

**Resolution Copper Project and Land Exchange  
Environmental Impact Statement**

USDA Forest Service  
Tonto National Forest  
Arizona

August 6, 2018

---

## **Process Memorandum to File**

### **Recreation Resource Analysis: Assumptions, Methodology Used and Relevant Regulations, Laws, and Guidance, and Key Documents**

This document is deliberative and is prepared by the third-party contractor in compliance with the National Environmental Policy Act and other laws, regulations, and policies to document ongoing process and analysis steps. This document does not take the place of any Line Officer's decision space related to this project.

**Prepared by:  
Emily Newell  
SWCA Environmental Consultants**

## Revision History

Date	Personnel	Revisions Made
08/06/18	Emily Newell	Process memorandum created
10/29/18	Emily Newell	Revisions to memorandum title, revision history table added, edits to purpose of process memorandum section, references and key documents section added
1/14/19	Emily Newell	Ready for PM review
7/12/19	Donna Morey	Update process memo to Draft EIS section
8/5/2019	Emily Newell	Final check for consistency review

## Purpose of Process Memorandum

In order to provide a concise and accessible summary of resource impacts, certain detailed information has not been included directly in the environmental impact statement (EIS). The purpose of this process memorandum is to describe additional supporting resource information in detail. The Recreation section of Chapter 3 of the EIS includes brief summaries of the information contained in this process memorandum. This process memorandum covers the following topics:

- Resource analysis area
- Analysis methodology
- Regulations, Laws, and Guidance
- Key Documents and References Cited

## Detailed Information Supporting EIS Analysis

### Resource 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 (Alternative 5) and proposed pipelines, and the Skunk Camp alternative (Alternative 6) and proposed pipelines. The analysis area 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 (Arizona Trail); and Game Management Units (GMUs) 24A, 24B, and 37B, as shown in figure 3.9.2-1 in Section 3.9.2 of the Draft EIS.

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).

## **Analysis Methodology**

The analysis relies on existing data, knowledge of recreation resources in the area, mine layout and activities, and professional judgment. The analysis also considers design features of the Mining Plan of Operations, and applicable mitigation measures identified in appendix J.

Recreation activities and the experiences they provide are interrelated and connected to other natural resources and resource uses. Therefore, changes in allowable uses and restrictions on other resources can affect recreational opportunities and use. Analyzing potential impacts on recreation resources also considers the potential to attain the desired Recreation Opportunity Spectrum (ROS) setting, should the proposed action be carried forward. This analysis was completed using the best available information, including private, State, and Federal agency information and recreation visitation numbers. Depictions of recreation resources on maps also use best-available information.

Analysis for the Arizona Trail addresses user experience on the affected passage of the trail for each alternative. The analysis considers those factors that provide the elements of a desired recreation experience such as noise, scenic views from the trail, and access to the trail. Because the exact numbers of users on the Arizona Trail are currently unknown, observations of Arizona Trail Association volunteers are presented as an approximation of use occurring on the Arizona Trail through the analysis area.

As a result of increasing population and increasing interest in natural resource-based outdoor recreation opportunities, the demands for outdoor recreation activities and opportunities are expected to continue to grow (U.S. Forest Service 2016). The popularity of motorized recreation and use of off-highway vehicles (OHVs) has rapidly grown over the past decade.

Although the analysis area (and the general vicinity of the Globe Ranger District) provides ample and varied recreational opportunities, there is little quantitative data for some of the more popular activities, particularly relative to the numbers and frequency of recreational vehicle use (driving for pleasure, OHV use) in the area. Quantification is used where available; knowledge of the area and professional judgment is used to provide qualitative assessments when measurable data are absent. It is assumed that the displacement of the public from the project footprint of the selected alternative would result in increased visitation to nearby lands within and beyond the Globe Ranger District, and other nearby Federal, State, and county lands.

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

## **Recreation Opportunity Spectrum**

The ROS classifies and manages recreation opportunities based on various criteria: physical setting, social setting, and managerial setting. Combining the criteria has resulted in six ROS classes: Primitive, Semi-Primitive Non-Motorized, Semi-Primitive Motorized, Roaded Natural, Rural, and Urban. Four of the six ROS classes occur within the analysis area and are described below.

