

Environmental Assessment

Tourmaline King Mine Road (TKM Road)

in Unincorporated San Diego County, California

Pala, California, SE4 Sec. 15, T9S, R2W, SBM

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Environmental Inventory

Purpose and Need:

The purpose of this Environmental Assessment is to provide a review of the environmental conditions, impacts, and alternatives for a proposed Right of Way (ROW) to the Tourmaline King Mine along a portion of Tourmaline King Mine Road (TKM Road) that traverses the Pala Indian Reservation in Pala, California. The ROW must be authorized by the Bureau of Indian Affairs (BIA), which requires this EA under NEPA. TKM Road runs towards the peak of Tourmaline Queen Mountain, a rugged mountain with limited access or ability to add additional roadways.

Location:

The Tourmaline King Mine Road is located in Pala, California, in SE4 Sec. 15, T9S, R2W, SBM. The section under review is approximately 0.8 miles long, running to the northwest of Carver Mountain and the northeast of Tourmaline Queen Mountain (Fig. 1). The road traverses elevations of between 1198-1630 feet, reaching its peak near the mine entrance. The roadway is an unpaved mountain road heading roughly East to West, dead ending at the mine site. The roadway is between Trujillo Creek and Pala Creek, in the Northwestern Extension of the Pala Reservation and adjacent non-Reservation properties.

This area consists of rocky outcrops, small meadows, and mixed chaparral. The climate is characterized as Mediterranean, consisting of dry hot summers and mild wet winters. The flora and fauna found in this area are typical of the Palomar Mountain foothills area in Northern San Diego County. This area is not within any USFWS critical habitat designations. The slopes of Tourmaline King Mountain are known to have some potential habitat for rare or protected species.

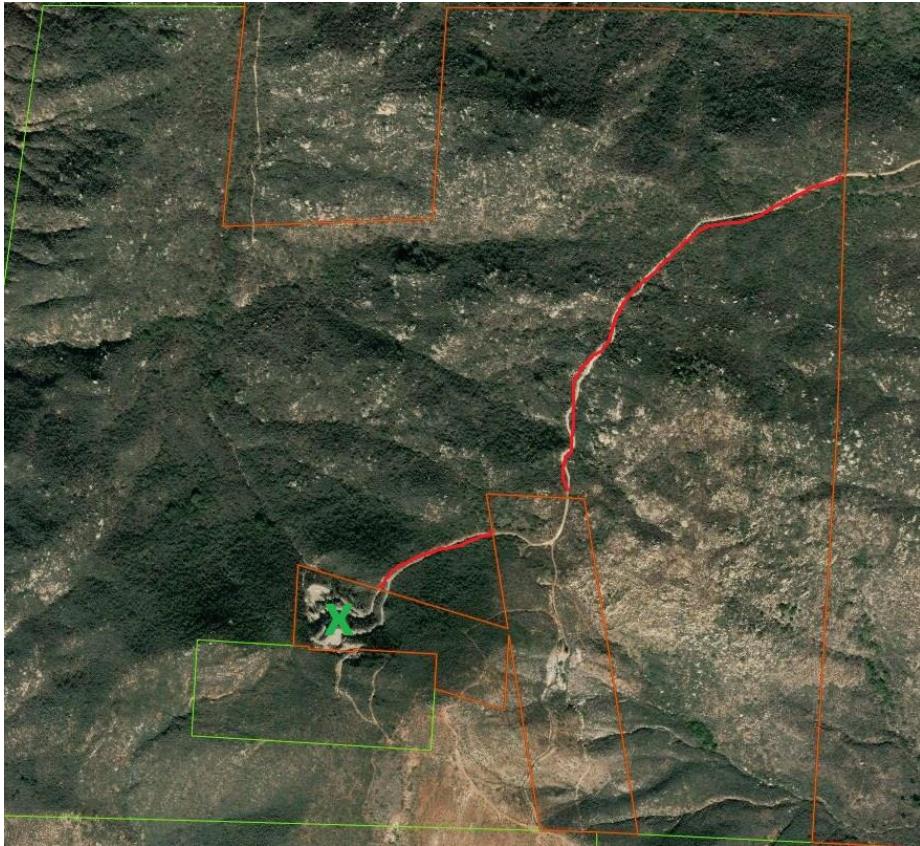


Fig. 1: Aerial map of mine (marked with green X) and TKM Road (marked with red line).

