



STATE OF CALIFORNIA
DEPARTMENT OF FISH AND WILDLIFE

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June 10, 2026
Sent via email

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**Subject: Castle Mountain Mine Phase II Expansion Project (Project)
Draft Environmental Impact Report (DEIR)
State Clearing House# 2025100846**

Dear Mr. Newland:

The California Department of Fish and Wildlife (CDFW) received a Notice of Availability of a DEIR from San Bernardino County (County) for the Project pursuant to 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 would appreciate the County providing responses to our comments in the Final EIR despite the late submission. The presence of the Environmental Impact Statement (EIS) on CEQAnet was confusing and led to CDFW initially reviewing the EIS for purposes of providing comments to the County.

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

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.

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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

Project Proponent: Equinox Gold Corp-Castle Mountain Venture

Objective: The objective of the Project is to expand an existing open-pit gold/silver mine in the eastern Mojave Desert of California during Phase II to increase long-term gold production and extend the overall life of the mine through 2060. The Project involves an expansion of mining and processing operations, supported by construction of a multi-state water pipeline and powerline to meet increased demands as the annual mining rate increases from 18 million tons to 80 million tons. The Project will require approximately 2,250 acre-feet of groundwater per year and up to 25 megawatts of power. To supply these resources, the Project Proponent proposes a 31.5-mile water pipeline, a 16.5-mile overhead powerline, and expansion of pits, overburden storage sites, heap-leach facilities, and utility corridors.

The Project will disturb an additional 1,814 acres of Bureau of Land Management (BLM) land, resulting in a total disturbance of about 3,288 acres. In total, the Project will extend the life of the mine by approximately 30 years, including 20 years of active mining followed by about 10 years of reclamation. Reclamation activities include recontouring, surface stabilization, revegetation, and long-term monitoring and closure measures. Project activities include excavation, open-pit mining, drilling, blasting, and earthmoving to deepen and widen existing pits and expand overburden storage areas and heap-leach facilities. Continuous removal and hauling of overburden and ore will occur using large-scale mining methods and heavy equipment, with material processed through crushing and heap-leaching operations. These activities will result in the extraction of approximately 296 million additional tons of material. The deepening of pits more than 400 feet below the water table will lead to formation of a permanent pit lake. Additional Project activities include constructing supporting infrastructure for new or expanded pits, storage areas, and facilities, as well as development of access and maintenance roads.

Project Area: The Project is located at 115575 Hart Mine Road, Nipton, California, 92364, within unincorporated San Bernardino County. The approximate center of the Project is located at latitude 35.28537° N and longitude -115.11250° W. The Project lies approximately 20 miles southeast of Interstate 15, 40 miles east of Baker, California, five miles west of the California/Nevada border, and 60 miles south of Las Vegas, Nevada. The Project encompasses roughly 4,285 acres across 38 parcels owned by the Project Proponent and BLM. The Project is bounded by the existing Castle Mountain Mine Phase I project to the north and by undeveloped BLM land to the west, south, and east.

Timeframe: The construction period is three years beginning in late 2026. Mining will last 20 years through 2046 followed by at least 10 years of reclamation through 2060.

COMMENTS AND RECOMMENDATIONS

On November 19, 2025, CDFW submitted comments in response to the Notice of Preparation (NOP) for the Project (Attachment A) to the County, in which CDFW recommended that the EIR include comprehensive biological resource assessments, focused surveys for sensitive species, an evaluation of impacts to

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wildlife connectivity, and avoidance and mitigation measures capable of reducing impacts to a level of less than significant under CEQA. CDFW appreciates that focused surveys were completed for several sensitive plant and wildlife species over spans of several years; however, many of the key issues raised by CDFW during the NOP, including the need for a comprehensive biological impact analysis and hydrological modeling, consideration of wildlife connectivity, and development of effective mitigation were insufficiently addressed in the DEIR.

CDFW appreciates the Project is committed to avoiding or substantially lessening potentially significant impacts to biological resources through inclusion of two sets of measures: Mitigation Measures (MM) and Applicant Proposed Measures (APM). CDFW offers the below recommendations, comments, and mitigation measure (see Attachment B) to assist the County in identifying and mitigating significant or potentially significant impacts to fish and wildlife resources for consideration in the Final EIR. Editorial comments or other suggestions have also been included to improve the DEIR.

COMMENT 1: Wildlife Connectivity

Sections: 4.4.1.9, 4.4.5.d, 4.14.5.2, and 4.17.1; Pages 4.4-35, 4.4-80 to 81, 4.14-20 to 4.14-22, and 4.17-1 to 6

Issue: The DEIR discusses the Project's impacts on wildlife connectivity and the DEIR recognizes on page 4.4-35 that, "Desert kit fox, American badger, mountain lion and coyote may travel across the study area in search of prey opportunities, and to access higher-quality habitat in the area for both prey and cover. Desert bighorn sheep may traverse the study area to travel between the Castle Mountains/Piute Range and the New York Mountains northeast of Lanfair Valley and into the Ivanpah Valley to the northwest. They also forage within the existing mine facility and proposed expansion areas, and drink from existing guzzlers".

CDFW is concerned that since a large portion of habitat, approximately 1,559 acres, likely provides suitable habitat for movement of wildlife, the DEIR lacks any evidence to support its determination. There were no Project specific studies of wildlife movement for such a large Project Area which would identify the Project's impact and what would be needed to avoid, minimize, or mitigate such impacts. As a result, there is no evidence to indicate that the measures included to mitigate for impacts to wildlife connectivity would in fact mitigate the Project's impacts on wildlife movement to below a level of significant. It is CDFW's opinion that MM-BI-1.4, MM-BI-1.5, MM-BI-1.6, MM-BI-1.17, MM-BI-1.20, and MM-BI-1.21 will not reduce impacts to less than significant for two reasons: 1) no wildlife studies were conducted and thus the Project's actual impacts are not known nor is there information concerning the proposed mitigation's effectiveness, and 2) none of the APMs or MMs require crossing structures to ensure wildlife connectivity. Instead, MM-BI-1.17 for example, proposes to leave gaps underneath the fence of approximately 4 to 6 inches, but any gaps in the fence would not only allow small wildlife, mesocarnivores, coyote, desert kit fox, and American badger to pass under the fence as the measure intended, but also desert tortoise, which is not intended by MM-BI-1.17. In fact, MM-BI-1.17 states, "Permanent site fencing installed around the Project should be designed to allow for the passage of wildlife, to the extent feasible given the need for the fencing to prevent ingress by desert tortoise..." and "Depending on the fencing material, the fence line should have gaps of approximately 4 to 6 inches accessible to wildlife other than desert tortoise...".

CDFW appreciates that MM-BI-1.17 intends to provide access to desert bighorn sheep to existing guzzlers throughout the Project Area, but without any

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description of the fencing design plans it is unclear how through MM-BI-1.17 “fencing should be sufficient to allow desert bighorn sheep passage and access to existing guzzlers located throughout the Project Area but exclude them from active mining areas”. CDFW is also aware that other large mammals such as mule deer and mountain lion occupy the area. Ultimately, the Project Area will be under construction which will remove suitable habitat and alter movement patterns across the area and thus wildlife connectivity onsite would be lost resulting in a significant impact.

Specific Impact: The Project will disturb approximately 1,814 acres of desert habitat, expanding the overall disturbance footprint of the Castle Mountain Mine to roughly 3,288 acres. This footprint includes pit expansions, haul roads, overburden storage sites, and linear infrastructure such as the 31.5-mile water pipeline and 16.5-mile powerline. The Project will lead to a fragmented landscape affecting wildlife movement patterns for migratory birds, desert bighorn sheep, desert tortoise, desert kit fox, American badger, and western burrowing owl among others. The DEIR states that with the identified mitigation, impacts to wildlife corridors would be less than significant, however CDFW believes that Project specific studies are needed to identify the extent of the Project’s impact on wildlife movement and to fashion effective measures that would avoid, minimize, and mitigate the Project’s impacts on wildlife movement. For example, such Project-specific studies could locate, design, and describe how to install appropriate wildlife crossings in suitable locations to help bring the impact to below a level of significance.

Why Impact Would Occur: The Project Area’s current condition is remote, intact, and surrounded by conservation lands which makes it uniquely important for wildlife movement and regional ecological permeability. Proposed ground disturbance, excavation, traffic, blasting, nighttime lighting, and the introduction of new roads and utility corridors will generate barriers to wildlife movement. The Project will fragment the habitat onsite, eliminate habitat for wildlife movement, increase access for predators (e.g., ravens along powerlines or ponded water), and facilitate spread of invasive species compounding ecological disruption of a connected landscape.

Evidence Impact Would Be Significant: Scientific literature underscores the importance of maintaining landscape connectivity in desert ecosystems (Zeller et al, 2020). Fragmentation from roads and fencing has been shown to isolate populations, reduce genetic diversity, and increase mortality rates (Boarman & Sazaki, 2006; Beier et al., 2008). The Project will disrupt movement for special status species, including bighorn sheep, between the Castle Mountains and Piute Range and the New York Mountains. The Project’s disruptions to landscape connectivity that have the potential to result in long-term impacts to wildlife connectivity include active mining for 20 years on 1,814 acres followed by reclamation for 10 years, which includes installation of exclusionary fencing, construction of a right-of-way, installation of 272 wooden poles, ongoing operations and maintenance, installation of an underground pipeline, increased human presence, noise, vibration, and perching opportunities for ravens and other predators from installation of overhead utility lines . Habitat quality and connectivity are important for supporting viable tortoise populations and facilitating gene flow, especially among Mojave Desert recovery units.

