described under Alternative 2 for the Arizona Trail. Impacts on recreation on Tonto National Forest lands and OHV use patterns on public lands would be similar to those described for Alternative 2.

Recreation Opportunity Spectrum

Only some portions of this alternative are located on Tonto National Forest land; therefore, only the acres of ROS that could be impacted by the tailings storage facility pipeline corridor rights-of-way described above are quantitatively discussed in this section. Impacts on recreation on BLM-administered and State Trust lands are described under “General Setting.”

None of the tailings storage facility would be within the identified ROS settings, and only portions of the tailings corridor would be

within the identified ROS settings. The west tailings corridor option would include 210 acres of roaded natural, 189 acres of semi-primitive motorized, and 32 acres of urban; while the east tailings corridor option would include 434 acres of roaded natural, 2 acres of semi-primitive motorized, and 88 acres of urban. Figure 3.9.3-3 shows the ROS settings that would be impacted by all action alternatives. The ground disturbance and installation of facilities associated with the tailings storage facility pipeline corridors would result in a change from the existing undeveloped recreation setting on lands surrounding the tailings storage facility pipeline corridor right-of-way to a more developed setting. People currently use these areas for a wide variety of recreation activities. The activities proposed under Alternative 5 pipeline routes would represent a change to the existing recreational setting; however, it is anticipated that changes would be consistent with the designated ROS classification of semiprimitive motorized.

Recreation Sites

Visitors to the White Canyon Wilderness would have background views of the tailings storage facility east pipeline corridor from some trails and overlooks, and the recreation setting from certain site-specific views would change if the tailings storage facility east pipeline corridor were visible. The White Canyon Wilderness is located approximately 0.6 mile from the tailings storage facility east pipeline corridor at its nearest point.

The Arizona Trail is within the Alternative 5 proposed tailings storage facility east (for approximately 0.13 mile) and west (for approximately 0.18 mile) pipeline corridor rights-of-way; the portion of the Arizona Trail Passage 18 intersected by the west pipeline corridor right-of-way is located within the MARRCO corridor and impacts would be the same as those discussed in “Impacts Common to All Action Alternatives.” Impacts on the Arizona Trail Passage 16 (Gila River Canyons) as a result of the intersection with the east pipeline corridor are discussed in more detail in the following text.

The Arizona Trail would be intersected by 0.18 mile of the proposed tailings storage facility east pipeline corridor, in the Passage 16 segment. The intersection with the Arizona Trail is approximately 20 miles south

of the beginning (i.e., trailhead at the Tonto National Forest boundary) of Passage 16, and approximately 6 miles north of the ending of Passage 16, where the Arizona Trail transitions to another passage when it crosses the Kelvin–Riverside Bridge.

The area of this intersection is in the uplands adjacent to the Gila River on BLM-administered land, with sweeping views of the Gila River Canyon and mountains to the south. At the point of intersection with the Alternative 5 tailings storage facility east pipeline corridor, the Arizona Trail is located on the southern flank of uplands north of the Gila River floodplain and just southeast of The Spine, a prominent geological feature. The area is largely undisturbed; with the exception of the Southern Pacific rail line located on the south side of the Gila River; there is very little to no motorized access to the area.

Because Alternative 5 would result in substantial interference with the nature and purpose of the Arizona Trail, Resolution Copper is proposing substantial design features. Resolution Copper would construct an “overpass” for the tailings corridors that would span the Arizona Trail, as shown on Figure 3.0-1h of the GPO. Recreation access along Passage 16 would be maintained during construction, and the span would not impede Arizona Trail access during operation or maintenance. There would be short-term impacts on trail users during construction activities when disturbance precludes use for safety reasons (e.g., active grading, transport of heavy equipment, active construction), but these would only occur during the activity, and when conditions are safe for hikers, cyclists, and equestrian users, the impact would cease. Contractors would provide necessary detours or signage for Arizona Trail user awareness during these activities. The Peg Leg alternative also intersects several proposed Pinal County trail corridors and OHV trails, as well as one planned OHV trail (Logan Simpson Design Inc. 2007).

Both the east and west tailings pipeline corridors would be visible from trails and overlooks on Picketpost Mountain. Resolution Copper anticipates burying the pipelines through these areas.

