State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Blvd, Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

January 20, 2023
Sent via e-mail

Michael Abraham
Assistant Director
Imperial County Planning and Development Services Department
801 Main Street
El Centro, CA 92243

IS21-0029 SMP GOLD CORP (ORO CRUZ) RECLAMATION PLAN #21-0001, A MINERAL EXPLORATION PROJECT (PROJECT)
MITIGATED NEGATIVE DECLARATION/ENVIRONMENTAL ASSESSMENT (MND/EA)
SCH #: 2022120331

Dear Mr. Abraham:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt an MND/EA from Imperial County Planning and Development Services Department (Imperial County) for the Project pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

Proponent: Imperial County

Objective: The objective of the Project is to perform mineral exploration consisting of three major activities: drilling, mining support, and reclamation. Drilling activities consist of creating up to sixty-five 800-foot boreholes across seven Drill Areas. Activities related to mining support consist of constructing approximately 10,410 feet of existing road improvements, approximately 6.2 miles of new 12-foot-wide temporary exploration drilling access road, up to 8 helicopter landing pads, and 65 drill pads that will be 60-feet by 40-

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

feet in the seven Drill Areas. The drill pads will hold 12-feet by 12-feet and 6-feet deep sumps sloped approximately 2:1 on one side. Additionally, the Project would consist of constructing approximately 9,640 feet of new permanent, 15-foot-wide access roads and 2.8 acre staging area. Reclamation activities would occur in three phases: 1) site preparation, 2) planting activities, and 3) ongoing maintenance procedures. These phases include installing erosion control devices where necessary, such as waddles, application of seed mix either by hydroseeding or mechanical broadcasting, and maintenance and monitoring of revegetation activities.

Location: The Project would occur at the Oro Cruz Pit Area within the lands administered by the Bureau of Land Management in Imperial County, California (32.881640°, -114.816921°), northwest of Yuma, Arizona. The Project Area encompasses a total of approximately 626.3 acres. The exact location of the proposed surface disturbance may change based on exploration results; however, the proposed seven Drill Areas within the Project Area are located approximately at the following locations below. The Project area crosses the Amos-Ogilby and Yuma watersheds and is within the Ogilby Valley and Yuma Valley Groundwater Basins.

Surface Disturbance Activities	Latitude	Longitude	Estimated Disturbed Acres
Improvements to Existing Roads	32.882253° (start 1) 32.885731° (end 1) 32.876843° (start 2) 32.882480° (end 2)	-114.832732° (start 1) -114.818456° (end 1) -114.822264° (start 2) -114.812539° (end 2)	1.43
New Access Roads (Temporary and Permanent)	32.858134° (start) 32.878368° (end)	-114.806039° (start) -114.811288° (end)	3.32
Staging Area	32.874424°	-114.812490°	2.80
Drill Area 1	32.875703°	-114.811749°	1.85
Drill Area 2	32.880943°	-114.816294°	3.83
Drill Area 3	32.886374°	-114.823370°	1.69
Drill Area 4	32.875271°	-114.820121°	1.18
Drill Area 5	32.885514°	-114.817582°	1.19
Drill Area 6	32.867346°	-114.810919°	0.77
Drill Area 7	32.880056°	-114.810942°	2.48

Timeframe: The Project is proposed to begin upon completion of Imperial County coordination, permitting, and bonding. Project mobilization, road construction, drilling, and borehole abandonment would be completed within 12 to 24 months. Reclamation would occur concurrently with exploration activities, starting at Drill Area 1 and concluding at Drill Area 7 (no more than 2 Drill Areas will be in operation concurrently). Revegetation would be monitored and maintained annually in late spring or early summer for three years. Monitoring for the success of reclamation would be completed within five years of Project implementation.

COMMENTS AND RECOMMENDATIONS

CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (i.e., biological resources). CDFW offers the comments and recommendations below to assist Imperial County in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. The MND/EA has not adequately identified and disclosed the Project's impacts (i.e., direct, indirect, and cumulative) to biological resources and whether those impacts are less than significant. Moreover, CDFW is concerned that an MND/EA may not be appropriate for the Project because of the potential for significant impacts that have not been mitigated to a level that is less than significant. CDFW's comments and recommendations on the MND/EA are explained in greater detail below and summarized here.

Project Description

CEQA is predicated on a complete and accurate description of the proposed Project. Without a complete and accurate project description, the MND/EA likely provides an

incomplete assessment of Project-related impacts to biological resources. CDFW has identified gaps in information and discrepancies related to the project description.

The MND/EA (Section 3.22.5) states the "Project would not consume groundwater from the Imperial Valley Groundwater Basin." However, a contradictory statement appears in Section 3.22.5, which indicates "groundwater may be encountered during the course of exploratory drilling within the Drill Pads," and no groundwater on-site will be affected. Groundwater is critical for the sustainability of natural ecosystems. However, if the connection between groundwater-dependent ecosystems and groundwater is lost from unsustainable pumping practices, the result could be depleted streams, wetlands, and springs and vulnerable species that depend on them (Rohde et al. 2019). The MND/EA should quantify the amount of groundwater that may be affected along with the adverse impacts on groundwater-dependent species and surface water resources affected from groundwater discharge. Species that have the potential to be directly impacted (i.e., some or all of their water needs) by groundwater depletion include vegetation, toads, frogs, and fish. Species that have to potential to be indirectly impacted (i.e., support habitat and foraging requirements) by groundwater depletion include snakes, birds, rodents, and large game. In addition, the MND/EA (Section 3.22.5) states the water required for drilling and dust suppression "would be procured from Gold Rock Ranch and/or a local water purveyor," but does not disclose whether a water right is needed or if a water right is in place due to the proximity to the Colorado River. Instead, the MND/EA proposes application for water rights on a case-by-case basis at the time of Project activities and defers analysis of impacts and development of species-specific mitigation to that time. CDFW is concerned that the conservation management actions proposed in the MND/EA (Appendix B) that were deemed to be inapplicable (LUPA-SW-5, LUPA-SW-15, LUPA-SW-16, LUPA-SW-17 through 32, and NLCS-SW-1) have not been analyzed to determine if groundwater impacts could occur. Without the proper environmental assessment, the MND/EA likely provides an incomplete or inaccurate analysis of Project-related environmental impacts and whether those impacts have been mitigated to a level that is less than significant. CDFW recommends that a complete analysis of groundwater use and impacts to biological resources be included in a revised MND/EA or other CEQA document.

There is a discrepancy between the MND/EA and the Biological Resources Assessment (Appendix E of the MND/EA, as indicated in the Table of Contents), which estimates surface disturbance to be 20.54 acres from Drill Areas 1-7, staging area, new access roads, and improvements to existing roads. The Biological Resources Assessment (Appendix E, Section I) estimates surface disturbance to be 21.1 acres. Also, the MND/EA is unclear if these estimations include all 65 proposed drilling locations, spaces and turnarounds for large trucks, heavy equipment, and sumps. The MND/EA should clarify the correct estimation of surface disturbance and provide an accurate description of the accompanying Project activities.

Finally, the MND/EA (Appendix A, Section 4.1) includes an estimated time frame for Project mobilization, road construction, drilling, and borehole abandonment to be completed within 12 to 24 months following mining exploration. However, the MND/EA fails to state the estimated period for mining exploration to begin. The MND/EA should clearly state the timing of the entire window of Project activities. In addition, the MND/EA (Appendix A, Section 4.1) states that "drill areas would be potentially revisited a second and third time based on findings," but fails to consider that repeated focused and/or pre-activity biological surveys would need to be completed before Project areas are revisited. Due to the unclear timing of the entire project window, revisiting sites without the proper environmental assessment could result in Project-related environmental impacts that cannot be mitigated to a level that is less than significant.

Existing Environmental Setting

Compliance with CEQA is predicated on a complete and accurate description of the environmental setting that may be affected by the proposed Project. CDFW is concerned that the assessment of the existing environmental setting has not been adequately analyzed in the MND/EA. CDFW is concerned that without a complete and accurate

description of the existing environmental setting, the MND/EA likely provides an incomplete or inaccurate analysis of Project-related environmental impacts and whether those impacts have been mitigated to a level that is less than significant.

