February 10, 2021

BASIC RESOURCES, INC.
Contact: Tom Ferrell
140 Empire Avenue
Modesto, California 95354

SUBJECT: Biological Resources Report for the Extension of Operating Hours at the Jackson Valley Quarry Located within Assessor Parcel Numbers (APNs) 005-230-016 and 005-230-007 in Amador County, California

Introduction

This report contains the findings of ELMT Consulting's (ELMT) biological resource report for the extension of operating hours at the Jackson Valley Quarry (project site or site) located near the City of Ione, Amador County, California. A biological resources survey was conducted by biologists Travis J. McGill and Jacob H. Lloyd Davies on November 24, 2020 to document baseline conditions and assess the potential for the extension of operation hours to impact nocturnal wildlife species known to occur within the vicinity of the project site. Special attention was given to the suitability of the project site and immediately surrounding areas to support nocturnal wildlife species and special-status identified by the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), and other electronic databases as potentially occurring in the general vicinity of the project; and includes avoidance and minimization measures to prevent potential impacts to such species.

Project Location

The project site is generally located south and east of State Route 88, west of the community of Buena Vista, north of the community of Camanche Village, southwest of the City of Ione, Amador County, California. The site is depicted on the Ione quadrangle of the United States Geological Survey's (USGS) 7.5-minute map series within Section 11 of Township 5 North, Range 9 East. Specifically, the site is bound to the north by State Route 88 and to the south by Jackson Valley Road within APNs 005-230-007 and 005-230-016 at 3421 Jackson Valley Road. Refer to Exhibits 1 and 2 in Attachment A.

Project Description

In order to support regional customer demands, George Reed, Inc. (GRI) has submitted a request to modify the approved hours of operation to allow for 24-hour operational/reclamation activities. Other than the extension of operating hours, GRI seeks no change to any element of the approved operations or Permit. The Project would not modify the disturbance area, current productions levels, materials to be mined, or mining methods, and the overall production and processing activities would be consistent with existing conditions.

Important to this analysis, the site currently conducts operational/reclamation activities from 6:00 a.m. to 6:00 p.m. which does involve activities during "nighttime" hours. As a result, area and task lighting is currently in-

place at the Site for safety purposes and to operate during periods of low visibility. However, in order to facilitate extended nighttime activities, it is anticipated that additional lighting will be necessary in select operational areas, and noise and vibration from construction equipment will occur in extended hours.

Methodology

A literature review and records search were conducted to determine which special-status biological resources have the potential to occur on or within the general vicinity of the project site. In addition to the literature review, a general habitat assessment or field investigation of the project site was conducted to document existing conditions and assess the potential for special-status biological resources and nocturnal wildlife to occur within the project site.

Literature Review

Prior to conducting the field investigation, a literature review and records search was conducted for special-status biological resources potentially occurring on or within the vicinity of the project site that could be effected by extending operation hours. Previously recorded occurrences of special-status wildlife species and their proximity to the project site was determined through a query of the CDFW's QuickView Tool in the Biogeographic Information and Observation System (BIOS), CNDDB Rarefind 5, compendia of special-status species published by CDFW, and the United States Fish and Wildlife Service (USFWS) species listings.

All available reports, survey results, and literature detailing the biological resources previously observed on or within the vicinity of the project site was reviewed to understand existing site conditions and note the extent of any disturbances that have occurred within the project site that would otherwise limit the distribution of special-status biological resources. Standard field guides and texts were reviewed for specific habitat requirements of special-status and non-special-status biological resources, as well as the following resources:

- Google Earth Pro historic aerial imagery (1993-2018);
- USFWS Critical Habitat designations for Threatened and Endangered Species; and
- USFWS Endangered Species Profiles.

The literature review provides a baseline from which to inventory the biological resources potentially occurring within the project site. The CNDDB database was used, in conjunction with ArcGIS software, to locate the nearest recorded occurrences of special-status species and determine the distance from the project site.

Habitat Assessment/Field Investigation

Following the literature review, biologists Travis J. McGill and Jacob H. Lloyd Davies inventoried and evaluated the condition of the habitat within the project site on November 24, 2020. Plant communities and land cover types identified on aerial photographs during the literature review were verified by walking meandering transects throughout the project site and immediate adjacent areas. In addition, aerial photography was reviewed prior to the site investigation to locate potential natural corridors and linkages that may support the movement of wildlife through the area. These areas identified on aerial photography were then walked during the field investigation.