The BLM manages the area as Visual Resource Management Class III (see Section 3.11, Scenic Resources, for a detailed discussion of BLM Visual Resource Management classes) which allows for a moderate

amount of visual change to the landscape, to which the activities proposed under Alternative 5 would conform. The presence of the tailings storage facility east pipeline corridor in the area would result in long-term impacts on the undisturbed and natural character of the landscape, resulting in a change to the recreation setting of that portion of Passage 16. The west pipeline corridor would be located partially within the previously disturbed MARRCO corridor. Therefore, it would have a reduced effect on recreation relative to the east pipeline corridor option, which is largely undisturbed.

Motorized Recreation

The tailings storage facility west pipeline corridor right-of-way would intersect 14 NFS roads and the tailings storage facility east pipeline corridor right-of-way would intersect 18 NFS roads. The tailings storage facility would intersect three named roads (Tea Cup Road, Tea Cup Ranch Road, Peg Leg Road) and an unknown number of unnamed roads and trails. There would be approximately 23 miles of BLM routes that would be intersected by the tailing storage facility. Not all NFS and BLM roads impacted by this alternative would be rerouted. However, where motorized access along connecting roads would be interrupted by the tailings storage facility, roads would be rerouted to maintain connectivity across the landscape. More detail can be found in Section 3.5, Transportation and Access.

Rock Climbing

There are no known or documented climbing resources within the tailings storage facility or tailings corridors.

3.9.4.7 Alternative 6 – Skunk Camp

General Setting

The majority of the tailings storage facility for this alternative would be located on Arizona State Trust and private lands that experience low levels of public dispersed recreation. The tailings corridor crosses Forest

Service, Arizona State Trust and private lands with low levels of public dispersed recreation. The area shows evidence of OHV recreation, and numerous unnamed jeep trails are present throughout valley bottoms and along ridges; however, the majority of the area is undisturbed. BLM-administered lands adjacent to the tailings storage facility are managed as an ERMA, where typically recreation is non-specialized, dispersed, and does not require intensive management. All public access would be eliminated on 8,647 acres, the area to be fenced surrounding the tailings storage facility, of which 2,132 acres is private and 6,515 acres is State Trust land.

Recreation users that seek opportunities for solitude commonly seek areas where they would be less likely to see other humans. Dispersed recreation activities would be temporarily affected as noises, visual disturbances, and/or the presence of other humans could detract from their chosen recreation opportunities and activities.

Only 7.7 miles of the north pipeline corridor and 10.8 miles of the south pipeline corridor would be located on Tonto National Forest land adjacent to the town of Superior, where the south pipeline corridor passes south of Superior and east of Picketpost Mountain and Boyce Thompson Arboretum and the north pipeline corridor passes east of Oak Flat. The main segment of the LOST trails would be crossed by the south pipeline corridor and would include impacts similar to those described under Alternative 2 for the Arizona Trail. The north pipeline corridor also crosses multiple sections of Devil's Canyon. These areas of the Tonto National Forest experiences high-use dispersed and motorized recreation.

Recreation Opportunity Spectrum

Similar to Alternative 5, only some portions of this alternative are located on Tonto National Forest land (none of the tailings storage facility would be located on areas of ROS classifications). Impacts on recreation on BLM-administered and State Trust lands are described under "General Setting."

Figure 3.9.3-3 shows the ROS settings that would be impacted by all action alternatives. The ground disturbance and installation of facilities associated with the tailings storage facility, tailings corridor, and new powerline would result in a change from the existing undeveloped, recreation setting on lands surrounding the tailings storage facility to a developed setting. People currently use these areas for a wide variety of recreation activities. The activities proposed under Alternative 5 pipeline routes would represent a change to the existing recreational setting; however, it is anticipated that changes would be consistent with the designated ROS classification of semiprimitive motorized.

Recreation Sites

No designated recreation sites or scenic trails are located within the tailings storage facility or tailings corridors, nor would the tailings storage facility be visible from any designated wilderness areas. However, the portions of this alternative in Pinal County are designated Open Space suitable for recreation purposes (Logan Simpson Design Inc. 2007). The southern tailings pipeline corridor would be visible from trails and overlooks on Picketpost Mountain, and the northern tailings pipeline corridor would be visible from the Superstition Wilderness.

Motorized Recreation

The tailings storage facility north pipeline corridor right-of-way would intersect 23 NFS roads, the tailings storage facility south pipeline corridor right-of-way would intersect 24 NFS roads, and the transmission line corridor right-of-way would intersect four NFS roads.