The MND/EA bases its analysis of impacts to biological resources on three reports: (1) WestLand Resources Inc., which conducted a field assessment of the Project site in March 2021 (Appendix E of the MND/EA); (2) Tetra Tech, Inc., which conducted a biological resources assessment in October 2011 (referenced in Appendix A and Appendix E of the MND/EA); and (3) a focused desert tortoise survey conducted by Stantec Consulting Services Inc., on January 8 through 15, 2021 (Appendix E of the MND/EA). However, the MND/EA (Appendix E, Section 5.1.2) indicates that vegetation mapping validation, diurnal raptor surveys, and habitat suitability assessments for Colorado Desert fringe-toed lizard, western burrowing owl, flat-tailed horned lizard, and bat species were all performed during the single field visit conducted by WestLand Resources. In addition, no focused, protocol-level surveys were conducted for special-status plant or animal species aside from the focused survey for desert tortoise, which is currently outdated. CDFW is concerned that the field assessments are outdated and were not conducted at the appropriate time(s) of year or using standard protocols to detect all special-status species on-site. CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Therefore, CDFW recommends that a revised MND/EA or other CEQA document include the results of a complete, recent inventory of rare, threatened, endangered, and other sensitive species located within the Project footprint and within off-site areas with the potential to be affected by Project activities (see “Assessment of Biological Resources” section below).

Assessment of Impacts to Biological Resources

Assessment of Biological Resources

CDFW is concerned about the potential for special-status species to occur on the Project site. The MND/EA acknowledges the potential for the following special-status species to occur: desert tortoise (*Gopherus agassizii*), burrowing owl (*Athene cunicularia*), prairie falcon (*Falco mexicanus*), peregrine falcon (*Falco peregrinus*), golden eagle (*Aquila chrysaetos*), black-tailed gnatcatcher (*Poliptila melanura*), loggerhead shrike (*Lanius ludovicianus*), Crissal thrasher (*Taxostoma crissale*), Le Conte’s thrasher (*Taxostoma lecontei*), nesting birds, Townsend’s big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*), greater western mastiff bat (*Eumops perotis californicus*), cave myotis (*Myotis velifer*), small-footed myotis (*Myotis ciliolabrum*), California leaf-nosed bat (*Macrotus californicus*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), desert bighorn sheep (*Ovis canadensis nelsoni*), mule deer (*Odocoileus hemionus eremicus*), flat-tailed horned lizard (*Phrynosoma mccallii*), and Colorado Desert fringe-toed lizard (*Uma notata*). A query of California Natural Diversity Database (CNDDB) and the Biogeographic Information and Observation System (BIOS) also indicates potential for other special-status species to occur in the Project area, such as Gila woodpecker (*Melanerpes uropygialis*). The MND/EA lacks a recent general assessment of biological resources and surveys for rare, threatened, endangered, and other special-status species located within the Project footprint and surrounding areas. CDFW is concerned that the MND/EA does not include a complete and accurate description of the existing environmental setting. This may result in the MND/EA having an incomplete or inaccurate analysis of Project-related environmental impacts and whether those impacts have been mitigated to a level that is less than significant.

To establish the existing environmental setting, the MND/EA should include a complete assessment of the flora and fauna within and adjacent to the Project footprint, with particular emphasis on identifying rare, threatened, endangered, and other special-status species and their associated habitats and an analysis of the level of impacts the Project will have on these resources. No recent, focused, protocol-level surveys were conducted for special-status plant or animal species aside from the focused survey for desert tortoise, which is currently outdated. Absent this information, CDFW cannot conclude that the

Project will not have a significant effect on fish and wildlife resources. CDFW recommends that the MND/EA be revised to include the following:

> A complete, *recent* inventory of rare, threatened, endangered, and other sensitive species located within the Project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern (CSSC) and California Fully Protected Species (Fish and Game Code § 3511). Species to be addressed should include all those which meet the CEQA definition (CEQA Guidelines § 15380). The inventory should address seasonal variations in use of the Project area and should not be limited to resident species. Focused species-specific surveys, completed by a qualified biologist and conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with CDFW and the U.S. Fish and Wildlife Service, where necessary. Note that CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of the proposed Project may warrant periodic updated surveys for certain sensitive taxa, particularly if the Project is proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought.

CDFW is also concerned about the potential for special-status species to occur on the Project site over the duration of the Project. A complete assessment of the flora and fauna within and adjacent to the Project footprint should be conducted at each Drill Area prior to mining and reclamation activities. CDFW suggests this information, and any necessary mitigation measures, be addressed in a revised MND/EA or other CEQA document.

California Endangered Species Act (CESA)

CESA prohibits the take (under Fish & G. Code, § 86, “take” means to hunt, pursue, catch, capture, or kill, or to attempt to hunt, pursue, catch, capture, or kill) of any endangered, threatened, or candidate species that results from a proposed project, except as authorized by state law (Fish & G. Code, §§ 2080, 2085). Consequently, if Project construction or any Project-related activity during the life of the proposed Project would result in take of a CESA-listed species, CDFW recommends that the Project applicant seek appropriate take authorization under CESA prior to implementing the proposed Project. Appropriate authorization from CDFW may include an Incidental Take Permit (ITP), a consistency determination, or other permitting options (Fish and G. Code, §§ 2080.1, 2081, subds. (b), (c)). CDFW encourages early consultation, as significant modification to the proposed Project and avoidance, minimization, and mitigation measures may be necessary to obtain a CESA ITP. Proposed avoidance, minimization, and mitigation measures must be sufficient for CDFW to conclude that the Project’s impacts are fully mitigated.

CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to CESA. CESA ITPs are issued to conserve protect, enhance, and restore state-listed CESA species and their habitats. More information on ITPs can be found at: https://wildlife.ca.gov/Conservation/CESA/Permitting/Incidental-Take-Permits. Species protected under CESA have the potential to occur within the Project site, such as desert tortoise.

Special-Status Plants

Based on review of the California Natural Diversity Database (CNDDB) and the Biogeographic Information and Observation System (BIOS), plant species that are state and/or federally listed as endangered and plant species with California Rare Plant Ranks of 1B and 2B have the potential to occur in the Project area. The California Rare Plant Rank 1B indicates plants that are rare, threatened, or endangered in California and elsewhere, and California Rare Plant Rank 2B indicates plants that are rare, threatened, or endangered in California but more common elsewhere. Impacts to these species must be

analyzed during preparation of environmental documents relating to CEQA because they meet the definition of rare or endangered under CEQA Guidelines §15125 (c) and/or §15380.

The MND/EA (Section 3.20.2) indicates that "impacts to special status plant species would include the disturbance of up to 20.54 acres of vegetation communities." The MND/EA continues to state that direct impacts to sensitive plant species would occur because "surface disturbance could occur at any location throughout the Project Area as exploration activities progress through the life of the Project." CDFW is concerned that the habitat assessments were not conducted at the appropriate time(s) of year to detect all special-status plants on the Project site and did not follow the standard protocol to detect special-status plants. The MND/EA (Section 3.20.2) and CNDDB/BIOS indicates that the following special-status plants have historically occurred near the Project site or have the potential to occur: Wiggin's croton (*Croton wigginsii*), sand foot (*Pholisma sonorae*), Munz cholla (*Cylindropuntia munzii*), flat-seeded spurge (*Euphorbia platysperma*), pink fairy-duster (*Calliandra erophylla*), and glandular ditaxis (*Ditaxis claryana*).

The MND/EA includes mitigation measures (PDF-33, LUPA-BIO-PLANT-2, LUPA-BIO-SVF-6, LUPA-BIO-VEG-1, and M-8) to address surveys and protections for special-status plants. However, the MND/EA has not provided a complete and accurate analysis of the current environmental setting for the Project site. CDFW recommends that a revised MND/EA or other CEQA document include a thorough, recent, floristic-based assessment of special-status plants completed at the appropriate time(s) of year before Imperial County adopts the MND/EA. CDFW generally considers biological field assessments for rare plants to be valid for a period of up to three years. The results of this assessment should be included in a revised MND/EA or other CEQA document. If any rare, threatened, endangered, or other sensitive plant species are located within the Project site, CDFW recommends that the MND/EA be revised to include appropriate avoidance, minimization, and mitigation measures. For unavoidable impacts to special-status species, on-site habitat restoration and/or enhancement and preservation should be evaluated and discussed in detail. Where habitat preservation is not available on-site, off-site land acquisition, management, and preservation should be evaluated and discussed in detail in a revised MND/EA or other CEQA document. CDFW recommends inclusion of the following mitigation measure:

MM BIO-[A]: Special-Status Plants

> **Prior to the adoption of the CEQA document and prior to mining and reclamation activities at each Drill Area and construction site, a thorough floristic-based assessment of special-status plants and natural communities, following CDFW's *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (CDFW 2018 or most recent version) shall be performed by a qualified biologist. Should any state-listed plant species be present in the Project area, the Project proponent shall obtain an Incidental Take Permit for those species prior to the start of Project activities. Should other special-status plants or natural communities be present in the Project area, the Project proponent shall either fully avoid the plant(s), with an appropriate buffer established by a qualified botanist and marked in the field (i.e., fencing or flagging), or mitigate the loss of the plant(s) through the purchase of mitigation credits from a CDFW-approved bank, or the acquisition and conservation of land approved by CDFW at a minimum 3:1 (replacement-to-impact) ratio.**

Pursuant to the CEQA Guidelines, section 15097(f), CDFW has prepared a draft mitigation monitoring and reporting program (MMRP) for proposed MM BIO-A–L (see Attachment 1).