Soils:

The primary soils from this area are the CIENEBA series which consist of very well drained, shallow, coarse, sandy loams. The three soils in the series found along the roadway include: Cieneba rocky coarse sandy loam, Cieneba very rocky coarse sandy loam, and Los Pogas stony fine sandy loam. These soils are formed by weathered granitic rock, and are relatively low in nitrogen, phosphorus and potassium. This area consists of rolling to mountainous uplands with slopes of 9-75%. These soils are known to support a mix of scrub, chaparral, native grasslands, and non-native grasslands. The Elsinore Fault runs approximately 3 miles east of the mountain peak.

Vegetation:

The two mapped vegetation types along the TKM Road are Diegan Coastal Sage Scrub (Holland 32500) and Southern Mixed Chaparral (Holland 37120). Not mapped but potential vegetation types also include oak woodland, native grasslands, and non-native grasslands or other disturbed areas. Disturbed and type converted areas to non-native grasslands are most likely to occur eastward towards the main roadway access near farming and homes.

Diegan Coastal Sage Scrub is characterized by low growing vegetation in often rocky and/or dry areas, often foothills and valleys in San Diego. Typical plants of this habitat include California buckwheat (*Eriogonum fasciculatum*), prickly pear cactuses (*Opuntia* spp.), sages (*Salvia* spp.), and other low growing evergreen shrubs with interspersed season annuals. Vegetation is generally 1 to 2 m in height.

Southern Mixed Chaparral is characterized by large, evergreen shrubs often exceeding 2 m in height, to approaching tree size. Typical plants include Mexican elderberry (*Sambucus mexicana*), manzanitas (*Arctosaphylos* spp.), California lilacs (*Ceanothus* spp.), and scrub oaks (*Quercus* spp.). Chaparral is often found in low to mid-elevation areas that see extra moisture via fog or areas such as north facing slopes. Understory plants are less common than in Diego Coastal Sage Scrub, but often include lilies and other perennial wildflowers.

In both of these habitats along Tourmaline Queen Mountain, invasive and non-native plants can be found, especially along roadsides (Fig. 2). . These are generally the Mediterranean grasses and small annuals such as storksbill (*Erodium* spp.) Non-natives and invasives are common along the roadsides and less so in the interior of relative undisturbed lands. Several rare plants have the potential to occur in or near the roadway site, including Parry's tetracoccus (*Tetracoccus dioicus*) and rainbow manzanita (*Arctostaphylos rainbowensis*), though neither species were observed on site during any visits. Both species occur within 3 miles of the project site.