Plant Communities

Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities were classified in accordance with Sawyer, Keeler-Wolf and Evens (2009), delineated on an aerial photograph, and then digitized into GIS Arcview. The Arcview application was used to compute the area of each plant community and/or land cover type in acres.

Wildlife

Wildlife species detected during the field investigation by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides used to assist with identification of wildlife species during the survey included The Sibley Field Guide to the Birds of Western North America (Sibley 2003), A Field Guide to Western Reptiles and Amphibians (Stebbins 2003), and A Field Guide to Mammals of North America (Reid 2006). Although common names of wildlife species are well standardized, scientific names are provided immediately following common names in this report (first reference only).

Existing Site Conditions

The proposed project site is located in an area that primarily supports agricultural land uses and rural residential homes. The site is bordered by State Route 88 on its northern boundary with undeveloped, vacant land to the immediate north and a mining quarry approximately 1 mile to the north; the site is bordered by undeveloped, vacant land, and rural residential homes beyond; and the site is bordered by agricultural lands to the south and west. The site consists of the existing Jackson Valley Quarry that is actively being mined, and the immediate surrounding undeveloped areas within the previously approved mining footprint.

On-site elevation ranges from approximately 231 to 420 feet above mean sea level and the site generally slopes from east to west. The main area of on-site topographical relief coincides with the active mining operations within the western portion of the site and areas removed from mining activities support a series of rolling hills.

The undisturbed areas on the western and northern boundaries of the project site consists of three (3) vegetation communities: oak woodland savannah, non-native grassland, and riparian. The site also supports one (1) land cover type that would be classified as disturbed. Refer to Attachment B, *Site Photographs*, for representative site photographs.

Oak woodland savannah occurs throughout the eastern portion of the site and along the northern boundary. This community is dominated by coast live oak (*Quercus agrifolia*), canyon oak (*Quercus chrysolepsis*), and blue oak (*Quercus douglasii*), with an understory primarily composed of annual non-native grasses such as red brome (*Bromus madritensis* ssp. *rubens*), wild oat (*Avenua fatua*), and soft chess (*Bromus hordeaceus*).

The southwest and northwest corners of the site support water detention basins and a riparian vegetation community. Notable plant species observed in this community include cottonwood (*Populus fremontii*), cattail (*Typha latifolia*), and rushes (*Juncus* spp.). It should be noted that the on-site ponds are actively used for water storage and acquisition for use in on-site mining activities and are routinely impacted by associated disturbances.

The non-native grassland community occurs intermixed with the oak woodland savannah where large trees tend to be absent. Additional plant species observed within the grassland plant community during the field investigation include wedgeleaf ceanothus (*Ceanothus cuneatus*), chamise (*Adenostoma fasciculatum*), gray pine (*Pinus sabiniana*), bull thistle (*Cirsium vulgare*), Italian thistle (*Carduus pycnocephalus*), cryptantha (*Cryptantha* sp.), and narrow leafed owl's clover (*Castilleja attenuata*).

Disturbed areas include active and remnant mining areas, dirt roads, and adjacent areas, and are largely devoid of vegetation except for weedy/ruderal species adapted to significant disturbance.

Wildlife

Plant communities provide foraging habitat, nesting/denning sites, and shelter from adverse weather or predation. This section provides lists of species detected during the field investigation and provides insight into which species are nocturnal and may be impacted by project implementation. The discussion is to be used a general reference and is limited by the season, time of day, and weather conditions in which the field investigation was conducted. Wildlife detections were based on calls, songs, scat, tracks, burrows, and direct observation.

Birds

The undisturbed areas on the eastern, northern and southern portions of the project site provide suitable foraging and nesting habitat for a variety of bird species that occur in the region. Bird species detected during the field investigation include northern flicker (*Colaptes auratus*), acorn woodpecker (*Melanerpes formicivorous*), northern mockingbird (*Mimus polyglottos*), western bluebird (*Sialia mexicana*), lesser goldfinch (*Spinus psaltria*), California scrub-jay (*Aphelocoma californica*), phainopepla (*Phainopepla nitens*), Anna's hummingbird (*Calypte anna*), mourning dove (*Zenaida macroura*), California quail (*Callipepla californica*), and black phoebe (*Sayornis nigricans*). In addition, signs of owl foraging activity (i.e. pellets) were observed during the field investigation, and the area surrounding the project site supports suitable nesting habitat for local owl species.