<u>Nesting Birds</u>

It is the Project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Fish and Game Code sections 3503, 3503.5, and 3513 afford protective measures as follows: Fish and Game Code section 3503 states that it is

unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto. Fish and Game Code section 3503.5 makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto. Fish and Game Code section 3513 makes it unlawful to take or possess any migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. § 703 et seq.).

The MND/EA (Section 3.23.2) acknowledges that "twenty avian species have the potential to occur within or near the area" and "17 avian species were documented during the 2021 biological baseline surveys." CDFW is concerned about impacts to nesting birds throughout all phases of the proposed Project activities. Although the MND/EA includes information about performing nesting bird surveys (Appendix F) and offers mitigation measures (PDF-10 and LUPA-BIO-IFS-24), the timing and scope are insufficient to protect nesting birds. CDFW recommends the revised MND/EA or other CEQA document include specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur. Project-specific avoidance and minimization measures may include, but are not limited to, Project phasing and timing, monitoring of Project-related noise (where applicable), sound walls, and buffers, where appropriate. CDFW recommends that disturbance of occupied nests of migratory birds and raptors within the Project site be avoided **any time birds are nesting on-site.** Pre-activity nesting bird surveys shall be performed within 3 days prior to Project activities to determine the presence and location of nesting birds. As a result, CDFW recommends adding the following mitigation measure:

MM BIO-[B]: Avoidance of Nesting Birds

> **Prior to commencing Project activities at each Drill Area and construction site, nesting bird surveys shall be performed by a qualified avian biologist no more than (3) days prior to vegetation removal or ground-disturbing activities. Pre-activity surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified avian biologist will make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If active nests are found during the pre-activity nesting bird surveys, a qualified biologist shall establish an appropriate nest buffer to be marked on the ground. Nest buffers are species specific and shall be at least 300 feet for passerines and 500 feet for raptors. A smaller or larger buffer may be determined by the qualified biologist familiar with the nesting phenology of the nesting species and based on nest and buffer monitoring results. Established buffers shall remain on-site until a qualified biologist determines the young have fledged or the nest is no longer active. Active nests and adequacy of the established buffer distance shall be monitored daily by the qualified biologist until the qualified biologist has determined the young have fledged or the Project has been completed. The qualified biologist has the authority to stop work if nesting pairs exhibit signs of disturbance.**

Burrowing Owl (*Athene cunicularia)*

Burrowing owl is a California Species of Special Concern (SSC). Take of individual burrowing owls and their nests is defined by Fish and Game Code section 86, and prohibited by sections 3503, 3503.5, and 3513. Fish and Game Code section 3513 makes it unlawful to take or possess any migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. § 703 et seq.).

The MND/EA (Section 3.23.2) acknowledges that "potentially suitable habitat exists within the area" for western burrowing owl. Burrowing owls are known to occupy burrows created by ground squirrels, which were observed during the field assessments (Table 3-34). Also, CNDDB/BIOS indicates that burrowing owl have historically occurred near the Project site. Although the MND/EA includes mitigation measures (LUPA-BIO-IFS-12, LUPA-BIO-IFS-

13, and LUPA-BIO-IFS-14) for burrowing owl, the timing and scope are insufficient to protect burrowing owls. CDFW recommends that prior to adoption of the MND/EA, a focused survey for burrowing owl following the recommendations and guidelines provided in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012 or most recent version) should be conducted by a qualified biologist. The Staff Report on Burrowing Owl Mitigation specifies that project impact evaluations include the following steps: (1) habitat assessment, (2) surveys, and (3) an impact assessment. The three progressive steps are effective in evaluating whether a project will result in impacts to burrowing owls. The focused survey should be repeated prior to commencement of Project-related activities at each site. Pre-activity surveys should also be conducted prior to commencement of Project-related activities at each borrow site. CDFW recommends the revised MND/EA or other CEQA document include specific avoidance and minimization measures to ensure that impacts to burrowing owls do not occur. As a result, CDFW recommends adding the following mitigation measure which includes both focused and pre-activity surveys:

MM BIO-[C]: Burrowing Owl Surveys

> **Suitable burrowing owl habitat has been confirmed on the site; therefore, focused burrowing owl surveys shall be conducted in accordance with the *Staff Report on Burrowing Owl Mitigation* (2012 or most recent version) prior to adoption of the CEQA document and no less than 30 days prior to the start of Project activities at each Drill Area and construction site. If burrowing owls are detected during the focused surveys, the qualified biologist and Project Applicant shall prepare a Burrowing Owl Plan that shall be submitted to CDFW for review and approval prior to commencing Project activities. The Burrowing Owl Plan shall describe proposed avoidance, monitoring, relocation, minimization, and/or mitigation actions. The Burrowing Owl Plan shall include the number and location of occupied burrow sites, acres of burrowing owl habitat that will be impacted, details of site monitoring, and details on proposed buffers and other avoidance measures if avoidance is proposed. If impacts to occupied burrowing owl habitat or burrow cannot be avoided, the Burrowing Owl Plan shall also describe minimization and compensatory mitigation actions that will be implemented. Proposed implementation of burrow exclusion and closure should only be considered as a last resort, after all other options have been evaluated as exclusion is not in itself an avoidance, minimization, or mitigation method and has the possibility to result in take. The Burrowing Owl Plan shall identify compensatory mitigation for the temporary or permanent loss of occupied burrow(s) and habitat consistent with the "Mitigation Impacts" section of the 2012 Staff Report and shall implement CDFW-approved mitigation prior to initiation of Project activities. If impacts to occupied burrows cannot be avoided, information shall be provided regarding adjacent or nearby suitable habitat available to owls. If no suitable habitat is available nearby, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls shall also be included in the Burrowing Owl Plan. The Permittee shall implement the Burrowing Owl Plan following CDFW review and approval.**
>
> **At each Drill Area and construction site, pre-activity burrowing owl surveys shall be conducted no less than 14 days prior to the start of Project-related activities and within 24 hours prior to ground disturbance, in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012 or most recent version). Pre-activity surveys should be performed by a qualified biologist following the recommendations and guidelines provided in the *Staff Report on Burrowing Owl Mitigation*. If the pre-activity surveys confirm occupied burrowing owl habitat, Project activities shall be immediately halted. The qualified biologist shall coordinate with CDFW and USFWS to conduct an impact assessment to develop avoidance and minimization measures to be approved by CDFW prior to commencing Project activities.**

Bats

Bats are considered non-game mammals and are afforded protection by State law from take and/or harassment (Fish & G. Code, § 4150; Cal. Code of Regs, § 251.1). Several bat species are considered SSC (CDFW 2022). Impacts on SSC could require a mandatory finding of significance under CEQA (CEQA Guidelines, § 15065). Impacts on bats, either directly or indirectly through disturbances to roosts and loss of habitat, would be a significant impact.

Project construction and activities may result in direct and indirect impacts to bats. Direct impacts include removal of vegetation and structures occupied by roosting bats. This could result in injury or mortality to bats as well as loss of roosting habitat. Indirect impacts to bats and roosts could result from increased noise disturbances, human activity, dust, ground-disturbing activities (e.g., staging, mobilizing, excavating, and grading), and vibrations caused by heavy equipment. The MND/EA (Appendix E, Biological Assessment Section 5.1.2) indicates "previous survey efforts detected 20 high value bat roosts in underground mines within the Analysis Area." Additionally, the MND/EA states "these mine features were occupied by a suite of species including California leaf-nosed bat (*Macrotus californicus*), Townsend's big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*) and an unknown myotis species, likely cave myotis (*Myotis velifer*)." Appendix E indicates the greater western mastiff bat (*Eumops perotis californicus*) and pocketed free-tailed bat (*Nyctinomops femorosaccus*) also have the potential to occur in the Project Area.