The tailings storage facility would intersect three named roads (Dripping Springs Road, Troy Ranch Road, and Looney Springs Trail) and an unknown number of unnamed roads and trails within the Dripping Springs basin. There would be approximately 15 miles of BLM routes that would be intersected by the tailing storage facility. Not all NFS and BLM roads impacted by this alternative would be rerouted. However, where motorized access along connecting roads would be interrupted by the tailings storage facility, roads would be rerouted to maintain

connectivity across the landscape. More detail can be found in Section 3.5, Transportation and Access.

Rock Climbing

There are no known or documented climbing resources within the fence line of the Alternative 6 tailings storage facility; however, the tailings storage facility pipeline corridors and power line corridor for Alternative 6 cross three areas of high-quality climbing resources. The north pipeline corridor crosses Upper Devil's Canyon, the south pipeline corridor crosses Lower Devil's Canyon, and the tailings storage facility power line corridor crosses Northern Devil's Canyon. There would be short-term impacts on recreators during construction activities when disturbance precludes use for safety reasons (e.g., active grading, transport of heavy equipment, active construction), but this would only occur during the project-related activity, and when conditions are safe for climbing, the impact would cease. The presence of the tailings storage facility pipeline corridors and transmission line infrastructure across the canyons may block or eliminate climbing routes, as well as change the dispersed recreation setting of the areas. Under this alternative, there would be temporary impacts on climbing resource access in the area.

3.9.4.8 Cumulative Effects

The Tonto National Forest has identified the following reasonably foreseeable future actions as likely, in conjunction with development of the Resolution Copper Mine, to contribute to cumulative changes to recreational opportunities and use patterns in the greater vicinity of the town of Superior and the "Copper Triangle" region. As noted in section 3.1, past and present actions are assessed as part of the affected environment; this section analyzes the effects of any RFFAs, to be considered cumulatively along with the affected environment and Resolution Copper Project effects.

- *Pinto Valley Mine Expansion.* The Pinto Valley Mine is an existing open-pit copper and molybdenum mine located approximately 8 miles west of Miami, Arizona, in Gila County.
- *Pinto Valley Mining Corporation* is proposing to expand mining activities onto an estimated 1,011 acres of new disturbance (245 acres on Tonto National Forest land and 766 acres on private land owned by Pinto Valley Mining Corporation) and extend the life of the mine to 2039. Although the Tonto National Forest is still evaluating the potential environmental effects of this proposed action, it is assumed that additional mine-related haul traffic along U.S. 60 between Top-of-the-World and the Miami-Globe area may conflict with recreational users traveling to or through this part of the Tonto National Forest.
- *Ripsey Wash Tailings Project.* ASARCO is planning to construct a new tailings storage facility to support its Ray Mine operations. The environmental effects of the project were analyzed in an EIS conducted by the USACE and approved in a ROD issued in December 2018. As approved, the proposed tailings storage facility project would occupy an estimated 2,574 acres and be situated in the Ripsey Wash watershed just south of the Gila River approximately 5 miles west-northwest of Kearny. The Ripsey Wash area has been a popular area, in particular, for mountain biking and OHV enthusiasts. With construction of the tailings storage facility, recreational use of this area south of the Gila River would be lost and most likely displaced to other locations. In addition, construction of the Ripsey Wash tailings storage facility would require relocation of an existing portion of the Arizona Trail farther to the east, with about 6.4 miles of new trail construction primarily along the eastern slopes of the Tortilla Mountains and about 0.2 miles of shared use along Riverside Drive. Cumulative impacts with the Resolution Copper Project are primarily related to the disruption of recreation opportunities associated with Alternative 5 – Peg Leg, which would impact some of the same general recreation lands south of the Gila River.
- *Ray Land Exchange and Proposed Plan Amendment.* ASARCO is also seeking to complete a land exchange with the BLM by which the mining company would gain title to approximately 10,976 acres of public lands and federally owned mineral estate

located near ASARCO's Ray Mine in exchange for transferring to the BLM approximately 7,304 acres of private lands, primarily in northwestern Arizona. It is known that at some point ASARCO wishes to develop a mining operation in the scenic "Copper Butte" area west of the Ray Mine. The Copper Butte area, which lies just to the east and adjacent to the BLM-managed White Canyon Wilderness, has long been a popular location for hikers, rock climbers, horseback riders, OHV treks, and camping. It is unclear at this time how mining development would adversely affect recreational use of this area, but there would likely be an effect, which would likely be a reduction in recreational opportunities.

