



ROCKY MOUNTAIN ECOLOGY

ENVIRONMENTAL CONSULTING | APPLIED RESTORATION SERVICES

Mr. Robert Newcomer
Environmental & Water Resources Consultant
Toltec Mesa Resources LLC
7823 Quintana Dr NE
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24 October 2022

Re: Rare Plant Survey at Orogrande Placer Gold Mine, Otero County, New Mexico

Mr. Newcomer:

On October 20th, 2022, Rocky Mountain Ecology (RME) conducted a rare plant survey at the Orogrande Placer Gold Mine in anticipation of renewed mining activities at the site. The survey was required by the Mining and Minerals Division (MMD) of the Energy, Mineral and Natural Resources Department (EMNRD), as a condition of obtaining a mining permit. The proposed permit area, totaling approximately eight acres, primarily includes disturbed soil associated with historic mining activities. The site is located approximately 1.2 miles north of Orogrande, Otero County, NM; access to the site is gained by utilizing various dirt two-tracks from just north of Orogrande.

Prior to the survey, the New Mexico Rare Plant Technical Council (NMRPTC) database was reviewed to determine potential occurrence of state or federal proposed, threatened, endangered, candidate and sensitive species in the project area. Habitat associations and species descriptions for the targeted species were derived from this resource, and their habitat requirements were then compared to the habitat found in the project area to identify which species were likely to occur. Species considered unlikely to occur and for which suitable habitat does not exist within the project area, were removed from further consideration.

Clay Bowers, a qualified RME biologist, surveyed the proposed permit area, in addition to a 150-meter buffer for rare plants, resulting in a total survey area of approximately 8.5 acres. The survey consisted of walking transects and visually inspecting the ground for rare plants. Searches for noxious weeds were also conducted. Weather conditions consisted of sunny skies, with a temperature of 50 degrees Fahrenheit and winds between 2-5 miles per hour. All plant species observed were documented, as listed below.

Results

Species documented include:

Common Name	Scientific Name	Status at Project Area
Grasses		
Six-weeks grama	<i>Bouteloua barbata</i>	Dominant grass
Black grama	<i>Bouteloua eriopoda</i>	Codominant grass
Common wolfstail	<i>Lycurus phleoides</i>	Codominant grass
Silver bluestem	<i>Bothriochloa laguroides</i>	Few
Sideoats grama	<i>Bouteloua curtipendula</i>	Common

Common Name	Scientific Name	Status at Project Area
Fluffgrass	<i>Erioneuron pulchellum</i>	Common
Lehmann's lovegrass	<i>Eragrostis lehmanniana</i>	Few
Bush muhly	<i>Muhlenbergia porteri</i>	Few
Tobosa	<i>Pleuraphis mutica</i>	Few
Plains bristlegrass	<i>Setaria leucopila</i>	Common
Shrubs and Half-Shrubs		
Creosotebush	<i>Larrea tridentata</i>	Dominant shrub
Mariola	<i>Parthenium incanum</i>	Codominant shrub
Spittleleaf brickelbush	<i>Brickellia lacinata</i>	Common
Whitethorn acacia	<i>Acacia constricta</i>	Few
Desert willow	<i>Chilopsis linearis</i>	Few
Tree cholla	<i>Cylindropuntia imbricata</i>	Common
Christmas cholla	<i>Cylindropuntia leptocaulis</i>	Few
Turk's head cactus	<i>Echinocactus horizonthalonius</i>	Few
Scarlet hedgehog cactus	<i>Echinocereus coccineus</i>	Few
Texas rainbow cactus	<i>Echinocereus dasyacanthus</i>	Few
Claret cup cactus	<i>Echinocereus triglochidiatus</i>	Few
Roetter's hedgehog cactus	<i>Echinocereus X roetteri</i>	Few
Ephedra	<i>Ephedra trifurca</i>	Few
Tarbush	<i>Flourensia cernua</i>	Few
Fishhook cactus	<i>Ferocactus wislizeni</i>	Few
Broom snakeweed	<i>Gutierrezia sarothrae</i>	Few
Engelmann prickly pear	<i>Opuntia engelmannii</i>	Common
Purple prickly pear	<i>Opuntia macrocentra</i>	Common
Honey mesquite	<i>Prosopis glandulosa</i>	Few
Littleleaf sumac	<i>Rhus microphylla</i>	Few
Banana yucca	<i>Yucca baccata</i>	Common
Forbs		
Palmer's amaranth	<i>Amaranthus palmeri</i>	Common
Desert marigold	<i>Baileya multiradiata</i>	Few
Stinging serpent	<i>Cevallia Sinuata</i>	Locally common
Sacred thorn-apple	<i>Datura wrightii</i>	Few
Spiny goldenweed	<i>Machaeranthera pinnatifida</i>	Common
Russian thistle	<i>Salsola spp</i>	Few
Silverleaf nightshade	<i>Solanum elaeagnifolium</i>	Locally common
Golden crownbeard	<i>Verbesina encelioides</i>	Few
Cocklebur	<i>Xanthium strumarium</i>	Few

No rare plants or noxious weeds were detected. Though the site has been previously disturbed, native vegetation is well established and exhibits good density and vigor when compared to the undisturbed and surrounding area. Due to the absence of any rare plants, no impacts to rare plants would occur with renewed mining activity.

If you have any questions or concerns, please feel free to contact.

Signature(s):

Prepared by: 

Date: 10/24/2022

Clay P. Bowers, Rocky Mountain Ecology, LLC

Photo 1. From northwest portion of permit area, facing southeast.



Photo 2. From southwest portion of permit area, facing northeast.



Photo 3. South-central permit area, facing northwest.



Photo 4. Central portion of permit area; dense thicket of mesquite, with some little-leaf sumac.

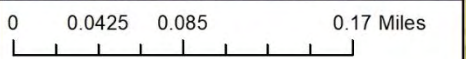


Photo 5. Western portion of permit area facing east.



Orogrande Placer Gold Mine Rare Plant Survey

Rare Plant Survey Area



Legend

- Proposed Permit Area (8 ac)
- BLM
- Private