Due to the historical occurrence of bats in the Project Area and optimal roosting habitat in mining features, focused surveys and pre-activity surveys for bats should be performed before the commencement of project activities. No compensatory mitigation is proposed in the MND/EA. The Project could result in loss of roosting habitat. Relocating or evicting active hibernacula or maternity roosts is not mitigating for loss of habitat that would occur. CDFW recommends the Lead Agency revise mitigation measure PDF-11 to state that Drill Area-specific field surveys be conducted to determine presence of daytime, nighttime, wintering (hibernacula), and maternity roost sites. Therefore, CDFW recommends adding the following mitigation measure, which includes both focused and pre-activity surveys:

MM BIO-[D]: Bat Surveys

> **Prior to adoption of the CEQA document, Imperial County shall retain a qualified biologist to conduct focused surveys to determine presence of daytime, nighttime, wintering (hibernacula), and maternity roost sites in the Project area. Two spring surveys (April through June) and two winter surveys (November through January) shall be performed by qualified biologists. Surveys shall be conducted during favorable weather conditions only. Each survey shall consist of one dusk emergence survey (start one hour before sunset and last for three hours), followed by one pre-dawn re-entry survey (start one hour before sunrise and last for two hours), and one daytime visual inspection of all potential roosting habitat on the Project site. Surveys shall be conducted within one 24-hour period. Visual inspections shall focus on the identification of bat sign (i.e., individuals, guano, urine staining, corpses, feeding remains, scratch marks and bats squeaking and chattering). Bat detectors, bat call analysis, and visual observation shall be used during all dusk emergence and pre-dawn re-entry surveys.**
>
> **If active hibernacula or maternity roosts are identified in the work area or 500 feet extending from the work area during preconstruction surveys, for maternity roosts, Project construction will only between October 1 and February 28, outside of the maternity roosting season when young bats are present but are not yet ready to fly out of the roost. Maternity roosts shall not be evicted, excluded, removed, or disturbed. A minimum 500-foot no-work buffer shall be provided around hibernacula. The buffer shall not be reduced. Project-related construction and activities shall not occur within 500 feet of or directly under or adjacent to hibernacula. Buffers shall be left in place until the end of Project construction and activities or until a qualified bat biologist**

determines that the hibernacula are no longer active. Project-related construction and activities shall not occur between 30 minutes before sunset and 30 minutes after sunrise. Hibernacula roosts shall not be evicted, excluded, removed, or disturbed. If avoidance of a hibernacula is not feasible, the qualified biologist will prepare a relocation plan to remove the hibernacula and provide for construction of an alternative bat roost outside of the work area. A bat roost relocation plan shall be submitted for CDFW review prior to construction activities. The qualified biologist will implement the relocation plan and new roost sites shall be in place before the commencement of any ground-disturbing activities that will occur within 500 feet of the hibernacula. New roost sites shall be in place prior to the initiation of Project-related activities to allow enough time for bats to relocate. Removal of roosts will be guided by accepted exclusion and deterrent techniques.

Colorado Desert Fringe-toed Lizard (*Uma notata*)

Colorado Desert fringe-toed lizard is a California Species of Special Concern (SSC). The MND/EA (Appendix E, Biological Assessment Section 6.2) acknowledges there are several areas within the Project area that include isolated sandy patches that may provide habitat for Colorado Desert fringe-toed lizard. These lizards burrow in sand to deposit eggs, thermoregulate, and/or to avoid predators at various times throughout the year. It is crucial to adequately assess whether these reptiles or signs of their presence are present on the Project site well in advance of commencing Project activities. If any special-status reptiles are found onsite, it could delay Project activities.

CDFW is concerned that the timing and scope of the habitat assessment were not sufficient to assess whether Colorado Desert fringe-toed lizard are present on the Project site due to their burrowing capabilities, which would be difficult to detect during quick, reconnaissance surveys. Therefore, CDFW recommends that prior to the adoption of the CEQA document, a focused survey for special-status lizards be conducted by a qualified biologist. The focused survey should be repeated prior to commencement of reclamation activities at each Drill Area. The focused surveys should be followed by pre-activity surveys. CDFW recommends the revised CEQA document include specific avoidance and minimization measures to ensure that impacts to the above-listed special-status lizards do not occur. As a result, CDFW recommends adding the following mitigation measure which includes both focused and pre-activity surveys:

MM BIO-[E]: Colorado Desert Fringe-toed Lizard Surveys

Prior to the adoption of the CEQA document and prior to Project activities at each Drill Area and construction site, a focused survey for Colorado Desert fringe-toed lizards be conducted by a qualified biologist, following the *Survey Protocol for the Blunt-nosed Leopard Lizard* (2019 or most current version), during the species' most active periods (February through November, however, juveniles can be active all year). CDFW recommends working with USFWS and CDFW concurrently to ensure a consistent and adequate approach to planning survey work and that biologists retained to complete special-status lizard protocol-level surveys submit their qualifications to CDFW and USFWS prior to the initiation of surveys.

No more than 30 calendar days prior to the beginning of ground disturbance and/or Project activities at each Drill Area and construction site, a qualified biologist shall conduct pre-activity surveys for Colorado Desert fringe-toed lizard as described in the *Survey Protocol for the Blunt-nosed Leopard Lizard* (2019 or most current version). Pre-activity surveys should include 100-percent visual coverage of the Project area and cannot be combined with other surveys conducted for other species while using the same personnel. If the pre-activity surveys confirm occupied Colorado Desert fringe-toed lizard habitat, Project activities shall be immediately halted, and the qualified biologist shall notify CDFW and USFWS to develop avoidance, minimization, and mitigation measures.

Desert Tortoise (*Gopherus agassizii)*

Desert tortoise is listed as a threatened species under CESA and is a candidate for up-listing to endangered under CESA. According to the MND/EA (Section 3.23.2), "evidence of tortoise use of the area was detected in some of the proposed Drill Areas" during the focused desert tortoise surveys conducted by Stantec Consulting Service Inc. on January 8 to 15, 2021. The MND/EA (Section 3.23.2) also acknowledges that appropriate Mojave Desert tortoise habitat is located within the Project area. Additionally, the Project area is closely located (about 6 miles) to the USFWS Critical Habitat for desert tortoise, and CNDDB/BIOS indicates that desert tortoise have historically occurred near the Project site. Chapter 4 of the Desert Tortoise (Mojave Population) Field Manual indicates that "surveys should be conducted during the desert tortoise's most active periods (April through May or September through October)" (USFWS 2009, p. 4–8). CDFW is concerned that the timing and scope of the surveys were insufficient to determine the full extent of desert tortoise on the Project site.

Although the MND/EA includes mitigation measures (PDF-12, PDF-13, PDF-14, and M-1) for desert tortoise, the timing and scope are insufficient to protect desert tortoise. CDFW recommends that prior to adoption of the CEQA document, an updated focused survey for desert tortoise following the Desert Tortoise (Mojave Population) Field Manual should be conducted by a qualified biologist. This focused survey should be repeated prior to commencement of Project-related activities at each site. Pre-activity surveys should also be conducted prior to commencement of Project-related activities at each site. CDFW recommends the revised MND/EA or other CEQA document include specific avoidance and minimization measures to ensure that impacts to desert tortoise do not occur.

In addition, research indicates a link between mineral mining and toxicant-based disease in desert tortoise (Chaffee and Berry 2006). Mineral mining can result in the delivery of toxicants into nearby soil, water resources, and habitats used by many vulnerable desert species. Soil anomalies in areas near mining districts often contain the elements arsenic, gold, cadmium, mercury, antimony, and tungsten, and plant anomalies contain the elements arsenic, antimony, and tungsten. High concentrations of mercury and arsenic have been found in ill desert tortoises (Chaffee and Berry 2006). Toxic chemicals from mining have been documented to travel as far as 22 km from the mining areas probably due to wind-borne dust, vehicles, and rainfall. CDFW encourages Imperial County to include in a revised CEQA document an analysis of this potentially significant impact on desert tortoise, as well as appropriate avoidance, minimization, and mitigation measures.