Recommendation: CDFW recommends including in the Final EIR studies on the wildlife movement within the Project area and wildlife crossings, if the study reveals that they are needed, which would then reduce impacts to less than significant. Below are CDFW’s recommendations:

- Conduct studies on wildlife movement (e.g., camera traps, track surveys, GIS-based modeling). Such studies will help identify what species are

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traversing the Project area, how often, when during the year, and at what locations. These studies would help inform Project specific impacts to wildlife connectivity and the development of effective measures to minimize, avoid, or mitigate the Project's impacts on wildlife movement. Studies on wildlife movement will also help identify if crossings are needed and the size and type of crossings needed. For example, if during the studies small animals, such as reptiles, are determined to use streams onsite consistently, a low under crossing/bridge should be placed within the stream. On the other hand, a study could reveal that a culvert within a stream onsite, should be upsized to accommodate larger species using the area.

- o Implement directional fencing and median barriers to guide wildlife toward safe crossing structures and to prevent access to hazardous infrastructure.
- o Coordination with CDFW to ensure any fencing and crossing designs are appropriate for the species they are intended for and supported by corresponding location data such as bighorn sheep VHF/GPS radio collar data.

COMMENT 2: Groundwater

Sections: 1.1, 2, 2.4.1.5, 4.10.5, 4.14.5.2, Appendix 7, and Appendix 11; Pages S-4, S-7 to S-9, 1-1, 2-2, 2-11, 4.10-16 to 19, 4.14-20 to 25, Appendix 7: 20-6, and Appendix 11: 79-85

Issue: The Project proposes a major increase in groundwater extraction, with an increase of an additional 1,625 acre-feet per year, for a total of approximately 2,250 acre-feet per year (AFY) of groundwater. This withdrawal will likely affect wells, groundwater-dependent riparian systems, ephemeral washes, springs such as Piute Spring, Lanfair and Ivanpah Basins, and special-status wildlife, including Nelson's bighorn sheep and other species dependent on these scarce desert water sources. Furthermore, the proposed new off-site water extraction near Nipton in the Ivanpah Valley Groundwater Basin will significantly impact resources for desert tortoise in California including Desert Tortoise Critical Habitat. Under CEQA Guidelines section 15382, these impacts are likely to constitute a substantial adverse change in the physical conditions of the environment.

Specific Impact: In sections 4.10.5 (b), 4.10.5 (e), and 4.10.6, the DEIR concludes that impacts to groundwater would be less than significant without mitigation. However, the hydrological analysis was based on an estimate of 2,250 AFY of groundwater pumping, which is far less than what is standard in the gold mining industry. According to the National Parks Conservation Association's comment letter on the Project, Steven Emerman at Malach Consulting stated that a more realistic water consumption is 22,000 acre-feet per year. Underestimating water use by such a large amount renders the conclusion that impacts to groundwater would be less than significant invalid. During the NOP, CDFW emphasized that drawdown could alter regional groundwater gradients and decrease flows in Lanfair and Ivanpah Valleys and associated springs, such as Piute Springs. Loss of groundwater-supported vegetation, including desert willow combined with changes to ephemeral wash hydrology would disrupt essential drought refugia, reduce soil moisture availability, and degrade wildlife habitat over decades.

Why the Impact Would Occur: Groundwater-dependent ecosystems in the eastern portions of the Mojave Desert rely on shallow moisture and isolated springs. Prolonged pumping and dewatering will reduce groundwater levels, lower the water table, and surface moisture availability to the root zone of most if not all plants. According to the U.S. Geological Survey (USGS), the increasing

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use of ground water, especially in the West, has caused groundwater levels to decline in some areas to the point where the water is actually being mined; that is, more water is being removed from the groundwater reservoir than is being put back in by natural hydrologic processes (Baldwin et al. 1990). The Project will rely on three groundwater wells and three pit dewatering wells. To support higher mining rates, the proposed Project includes an additional seven dewatering wells. Pumping water from a well lowers the water table around the well and creates a cone of depression (Baldwin et al. 1990). A cone of depression forms when a well pumps water from an aquifer faster than the surrounding groundwater can naturally flow in to replace it, creating a drawdown in the water level near the well. With such a drawdown, the flow of groundwater onto the land surface cannot take place and water is unable to seep from the ground into a stream through the bed and banks, or emerge as a spring, or seep out to the surface in a swampy area (Baldwin et al. 1990), thus preventing moisture availability for groundwater dependent vegetation.

Evidence That Impact Would Be Significant: Since the groundwater impact analysis is based on an underestimated water demand of 2,250 AFY and the hydrological modeling includes several deficiencies that make it impossible to understand the impacts (see list below), it is CDFW's opinion that the DEIR's conclusion that impacts would be less than significant without mitigation is unsubstantiated and that impacts are likely significant instead.

- Model-related information is missing from the DEIR; for example, model calibration, baseline conditions, and results of simulations.
- Without the actual Piute Spring elevation information assigned in the model drain package, it is impossible to interpret the reliability of the impacts of Project caused drawdown and the impacts to Piute Spring.
- Reliance on historic precipitation for recharge estimates without addressing increasing temperatures that will significantly affect recharge and evaporation.
- No discussion of evapotranspiration or quantification of discharge at Piute Spring and other springs in the area including Vontrigger Spring.
- No estimate of groundwater underflow to neighboring Piute Valley to the east, or Fenner Valley to the south.
- Water use and pumping data used in the model has not been updated for over 40 years.
- Groundwater recharge estimates in the report are based on an outdated 1988 report, although newer information is readily available from USGS.
- Boundary conditions at Piute Spring are not provided

Recommendation: Due to the deficiencies mentioned above, CDFW recommends that a new analysis is conducted that addresses all of the above bullet points for inclusion in the Final EIR. Without the deficiencies being addressed, the DEIR lacks evidence to support its determination that Project impacts to groundwater would be less than significant and lacks sufficient detail to inform the public as to the Project's impact on groundwater.

COMMENT 3: Crotch's Bumble Bee (*Bombus crotchii*)

Sections: None

Issue: During the NOP, CDFW raised concerns regarding the potential presence of Crotch's bumble bee, a candidate species under CESA, in the Project Area. The DEIR did not address Crotch's bumble bee despite the Project occurring within the distribution range for Crotch's bumble bee. CDFW is unclear why the DEIR did not evaluate potential impacts to Crotch's bumble bee; for example, through a habitat assessment and focused protocol surveys (if habitat is present). CDFW considers adverse project-related impacts to sensitive species,

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such as Crotch's bumble bee and their habitats to be significant to both local and regional ecosystems. According to CEQA Guidelines section 15126.4, where a potentially significant impact or significant and unavoidable impact is identified, feasible mitigation measures that could minimize the identified significant adverse impact are required.

Specific Impacts: Since an impacts analysis was not conducted, the DEIR does not provide mitigation measures for potential impacts to Crotch's bumble bee and Project activities may result in unauthorized take if the species is present. California Fish and Game Code section 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (Take). Potential impacts to Crotch's bumble bee include:

- Direct mortality of adults or queens during grading, equipment mobilization, vegetation removal, or soil disturbance.
- Destruction of ground-nesting sites and overwintering habitat due to soil compaction or excavation.
- Loss of foraging resources through removal of native flowering plants and disturbance to pollinator-dependent vegetation communities.
- Habitat fragmentation, reducing dispersal capability between suitable habitat, which is known to negatively affect viability of small and isolated bumble bee populations.

Without mitigation measures, to avoid, minimize and mitigate impacts to Crotch's bumble bee, impacts to the species will be significant.

Why Impacts Would Occur: Crotch's bumble bee typically occupies open scrub, grassland, and desert environments with abundant native forbs and friable soils suitable for nesting and overwintering. The Project Area contains patches of native and available non-native foraging vegetation and undisturbed sandy soils characteristic of Crotch's bumble bee nesting and overwintering habitat. Project disturbance, such as vegetation clearing and grading directly threatens these habitats. Bumble bee colonies are especially vulnerable, because they rely on single nest locations and have limited capacity to relocate in response to disturbance. Therefore, without presence/absence data based on focused protocol-level surveys and any mitigation measures, the Project is likely to result in direct and/or indirect impacts to Crotch's bumble bee.

Evidence Impacts Would Be Significant: Crotch's bumble bee is designated as a CESA candidate species, which affords it the same protections as State-listed species under Fish and Game Code section 2080 et seq. Thus, CESA requires the Project to fully avoid take of the species or if take cannot be fully avoided, CDFW recommends that the Project Proponent obtain take authorization under CESA by applying for and receiving an incidental take permit (ITP). The species is also ranked S1/S2, indicating it is critically imperiled and extremely rare within California. Additionally, Crotch's bumble bee is listed as an invertebrate of conservation priority under the California Terrestrial and Vernal Pool Invertebrates of Conservation Priority.

Recommendation: To reduce potentially significant impacts to Crotch's bumble bee, CDFW recommends the adoption of MM-BI-30 (Crotch's Bumble Bee) below in the Final EIR:

MM-BI-30: Crotch's Bumble Bee (NEW)

A habitat assessment in accordance with the 2023 CDFW Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species (CDFW 2023) shall be conducted prior to commencement of Project activities to

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identify suitable habitat for Crotch's bumble bee. Within suitable habitat for Crotch's bumble, surveys shall be conducted during the appropriate season when adult bees are active and floral resources are available in accordance with the 2023 CDFW Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species (CDFW 2023). If Crotch's bumble bee is detected during surveys or construction activities and full avoidance is not feasible, the Project Proponent shall obtain a CESA ITP from CDFW prior to commencing/resuming any vegetation or ground-disturbing activities. Any unauthorized take of Crotch's bumble bee would constitute a violation of Fish and Game Code section 2080 et seq.