- Semi-Primitive Non-Motorized: The area exists at least ½ mile from all roads and trails that have motorized use and is generally 2,500 to 5,000 acres in size. The natural setting has subtle modifications such as primitive roads and trails. Structures are rare. Typical recreation activities in Semi-Primitive Non-Motorized class areas include hiking or horseback riding.
- Semi-Primitive Motorized: The area exists ½ mile from Level 3 or better roads and is generally 2,500 to 5,000 acres in size. The natural setting may have moderately dominant alternations and has strong evidence of roads and motorized use of roads and trails. Typical recreational activities include OHV use, hiking, horseback riding, hunting and fishing.
- Roaded Natural: The area exists no more than ½ mile from roads and trails open to motorized use. The natural setting has been clearly modified but the modifications are congruous with the natural environment. Typical recreational activities include hiking, horseback riding, OHV use, trailer camping, hunting and fishing.
- Urban: The natural setting has been substantially urbanized and modified. Recreational opportunities could include resorts and information centers.

**Regulations, Laws, and Guidance**

Mining operations are subject to a wide range of Federal, State, and local requirements. Table 1 provides a summary of recreation laws, regulations, policies, and plans at the Federal, State, and local level.

**Table 1. Relevant Laws, Regulations, Policies, and Plans**

Laws, Ordinances, Regulations, and Standards	Description	Applicability
The Multiple-Use Sustained-Yield Act of 1960, as amended (16 United States Code [U.S.C.] 528)	Establishes the policy of Congress that national forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes	Mining operations would reduce recreational availability in Tonto National Forest.
The Wilderness Act of 1964 (16 U.S.C. 1131–1136), as amended by the Arizona Wilderness Act of 1984 (Public Law 98-406)	Designated certain national forest lands in the state of Arizona as wilderness and for other purposes	Two designated wilderness areas are located within the analysis area considered for potential indirect and cumulative effects.
The National Trails System Act of 1968 (Public Law 90-543; 16 U.S.C. 1244(a)), as amended by the Arizona National Scenic Trail Act	Designates the scenic nonmotorized trail through some of the most renowned mountains, deserts, canyons, and forests in Arizona; this act states, “Provide for . . . the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass.”	Four Arizona Trail “passages” are located within the analysis area, stretching from the Tortilla Mountains in the south to the Superstition Mountains in the north.

<b>Laws, Ordinances, Regulations, and Standards</b>	<b>Description</b>	<b>Applicability</b>
The National Forest Management Act of 1976 (16 U.S.C. 1600)	Establishes standards for how the U.S. Forest Service manages the national forests, requires the development of land management plans for national forests and grasslands, and directs the Forest Service to develop regular reports on the status and trends of the nation’s renewable resources on all forest and rangelands.	The National Visitor Use Monitoring (NVUM) typically occurs on a forest-wide level every year, and the data provide the most relevant, reliable, and accurate data available on national forest visitation.
Executive Order 13195 of January 18, 2001	Directs Federal, State, and local government agencies to protect, connect, promote, and assist trails of all types throughout the United States, including national scenic trails.	Four Arizona Trail “passages” are located within the analysis area, stretching from the Tortilla Mountains in the south to the Superstition Mountains in the north.
Forest Service Manual (FSM) 2353, “National Forest System Trails”	States that national trails are located so that they provide for maximum outdoor recreation potential and for conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which these trails pass. Management of each trail in the National Trails System addresses the nature and purposes of the trail and is consistent with the applicable land management plan.	Four Arizona Trail “passages” are located within the analysis area, stretching from the Tortilla Mountains in the south to the Superstition Mountains in the north.
Title 36 Code of Federal Regulations (CFR) Part 212, referred to as the “Forest Service Travel Management Rule”	Requires that roads, trails, and areas open to motorized vehicle use be designated on all forest management lands	The recreation setting varies throughout the analysis area, illustrated by the different ROS classifications that occur within the analysis area: semi-primitive non-motorized (5,576 acres), semi-primitive motorized (21,226 acres), roaded natural (10,213 acres), and urban (10,180 acres).
Arizona 2017-18 Arizona Hunting Regulations issued by the Arizona Game and Fish Department (AGFD)	Establishes regulations for hunting and trapping in Arizona	Hunting opportunities are available on public lands within the analysis area, including AGFD Hunting Units 24A, 24B, and 37B.
Recreation Permit program (Arizona Revised Statutes [ARS] Title 37)	Administered by the Arizona State Land Department (ASLD), this program requires users to obtain a recreation permit to camp, hike, or travel on State Trust land that is designated as open for recreation.	Arizona State Trust land is present throughout portions of the analysis area, and it is not public land: it is land managed by the ASLD to generate revenue for specific beneficiaries.
Pinal County Open Space and Trails Master Plan (Logan Simpson Design Inc. 2007)	This plan reflects the vision of county residents and identifies goals and objectives for the attainments of open space, trails, and regional parks within Pinal County.	Dispersed and developed recreation in the analysis area is managed in part by Pinal County.