CDFW recommends inclusion of the following mitigation measure, which includes focused and pre-activity surveys, in the revised MND/EA or other CEQA document:

MM BIO-[F]: Desert Tortoise Surveys

> **Prior to adoption of the CEQA document and prior to commencing Project activities at each Drill Area and construction site, a focused survey for desert tortoise shall be conducted by a qualified biologist, according to protocols in chapter 4 of the Desert Tortoise (Mojave Population) Field Manual (USFWS 2009 or most recent version), during the species' most active periods (April through May or September through October). CDFW recommends working with USFWS and CDFW concurrently to ensure a consistent and adequate approach to planning survey work and that biologists retained to complete desert tortoise protocol-level surveys submit their qualifications to CDFW and USFWS prior to initiation of surveys.**
>
> **At each Drill Area and construction site, no more than 14 calendar days prior to start of Project activities, a qualified biologist shall conduct pre-activity surveys for desert tortoise as described in the USFWS *Desert Tortoise (Mojave Population) Field Manual* (USFWS 2009 or most recent version). Pre-activity surveys shall be completed using perpendicular survey routes within the Project area and 50-foot buffer zone. Pre-activity surveys cannot be**

combined with other surveys conducted for other species while using the same personnel. Project activities cannot start until two negative results from consecutive surveys using perpendicular survey routes for desert tortoise are documented. Should desert tortoise presence be confirmed during the survey, the qualified biologist shall immediately notify CDFW and USFWS to determine appropriate avoidance, minimization, and mitigation measures.

Minimizing Impacts to Other Species

The MND/EA (Section 3.23.5) acknowledges that proposed Project activities have the potential to effect natural communities and lists common species identified during the biological surveys but includes no avoidance and minimization measures. Because of the potential for previously undetected wildlife to occur on the Project site, CDFW recommends inclusion of the following mitigation measure to allow non-listed, non-special-status terrestrial wildlife to leave or be moved out of harm's way:

MM BIO-[G]: Minimizing Impacts to Other Species

To avoid impacts to terrestrial wildlife, a qualified biologist shall be on-site prior to and during all ground- and habitat-disturbing activities to inspect the Project area prior to any Project activities. Individuals of any wildlife species found shall not be harassed and shall be allowed to leave the project area unharmed. If needed, a qualified biologist may guide, handle, or capture an individual non-listed, non-special-status wildlife species to move it to a nearby safe location within nearby refugium, or it shall be allowed to leave the project site of its own volition. Capture methods may include hand, dip net, lizard lasso, snake tongs, and snake hook. If the wildlife species is discovered or is caught in any pits, ditches, or other types of excavations, the qualified biologist shall release it into the most suitable habitat nearby the site of capture. Movement of wildlife out of harm's way should be limited to only those individuals that would otherwise by injured or killed, and individuals should be moved only as far a necessary to ensure their safety. Measures shall be taken to prevent wildlife from re-entering the Project site. Only biologists with appropriate authorization by CDFW shall move CESA-listed or other special-status species.

Revegetation Plan

Imperial County outlines their revegetation plan in the MND/EA Appendix A, Section 6.4 and in the MND/EA Reclamation Plan Application Attachment D. However, CDFW is concerned that the revegetation plan does not identify specific precautions that should be taken to reduce impacts to a level that is less than significant. Therefore, specific areas of focus are outlined below followed by the addition of an avoidance, minimization, and mitigation measure.

The MND/EA (Reclamation Plan Application Attachment D, Section 2) acknowledges that vegetation in the Project area consists of low desert shrub dominated by creosote and brittlebush, in addition to disturbed habitats. However, CDFW is concerned that the habitat assessment conducted in March 2021 does not adequately specify or quantify the relative cover of each species in each of the seven Drill Areas. Specifically, before reclamation activities commence, CDFW encourages Imperial County to identify the alliances in the plan and list the species with corresponding relative cover that are found in each alliance in each Drill Area independently. In this way, Imperial County can use the species cover information as a success criterion to identify in detail which components of the communities they are trying to restore. Creosote bush shrubland alliance membership rules per the California Native Plant Society have been developed by local and regional vegetation studies and could offer localized understanding to provide better revegetation success.

The MND/EA (Reclamation Plan Application Attachment D, Section 6) states seeds will be purchased from a commercial vendor. CDFW strongly encourages the seeds that are used

be from local populations because using non-local seeds introduces plants that are not locally adapted to the area. Restoration projects that use species that are non-local often do not restore natural communities as intended but bring in non-local materials (i.e., genes, pathogens, outbreeding depression, etc.) (Mijnsbrugge et al. 2010) and distribute plants in unnatural groupings.

The MND/EA (Section 2.1.2) mentions salvaged topsoil and subsoil will be used as a growth medium for revegetation. Salvaged topsoil and subsoil during mining activities is linked to two primary concerns: toxicants and soil age. Mineral mining often results in the delivery of heavy metal toxicants into nearby soil, water resources, and habitats, which is associated with illness in desert tortoise (Chaffee and Berry 2006). Additionally, soil age is an important factor to consider during vegetation restoration. Studies have found that microbial communities in soil stockpiles degreed drastically when stored up to 10-years and reduce plant performance (Gorzelak et al. 2020). Soil microbial communities plan important role in ecosystem functioning and are essential for plant nutrition and health. CDFW is concerned that high levels of metals in soils near the mining areas would ultimately lead to negative biological impacts during revegetation. CDFW is also concerned about the length of time that topsoil will be stored in stockpiles unused as the microbial community within them will degrade and prevent successful revegetation. As a result, CDFW encourages Imperial County to test for heavy metals in their soil stockpiles prior to being used for revegetation and use the soil in a timely manner, preferable less than 10 years of being stored, to prevent the degradation of microbiota necessary for plant health.

Activities related to revegetation could lead to negative impacts that cannot be reduced to a level less than significant if Imperial County does not account for species relative cover in their seed mix, sources non-local seeds, and/or disregards possible soil stockpile toxicants or age. As a result, CDFW recommends the following mitigation measure be included in a revised MND/EA or other CEQA document:

MM BIO-[H]: Revegetation Plan

> **Within 12 months prior to the initiation of Project activities, and during the appropriate periods (e.g., seasons, weather conditions, times of day) to identify species potentially occurring onsite, the Project proponent shall conduct general and, if necessary, focused biological surveys to identify alliances that occur on the Project site. The Project proponent shall list the species with corresponding relative cover that are found in each alliance in the surrounding area to provide a baseline for vegetation selection. Once the appropriate species are identified that are deemed appropriate to use in the vegetation restoration, the project proponent shall also identify the correct variety or subspecies appropriate for the borrow site locations. If the Project proponent intends to use a commercial vendor to obtain seed mixes, they should ensure that the vendor is using local seeds in their mix with the appropriate variety and subspecies. The Project proponent shall ensure topsoil stockpiles do not contain potentially harmful toxicants and are not stored for over a period of 10-years before being utilized during the vegetation restoration.**

Noise

Project exploration activities may result in substantial noise through access road use, equipment, and other Project-related activities. This may adversely affect wildlife species in several ways as wildlife responses to noise can occur at exposure levels of only 55 to 60 dB (Barber et al. 2009). Anthropogenic noise can disrupt the communication of many wildlife species including frogs, birds, and bats (Sun and Narins 2005, Patricelli and Blickley 2006, Gillam and McCracken 2007, Slabbekoorn and Ripmeester 2008). Noise can also affect predator-prey relationships as many nocturnal animals such as bats and owls primarily use auditory cures (i.e., hearing) to hunt. Additionally, many prey species increase their vigilance behavior when exposed to noise because they need to rely more on visual detection of predators when auditory cues may be masked by noise (Rabin et al. 2006, Quinn et al. 2017). Noise has also been shown to reduce the density of nesting birds

(Francis et al. 2009) and cause increased stress that results in decreased immune responses (Kight and Swaddle 2011).

The MND/EA (Section 3.15.5) acknowledges that sources of construction noise from the Project will be generated using a combination of heavy equipment, including loaders and dozers with the potential to generate ground-borne vibration. Results from three noise scenarios calculated for the various potential equipment to be used in conjunction documented in Appendix E in Figures 1A-1C, Figures 2A-2C, Figures 3A-3C, and Figures 4A-4C, all show that noise levels are likely to exceed 55 dBA in the immediate project vicinity. However, the MND/EA includes no analysis of the impacts of Project-related noise to biological resources. Although the MND/EA includes mitigation measure LUPA-BIO-12 for noise, the timing and scope are insufficient to protect biological resources. Because of the potential for Project-related noise to negatively impact wildlife, CDFW recommends including the following mitigation measure:

MM BIO-[I]: Noise

> **Restrict use of equipment to hours least likely to disrupt wildlife (e.g., not at night or in early morning). Do not use generators except for temporary use in emergencies. Power to sites can be provided by solar PV (photovoltaic) systems, cogeneration systems (natural gas generator), small micro-hydroelectric systems, or small wind turbine systems. Consider use of noise suppression devices such as mufflers or enclosure for generators. Sounds generated from any means must be below the 55-60 dB range within 50-feet from the source.**

Artificial Light

Artificial nighttime lighting often results in light pollution, which has the potential to significantly and adversely affect fish and wildlife. Artificial lighting alters ecological processes including, but not limited to, the temporal niches of species; the repair and recovery of physiological function; the measurement of time through interference with the detection of circadian and lunar and seasonal cycles; and the detection of resources and natural enemies and navigation (Gatson et al. 2013). Many species use photoperiod cues for communication (e.g., bird song; Miller 2006), determining when to begin foraging (Stone et al. 2009), behavior thermoregulation (Beiswenger 1977), and migration (Longcore and Rich 2004). Phototaxis, a phenomenon which results in attraction and movement towards light, can disorient, entrap, and temporarily blind wildlife species that experience it (Longcore and Rich 2004).