COMMENT 4: Western Burrowing Owl (*Athene cunicularia*)

Sections: 4.4.1.7 and 4.4.5; Pages 4.4-20, 4.4-28, and 4.4-57

Issue: Focused surveys for western burrowing owl were only conducted within the utilities right-of-way (ROW), where suitable burrows occur and no western burrowing owl were found. The DEIR states on page 4.4-59, "Surveys have not been conducted within the proposed mine expansion area, but suitable habitat is present. Construction of the Project will result in direct impacts to burrowing owl, including the direct, permanent removal of up to approximately 1,559 acres of habitat suitable habitat." The impact analysis for western burrowing owl is missing focused protocol level surveys for the expansion area, which is needed to develop appropriate avoidance, minimization, and mitigation measures. For example, focused protocol level surveys would inform if burrowing owls are present during the breeding and non-breeding season within the expansion area and therefore whether relocation of western burrowing owl is needed. Relocation and impacts to breeding and non-breeding habitat would be significant without mitigation, such as perpetual protection and management of habitat mitigation lands, which would occur through a CESA ITP.

Thus, it is unclear from the DEIR what the actual impacts to western burrowing owl will be, but based on MM-BI-1.25, eviction of western burrowing owl may be necessary. Evicting a burrowing owl requires handling the species and that is considered "take" under the Fish and Game Code. As a result, implementation of MM-BI-1.25 would require the Project proponent to obtain a CESA ITP authorizing take of western burrowing owl.

Specific Impacts: The DEIR determined that with mitigation, impacts to western burrowing owl would be less than significant. However, in CDFW's opinion, impacts would remain significant despite the proposed mitigation since only a take avoidance survey (i.e., MM-BI-1.25) was proposed and no APMs. Take avoidance surveys are intended to confirm the current status of western burrowing owl from previous focused surveys. Breeding and non-breeding surveys are needed to determine the extent of impacts to western burrowing owl. Breeding and non-breeding surveys conducted according to the 2012 CDFW *Staff Report on Western Burrowing Owl Mitigation* help identify the potential loss of nesting burrows, satellite burrows, foraging habitat, dispersal and migration habitat, wintering habitat, and habitat linkages, including habitat supporting prey and host burrowers and other essential habitat attributes. All this information is missing from the DEIR in regard to the expansion area.

Mitigation for permanent habitat loss necessitates permanent conservation and replacement with a habitat area similar or better to that lost for breeding, foraging, wintering, dispersal, and should include the presence of burrows, burrow surrogates, fossorial mammal dens, well drained soils, and abundant and available prey within close proximity. Under CESA, a project's impacts must

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be fully mitigated to compensate for the Project's impacts, which typically entails a mitigation ratio higher than 1:1, depending on the quality of habitat lost.

When buffers are implemented to avoid western burrowing owl, as proposed in MM-BI-1.25, the level of project disturbance and whether the burrow is a nesting site determines the buffer distance. Thus, a qualified biologist is needed with experience with identifying and monitoring occupied western burrowing owl burrows as well as behavioral responses to disturbance, such as stress calls, signs of agitation, and lack of foraging/feeding etc.

The DEIR lacks proper evaluation of western burrowing owl presence/absence within the entirety of the Project Area. However, up to 1,559 acres of potential western burrowing owl habitat has been identified within the Project Area. Without confirmed absence, the following impacts to western burrowing owl may occur: (1) staging, vehicles, and foot traffic may result in the collapse of occupied burrows and result in direct mortality and/or injury, (2) Project construction and related activities may result in collision with or crushing by vehicles or heavy equipment, (3) entrapment within open trenches and pipes, and (4) entrapment or entanglement within materials and equipment staged and moved.

Why Impacts Would Occur: While the status of western burrowing owl is unknown within the entire Project Area, due to the presence of at least 1,559 acres of potential western burrowing owl habitat, western burrowing owl is likely to nest, forage, or find refuge within the Project Area.

Evidence Impacts Would Be Significant: The western burrowing owl was designated a CESA candidate species on October 10, 2024, triggering protections under Fish and Game Code section 2080 et seq. Moreover, it remains protected under Fish and Game Code section 3503.5 (active nest disturbance) and the Migratory Bird Treaty Act (MBTA). Habitat loss has resulted in either extirpation or drastic reduction of western burrowing owl populations and the Project will impact at least 1,559 acres of potentially suitable habitat for western burrowing owl. CDFW considers take of western burrowing owl and the loss of the species' habitat as a significant impact, unless mitigated to a level of less than significant, which would occur through a CESA ITP.

Recommendation: To avoid potentially significant impacts to western burrowing owl, CDFW recommends adoption of the following edits to MM-BI-1.25 (Burrowing Owl Protection Measures) in the Final EIR (deletions are in ~~strike through~~ and additions are in **bold**):

*MM-BI-1.25 Burrowing Owl Protection Measures. ~~No more than 14 days~~ Prior to the start of ground disturbance, ~~a~~ preconstruction surveys for burrowing owls **during the breeding and non-breeding season shall be conducted by a qualified biologist** in conformance with the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012) ~~shall be completed~~ within suitable habitat at every work area and within an ~~20200-m~~ **appropriate** buffer zone **determined by the qualified biologist** of each work area. **If conducting breeding and non-breeding season surveys is infeasible, Project Proponent shall coordinate with CDFW to propose and receive approval of an alternate survey schedule.** Work areas will be resurveyed following periods of inactivity of 2 weeks or more. The Project Applicant/owner shall submit the results of the preconstruction survey to BLM's Authorized Officer and CDFW. The Project Applicant/owner shall also submit evidence of conformance with federal and state regulations regarding the protection of the burrowing owl by demonstrating compliance with the following:*

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- a. Unless otherwise authorized by BLM and CDFW, a 650-foot (200-meter) buffer within which no activity will be permissible shall be maintained between project activities and nesting burrowing owls during the nesting season. This protected area shall remain in effect until August 31 or at CDFW's discretion and, based on monitoring evidence, until the young owls are foraging independently. No disturbance shall occur within 160 feet (50 m) of occupied burrows during the non-breeding season (September 1–January 31). Eviction outside the nesting season may be permitted pending evaluation of eviction plans (developed in accordance with CDFW protocol for burrowing owls) by CDFW and receipt of formal written approval from CDFW and **through a CESA incidental take permit (ITP)** authorizing the eviction. A Burrowing Owl Mitigation and Monitoring Plan following the guidance in the CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012) **and CESA ITP** shall be submitted to the BLM's Authorized Officer and CDFW for review and approval prior to passive relocation.
- b. In the event that an occupied burrow cannot be avoided, passive relocation of owls may be implemented **through a CESA ITP** prior to construction activities only if a qualified biologist approved by BLM and CDFW verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Eviction outside the nesting season may be permitted pending evaluation of eviction plans (developed in accordance with BLM protocol for burrowing owls) by CDFW and receipt of formal written approval from BLM authorizing the eviction **and with authorization from CDFW through a CESA ITP**. A Burrowing Owl Mitigation and Monitoring Plan shall be submitted to the BLM and CDFW for review and approval prior to passive relocation.
- c. If accidental take (disturbance, injury, or death of owls) occurs, the Designated Biologist **and CDFW** shall be notified immediately.
- d. Impacts to active burrowing owl territories shall be mitigated at a **minimum 3+:1** ratio through a combination of off-site habitat compensation and/or off-site restoration of disturbed habitat capable of supporting this species. The acquisition of occupied habitat off-site shall be in an area where energy facilities would not pose a mortality risk. Acquisition of habitat shall be consistent with the CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012) **and the Project's CESA ITP**. The preserved habitat shall be occupied by burrowing owl and shall be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by a qualified ornithologist. The site shall be approved by BLM and CDFW. Land shall be purchased and/or placed in a conservation easement in perpetuity and managed to maintain suitable habitat. The off-site area to be preserved can coincide with other off-site mitigation lands, with the approval of CDFW.
- e. The Designated Biologist or Biological Monitor(s) shall remain on-site until all vegetation is cleared and, at a minimum, conduct site and fence inspections on a regular (monthly) schedule throughout construction to ensure that the project is in compliance with the mitigation measures.
- f. Employees and contractors shall look under vehicles and equipment for the presence of wildlife prior to moving vehicles and equipment. If present, the animal shall be left to move on its own or until it is removed by the approved biologist. No listed species shall be handled without concurrence from USFWS and ~~for~~ **proper CESA authorization from CDFW**, as applicable.

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COMMENT 5: Mojave Desert Tortoise (*Gopherus agassizii*)

Sections 4.4.5, 4.4.6, 4.5.1.1, and 4.5.2; Pages 4.4-24, 4.4-46 to 50, 4.4-58, 4.4-63 to 69, and 4.4-82 to 84

Issue: The DEIR determined that impacts to desert tortoise would be less than significant with the proposed mitigation. However, this determination was based on focused surveys conducted in 2020, and CDFW generally considers biological field assessments for wildlife to be valid for a one-year period. Based on the 2020 focused surveys the DEIR concludes that, “Consistent with the 2019 USFWS survey protocol, desert tortoise is considered present within the study area based on observations of tortoise sign including scat, as well as detections of live tortoises, carcasses, and Class 1–5 burrows”. As such, the DEIR does not provide an analysis that considers the current status of desert tortoise in the Project Area. Additionally, the analysis fails to explain how the APMs avoid, reduce, or otherwise mitigate Project impacts on the species. Still, even with implementation of the APMs, impacts to desert tortoise would remain significant if impacts are not fully mitigated, such as through a CESA ITP. The proposed APMs for desert tortoise are appropriate for implementation but are not sufficient on their own to mitigate potentially significant impacts to desert tortoise; for this reason, APMs should be implemented along with the MMs for desert tortoise (as CDFW revised below). Thus, CDFW recommends that both APMs and MMs for desert tortoise be adopted in the Final EIR.