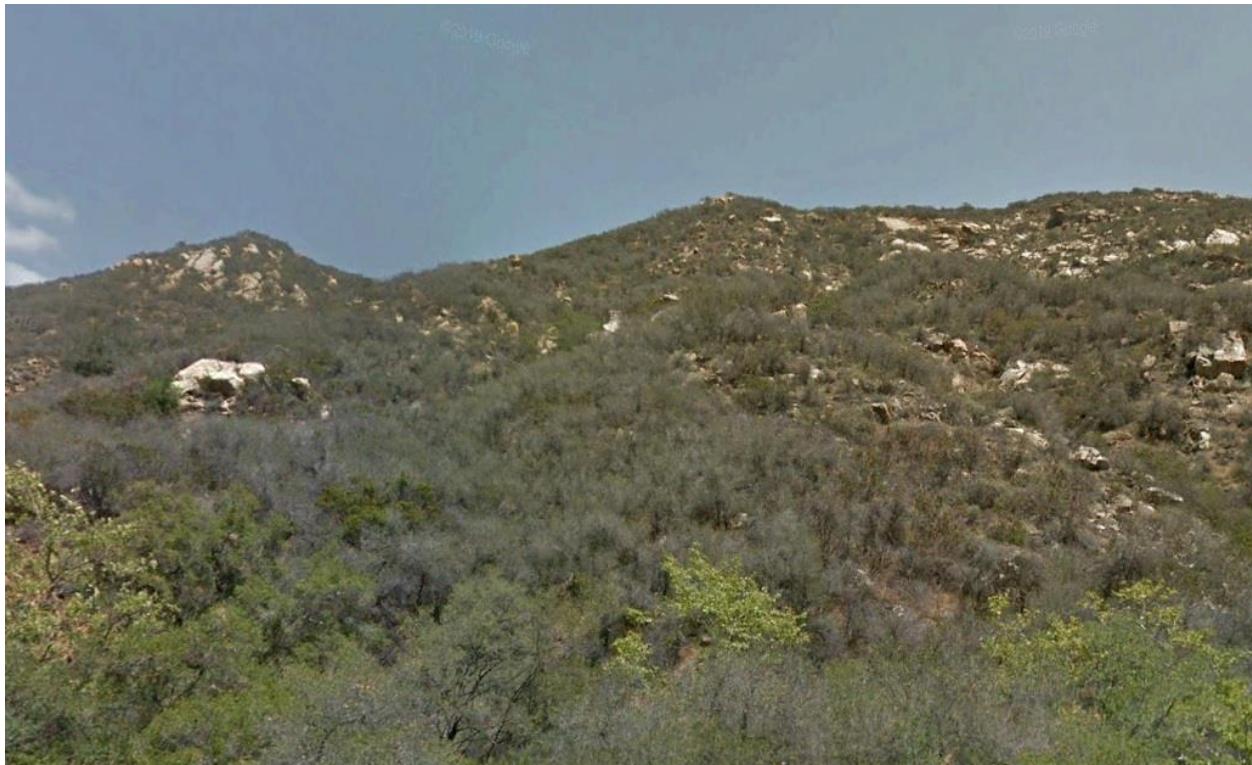


Fig. 2: Image of vegetation on Tourmaline Queen Mountain showing mixed chaparral and coastal scrub.

Wildlife:

The small mammal species noted from trail cameras and personal observation include dusky-footed wood rat (*Neotoma fuscipes*), San Diego desert wood rat (*Neotoma lepida*), western harvest mouse (*Reithrodontomys megalotis*), brush mouse (*Peromyscus boylii*), California mouse (*Peromyscus californicus*), spiny mouse, desert cottontails (*Sylvilagus audubonii*), and California ground squirrels (*Otospermophilus beecheyi*). Other observed species include grey foxes, coyotes, raccoons, mule deer, and bobcats.

Common reptiles and amphibians in the region include red diamond rattlesnake, Pacific rattlesnake, rosy boa, lyre snake, granite spiny lizard, western toad, sage brush lizard, and side-blotched lizard. It is likely that there are other reptile species that have not yet been observed.

Species of birds that have been noted include California quail, California towhee, California thrasher, western scrub jay, blue-grey gnat catcher, red tail hawk, barn owls, and great-horned owls.

Insects noted through observation at the road site include pinacate beetles (*Eleodes dentipes*), crane flies (Tipulidae spp.), dark Jerusalem crickets (*Stenopelmatus nigrocapitatus*), sand cockroaches, grasshoppers, and desert tarantula (*Aphonopelma chalcodes*).

Culturally sensitive species known to occur near the roadway include the mountain lion, bobcat, golden eagle, and mule deer. The species have special meaning regardless of protection status to the Tribe. Protected species that may occur include the Federally listed coastal California gnatcatcher (*Poplioptila californica californica*), though the nearest records are in the valley areas and are not found in mountains areas generally (Fig. 3). Other listed and protected species may be found nearby but are highly unlikely to occur along the TKM Road.