The MND/EA (Section 3.21.5) indicates nighttime operations would require the use of artificial light; however, impacts to biological resources are not analyzed. Although the MND/EA includes mitigation LUPA-BIO-13 for light, the timing and scope are insufficient to protect biological resources. The direct and indirect impacts of artificial nighttime lighting on biological resources including migratory birds that fly at night, bats, and other nocturnal and crepuscular wildlife should be analyzed, and appropriate avoidance and minimization measures should be included in a revised MND/EA or other CEQA document. Because of the potential for artificial nighttime lighting used during construction to impact biological resources, CDFW recommends that the revised MND/EA or other CEQA document include the following mitigation measure:

MM BIO-[J]: Artificial Light

> **During Project construction and operation, Imperial County shall eliminate all nonessential lighting throughout the Project area and avoid or limit the use of artificial light during the hours of dawn and dusk when many wildlife species are most active. The County shall ensure that lighting for Project activities is shielded, cast downward, and does not spill over onto other properties or upward into the night sky (see the International Dark-Sky Association standards at http://darksky.org/). Use LED lighting with a correlated color**

temperature of 3,000 Kelvins or less, properly dispose of hazardous waste, and recycle lighting that contains toxic compounds with a qualified recycler.

CDFW's Lake and Streambed Alteration Program

Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: substantially divert or obstruct the natural flow of any river, stream, or lake; substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or deposit debris, waste or other materials that could pass into any river, stream or lake. Note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. Upon receipt of a complete notification, CDFW determines if the proposed Project activities may substantially adversely affect existing fish and wildlife resources and whether a Lake and Streambed Alteration (LSA) Agreement is required. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify the Project that would eliminate or reduce harmful impacts to fish and wildlife resources.

CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code § 21065). To facilitate issuance of an LSA Agreement, if necessary, the MND/EA should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended since modification of the proposed Project may be required to avoid or reduce impacts to fish and wildlife resources. To submit a Lake or Streambed Alteration notification, visit: https://wildlife.ca.gov/Conservation/Environmental-Review/LSA.

The MND/EA (Section 3.22.2) indicates that "a total of 432 aquatic resource features (i.e., drainages, tributaries, stream channels), including one pond, have been mapped within and in the vicinity of the Project Area." CDFW recommends the following mitigation measure be added to a revised MND/EA or other CEQA document:

MM BIO-[K]: Lake and Stream Alteration (LSA) Program

Prior to Project-activities and issuance of any grading permit, the Project Sponsor shall obtain written correspondence from the California Department of Fish and Wildlife (CDFW) stating that notification under section 1602 of the Fish and Game Code is not required for the Project, or the Project Sponsor shall obtain a CDFW-executed Lake and Streambed Alteration Agreement, authorizing impacts to Fish and Game Code section 1602 resources associated with the Project.

Employee Awareness of Wildlife Resources

CDFW is concerned that because the Project area is surrounded by open desert, reclamation activities will bring biological hazards common to urban areas to the rural landscape. Waste management must be a priority as accessible waste can encourage opportunistic species such as rats, ravens, and coyotes to become more prevalent, posing a substantial predation hazard to wildlife. Predators like ravens and coyotes are both known to prey on desert tortoise and other sensitive species. Waste management plans should include waste receptacles with closing, lockable lids and a waste removal schedule that does not allow for excess waste to accrue. Increased traffic may also pose a hazard to species in the form of vehicle-animal collisions, which often lead to the death of the animal. For slow-moving species like desert tortoise, busy access roads in their territory can have a significant impact on populations. Project activities, including all phases of the mining plan for the life of the Project, will affect local wildlife. Part of the Project Proponent's responsibility is to educate individuals that will be on-site, whether they are employees or contractors, on the wildlife species that may be present and how to limit impacts to wildlife

species in the area. CDFW recommends that the following mitigation measure be added to the revised MND/EA or other CEQA document:

MM BIO-[L]: Employee Awareness of Wildlife Resources

> **A qualified biologist shall conduct an education program for all persons employed or otherwise working on the Project site prior to performing any work on-site. The program shall consist of a presentation that includes a discussion of the biology of the habitats and species that may be present at the site. The qualified biologist shall also include as part of the education program information about the distribution and habitat needs of any special status species that may be present, legal protections for those species, penalties for violations, and mitigation measures. The Employee Education Program should include, but not be limited to: (1) best practices for managing waste and reducing activities that can lead to increased occurrences of opportunistic species and the impacts these species can have on wildlife in the area; (2) protected species that have the potential to occur on the Project site including, but not limited to, rare and sensitive plants, burrowing owl, desert tortoise, Colorado Desert Fringe-toed Lizard, bats, and nesting birds; (3) the location of conservation areas, as well as the importance of ensuring that no refuse or pollution enters the streams or conservation areas and that encroachment into the streams and conservation areas is not permitted during construction or other Project activities. Interpretation shall be provided for any non-English-speaking workers, and the same instruction shall be provided for any new workers prior to their performing any work on-site.**

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be filled out and submitted online at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

ENVIRONMENTAL DOCUMENT FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

CDFW appreciates the opportunity to comment on the MND/EA to assist Imperial County in identifying and mitigating Project impacts on biological resources. CDFW concludes that the MND/EA does not adequately identify or mitigate for the Project's significant, or potentially significant, impacts on biological resources. CDFW is concerned that the proposed Project may result in significant impacts to the environment and that the MND/EA may not be appropriate for the Project because of the difficulty of determining impacts and whether those impacts have been mitigated to a level that is less than significant. If the revised MND/EA cannot demonstrate that impacts to biological resources are mitigated to a level that is less than significant, CDFW recommends that an Environmental Impact Report be prepared by Imperial County for the Project.

CDFW personnel are available for consultation regarding biological resources and strategies to minimize impacts. Questions regarding this letter or further coordination should be directed to Alyssa Hockaday, Senior Environmental Scientist (Specialist), at (760) 920-8252 or Alyssa.Hockaday@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Kim Freeburn
84F92FFEEFD24C8...

Kim Freeburn
Environmental Program Manager

Attachment 1: MMRP for CDFW-Proposed Mitigation Measures

ec: Heather Brashear, Senior Environmental Scientist (Supervisor), CDFW
Heather.Brashear@wildlife.ca.gov

REFERENCES

Barber, J. R., K. R. Crooks, and K. M. Fristrup. 2009. The costs of chronic noise exposure for terrestrial organisms. Trends in Ecology and Evolution 25:180-189.

Beiswenger, R. E. 1977. Diet patterns of aggregative behavior in tadpoles of *Bufo americanus*, in relation to light and temperature. Ecology 58:98–108.

CDFW, California Department of Fish and Wildlife. 2022. Species of Special Concern. Available from: https://wildlife.ca.gov/Conservation/SSC

Chaffee, M. A., K. H. Berry. 2006. Abundance and distribution of selected elements in soils, stream sediments, and selected forage plants from desert tortoise habitats in the Mojave and Colorado deserts, USA. Journal of Arid Environments 67:35-87.

Francis, C. D., C. P. Ortega, and A. Cruz. 2009. Noise pollution changes avian communities and species interactions. Current Biology 19:1415–1419.

Gatson, K. J., Bennie, J., Davies, T., Hopkins, J. 2013. The ecological impacts of nighttime light pollution: a mechanistic appraisal. Biological Reviews.

Gillam, E. H., and G. F. McCracken. 2007. Variability in the echolocation of Tadarida brasiliensis: effects of geography and local acoustic environment. Animal Behaviour 74:277–286.

Gorzelak, M., B. M. McAmmond, J. D. Van Hamme, C. Birnbaum, C. Thomsen, and M. Hart. 2020. Ecological Restoration 38(1):13-23.

Kight, C. R., and J. P. Swaddle. 2011. How and why environmental noise impacts animals: An integrative, mechanistic review. Ecology Letters 14:1052–1061.