Specific Impacts: Project activities, including grading, vegetation clearing, excavation, and equipment/vehicle operation may result in injury or death of desert tortoise, collapse of occupied burrows, or entrapment in open trenches. Additionally, noise, dust, and habitat fragmentation may degrade habitat and limit movement of desert tortoise for foraging, mating, nesting, and hibernation.

Why Impacts Would Occur: Desert tortoise is considered present within the study area based on observations of tortoise sign including scat, as well as detections of live tortoises, carcasses, and Class 1–5 burrows during focused surveys.

Evidence Impacts Would Be Significant: The DEIR estimated impacts to 1,559 acres of desert tortoise habitat, with some of these impacts occurring to critical habitat for desert tortoise (see “Issue” section above). Desert tortoise is protected under the federal Endangered Species Act (ESA) and CESA. Desert tortoise populations have declined significantly in recent decades largely because of human activities in their native habitat, including land development, off-road vehicle use, overgrazing, agricultural development, disease, military activities, predation, and the spread of invasive species. The desert tortoise population in the western Mojave Desert has declined by 90% since the 1980s. Desert tortoise can take up to 20 years to reach sexual maturity, which limits their ability to recover even from small losses in population numbers.

Recommendation: CDFW recommends that a CESA ITP for desert tortoise is obtained. CDFW recommends the following edits below to the MMs for desert tortoise (deletions are in ~~strike through~~ and additions are in **bold**): *Note that where CDFW identified that no changes were needed, that portion of the mitigation measure has been excluded.*

*MM-BI-1.8 Desert Tortoise Protection. **The Project Applicant/owner shall obtain a CESA incidental take permit (ITP) for desert tortoise.** The Project Applicant/owner shall undertake appropriate measures to manage the construction site and related facilities in a manner to avoid or minimize impacts to desert tortoise **as outlined in the CESA ITP.** Methods for clearance surveys, fence specification and installation, tortoise handling, artificial burrow construction, egg handling, and other procedures shall be consistent with those*

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described **in the CESA ITP and** the USFWS's Desert Tortoise (Mojave Population) Field Manual (USFWS 2009) or more current guidance provided by CDFW and USFWS. The Project Applicant/owner shall also implement all terms and conditions described in the **CESA ITP and** BO to be prepared by USFWS. These measures include, but are not limited to, the following, subject to modification by the terms of incidental take authorizations issued by the USFWS **and CDFW**.

MM-BI-1.9 Desert Tortoise Exclusion Fence Installation. To avoid impacts to desert tortoise, permanent desert tortoise exclusion fencing shall be installed along the permanent perimeter security fence and temporarily installed along road corridors during construction **according to the CESA ITP**. The proposed alignments for the permanent perimeter fence and temporary fencing shall be flagged and surveyed within 24 hours prior to the initiation of fence construction. Clearance surveys of the perimeter fence and temporary fencing areas shall be conducted by the Designated Biologist(s) using techniques outlined in the USFWS's Desert Tortoise (Mojave Population) Field Manual ~~and may be conducted in any season with USFWS and CDFW approval~~ **and the CESA ITP**. Biological Monitors may assist the Designated Biologist under his or her supervision. These fence clearance surveys shall provide 100% coverage of all areas to be disturbed and an additional transect along both sides of the fence line covering an area approximately 90 feet wide centered on the fence alignment. Transects shall be no greater than 15 feet apart. All desert tortoise burrows and burrows constructed by other species that might be used by desert tortoise shall be examined to assess occupancy of each burrow by desert tortoise and handled in accordance with the USFWS's Desert Tortoise Field Manual. Any desert tortoise located during fence clearance surveys shall be handled by the Designated Biologist in accordance with the USFWS's 2009 Desert Tortoise (Mojave Population) Field Manual (USFWS 2009) **and the CESA ITP**.

MM-BI-1.10 Desert Tortoise Clearance Surveys. Clearance surveys shall be conducted in accordance with the USFWS Desert Tortoise (Mojave Population) Field Manual (USFWS 2009) (Chapter 6 – Clearance Survey Protocol for the Desert Tortoise – Mojave Population) **and the CESA ITP** and shall consist of two surveys covering 100% of the study area by walking transects no more than 15 feet apart. If a desert tortoise is located during the second survey, a third survey shall be conducted. Each separate survey shall be walked in a different direction to allow opposing angles of observation. Clearance surveys of the Project Area may only be conducted when tortoises are most active (April–May or September–October) unless the Project receives approval from CDFW and USFWS. ~~Clearance surveys of linear features may be conducted during any time of the year.~~ Any tortoise located during clearance surveys shall be translocated or relocated and monitored in accordance with the Desert Tortoise Translocation Plan (DTP) (MM-BI1.13) **approved by CDFW pursuant to a CESA ITP**. The Designated Biologist, who may be assisted by the Biological Monitors, shall assess occupancy of each burrow by desert tortoise in accordance with the USFWS Desert Tortoise (Mojave Population) Field Manual (USFWS 2009) **and the CESA ITP**. All potential desert tortoise burrows located during clearance surveys shall be excavated by hand, tortoises removed, and burrows collapsed or blocked to prevent occupation by desert tortoise in accordance with the DTP.

MM-BI-1.16 Desert Tortoise Compensatory Mitigation: To fully mitigate for habitat loss and potential take of desert tortoise, the Project owner shall provide compensatory mitigation consistent with federal **and CDFW** requirements **in the CESA ITP**, adjusted to reflect the final Project footprint. The acreage for mitigation of desert tortoise habitat will be at a 1:1 ratio **determined by CDFW in the CESA ITP**. For the purposes of this condition, the Project footprint means all lands disturbed in the construction and operation of the Project, including all

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*Project linears, as well as undeveloped areas inside the Project’s boundaries that will no longer provide viable long-term habitat for the desert tortoise. To satisfy this condition, the Project owner shall acquire, protect, and transfer ~~1 acre of~~ desert tortoise habitat **according to the compensatory mitigation in the CESA ITP** for every acre of habitat within the final Project footprint, and provide associated funding for the acquired lands, as specified below **and in the CESA ITP**.*

COMMENT 6: Golden Eagle (*Aquila chrysaetos*)

Sections: 4.4.1.7; Pages 4.4-18, 4.4-21, 4.4-23, and 4.4-28 to 29

Issue: During ongoing coordination meetings for the Project, CDFW was made aware of the detection of golden eagle on January 19, 2026 in the Project area during surveys. Additionally, a separate golden eagle was detected within the existing mine and reported to CDFW in 2026. Due to timing, the DEIR did not include the aforementioned survey results, nor results from surveys scheduled for late-March and before mid-April, which ultimately may result in identifying additional Project impacts to golden eagle.

Considering potential impacts to golden eagle, a CDFW fully protected species, CDFW is concerned that according to the DEIR, impacts to golden eagle will be reduced through implementation of APMs and MMs described for general avian species, and thus no APMs or MMs specific to golden eagle were included in the DEIR. In reviewing the proposed APMs and MMs for avian species, it is CDFW’s opinion that as written, they are not sufficient to reduce significant impacts to golden eagle as required under CEQA Guidelines section 15126.4 et seq. For example, a 1,500 feet buffer was included in MM-BI-1.26 for raptors; however, a half a mile buffer (2,640 feet) buffer is required for golden eagle because territories regularly span 5 to 10 miles depending on the availability of prey, nest sites, and wind resources. Breeding adults in desert settings may range up to 10 miles from the nest while foraging. Further, the pre-construction surveys for golden eagle need to consider surveys for active nests within the Project Area and a half-mile radius of the Project Area prior to the start of Project activities. Due to these details that consider the life history of golden eagle, the proposed APMs and MMs for avian species are appropriate for non-protected bird species but are not appropriate to mitigate impacts to golden eagle, and a species-specific measure is needed, as proposed below.

Specific Impacts: The addition of the 69-kV overhead power line and the expansion of large vertical structures associated with the heap leach pad introduce new collision and electrocution risks to golden eagles. The expansion of the heap leach may also attract golden eagle due to perching structures and ponded water, where golden eagle may be exposed to hazardous materials or electrical/drowning hazards despite the presence of netting. Further, golden eagles require large amounts of open space for hunting, such as grasslands, deserts, and savannahs. The entire Project Area provides suitable foraging habitat and may support a suitable prey base.

Why Impacts Would Occur: According to the results of the Golden Eagle Flight No.1 Survey Report, dated January 23, 2026, pairs of adult golden eagles were encountered at two locations in the Project Area. Both pairs were seen in close proximity to each other, indicating a pair bond or a potential breeding pair. During the survey, 18 nesting structures for golden eagle were also identified.

Evidence Impacts Would Be Significant: Golden eagle is a fully protected species under California law. Fully protected species are species that are deemed to need additional protection due to their rarity or face possible extinction. CDFW may issue permits authorizing take of fully protected species

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under certain limited situations specified in the Fish and Game Code. Otherwise, fully protected species may not be taken or possessed at any time and projects should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to the project areas. Golden eagle is also protected under the federal Bald and Golden Eagle Protection Act (BGEPA), which prohibits any unpermitted take, including disturbance that interferes with breeding, feeding, or sheltering and requires an eagle take permit for authorized activities. The species is additionally protected under the MBTA and California Fish and Game Code section 3503.5 et seq., which prohibits the destruction of raptor nests or eggs, even if the nest is inactive.