Of the aforementioned bird species, only owls are nocturnal and may be impacted by project implementation. Due to on-site and surrounding habitats, regional topography, and known habitat requirements and ranges of native owl species, only great-horned owl (*Bubo virginianus*) and barn owl (*Tyto alba*) are expected to utilize the undeveloped portions of the project site for foraging activities. No large raptor nests were observed within the project footprint during the field investigation. With implementation of avoidance and minimization measures described below, impacts to the aforementioned species will be less than significant.

Mammals

The undisturbed areas on the eastern, northern and southern portions project site provide suitable foraging and cover habitat for a variety of mammalian species that occur in the region. Mammalian species detected during the field investigation included coyote (*Canis latrans*), mule deer (*Odocoileus hemionus*), gopher (*Thomomys* sp.), and striped skunk (*Mephitis mephitis*). While no bat species or potential roosting opportunities were observed during the field investigation, the project site does support suitable foraging habitat for bats. Further, suitable roosting habitat can be found in the general area surrounding the site, indicating that bat species have the potential to occur.

All of the aforementioned species, except mule deer, are typically nocturnal and have the potential to be impacted by project implementation. With implementation of avoidance and minimization measures described below, impacts to the aforementioned species will be less than significant.

Reptiles

The project site provides suitable foraging and cover habitat for a limited variety of reptile species adapted to a high degree of anthropogenic disturbance. No reptile species observed during the field investigation. Common reptilian species that could potentially occur on-site include California kingsnake (*Lampropeltis californiae*), Pacific gopher snake (*Pituophis catenifer catenifer*), northern Pacific rattlesnake (*Crotalus oreganus oreganus*), forest alligator lizard (*Elgaria multicarinata multicarinata*), and northwestern fence lizard (*Sceloporus occidentalis occidentalis*).

Of the aforementioned species, California kingsnake, Pacific gopher snake, and northern Pacific rattlesnake are could be affected by night activities. With implementation of avoidance and minimization measures described below, impacts to the aforementioned species will be less than significant.

Migratory Corridors and Linkages

Habitat linkages provide connections between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet still inadequate for others. Wildlife corridors are features that allow for the dispersal, seasonal migration, breeding, and foraging of a variety of wildlife species. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

No documented wildlife movement areas occur within the boundary of the project site. The nearest wildlife movement area occurs within Jackson Creek, approximately 600 feet south of the project, beyond Jackson Valley Road and existing agricultural development. These and other surrounding land uses have isolated the project site from Jackson Creek and surrounding habitats, and there are no riparian corridors, creeks, or useful patches of steppingstone habitat within or connecting the project site to any identified wildlife corridors or linkages. The site is further constrained to the east but by existing agricultural development, ranching activities, and paved roads. As a result, extending operating hours is not expected to disrupt or have any adverse effects on any migratory corridors or linkages in the surrounding area.

Special-Status Wildlife Species

The CNDDB Rarefind 5 was queried for reported locations of special-status wildlife species in the Ione USGS 7.5-minute quadrangles. Only one quadrangle was queried due to surrounding land uses and regional topography, and limited scope of work. The habitat assessment evaluated the conditions of the habitat(s) within the boundaries of the project site to determine if the existing plant communities, at the time of the survey, have the potential to provide suitable habitat(s) for special-status wildlife species.

The literature search identified eight (8) special-status plant species, seven (7) special-status wildlife species, and one (1) special-status plant community as being documented within the Ione 7.5-minute

quadrangle. Special-status wildlife species were evaluated for their potential to occur within the project site based on habitat requirements, availability and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity of the project site is presented in Attachment C*: Potentially Occurring Special-Status Biological Resources*.

Special-Status Plant

According to the CNDDB and CNPS, eight (8) special-status plant species have been recorded in the Ione quadrangle (refer to Attachment C). No special-status plant species were observed within the boundaries of the project site during the field investigation. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the project site does not have potential to support any special-status plants known to occur in the vicinity of the site and all special-status plant species are presumed absent.