Longcore, T., and C. Rich. 2004. Ecological light pollution - Review. Frontiers in Ecology and the Environment 2:191–198.

Mijnsbrugee, K. V., A. Bischoff, and B. Smith. 2010. A question of origin: Where and how to collect seed for ecological restoration. Basic and Applied Ecology 11(4):300-311.

Miller, M. W. 2006. Apparent effects of light pollution on singing behavior of American robins. The Condor 108:130–139.

Patricelli, G., and J. J. L. Blickley. 2006. Avian communication in urban noise: causes and consequences of vocal adjustment. Auk 123:639–649.

Quinn, J. L., M. J. Whittingham, S. J. Butler, W. Cresswell, J. L. Quinn, M. J. Whittingham, S. J. Butler, W. Cresswell, and W. Noise. 2017. Noise, predation risk compensation and vigilance in the chaffinch Fringilla coelebs. Journal of Avian Biology 37:601–608.

Rabin, L. A., R. G. Coss, and D. H. Owings. 2006. The effects of wind turbines on antipredator behavior in California ground squirrels (Spermophilus beecheyi). Biological Conservation 131:410–420.

Rohde MM, Seapy B, Rogers R, Castañeda X, editors. 2019. Critical Species LookBook: A compendium of California's threatened and endangered species for sustainable groundwater management. The Nature Conservancy, San Francisco, California.

Sharma, R. K., M. Agrawal. 2005. Biological effects of heavy metals: An overview. Journal of Environmental Biology 26:301-313.

Slabbekoorn, H., and E. A. P. Ripmeester. 2008. Birdsong and anthropogenic noise: Implications and applications for conservation. Molecular Ecology 17:72–83.

Stone, E. L., G. Jones, and S. Harris. 2009. Street lighting disturbs commuting bats. Current Biology 19:1123–1127. Elsevier Ltd.

Sun, J. W. C., and P. M. Narins. 2005. Anthropogenic sounds differentially affect amphibian call rate. Biological Conservation 121:419–427.

ATTACHMENT 1: MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

Biological Resources (BIO)		
Mitigation Measure (MM) Description	**Implementation Schedule**	**Responsible Party**
MM-BIO-[A]: Special-Status Plants Prior to the adoption of the CEQA document and prior to mining and reclamation activities at each Drill Area and construction site, a thorough floristic-based assessment of special-status plants and natural communities, following CDFW's Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities (CDFW 2018 or most recent version) shall be performed by a qualified biologist. Should any state-listed plant species be present in the Project area, the Project proponent shall obtain an Incidental Take Permit for those species prior to the start of Project activities. Should other special-status plants or natural communities be present in the Project area, the Project proponent shall either fully avoid the plant(s), with an appropriate buffer established by a qualified botanist and marked in the field (i.e., fencing or flagging), or mitigate the loss of the plant(s) through the purchase of mitigation credits from a CDFW-approved bank, or the acquisition and conservation of land approved by CDFW at a minimum 3:1 (replacement-to-impact) ratio.	Prior to adoption of the CEQA document and prior to commencing Project activities.	Imperial County
MM-BIO-[B]: Avoidance of Nesting Birds Prior to commencing Project activities at each Drill Area and construction site, nesting bird surveys shall be performed by a qualified avian biologist no more than (3) days prior to vegetation removal or ground-disturbing activities. Pre-activity surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified avian biologist will make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If active nests are found during the pre-activity nesting bird surveys, a qualified biologist shall establish an appropriate nest buffer to be marked on the ground. Nest buffers are species specific and shall be at least 300 feet for passerines and 500 feet for raptors. A smaller or larger buffer may be determined by the qualified biologist familiar with the nesting phenology of the nesting species and based on nest and buffer monitoring results. Established buffers shall remain on-site until a qualified biologist determines the young have fledged or the nest is no longer active. Active nests and adequacy of the established buffer distance shall be monitored daily by the qualified biologist until the qualified biologist has determined the young have fledged or the Project has been completed. The qualified biologist has the authority to stop work if nesting pairs exhibit signs of disturbance.	No more than (3) days prior to vegetation clearing or ground-disturbing activities.	Imperial County
MM-BIO-[C]: Burrowing Owl Surveys Suitable burrowing owl habitat has been confirmed on the site; therefore, focused burrowing owl surveys shall be conducted in accordance with the Staff Report on Burrowing Owl Mitigation (2012 or	**Focused surveys:** Prior to the adoption of the CEQA document and prior to	Imperial County

most recent version) prior to adoption of the CEQA document and no less than 30 days prior to the start of Project activities at each Drill Area and construction site. If burrowing owls are detected during the focused surveys, the qualified biologist and Project Applicant shall prepare a Burrowing Owl Plan that shall be submitted to CDFW for review and approval prior to commencing Project activities. The Burrowing Owl Plan shall describe proposed avoidance, monitoring, relocation, minimization, and/or mitigation actions. The Burrowing Owl Plan shall include the number and location of occupied burrow sites, acres of burrowing owl habitat that will be impacted, details of site monitoring, and details on proposed buffers and other avoidance measures if avoidance is proposed. If impacts to occupied burrowing owl habitat or burrow cannot be avoided, the Burrowing Owl Plan shall also describe minimization and compensatory mitigation actions that will be implemented. Proposed implementation of burrow exclusion and closure should only be considered as a last resort, after all other options have been evaluated as exclusion is not in itself an avoidance, minimization, or mitigation method and has the possibility to result in take. The Burrowing Owl Plan shall identify compensatory mitigation for the temporary or permanent loss of occupied burrow(s) and habitat consistent with the "Mitigation Impacts" section of the 2012 Staff Report and shall implement CDFW-approved mitigation prior to initiation of Project activities. If impacts to occupied burrows cannot be avoided, information shall be provided regarding adjacent or nearby suitable habitat available to owls. If no suitable habitat is available nearby, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls shall also be included in the Burrowing Owl Plan. The Permittee shall implement the Burrowing Owl Plan following CDFW review and approval. At each Drill Area and construction site, pre-activity burrowing owl surveys shall be conducted no less than 14 days prior to the start of Project-related activities and within 24 hours prior to ground disturbance, in accordance with the Staff Report on Burrowing Owl Mitigation (CDFG 2012 or most recent version). Pre-activity surveys should be performed by a qualified biologist following the recommendations and guidelines provided in the Staff Report on Burrowing Owl Mitigation. If the pre-activity surveys confirm occupied burrowing owl habitat, Project activities shall be immediately halted. The qualified biologist shall coordinate with CDFW and USFWS to conduct an impact assessment to develop avoidance and minimization measures to be approved by CDFW prior to commencing Project activities.	commencing Project-related activities. **Pre-activity surveys:** No less than (14) days prior to start of Project-related activities and within 24 hours prior to ground disturbance.	
MM-BIO-[D]: Bat Surveys Prior to adoption of the CEQA document, Imperial County shall retain a qualified biologist to conduct focused surveys to determine presence of daytime, nighttime, wintering (hibernacula), and maternity roost sites in the Project area. Two spring surveys (April through June) and two winter surveys	**Focused surveys:** Prior to the adoption of the CEQA document and prior to commencing	Imperial County

(November through January) shall be performed by qualified biologists. Surveys shall be conducted during favorable weather conditions only. Each survey shall consist of one dusk emergence survey (start one hour before sunset and last for three hours), followed by one pre-dawn re-entry survey (start one hour before sunrise and last for two hours), and one daytime visual inspection of all potential roosting habitat on the Project site. Surveys shall be conducted within one 24-hour period. Visual inspections shall focus on the identification of bat sign (i.e., individuals, guano, urine staining, corpses, feeding remains, scratch marks and bats squeaking and chattering). Bat detectors, bat call analysis, and visual observation shall be used during all dusk emergence and pre-dawn re-entry surveys. If active hibernacula or maternity roosts are identified in the work area or 500 feet extending from the work area during preconstruction surveys, for maternity roosts, Project construction will only between October 1 and February 28, outside of the maternity roosting season when young bats are present but are not yet ready to fly out of the roost. Maternity roosts shall not be evicted, excluded, removed, or disturbed. A minimum 500-foot no-work buffer shall be provided around hibernacula. The buffer shall not be reduced. Project-related construction and activities shall not occur within 500 feet of or directly under or adjacent to hibernacula. Buffers shall be left in place until the end of Project construction and activities or until a qualified bat biologist determines that the hibernacula are no longer active. Project-related construction and activities shall not occur between 30 minutes before sunset and 30 minutes after sunrise. Hibernacula roosts shall not be evicted, excluded, removed, or disturbed. If avoidance of a hibernacula is not feasible, the qualified biologist will prepare a relocation plan to remove the hibernacula and provide for construction of an alternative bat roost outside of the work area. A bat roost relocation plan shall be submitted for CDFW review prior to construction activities. The qualified biologist will implement the relocation plan and new roost sites shall be in place before the commencement of any ground-disturbing activities that will occur within 500 feet of the hibernacula. New roost sites shall be in place prior to the initiation of Project-related activities to allow enough time for bats to relocate. Removal of roosts will be guided by accepted exclusion and deterrent techniques.	Project-related activities.	
MM-BIO-[E]: Colorado Desert Fringe-toed Lizard Surveys Prior to the adoption of the CEQA document and prior to Project activities at each Drill Area and construction site, a focused survey for Colorado Desert fringe-toed lizards be conducted by a qualified biologist, following the Survey Protocol for the Blunt-nosed Leopard Lizard (2019 or most current version), during the species' most active periods (February through November, however, juveniles can be active all year). CDFW recommends working with USFWS and CDFW concurrently to ensure a consistent and adequate	**Focused surveys:** Prior to the adoption of the CEQA document and prior to commencing Project-related activities. **Pre-activity surveys:** No more than (30) days prior to	Imperial County