Recommendation: CDFW recommends that the DEIR be revised to include the golden eagle survey results from 2026 and reevaluates the Project's impacts to golden eagle. CDFW also recommends adoption of MM-GOEA-1 (Golden Eagle Avoidance and Protection) below in the Final EIR to mitigate impacts to Golden Eagle to less significant:

MM-GOEA-1: Golden Eagle Avoidance and Protection (New)

The Project Proponent shall determine whether suitable nesting habitat or wintering habitat features are present for golden eagle on or within a half-mile of the Project Area. If suitable nesting habitat features are present, Project Proponent shall perform Project activities as follows:

- a. Project Proponent shall not conduct Project activities during the nesting season (February 1 - August 31) unless a qualified biologist conducts CDFW-approved protocol surveys for active nests within the Project Area and a half-mile radius of the Project Area prior to the start of Project activities. Surveys shall be done during the appropriate time of day to maximize detectability and shall concentrate on suitable nesting structures for the species. Project Proponent shall submit survey results to CDFW.**
- b. Project Proponent shall establish a minimum half-mile no-disturbance buffer around active nests until the breeding season has ended or until a qualified biologist determines that all young have fledged and are no longer reliant upon the nest or parental care for survival. Permittee shall halt any Project activities that could affect the foraging or feeding behavior of golden eagle until golden eagle has left of its own volition.**

COMMENT 7: Swainson's Hawk (*Buteo swainsoni*)

Section 4.4.1.7; Pages 4.4-21 and 4.4-28

Issue: The DEIR states on page 4.4-28, "No site-specific Swainson's hawk surveys have been conducted for the current project". Despite this, the DEIR concludes that the Project has the potential to impact Swainson's hawk, a CESA-listed threatened species, due to regional occurrences and the presence of foraging and nesting habitat onsite. As a CESA-listed species, CDFW is concerned that, according to the DEIR, impacts to Swainson's hawk will be reduced to less than significant through implementation of APMs and MMs described for general avian species, and thus no APMs or MMs specific to Swainson's hawk were included in the DEIR. However, the proposed APMs and MMs for avian species are not sufficient to reduce impacts to Swainson's hawk to less than significant, as required under CEQA Guidelines section 15126.4 et seq. For example, a 1,500 feet buffer was included in MM-BI-1.26 for raptors; however, a half a mile buffer (2,640 feet) buffer is required for Swainson's hawk because territories regularly span 5 to 10 miles depending on the availability of prey, nest sites, and wind

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resources. Breeding adults in desert settings may range up to 10 miles from the nest while foraging. Further, the pre-construction surveys for Swainson's hawk need to consider surveys for active nests within the Project Area and a half-mile radius of the Project Area prior to the start of Project activities. Due to these details that consider the life history of Swainson's hawk, the proposed APMs and MMs for avian species are not appropriate to mitigate impacts to Swainson's hawk, and a species-specific measure is needed, as proposed below.

Specific Impacts: Construction activities, including grading, traffic, and vegetation removal, could directly disturb Swainson's hawk individuals traveling through the area during migration. The Project will also eliminate foraging habitat for Swainson's hawk. Expansion of mining infrastructure and increased vertical features could alter flight paths or increase collision risks.

Why Impacts Would Occur: Swainson's hawks migrate across broad landscapes and frequently utilize open grasslands and shrublands for foraging. The Project would substantially alter existing habitat by replacing open terrain with large-scale industrial features and reducing both foraging habitat and suitable flight corridors. Swainson's hawk is known to travel long distances during migration and dispersal, and individuals may move through the Project Area even if nesting is not documented locally.

Evidence Impacts Would Be Significant: Under CESA, Swainson's hawk is listed as a threatened species, and any activity that could result in take of the species requires a CESA ITP. Given the Project's substantial conversion of suitable habitat and the potential for disturbance to migrating or dispersing birds, impacts to Swainson's hawk is likely to be significant unless appropriate avoidance, minimization, and mitigation measures are implemented.

Recommendation: CDFW recommends MM-SH-1 (Swainson's Hawk Protection) below for adoption in the Final EIR to mitigate the Project's impacts to Swainson's hawk to less than significant:

MM-SH-1: Swainson's Hawk Protection (New)

- a. **Seasonal Work Restriction.** Absent take authorization covering the Project Area, and if Project activities will be initiated during or extend into the breeding season for Swainson's hawk (February 15 through September 15), Project Proponent shall determine whether suitable nesting habitat features for Swainson's hawk are present at or within a half-mile of the Project Area. If suitable nesting habitat features are present, and Project activities will occur during the species breeding season, Project Proponent shall perform Project activities via one of the following options:
- b. **Pre-Construction Surveys/Sweeps.** A qualified biologist shall conduct nesting surveys prior to the start of Project activities. Project Proponent shall submit survey results to CDFW prior to the start of Project activities. If nesting is observed, Permittee shall establish a minimum half-mile no disturbance buffer around active nests until the breeding season has ended or until the qualified biologist has determined, that all young have fledged and are no longer reliant upon the nest or parental care for survival.
- c. **Avoidance Buffers.** If Swainson's hawk is detected the Project Proponent shall implement a minimum half-mile no disturbance buffer. If full avoidance, cannot be implemented, Project Proponent is advised to acquire CESA take authorization from CDFW prior to commencing Project activities.
- d. **If Swainson's Hawk is observed within the Project Area during Project activities, and full avoidance isn't possible, Permittee shall pause Project**

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activities in the vicinity of the occurrence and contact CDFW immediately within 24 hours) to discuss additional avoidance measures or acquire CESA take authorization from CDFW prior to continuing Project activities.

- e. Permittee may assume presence of Swainson’s hawk and acquire a CESA ITP prior to initiating Project activities.**

COMMENT 8: Gilded Flicker (*Colaptes chrysoides*)

Sections: 4.4.1.7; Pages 4.4-18 to 4.4-29

Issue: The Project has the potential to impact gilded flicker, a CESA-listed endangered species; however, the DEIR does not analyze the Project’s potential impacts on the species; in fact, the DEIR does not mention the species. Furthermore, no species-specific APMs or MMs were included for gilded flicker. Instead, the DEIR will rely on APMs described for general avian species to reduce impacts to gilded flicker. Yet, the APMs that were included (e.g., APM-WILD-52 Birds) are not appropriate to avoid, minimize, and mitigate impacts to gilded flicker. For example, APM-WILD-52 is as follows: “Conduct vegetation removal outside the active nesting bird season that runs from March 1 through August 31. Vegetation clearance that does occur inside the active nesting bird season (March through August) must be preceded by a nesting bird survey to document the absence of nesting birds”. APM-WILD-52 does not specify appropriate measures to be taken if golden flicker is detected during surveys; for example, fully avoiding impacts through a suitable buffer. For example, MM-BI-1.26 requires a 150 feet buffer for passerine birds, such as gilded flicker, but due to a larger distribution range, gilder flicker requires a minimum 500-foot buffer, as CDFW proposed below. Thus, in reviewing the proposed general avian APMs and MMs, it is CDFW’s opinion that the measures are not appropriate to reduce impacts to less than significant to gilded flicker as required under CEQA Guidelines section 15126.4 et seq.

Specific Impacts: The DEIR identifies potential habitat features for gilded flicker, including saguaro-associated desert scrub and woodland-edge habitat. Large-scale vegetation removal, ground disturbance, and infrastructure expansion would reduce or eliminate trees, large shrubs, and snags that could serve as potential foraging or cavity-nesting substrate for gilded flickers. Noise, vibration, and human activity during construction may disturb individuals as well. Additionally, the expansion of tall structures and mine facilities could alter local movement patterns.

Why Impacts Would Occur: Gilded flicker occupies open desert habitats that contain large woody plants suitable for cavity nesting and roosting. Although the species’ primary range lies within the Sonoran Desert, the Project Area in California lies within the distribution range of gilded flicker: [Gilded Flicker Range - CWHR B549 \[ds1685\] | CDFW Open Data Portal](#). The Project area’s scrub habitat, combined with the presence of suitable vegetation and potential cavity sources, provides suitable habitat for gilded flickers. Habitat removal and fragmentation caused by the proposed mine expansion would diminish these resources for gilded flicker resulting in a potentially significant effect on the species.

Evidence Impacts Would Be Significant: Gilded flicker is reliant on habitats that provide cavities for roosting and nesting. Loss of nesting and foraging substrates, including large shrubs, snags, and cavity-bearing trees can significantly degrade their habitat and may substantially affect the species. Since the DEIR does not fully assess the quality or distribution of these microhabitats or quantifies the species’ occurrence, the impact analysis is insufficient and potential impacts to gilded flicker may be underestimated. As a

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result, the DEIR lacks sufficient evidence to supports its determination that Project impacts to the species would be less than significant.

Recommendation: CDFW recommends that the Final EIR adopt MM-GF-1 (Gilded Flicker Avoidance and Protection) as follows to reduce impacts to the species to less than significant:

MM-GF-1: Gilded Flicker Avoidance and Protection (New)

A qualified biologist shall conduct a habitat assessment prior to any Project activities occurring to determine if suitable habitat for gilded flicker is present. If gilded flicker suitable habitat is present within the Project Area, the Project Proponent shall implement the following measures, or Project Proponent may assume presence of gilded flicker and acquire a CESA ITP prior to initiating Project activities.