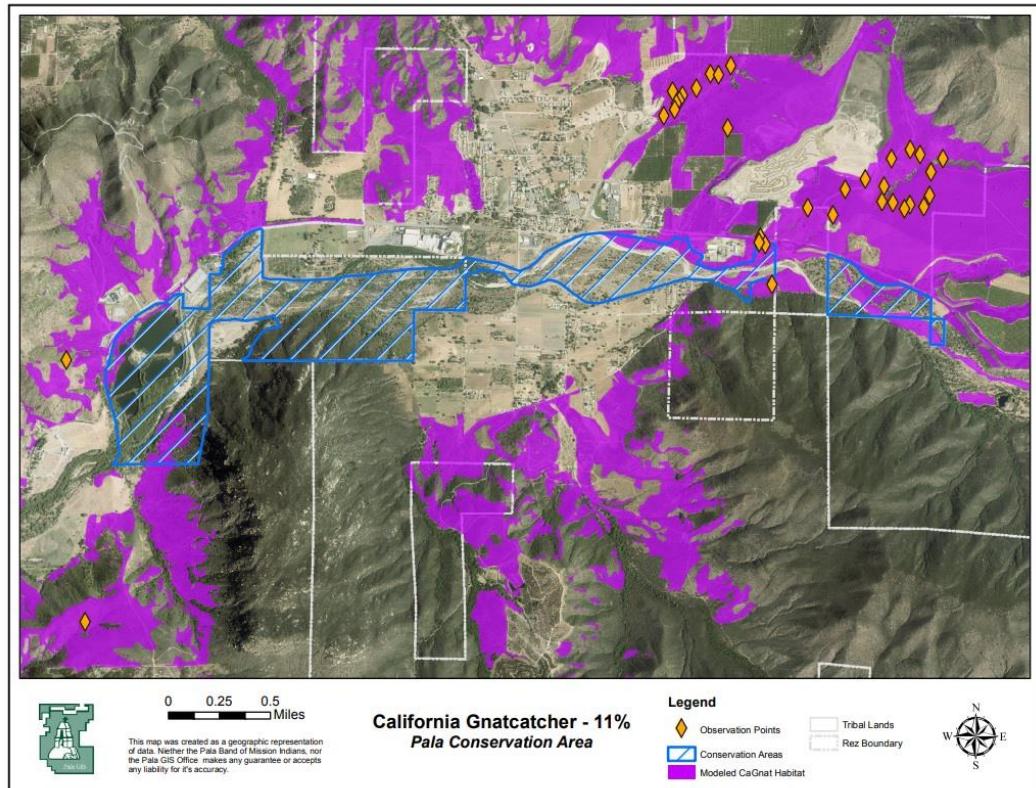


Fig. 3: Known California gnatcatcher locations (orange diamonds) and potential habitat (purple). Note that the TKM Road site location is just north of the area shown on this map.

Water Resources:

The project area lies within the San Luis Rey Watershed and there are two tributary creeks that flow less than a mile from the TKM roadway. Both creeks are northern tributaries that flow into the San Luis Rey River, eventually draining into the Pacific Ocean.

Pala Creek is a north-south flowing ephemeral creek that lies 0.86 miles to the west of the TKM (Figure 4). The TKM roadway is upstream from this creek and there are a number of natural drainage channels that connect the two. Trujillo Creek is another north-south flowing ephemeral creek that lies 0.61 miles to the east of the TKM roadway (Figure 4). These creeks feed Pala's aquifer, which is the tribe's sole drinking water source, making both the water quality and quantity of these creeks an important natural resource for the Pala Tribe.

There is some concern regarding higher than normal sedimentation that has been occurring in both Pala Creek and Trujillo Creek over the last four years. This may be related to erosion from the TKM roadway or mine, or from another source. Since both creeks are located downstream and the TKM roadway is a potential for nonpoint source pollution, every effort should be made to prevent sedimentation from entering these natural drainages and creeks. The Pala Environmental Department has observed increased precipitation rates (e.g. February 2019; January/February 2017) in this area over the last few years, potentially indicative of climate change related impacts and a ‘new normal’ for our area, which likely exacerbates erosion issues.