- *Central Arizona Project (CAP) Trail Plan.* The U.S. Bureau of Reclamation and Pinal County, in coordination with Maricopa County, are planning to develop a continuous, non-motorized, 10- to 20-foot-wide recreation corridor along the length of the CAP canal in Pinal County; this system would tie in to the Maricopa County Regional Trail System. This project would create additional recreational opportunities along the CAP canal in both counties.
- *Tonto National Forest Plan Amendment and Travel Management Plan.* The Tonto National Forest is currently in the process of revising its Forest Plan to replace the plan now in effect, which was implemented in 1985. Simultaneously, the Tonto National Forest is developing a Supplemental EIS to address certain court-identified deficiencies in its 2016 Final Travel Management Rule EIS. Both documents and their respective implementing decisions are expected within the next 2 years. Both documents will have substantial impacts on current recreational uses of NFS lands. The Supplemental EIS proposes a total of 3,708 miles of motorized routes open to the public, a reduction from the 4,959 miles of motorized open routes prior to the Travel Management Rule. Limiting availability of motorized routes open to the public would result in reduced access to recreational activities currently practiced on the Tonto National Forest, including sightseeing, camping, hiking, hunting, fishing, recreational riding, and collecting fuelwood and other forest products.
- *Bighorn Sheep Capture and Relocation.* The Tonto National Forest is intending to capture and relocate bighorn sheep over the next 3 to 5 years in order to improve forest-wide health and genetic viability of the species. The project would involve use of helicopters, including in five wilderness areas within the Tonto National Forest (Four Peaks, Hellsgate, Mazatzal, Salt River Canyon, and Superstition). It is expected that improvements in bighorn sheep numbers would benefit many types of recreational users of NFS lands.
- *Copper King Exploratory Drilling/Superior West Exploration.* This project combines the environmental review of two mineral exploration projects proposed by Bronco Creek Exploration, Copper King, and Superior West. While Bronco Creek Exploration is the mining claimant, the exploration would be funded and bonded by Kennecott Exploration Company (part of the Rio Tinto Group), which would be the operator of record for both plans of operations. The combined projects result in a total of 106 unique drill site locations identified, of which the proponent would be authorized to select up to 43 to be drilled over a 10-year period. Existing roads and helicopters would be used to access drill sites. The use of helicopters could interfere with recreational opportunities for recreationists seeking solitude and a natural setting; however, these impacts would be temporary and short lived and would be unlikely to cumulatively add to Resolution Copper Project impacts.
- *ADOT Vegetation Treatment.* ADOT plans to conduct annual treatments using EPA-approved herbicides to contain, control, or eradicate noxious, invasive, and native plant species that pose safety hazards or threaten native plant communities on road easements and NFS lands up to 200 feet beyond road easement on the Tonto National Forest. It can be reasonably assumed that ADOT would continue to conduct vegetation treatments along U.S. 60 on the Tonto National Forest during the expected

life of the Resolution Copper Mine (50–55 years) for safety reasons. The vegetation treatment could impact motorized use along roads from additional traffic and road use, but impacts would be minimal and would be unlikely to cumulatively add to Resolution Copper Project impacts.

- Silver Bar Mining Regional Landfill and Cottonwood Canyon Road.* A private firm, Mineral Mountain LLC, is proposing to develop a landfill on land the company owns approximately 6 miles southeast of Florence Junction and 4 miles due east of SR 79. This private land lies entirely within an area of BLM-administered lands and cannot be accessed without crossing Cottonwood Canyon Road, located on BLM lands. The company received Master Facility Plan Approval for the proposed landfill from ADEQ in 2009 and a BLM right-of-way grant in 2017. This project would improve and maintain road conditions on Cottonwood Canyon Road for landfill haul truck traffic. As a result, the road would be made more reliable for use by road and street vehicles used by recreational visitors. The proposed action would result in the loss of recreation parking areas on BLM land. A new parking area for the public is proposed on the landfill property, but does not appear to be sufficient for current recreational users. As a result, recreational users are likely to lead to resource damage by creating new turnouts or enlarging existing turnouts on BLM land east of the Sandman Road intersection. Recreational access would be temporarily impacted along Cottonwood Canyon Road during construction. Recreational users would be detoured and would be likely to impact existing parking areas along Mineral Mountain Road.
- Wild and Scenic River Eligibility.* Segments of Arnett Creek and Telegraph Canyon were evaluated for their eligibility for inclusion in the National Wild and Scenic Rivers System in October 2017 as part of the forest plan revision process. These river segments were identified as eligible for inclusion because they possess unique and outstandingly remarkable values for both scenery and fisheries. The eligible river segments of Arnett Creek and Telegraph Canyon will be managed to protect their outstandingly remarkable values (scenery and fisheries) and to retain their classification as Recreational until such time as they are formally designated, or because of changed circumstances, no longer meet wild and scenic river eligibility criteria. Eligibility status and public recognition of the outstandingly remarkable values may attract additional recreational use of the river segments or adjoining national forest area, potentially cumulative with displaced recreation caused by Resolution Copper Project impacts.
- Recreation Special Use Permits.* The Tonto National Forest manages their recreation special use permits pursuant to 36 CFR 251, and the analysis area is used by a number of permitted recreation and commercial special use activities. Recreation events are commercial activities requiring temporary, authorized use of NFS land. Commercial activity on Tonto National Forest lands occurs when an entry or participation fee is charged by the applicant, and the primary purpose is the sale of a good or service. Most of these applicants offer guided tours that provide the safety, knowledge, and experience of qualified guides with quality equipment, while others provide in-demand equipment and basic instruction for visitors to explore on their own. Activities include hiking, camping, climbing, canyoneering, horseback riding, jeep tours, motorcycle riding, UTV and ATV tours, road biking, and mountain biking. Each company follows strict operating procedures, safety practices, and Forest Service regulations to protect the environment. Special use permits are likely to positively contribute toward recreational activities and access. These are cumulative with Resolution Copper Project impacts on recreation and access, which are overall adverse, from displacement of recreation and loss of roads. Some mitigation activities undertaken by Resolution Copper would offset some of these losses, and may be beneficial to special use permit holders, providing greater opportunities and access.