- a) Seasonal Work Restriction. To the extent feasible, all construction activities occurring within 500 feet of suitable gilded flicker nesting habitat shall be scheduled outside the peak breeding season (March 1–July 31).**
- b) Pre-Construction Surveys/Sweeps. If construction cannot be avoided during the peak breeding season (March 1–July 31), a qualified biologist shall conduct pre-construction surveys within 500 feet of all work areas no more than three days prior to any Project activities. Surveys shall identify any direct or indirect evidence of nesting.**
- c) Avoidance Buffers for Active Nests. If an active gilded flicker nest is detected, a 500-foot no-disturbance buffer shall be established and clearly demarcated in the field. No construction activities shall occur within the buffer until the qualified biologist confirms that chicks have fledged and are no longer dependent on the nest. Monitoring shall be conducted from a distance using binoculars to avoid disturbance. Work shall stop and buffers expanded if birds exhibit distress.**
- d) If Gilded Flicker is observed within the Project Area during Project activities, and full avoidance isn't possible, Permittee shall pause Project activities in the vicinity of the occurrence and contact CDFW immediately (within 24 hours).**

COMMENT 9: Bendire's Thrasher (*Toxostoma bendirei*) and LeConte's Thrasher (*Toxostoma lecontei*)

Sections: 4.4.1.7, 4.17.1, and 4.4.5.a; Pages 4.4-19 to 20, 4.4-25 to 27, and 4.4-58

Issue: The DEIR acknowledges potential impacts to Bendire's thrasher and LeConte's thrasher. The DEIR confirms the presence of Bendire's thrasher during surveys. LeConte's thrasher was not documented onsite during surveys, but according to the Draft EIR, there is potential for it to occur, since suitable desert scrub is present. On May 15, 2026, Bendire's thrasher and LeConte's thrasher became candidate species under CESA. The DEIR states that impacts to these two (Bendire's Thrasher, and LeConte's Thrasher) special-status avian species would be reduced through implementation of APMs described for general avian species, such as APM-WILD-52 Birds discussed above in the "Gilded Flicker" section. Due to the recent candidacy under CESA, the proposed APMs are not appropriate to avoid, minimize, and mitigate impacts to Bendire's thrasher and LeConte's thrasher, since species specific measures are needed, such as protocol level pre-construction surveys.

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Specific Impacts: The Project's extensive vegetation clearing, ground disturbance, and installation of vertical and horizontal infrastructure would result in the permanent loss of key desert scrub and grassland habitats used by Bendire's and LeConte's thrashers. These thrashers, which forage and nest on or near the ground, rely on patches of cholla, saltbush, yucca, and desert shrubs—features the Project would remove across a large footprint.

Why Impacts Would Occur: Bendire's thrasher and LeConte's thrasher occupy desert scrub and arid grassland ecosystems on the Mojave–Sonoran border, with declining populations attributed to habitat loss, fragmentation, and degradation. Their ground-dwelling behavior and dependence on microhabitats make them especially susceptible to disturbance and habitat conversion. The Project's widespread habitat alteration poses a direct threat to these species, including potential take.

Evidence Impacts Would Be Significant: LeConte's thrasher and Bendire's thrasher are newly designated CESA-candidate species and therefore receive full protection under CESA for the duration of their candidacy. Under Fish and Game Code sections 2080 et seq. and 2085 et seq., take of any CESA-listed or candidate species is prohibited unless authorized by state law. Additional protections apply to LeConte's thrasher and Bendire's thrasher nests and eggs under Fish and Game Code sections 3503 et seq. and 3513 et seq.

Project activities are anticipated to remove desert scrub, eliminate essential vegetation structure, and disturb suitable nesting and foraging areas for both LeConte's thrasher and Bendire's thrasher. These actions can result in nest destruction, breeding disruption, and habitat modification that leads to injury, mortality, or decreased survival/reproduction.

Recommendation: CDFW recommends that MM-THRASHERS-1 (Thrasher Pre-Construction Survey) below be adopted into the Final EIR to reduce impacts to the species to less than significant.

MM-THRASHERS-1: Thrasher Pre-construction Survey (New)

If suitable habitat is present, a qualified biologist with the appropriate CESA authorization shall conduct pre-construction surveys for Le Conte's thrasher and Bendire's thrasher in accordance with the Desert Thrasher Working Group Clearance Protocol ([Clearance Survey Protocol - Google Drive](#)). The qualified biologist shall conduct the surveys 30 minutes before sunrise and up to 4 hours after sunrise during appropriate weather conditions (not be conducted in rainy or windy conditions (> 12 mph sustained)). The qualified biologist shall perform three surveys spaced 20-35 days apart between January 15th and April 30th. If Project activities are set to commence outside of the recommended survey period, the Project Proponent shall contact CDFW to review and approve alternative methodology and protocol. If Le Conte's thrasher or Bendire's thrasher is detected during surveys, Project Proponent shall fully avoid impacts by maintaining a buffer of 500 feet or obtain a CESA ITP if impacts cannot be fully avoided.

If Le Conte's thrasher is observed within the Project Area during Project activities, and full avoidance isn't possible, Permittee shall pause Project activities in the vicinity of the occurrence and contact CDFW immediately (within 24 hours).

EDITORIAL COMMENTS AND/OR SUGGESTIONS

COMMENT 10: Lake and Streambed Alteration Program

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Sections: 4.4.1.8 and 4.4.5.c; Pages 4.4-34 and 4.4-78 to 83

The DEIR states that multiple drainage features, ephemeral streams, desert washes, and riparian features traverse the Project Area, totaling approximately 24.94 acres. The DEIR also identifies alterations to drainage morphology and hydrological connectivity. As such, CDFW appreciates that the Project Proponent will obtain a Lake and Streambed Alteration Agreement through MM-BI-3.1. To provide clarification, CDFW recommends the below minor revisions to MM-BI-3.1 (additions are in **bold** and deletions are in ~~strike through~~). Note that where CDFW identified that no changes were needed, that portion of the mitigation measure has been excluded.

MM-BI-3.1 The Project Proponent shall implement the following measures to avoid, minimize, and mitigate for direct and indirect impacts to waters of the State and to satisfy requirements of California Fish and Game Code Sections 1602 and the Porter Cologne Water Quality Control Act. Details and final acreages will be determined through permitting process with the CDFW and RWQCB.

- a. The Project Proponent shall notify CDFW and RWQCB of unavoidable impacts to potentially jurisdictional aquatic resources through their respective **Streambed Alteration Agreement (SAA)** and Waste Discharge Requirements programs.
- b. To compensate for the loss of aquatic resources resulting from project impacts by implementing off-site mitigation measures that ensure no net loss of aquatic functions and values, the Project Applicant shall implement Mitigation Measure MM-BI-3.1.b.1 OR MM-BI-3.1.b.2:
 - 1. The Project Proponent shall purchase mitigation credits from a CDFW approved mitigation bank that provides credits for similar aquatic resource types and functions as those ephemeral drainages impacted by the project. Mitigation credits shall include at least 9.75 acres of state waters (including 9.33 acres of RWQCB-regulated areas) ~~or comparable area~~ **and shall be** based on actual project impacts to ephemeral drainages **and associated habitat (applicable to CDFW)** (depending upon the actual project impacts) that meet ~~1:1~~ mitigation ratios ~~for no net loss~~ **determined by CDFW in the SAA and RWQCB in the waste discharge requirement**. The number of credits purchased shall be sufficient to fully offset the loss of aquatic resource functions and values. Mitigation for impacts to state waters shall occur as close to the project site as possible. Temporary impacts to ~~1.68 acres of~~ CDFW-regulated areas (including 1.31 acres of RWQCB-regulated areas) will be replaced through a revegetation plan, **acquisition and permanent conservation and management of habitat management lands**, or through purchasing mitigation credits, whichever is determined appropriate during permitting process.
 - OR
 - 2. The Project Proponent shall fund or undertake habitat creation or restoration activities at an off-site location. **If habitat creation or restoration is an option in the SAA to mitigate for permanent impacts to Fish and Game Code section 1602 resources, the Project Proponent shall conserve the created/restored habitat in perpetuity through a conservation easement and provide for management of the habitat in perpetuity through an endowment amount determined by CDFW.** This will include restoring aquatic habitats to ensure the replacement of lost

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functions and values. The habitat creation or restoration site shall be selected based on its ecological suitability ~~to ensure 1:1 mitigation ratios and no net loss~~. The Project Proponent shall develop and implement a monitoring plan to assess the success of the off-site mitigation over time. The monitoring plan report shall detail the success criteria including relative plant cover and timeframe in which the success criteria will be achieved. Reports detailing the progress and effectiveness of the mitigation efforts shall be prepared annually until the defined success criteria has been met. If monitoring indicates that the mitigation is not achieving the desired outcomes, the Project Proponent shall implement adaptive management strategies. Adaptive management strategies may include additional habitat enhancements, further monitoring, or other corrective actions.

COMMENT 11: Bats

Sections: 4.4.1.7, 4.4.4.1, and 4.4.5.a; Pages 4.4-18 to 22, 4.4-31 to 34, 4.4-50 to 51, 4.4-60, and 4.4-72

CDFW appreciates that several surveys for bats have been conducted for the Project from the 1980's to 2023. Due to extensive surveying, several bat species are identified by the DEIR as potentially being impacted by the Project, including Yuma myotis (*Myotis yumanensis*), fringed myotis (*Myotis thysanodes*), California myotis (*Myotis californicus*), small-footed myotis (*Myotis ciliolabrum*), canyon bat (*Parastrellus hesperus*), big brown bat (*Eptesicus fuscus*), Townsend's big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*), and Mexican free-tailed bat (*Tadarida brasiliensis*). Bats are protected by California law, as nongame mammals under Fish and Game Code section 4150 et seq., which prohibits take of bats.