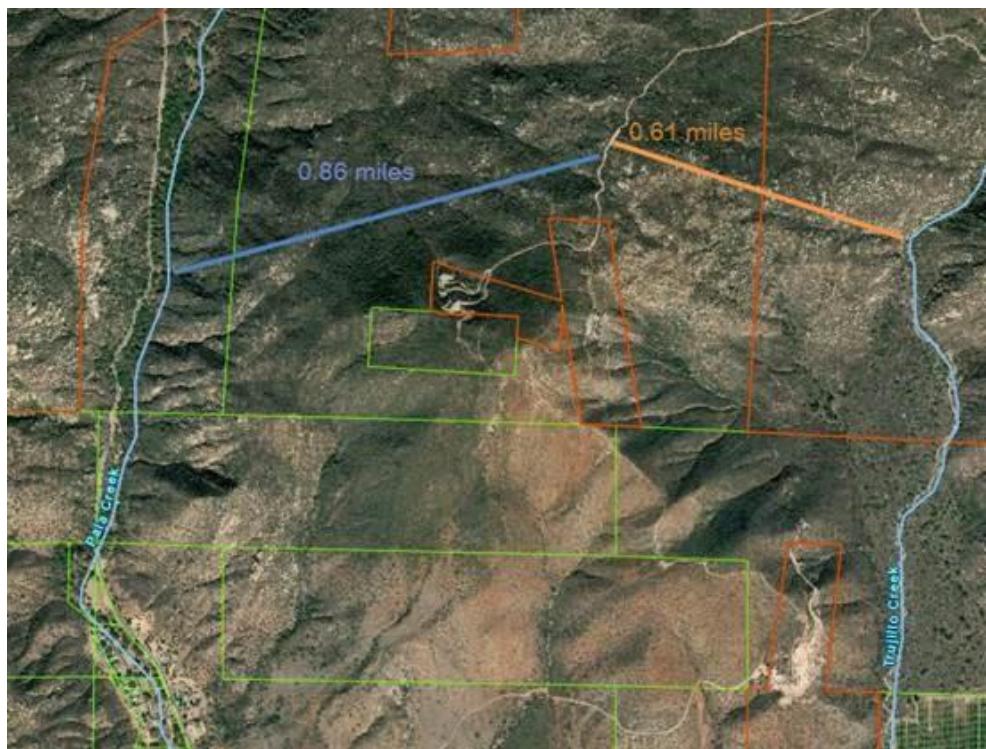


Fig. 4: Ephemeral creek location.

Cultural Resources:

A cultural resource records check and site survey was conducted by the Pala Tribal Historic Preservation Office. No precontact or historic tribal cultural resources are present near or within the proposed TKM Road ROW. Historic resources in the vicinity include various abandoned mine claims, none of which will be impacted by the road.

Alternatives:

The road under review for this ROW is currently the only access route to the Tourmaline King Mine. There are two alternatives:

No Action Alternative: No ROW is granted and access to the mine via TMK Road is prohibited.

Alternative 1: A BIA-authorized ROW is granted strictly for access to Tourmaline King Mine. This alternative would include regular roadway maintenance without encroachment onto Tribal lands. Alternative 1 is the preferred alternative. Proper erosion control measures and stormwater BMP's to prevent sedimentation from draining west into the Pala Creek and east into Trujillo Creek will be included in ROW activities.

Environmental Consequences:

Tourmaline King Mine Road has already been constructed, thus there are no impacts associated with initial construction. Maintenance of the road involves regular grading and maintenance and repair of drainage and anti-erosion features. There are no anticipated environmental effects to flora, fauna, or cultural resources from this activity.

Mitigation Measures:

Under the preferred Alternative 1, BIA-authorized access will occur with some minor road maintenance for safety and use. Maintenance of the TKM Road will be done in such a way as to best preserve edge vegetation and habitat and to avoid any and all potential take of species. This would include avoiding nests, avoiding roadway maintenance during bird nesting season whenever possible, and avoiding roadway maintenance at night when small mammals are likely to be active, and amphibians may be migrating. As no waterways flow through the road, issues with blocking streams are unlikely. Ruts will be filled using clean dirt and rocks, such as those from onsite of the mining operation.

Should a question arise about wildlife, other natural resources, or cultural resources, the persons using or maintaining the road will contact the BIA or Pala Environmental Department for assistance and expert help. Under all circumstances, impacts to the surrounding wildlands and Tribal lands will be avoided whenever possible. Long-term maintenance and use of the TKM Road will not significantly alter the environment or resources of the Tribal lands as this is an existing road feature.

Consultation:

The BIA and the Pala Band of Mission Indians were consulted as this project occurs on Tribal Reservation lands.

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