Special-Status Wildlife

According to the CNDDB, seven (7) special-status wildlife species have been reported in the Ione quadrangle (refer to Attachment C). No special-status wildlife species were observed on-site during the field investigation. Onsite and adjacent disturbances have reduced potential foraging and nesting/denning opportunities for most wildlife species. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the project site has a low potential to support Tricolored blackbird (*Agelaius tricolor*), California tiger salamander (*Ambystoma californiense*), and western pond turtle (*Emys marmorata*). All remaining special-status wildlife species were presumed to be absent from the project site.

Based on the results of the updated field investigation, and conclusions presented in the April 2013 Final Environmental Impact Report, the extension of operating hours is not expected to have a significant impact to special-status wildlife species.

Special-Status Plant Communities

One (1) special-status plant community has been recorded within the Ione quadrangle: Ione Chaparral. This plant community does not occur onsite.

Critical Habitats

Under the federal Endangered Species Act, "Critical Habitat" is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. All federal agencies are required to consult with the USFWS regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued existence of the listed species or adversely modify or destroy its designated Critical Habitat. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing is on federal lands, uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a Clean Water Act Permit from the United States Army Corps of Engineers). If a there is a federal nexus,

then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The project site is not located within federally designated Critical Habitat. The nearest designated Critical Habitat is located approximately 2.7 miles southeast for California tiger salamander (*Ambystoma californiense*).

Avoidance and Minimization Measures

The avoidance and minimization measures provided in the Light Pollution Prevention Plan, existing conditions of approval, and recommended mitigation measures listed in the Environmental Noise and Vibration Assessment are intended to address potential indirect effects to nocturnal wildlife species associated with extending operating hours.

Lighting

Nighttime lighting associated with extended hours for the project have the potential to disrupt the behaviors of local nocturnal wildlife species. The proposed project is not anticipated to significantly increase lighting and glare. All light sources will be designed with internal baffles to direct the lighting towards the ground and the disturbed areas and have a zero-side angle cut off to the horizon to prevent glare from affecting neighboring parcels. The extension of operating hours is not expected to result in lighting that extends beyond the quarry footprint. In addition, vehicle headlights from parking areas and drive aisles will not shine into adjacent undeveloped habitat.

Noise

Noise associated with extended hours of operation for the project have the potential to disrupt the behaviors of local nocturnal wildlife species. However, the existing mining pit has created a physical separation or barrier from undeveloped habitats to the north, west, and south. This barrier has created a noise buffer from potential indirect impacts on local wildlife movement adjacent to the project site. The natural buffer created by the existing mining pit significantly lessen any noise exposure to any nocturnal wildlife species.

A project specific Environmental Noise and Vibration Assessment (prepared by Bollard Acoustical Consultants, 2021) analyzed potential noise and vibration impacts related to the extended hours of operation at the Jackson Valley Quarry. Specific noise sources evaluated included aggregate mining, processing, and loadout. This evaluation did not analyze noise or vibration generated by blasting operations, as no changes to current blasting operations are proposed as part of the project.

The evaluation concluded that, with implementation of appropriate noise mitigation measures (e.g.., mining setbacks, processing area source noise control, and limitations on the number of nighttime truck load-out operations) impacts from noise would be reduced to less than significant levels. Further, no adverse vibration impacts were identified for the proposed project, and no vibration mitigation measures were recommended.

Conclusion

There have been no significant changes in the biological setting at the Project site since the 2013 Environmental Impact Report was prepared in support of the Jackson Valley Quarry Use Permit. With implementation of mitigation measures provided in the Light Pollution Prevention Plan, existing Conditions of Approval, and

outlined in the Environmental Noise and Vibration Assessment, indirect impacts to nocturnal wildlife will be less than significant.

Please do not hesitate to contact Tom McGill at (951) 285-6014 or tmcgill@elmtconsulting.com or Travis McGill at (909) 816-1646 or travismcgill@elmtconsulting.com should you have any questions this report.

Sincerely,

Thomas J. McGill, Ph.D.
Managing Director

Travis J. McGill
Director

Attachments:

A. *Project Exhibits*
B. *Site Photographs*
C. *Potentially Occurring Special-Status Wildlife Species*