CDFW also appreciates that the Project Proponent is committed to avoiding or substantially lessening potentially significant impacts to bats through several APMs including APM-WILD-3, APM-WILD-46 to APM-WILD-50, and APM-WILD-53 to APM-WILD-56 for Bats/Birds, as well as MM-BI-1.28. CDFW's only concern is whether impacts to maternity roosts will be completely avoided during the maternity season from March to August and whether replacement roosts will be provided for any bats that are excluded outside of the maternity season. Note that CDFW is likely to make these requirements as part of the proposed Bird and Bat Conservation Strategy (BBCS) in MM-BI-1.28. As such, CDFW recommends that MM-BI-1.28 be revised to include the following (additions are in **bold**) in the Final EIR:

MM-BI-1.28 Bird and Bat Conservation Strategy (BBCS). The Project Applicant/owner shall develop a BBCS to address project impacts to special status avian and bat species. The Project Applicant/owner shall submit the BBCS to the CDFW and USFWS for review and approval prior to initiation of project construction. The BBCS shall include an assessment of potential avian and bat impacts from lighting, noise, collision, electrocution, and attraction of ravens, as applicable; measures to mitigate for the effects to birds; a description of general avoidance and minimization measures applicable during construction, operation and maintenance, and postconstruction to include nest management and postconstruction monitoring; a description of the reporting requirements and reporting schedule and duration; and the adaptive management strategy. A raven management element shall be included in the BBCS or provided separately that includes measures such as storage of garbage in raven-proof containers and installation of anti-nesting devices on structures where raven nests could be built. **At a minimum the BBCS shall include:**

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- a. Maternity Roosting Season Avoidance.** The Project shall avoid impacts to maternity roosts during March through August. If the maternity roosting season cannot be avoided, then roost exclusion shall occur outside the maternity roosting season during September through February.
- b. No less than 14 days prior to the initiation of Project activities, Project Proponent shall construct and place artificial bat boxes for species that will utilize bat boxes, as determined by qualified biologists, to provide roosting habitat for roosts that will be removed. In coordination with a qualified biologist, Project Proponent shall install two or more (dependent on colony size) bat boxes. Bat boxes shall be multi-chambered and ventilated to allow for temperature regulation. Following the placement of bat boxes, the qualified biologist shall conduct subsequent surveys and monitoring to detect whether any roosting bats have relocated to the bat boxes. The qualified biologist shall establish a no-disturbance buffer around the bat boxes which may be modified at the discretion of the qualified biologist.**
- c. When a maternal roost is absent and vegetation that provides roosting habitat to bats needs to be removed, Project Proponent shall remove the vegetation in phases (e.g., sections, working outward in) to avoid direct mortality to vegetation roosting bat species. The qualified biologist shall monitor the removal of any roosting habitat. The goal is to create a disturbance sufficient to cause any bats roosting in the tree to leave that night and not return, but not at a level of intensity that will cause bats to fly out during the disturbance itself (i.e., during the daytime, when leaving the roost will likely result in predation).**

COMMENT 12: Nelson's Bighorn Sheep (*Ovis canadensis nelsoni*)

Sections: 4.4.1.7, 4.4.1.9, 4.4.4.1, and 4.4.5.a; Pages 4.4-21, 4.4-29, 4.4-35, 4.4-29, 4.4-50 to 51, 4.4-58 to 59, and 4.4-69 to 70

CDFW appreciates that several surveys for Nelson's bighorn sheep (referred to in the DEIR as Desert Bighorn Sheep) have been conducted. As the DEIR states on page 4.4.-29, "Bighorn sheep is considered present in the study area and populations within the Project Area continue to grow as a result of stable water supply, suitable escape habitat provided by pit highwalls, and decreased mountain lion (*Puma concolor*) predation due to human presence and activity". According to the DEIR on page 4.4.-58, construction of the Project may result in direct impacts to desert bighorn sheep, including the direct, permanent removal of up to approximately 1,559 acres of habitat suitable for desert bighorn sheep. The DEIR acknowledges that bighorn sheep is a fully protected species and as a result, CDFW cannot authorize take of the species except under certain limited situations specified in the Fish and Game Code.

CDFW is aware of the high density of bighorn sheep in the Project Area due to tracking data. Therefore, CDFW appreciates that several APMs, including APM-WILD-51, APM-WILD-57, and APM-WILD-59, as well as MMs were included for bighorn sheep. Specifically, CDFW appreciates that APM-WILD-57 requires reporting of desert big horn mortalities, APM-WILD-51 requires construction of fencing in a manner that reduces entanglement of desert big horn sheep, and APM-WILD-59 proposes to maintain and/or relocate drinkers. However, it is unclear what the Desert Bighorn Sheep Compensatory Mitigation mentioned in MM-BI-1.20 refers to and CDFW requests that the Project Proponent immediately begins coordinating with CDFW on mitigation for bighorn sheep, especially considering that CDFW coordination is needed through MM-BI-1.21 for review and approval of a "Desert Bighorn Sheep Mitigation and Monitoring Plan".

MM-BI-1.20 proposes mitigation for desert bighorn sheep, but without the clarification requested in MM-BI-1.20 below, as written MM-BI-1.20 is not likely to

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reduce impacts to bighorn sheep to less than significant, since MM-BI-1.20 only considers mitigation at a 1:1 mitigation to impact ratio for impacts that occur within approximately 1 km of desert bighorn sheep-occupied or CDFW-identified/modeled desert bighorn sheep habitat. To reduce impacts to desert bighorn sheep to less than significant, CDFW recommends that the edits to MM-BI-1.20 below (deletions are in ~~strike through~~ and additions are in **bold**) be adopted in the Final EIR:

MM-BI-1.20 Desert Bighorn Sheep Compensatory Mitigation. ~~If Desert Bighorn Sheep Compensatory Mitigation is adhered to and occurs within approximately 1 km of desert bighorn sheep-occupied or CDFW-identified/modeled desert bighorn sheep habitat, then no additional compensatory habitat mitigation would be required as the acquired habitat would also satisfy the foraging needs of desert bighorn sheep. However, if the mitigation lands acquired for desert bighorn sheep do not satisfy this requirement, then separate~~
Compensatory mitigation for loss of desert bighorn sheep foraging habitat at a 1:1 ratio determined by CDFW and that meets all of the other requirements (i.e., requirements for acquisition, initial improvement, and long-term management of compensation lands) and protections **(e.g., conservation easement and endowment)**~~afforded under Desert Bighorn Sheep Compensatory Mitigation~~ will be required.

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 (CNDDDB). The CNDDDB field survey form can be filled out and submitted online at the following link:

<https://wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The types of information reported to CNDDDB can be found at the following link:

<https://www.wildlife.ca.gov/Data/CNDDDB/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 DEIR for the Project to assist San Bernardino County and the BLM in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to CDFW Scott Jakubowski, Senior Environmental Scientist (Specialist), at (909) 354-0919 or scott.jakubowski@wildlife.ca.gov.

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Sincerely,

DocuSigned by:

84FBB8273E4C480...
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ATTACHMENTS

Attachment A: CDFW Comments in Response to Notice of Preparation (NOP) of DEIR, November 19, 2025

Attachment B: Mitigation and Monitoring Reporting Program (MMRP) Table

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State of California – Natural Resources Agency

DEPARTMENT OF FISH AND WILDLIFE

Inland Deserts Region

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GAVIN NEWSOM, Governor

CHARLTON H. BONHAM, Director



November 19, 2025

Sent via email

Derek Newland, Planner II

San Bernardino County

Land Use Services Department – Planning Division

385 North Arrowhead Avenue, First Floor

San Bernardino, CA 92415-0187

Subject: Notice of Preparation of (NOP) a Draft Joint Environmental Impact Report (EIR) Castle Mountain Mine Phase II Expansion Project
State Clearinghouse No. 2025100846

Dear Mr. Newland:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) of a Draft EIR from San Bernardino County (County) for the Castle Mountain Mine Phase II Expansion Project (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

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.

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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

The Castle Mountain Mine (CMM) Project is located in unincorporated San Bernardino County, California, in the Mojave Desert near the community of Nipton at latitude 35.285°N, longitude -115.090°W. The Project site lies about 100 miles east of Barstow and 60 miles south of Las Vegas, covering roughly 3,294 acres across 38 parcels. The Project is situated on land managed by the Bureau of Land Management (BLM).

The Project will extend the life of Castle Mountain Mine by 30 years, with 20 years for mining/processing and 10 years for reclamation. Project activities including expanding open pits, creating overburden storage areas, and installation of heap-leach pads will allow for an increase in the annual mining rate from 18 to 80 million tons. The Project will extract an additional 296 million tons of material, deepen pits over 400 feet below the water table, and result in a permanent pit lake. The expansion will disturb an additional 1,800 acres, bringing the total disturbed area to approximately 3,294 acres. The Project proposes groundwater pumping, a 32-mile water pipeline, and a 16.5-mile powerline, supplying up to 2,250 acre-feet of groundwater annually and 25 megawatts of power. Installation of utilities will occur on the existing BLM right-of-way.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the County in adequately identifying and mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources.

CDFW recommends that the forthcoming EIR address the following:

Assessment of Biological Resources

Section 15125(c) of the CEQA Guidelines states that knowledge of the regional setting of a project is critical to the assessment of environmental impacts and that special emphasis should be placed on environmental resources that are rare or unique to the region. To enable CDFW staff to adequately review and comment on the Project, the EIR should include a complete assessment of the flora and fauna within and adjacent to

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the Project footprint, with particular emphasis on identifying rare, threatened, endangered, and other sensitive species and their associated habitats.

The CDFW recommends that the EIR specifically include:

1. An assessment of the various habitat types located within the Project footprint, and a map that identifies the location of each habitat type. CDFW recommends that floristic, alliance- and/or association-based mapping and assessment be completed following *The Manual of California Vegetation*, second edition (Sawyer et al. 2009). Adjoining habitat areas should also be included in this assessment, where Project site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.
2. A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the Project. CDFW's California Natural Diversity Database (CNDDDB) should be searched at <https://apps.wildlife.ca.gov/bios6/> to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code, in the vicinity of the proposed Project.

Please note that CDFW's CNDDDB is not exhaustive in terms of the data it houses, nor is it an absence database. CDFW recommends that it be used as a starting point in gathering information about the *potential presence* of species within the general area of the Project site.

3. 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 (USFWS), where necessary. Special status species that the Project site has the potential to support, include but are not limited to: Crotch's bumble bee (*Bombus crotchii*); western burrowing owl (*Athene cunicularia*); Agassiz's desert tortoise (*Gopherus agassizii*); desert big horn sheep (*Ovis canadensis nelsoni*); LeConte's thrasher (*Toxostoma lecontei*); Bendire's thrasher (*Toxostoma benirei*); American badger (*Taxidea taxus*); and desert kit fox (*Vulpes macrotis*).