Recreational uses on the Tonto National Forest, BLM-administered public lands, Arizona State Trust lands, and private lands in this part of south-central Arizona will no doubt continue to evolve during the foreseeable future life of the Resolution Copper Mine (50–55 years). Some changes in recreational use may be driven by issuance of new Federal and State land management policies and planning decisions, whereas others may develop more organically through shifting population distribution, newly emerging patterns of tourism or other visitation, or by evolving technology. For example, OHV use on public lands was not a popular pursuit several decades ago, and conflicts or potential conflicts between motorized and non-motorized forms of recreation was not a prominent issue; today, however, this issue is an ongoing concern to land-management agencies responsible for ensuring both public access and resource protection.

3.9.4.9 Mitigation Effectiveness

The Forest Service is in the process of developing a robust mitigation plan to avoid, minimize, rectify, reduce, or compensate for resource impacts that have been identified during the process of preparing this EIS. Appendix J contains descriptions of mitigation concepts being considered and known to be effective, as of publication of the DEIS. Appendix J also contains descriptions of monitoring that would be needed to identify potential impacts and mitigation effectiveness. As noted in chapter 2 (section 2.3), the full suite of mitigation would be contained in the FEIS, required by the ROD, and ultimately included in the final GPO approved by the Forest Service. Public comment on the EIS, and in particular appendix J, will inform the final suite of mitigations.

This section contains an assessment of the effectiveness of design features from the GPO and mitigation and monitoring measures found in appendix J that are applicable to recreation resources.

Mitigation Measures Applicable to Recreation

Relocation of Arizona National Scenic Trail (RC-212): Resolution Copper has proposed to fund the relocation of a segment of the Arizona Trail as well as the construction of new trailheads. Approximately 9 miles of new trail would need to be built between U.S. 60 and NFS Road 650 near Whitford Canyon. Resolution Copper proposed this measure and seeks to mitigate impacts on recreational opportunities on the trail. This measure is only applicable to Alternatives 2, 3, and 4. Relocating the trail and constructing new trailheads would require additional ground disturbance but the exact area of new disturbance has yet to be determined, although it is assumed the new trail would be about 2 to 3 feet in width and totaling approximately 3 acres in area. If any of the applicable alternatives are selected, this measure would be required by the Forest Service and would be noted in the ROD/Final Mining Plan of Operations.

Mitigate loss of bouldering at Oak Flat by establishing access to the “Inconceivables” (RC-213): To mitigate impacts on recreation through the loss of bouldering areas at Oak Flat, Resolution Copper has proposed to establish access to an alternative area known as “Inconceivables.” This area extends along cliffs for approximately 3 miles on Tonto National Forest land and is located off SR 177. This mitigation measure is applicable to all alternatives. It would be required by the Forest Service and noted in the ROD/Final Mining Plan of Operations. Additional ground disturbance is required, but the exact area has not been identified at this time.