Laws, Ordinances, Regulations, and Standards	Description	Applicability
The Tonto National Forest Land and Resource Management Plan (forest plan) (U.S. Forest Service 1985)	Describes existing management direction for resource use within National Forest System (NFS) lands.	The forest plan describes Management Area 2F, Globe Ranger District – General Management Area to “manage for a variety of renewable natural resource with primary emphasis on wildlife habitat improvement, water quality maintenance, livestock forage production, and dispersed recreation.”
Bureau of Land Management (BLM) Handbook H-8320-1, Planning for Recreation and Visitor Services	Assists in the planning and management of recreation and visitor services on public lands and adjacent waters and planning guidance at the land use plan and implementation level.	BLM routes are located within the analysis area. BLM Tucson Field Office is currently preparing a draft travel management plan to designate roads, trails, and areas for motor vehicle travel.
Secretarial Order 3373	Ensures that public access is an important value now and into the future as the BLM makes decisions involving the disposal or exchange of lands.	The analysis area includes land managed by the BLM and is applicable under Secretarial Order 3373.

## Key Documents and References Cited for Recreation

The following list is meant to highlight key process or analysis documents available in the project record. It should not be considered a full list of all available documentation considered within this process memorandum or the EIS analysis.

America's Scenic Byways. 2018. Gila-Pinal Scenic Road. Available at:

<https://scenicbyways.info/byway/11289.html>. Accessed April 1, 2018.

Arizona Game and Fish Department (AGFD). 2018a. Game Management Unit 24A. Available at:

<https://www.azgfd.com/hunting/units/mesa/24a/>. Accessed June 4, 2018.

———. 2018b. Game Management Unit 24B. Available at:

<https://www.azgfd.com/hunting/units/mesa/24b/>. Accessed June 4, 2018.

———. 2018c. Game Management Unit 37B. Available at:

<https://www.azgfd.com/hunting/units/tucson/37b/>. Accessed June 4, 2018.

Dark Sky Partners LLC. 2018. *Impact Assessment of the Proposed Resolution Copper Mine on Night Sky Brightness: Final Report*. Prepared for Resolution Copper. Tucson, Arizona: Dark Sky Partners LLC. February.

M3 Engineering and Technology Corporation. 2019. *Resolution Copper Project: Concentrate Pipeline Corridor Management Plan, Superior, Arizona*. Revision 4. Project No. M3-PN140023.603. Chandler, Arizona: M3 Engineering and Technology Corporation. May 2.

- Logan Simpson Design Inc. 2007. *Pinal County Open Space and Trails Master Plan*. Tempe, Arizona: Logan Simpson Design Inc. October.
- Oliver, D. 2017. *Climbing Resources Inventory*. Project Number: 31400706. Technical memorandum. Denver, Colorado: WSP Parsons Brinckerhoff. April 14.
- Queen Creek Coalition. 2015. Maximizing rock climbing resources in the Queen Creek region of Arizona. Available at: <http://theqcc.com/>. Accessed December 12, 2018.
- Resolution Copper Mining, LLC. 2018. Queen Creek climbing registration. Available at: <http://queencreekclimbing.com/>. Accessed December 20, 2018.
- Tetra Tech Inc. 2019. *Sound and Vibration Analysisd Report: Resoution Copper Mine Project, Pinal County, Arizona*. Boston, Massachusetts: Tetra Tech Inc. April 12.
- U.S. Forest Service. 1985. *Tonto National Forest Land and Resource Management Plan*. U.S. Forest Service, Southwestern Region. October.
- . 2010. *Decision Notice and Finding of No Significant Impact Resolution Copper Mining Pre-Feasibility Activities Plan of Operations [FONSI]*. Tonto National Forest, Globe Ranger District. May 14.
- . 2013. Special Uses - Applying for a Permit. Available at: [https://www.fs.fed.us/specialuses/special\\_com\\_uses.shtml](https://www.fs.fed.us/specialuses/special_com_uses.shtml). Accessed June 27, 2018.
- . 2016. *Travel Management on the Tonto National Forest: Draft Record of Decision*. Phoenix, Arizona: Tonto National Forests. June.
- . 2017. *Apache Leap Special Management Area: Management Plan*. Tonto National Forest, Globe Ranger District. December.
- . 2018a. *Arizona National Scenic Trail Nature and Purposes*. U.S. Forest Service. March.
- . 2018b. Oak Flat Campground. Available at: <https://www.fs.usda.gov/recarea/tonto/recarea/?recid=35345>. Accessed December 12, 2018.