approach to planning survey work and that biologists retained to complete special-status lizard protocol-level surveys submit their qualifications to CDFW and USFWS prior to the initiation of surveys. No more than 30 calendar days prior to the beginning of ground disturbance and/or Project activities at each Drill Area and construction site, a qualified biologist shall conduct pre-activity surveys for Colorado Desert fringe-toed lizard as described in the Survey Protocol for the Blunt-nosed Leopard Lizard (2019 or most current version). Pre-activity surveys should include 100-percent visual coverage of the Project area and cannot be combined with other surveys conducted for other species while using the same personnel. If the pre-activity surveys confirm occupied Colorado Desert fringe-toed lizard habitat, Project activities shall be immediately halted, and the qualified biologist shall notify CDFW and USFWS to develop avoidance, minimization, and mitigation measures.	commencing Project-related activities.	
MM BIO-[F]: Desert Tortoise Surveys Prior to the adoption of the CEQA document and prior commencing Project activities at each Drill Area and construction site, a focused survey for desert tortoise shall be conducted by a qualified biologist, according to protocols in chapter 4 of the Desert Tortoise (Mojave Population) Field Manual (USFWS 2009 or most recent version), during the species' most active periods (April through May or September through October). CDFW recommends working with USFWS and CDFW concurrently to ensure a consistent and adequate approach to planning survey work and that biologists retained to complete desert tortoise protocol-level surveys submit their qualifications to CDFW and USFWS prior to initiation of surveys. At each Drill Area and construction site, no more than 14 calendar days prior to start of Project activities, a qualified biologist shall conduct pre-activity surveys for desert tortoise as described in the USFWS Desert Tortoise (Mojave Population) Field Manual (USFWS 2009 or most recent version). Pre-activity surveys shall be completed using perpendicular survey routes within the Project area and 50-foot buffer zone. Pre-activity surveys cannot be combined with other surveys conducted for other species while using the same personnel. Project activities cannot start until two negative results from consecutive surveys using perpendicular survey routes for desert tortoise are documented. Should desert tortoise presence be confirmed during the survey, the qualified biologist shall immediately notify CDFW and USFWS to determine appropriate avoidance, minimization, and mitigation measures.	**Focused surveys:** Prior to the adoption of the CEQA document and prior to commencing Project-related activities. **Pre-activity surveys:** No more than (14) days prior to start of Project-related activities.	Imperial County
MM-BIO-[G]: Minimizing Impacts to Other Species To avoid impacts to terrestrial wildlife, a qualified biologist shall be on-site prior to and during all ground- and habitat-disturbing activities to inspect the Project area prior to any Project activities. Individuals of any wildlife species found shall not be harassed and shall be allowed to leave the project	Prior to and during all ground- and habitat-disturbing activities.	Imperial County

area unharmed. If needed, a qualified biologist may guide, handle, or capture an individual non-listed, non-special-status wildlife species to move it to a nearby safe location within nearby refugium, or it shall be allowed to leave the project site of its own volition. Capture methods may include hand, dip net, lizard lasso, snake tongs, and snake hook. If the wildlife species is discovered or is caught in any pits, ditches, or other types of excavations, the qualified biologist shall release it into the most suitable habitat nearby the site of capture. Movement of wildlife out of harm's way should be limited to only those individuals that would otherwise by injured or killed, and individuals should be moved only as far a necessary to ensure their safety. Measures shall be taken to prevent wildlife from re-entering the Project site. Only biologists with appropriate authorization by CDFW shall move CESA-listed or other special-status species.		
MM-BIO-[H]: Revegetation Plan Within 12 months prior to the initiation of Project activities, and during the appropriate periods (e.g., seasons, weather conditions, times of day) to identify species potentially occurring onsite, the Project proponent shall conduct general and, if necessary, focused biological surveys to identify alliances that occur on the Project site. The Project proponent shall list the species with corresponding relative cover that are found in each alliance in the surrounding area to provide a baseline for vegetation selection. Once the appropriate species are identified that are deemed appropriate to use in the vegetation restoration, the project proponent shall also identify the correct variety or subspecies appropriate for the borrow site locations. If the Project proponent intends to use a commercial vendor to obtain seed mixes, they should ensure that the vendor is using local seeds in their mix with the appropriate variety and subspecies. The Project proponent shall ensure topsoil stockpiles do not contain potentially harmful toxicants and are not stored for over a period of 10-years before being utilized during the vegetation restoration.	Within 12 months prior to commencement of Project-related activities and during Project activities.	Imperial County
MM-BIO-[I]: Noise Restrict use of equipment to hours least likely to disrupt wildlife (e.g., not at night or in early morning). Do not use generators except for temporary use in emergencies. Power to sites can be provided by solar PV (photovoltaic) systems, cogeneration systems (natural gas generator), small micro-hydroelectric systems, or small wind turbine systems. Consider use of noise suppression devices such as mufflers or enclosure for generators. Sounds generated from any means must be below the 55-60 dB range within 50-feet from the source.	During all Project-related activities.	Imperial County
MM-BIO-[J]: Artificial Light During Project construction activities, the City shall eliminate all nonessential lighting throughout the Project area and avoid or limit the use of artificial light during the hours of dawn and dusk when many wildlife species are most active. The County shall ensure that lighting for Project activities is shielded, cast downward, and does not spill over onto other	During all Project-related activities.	Imperial County

properties or upward into the night sky (see the International Dark-Sky Association standards at http://darksky.org/). Use LED lighting with a correlated color temperature of 3,000 Kelvins or less, properly dispose of hazardous waste, and recycle lighting that contains toxic compounds with a qualified recycler.		
MM BIO-[K]: Lake and Stream Alteration (LSA) Program Prior to Project-activities and issuance of any grading permit, the Project Sponsor shall obtain written correspondence from the California Department of Fish and Wildlife (CDFW) stating that notification under section 1602 of the Fish and Game Code is not required for the Project, or the Project Sponsor should obtain a CDFW-executed Lake and Streambed Alteration Agreement, authorizing impacts to Fish and Game Code section 1602 resources associated with the Project.	Prior to construction and issuance of any grading permit.	Imperial County
MM BIO-[L]: Employee Awareness of Wildlife Resources A qualified biologist shall conduct an education program for all persons employed or otherwise working on the Project site prior to performing any work on-site. The program shall consist of a presentation that includes a discussion of the biology of the habitats and species that may be present at the site. The qualified biologist shall also include as part of the education program information about the distribution and habitat needs of any special status species that may be present, legal protections for those species, penalties for violations, and mitigation measures. The Employee Education Program should include, but not be limited to: (1) best practices for managing waste and reducing activities that can lead to increased occurrences of opportunistic species and the impacts these species can have on wildlife in the area; (2) protected species that have the potential to occur on the Project site including, but not limited to, rare and sensitive plants, burrowing owl, desert tortoise, Colorado Desert Fringe-toed Lizard, bats, and nesting birds; (3) the location of conservation areas, as well as the importance of ensuring that no refuse or pollution enters the streams or conservation areas and that encroachment into the streams and conservation areas is not permitted during construction or other Project activities. Interpretation shall be provided for any non-English-speaking workers, and the same instruction shall be provided for any new workers prior to their performing any work on-site.	Prior to and during all Project-related activities.	Imperial County Planning and Development Services Department