Implement Recreation User Group and Superior Trail Network Plan (RC-214): Resolution Copper has proposed to implement the Recreation User Group (RUG) and the Superior Trail Network Plan to offset loss of public roads at Oak Flat. The RUG was formed to develop a recreational trail design in the town of Superior area. The RUG has developed a conceptual plan for a trail system on the Tonto National Forest that would meet the needs and interests of different stakeholders as well as the management priorities of the Tonto National Forest. Within the vicinity of Superior, there is a network of unpaved roads and trails, many of which are not authorized by the Tonto National

Forest, that are contributing to ongoing resource degradation. The development of a trail system would help with reducing continued development of unauthorized trails. The purposes of the RUG and Superior Trail Network Plan are to provide recreation opportunities for hikers, equestrians, mountain bicyclists, and OHV enthusiasts; provide readily accessible recreation opportunities to the Superior and Phoenix metropolitan areas; offer long-term, sustainable economic benefits to the local community through recreation and ecotourism; protect soil resources in the area from erosion; and provide access to uniquely beautiful viewsheds within Tonto National Forest that are not currently accessible by authorized trails. The full plan, if implemented, would require 66.5 acres of additional ground disturbance and would be applicable to all alternatives. It would be required by the Forest Service and noted in the ROD/Final Mining Plan of Operations.

Provide replacement campground (RC-215): Resolution Copper has proposed to establish an alternative campground site, known as Castleberry, to mitigate the loss of Oak Flat Campground. The development of the new campground as well as access to the property would require additional ground disturbance of 41 acres. This measure is applicable to all alternatives and would be required by the Forest Service and noted in the ROD/Final Mining Plan of Operations.

Develop access to Oak Flat Campground while safe per MSHA regulations (RC-216): To mitigate the future permanent loss of Oak Flat Campground, Resolution Copper has proposed to develop an access plan for the campground as long as it is safe per MSHA regulations. This would allow access to Oak Flat Campground after the land exchange has occurred and the parcel is privately owned by Resolution Copper. The exact duration and extent of access would be determined later per safety requirements by MSHA. This measure would mitigate both losses to recreation as well as impacts on tribal values, would be applicable to all alternatives, and would require no additional ground disturbance. The measure would be noted in the ROD/Final Mining Plan of Operations and would be required by the Forest Service.

Arizona Trail construction considerations (GP-230): To effectively mitigate interference with through-hikers and riders who are doing the

entire Arizona Trail in one trip, work that shuts down the trail should be done when use on that section is least likely to occur, which is June through August.

Burying the pipeline on either side of the Arizona Trail overpass and naturalizing the overpass and pipeline corridor in scenic areas within 0.5 mile of the trail would help to avoid substantial interference with the nature and purposes of the trail.

Mitigation Effectiveness and Impacts

The RUG plan would provide effective mitigations for the loss of motorized recreation opportunities and would improve access conditions in the immediate area with the development of three new trailheads. Other mitigations would be effective at partially replacing climbing and camping opportunities, though not in the same location or with the same characteristics.

Impacts for all the mitigations could result in roughly an additional 110 acres of ground disturbance.

Unavoidable Adverse Impacts

Recreational use of the area would be permanently adversely impacted. Unavoidable adverse impacts on recreation include long-term displacement from the project area; and the loss of public access roads throughout the project area. These impacts cannot be avoided or fully mitigated.

3.9.4.10 Other Required Disclosures

Short-Term Uses and Long-Term Productivity

Recreation would be impacted in both the short and long term. Public access would be restricted within the perimeter fence until mine closure, which is considered to be a short-term impact. However, much or all of the tailings and subsidence area may not be available for uses such

as OHV or other recreational use in the future, depending on the final stability and revegetation of these areas.

Irreversible and Irretrievable Commitment of Resources

In general, there would be irretrievable and irreversible impacts as a result of displaced recreational users and adverse effects on recreation experiences and activities. There would be irretrievable impacts on recreation with all action alternatives. Alternatives 2, 3, and 5 with the west corridor option would cross the Arizona Trail. Alternative 4 would require rerouting of the trail.

Each action alternative would result in the permanent removal of off-highway routes, resulting in a permanent loss of recreation opportunities and activities. Public access would only be permitted outside the mine perimeter fence. Although routes through the project area might be reestablished after closure of the East Plant Site, West Plant Site, filter plant and loadout facility, and the MARRCO corridor, routes through the subsidence area and tailings storage facility likely would not be reestablished. Therefore, impacts on OHV routes are considered irretrievable for those that would be reestablished following mine closure, and irreversible for those that would be permanently affected.

Even after full reclamation is complete, the post-mine topography of the project area may limit the recreation value and potential for future recreation opportunities.