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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.

4. A thorough, recent, 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 (see <https://www.wildlife.ca.gov/Conservation/Plants>).
5. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region (CEQA Guidelines § 15125[c]).
6. The impacts of both lighting and noise from the continuous operation of the Project should be analyzed for impacts for both resident species and species that are attempting to move through the Project area for as part of either seasonal migration or dispersal.
7. A full accounting of all open space and mitigation/conservation lands within and adjacent to the Project.
8. Species specific surveys for special status species that the Project footprint has the potential to support, including Crotch's bumble bee, burrowing owl, Agassiz's desert tortoise, American badger, desert kit fox and bats.

Crotch's Bumble Bee (*Bombus crotchii*)

The Project is within the distribution range for Crotch's bumble bee. As described, the Project may result in take of Crotch's bumble bee, a candidate species for listing under CESA. Take of Crotch's bumble bee is illegal unless authorized through a CESA Incidental Take Permit (ITP). California Fish and Game Code section 86, defines "take" as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CDFW considers the take of Crotch's bumble bee and the loss or degradation of its habitat to be a significant impact unless it is mitigated to a level of less than significant, which would occur through a CESA ITP.

Crotch's bumble bee is a ground-nesting species historically found in open grasslands, coastal scrub, and desert habitats in Southern California. The Project site may contain suitable breeding, foraging, and nesting habitat, particularly in areas with native flowering plants and undisturbed soils. Activities such as vegetation clearing, grading, or soil compaction could directly or indirectly impact the species by destroying nests, reducing floral resources, or fragmenting habitat.

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CDFW recommends that the County evaluate the potential for Crotch's bumble bee to occur within the Project area by conducting a habitat assessment and focused surveys according to the 2023 CDFW Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species.

If Crotch's bumble bee is found within the Project area during surveys or construction activities and complete avoidance is not possible, CDFW strongly recommends the County acquire a CESA ITP prior to any vegetation- or ground-disturbing activities. Any take of Crotch's bumble bee without authorization (e.g., ITP) would be a violation of Fish and Game Code section 2080.

Burrowing Owl (*Athene cunicularia*)

On October 10, 2024, the Fish and Game Commission designated burrowing owl as a candidate species under CESA. The Project, as described, may result in take of burrowing owl. CDFW considers the take of burrowing owl and the loss of the species' habitat as a significant impact, unless mitigated to a level of less than significant, which would occur through a CESA ITP. Further, burrowing owl is protected under Fish and Game Code section 3503.5 and the Migratory Bird Treaty Act. The Project site has the potential to provide suitable foraging and/or nesting habitat for burrowing owl.

Thus, CDFW recommends that the County follow the recommendations and guidelines provided in the Staff Report on Burrowing Owl Mitigation (Department of Fish and Game, March 2012); available for download from CDFW's website: <https://www.wildlife.ca.gov/conservation/survey-protocols>. The Staff Report on Burrowing Owl Mitigation, specifies three steps for project impact evaluation:

- a) A habitat assessment;
- b) Surveys; and
- c) An impact assessment

As stated in the Staff Report on Burrowing Owl Mitigation, the three progressive steps are effective in evaluating whether a project will result in impacts to burrowing owls, and the information gained from the steps will inform any subsequent avoidance, minimization, and mitigation measures. Habitat assessments are conducted to evaluate the likelihood that a site supports burrowing owl. Burrowing owl surveys provide information needed to determine the potential effects of proposed projects and activities on burrowing owls, and to avoid take in accordance with Fish and Game Code sections 86, 3503, and 3503.5. Impact assessments evaluate the extent to which burrowing owls and their habitat may be impacted, directly or indirectly, on and within a reasonable distance of a project.

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If burrowing owl is found within the Project area during surveys or construction activities and complete avoidance is not possible, CDFW strongly recommends the County acquire a CESA ITP prior to any vegetation- or ground-disturbing activities. Any take of burrowing owl without authorization (e.g., ITP) would be a violation of Fish and Game Code section 2080.

Agassiz's Desert Tortoise (*Gopherus agassizii*)

The proposed Project occurs within the range of desert tortoise, a federally listed threatened species and a species designated as endangered pursuant to CESA. The Project has the potential to result in permanent and temporary loss, degradation and impacts to desert tortoise and desert tortoise habitat. CDFW recommends the County completes protocol level surveys over all areas (i.e., 100 percent coverage) proposed to be directly or indirectly affected by the Project, using qualified biologists and following the U.S. Fish and Wildlife Service 2009 Desert Tortoise Field Manual (<https://www.fws.gov/sites/default/files/documents/Desert-Tortoise-Field-Manual.pdf>). To reduce the likelihood of nonconcurrence with proposed surveys, methodology, and qualifications of biologists, CDFW recommends working with the USFWS and CDFW concurrently to ensure a consistent and adequate approach.

If desert tortoise are found within the Project area during surveys or construction activities and complete avoidance is not possible, CDFW strongly recommends the County acquire a CESA ITP prior to any vegetation- or ground-disturbing activities. Any take of desert tortoise without authorization (e.g., ITP) would be a violation of Fish and Game Code section 2080.

American Badger (*Taxidea taxus*)

The proposed Project occurs within the range of American badger, a CSSC. CDFW recommends the County completes surveys for American badger in areas proposed to be directly or indirectly affected by the Project and that the results of the surveys be included in the EIR. If American badger or sign thereof is found, or have the potential to occupy the Project site, CDFW recommends the County incorporate into the EIR species-specific, avoidance, minimization, and mitigation measures.

Desert Kit Fox (*Vulpes macrotis*)

The proposed Project occurs within the range of desert kit fox, a protected species under Title 14 of the California Code of Regulations section 460, which prohibits take of the species at any time. CDFW recommends the County conducts surveys over all areas proposed to be directly or indirectly impacted by the Project to determine presence/absence and quantity of desert kit fox, and that this information be included in the EIR. If desert kit fox or sign thereof is found, or if desert kit fox has

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the potential to occupy the Project site, CDFW recommends the County incorporate into the EIR species-specific avoidance, minimization, and mitigation measures.

Roosting Bats

Bats are considered non-game mammals and are afforded protection by State law from take (Fish & G. Code, § 4150) and harassment (Cal. Code of Regs, § 251.1). The proposed Project may impact bats. CDFW recommends that the County conducts a habitat suitability assessment to identify bat roosts within the Project site. If bat roosts are identified, focused bat surveys should be conducted by a qualified bat biologist during the appropriate season and time using an appropriate combination of inspection, sampling, exit counts, and acoustic surveys. The results of the habitat suitability assessment and bat surveys should be included in the EIR. If bats are found roosting, the EIR should include species-specific avoidance, minimization, and mitigation measures, including replacement of lost roosts.

Analysis of Direct, Indirect, and Cumulative Impacts to Biological Resources

1. The EIR should provide a thorough discussion of the direct, indirect, and cumulative impacts expected to adversely affect biological resources as a result of the Project.
2. The EIR should include a discussion of potential impacts from lighting, noise, operations and maintenance activities, exotic and/or invasive species, and drainage. The latter subject should address Project-related changes on drainage patterns and water quality within, upstream, and downstream of the Project site, including: volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-Project fate of runoff from the Project site.
3. A discussion of potential indirect Project impacts on biological resources should be included in the EIR, including resources in areas adjacent to the Project footprint, such as nearby public lands (e.g. BLM lands, State, and County Parks, etc.), open space, adjacent natural habitats, riparian ecosystems, wildlife corridors, and any designated and/or proposed reserve or mitigation lands.
4. A cumulative effects analysis developed as described under CEQA Guidelines section 15130. Please include all potential direct and indirect Project related impacts to riparian areas, wetlands, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and other sensitive habitats, open lands, open space, and adjacent natural habitats in the cumulative effects analysis.

Alternatives Analysis

CDFW recommends the EIR describe and analyze a range of reasonable alternatives to the Project that are potentially feasible, would “feasibly attain most of the basic

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objectives of the Project,” and would avoid or substantially lessen any of the Project’s significant effects (CEQA Guidelines § 15126.6[a]). The alternatives analysis should also evaluate a “no Project” alternative (CEQA Guidelines § 15126.6[e]).

Mitigation Measures for Project Impacts to Biological Resources

The EIR should identify mitigation measures and alternatives that are appropriate and adequate to avoid or minimize potential impacts, to the extent feasible. The County should assess all direct, indirect, and cumulative impacts that are expected to occur as a result of the implementation of the Project and its long-term operation and maintenance. When proposing measures to avoid, minimize, or mitigate impacts, CDFW recommends consideration of the following:

1. *Fully Protected Species*: CDFW may issue permits authorizing take of fully protected species if the requirements under Fish and Game Code section 2081.15 are met, otherwise fully protected species may not be taken or possessed at any time and projects should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to the project areas. A fully protected species that occurs within the Project footprint is desert bighorn sheep. CDFW recommends that the County analyzes impacts to fully protected species and their habitats and includes measures in the EIR to fully avoid impacts to fully protected species.
2. *Sensitive Plant Communities*: CDFW considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, alliances, and associations with a statewide ranking of S-1, S-2, S-3, and S-4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by querying the CNDDB and are included in *The Manual of California Vegetation* (Sawyer et al. 2009). The proposed powerline corridor would cut directly through habitat known to support the rare white-margined penstemon (*Penstemon albomarginatus*) (S1), a species endemic to the Mojave Desert whose survival depends on specific sandy and loamy soils and undisturbed desert terrain. The EIR should include measures to fully avoid and otherwise protect sensitive plant communities from Project-related direct and indirect impacts.
3. *California Species of Special Concern (CSSC)*: CSSC status applies to animals generally not listed under the federal Endangered Species Act or CESA, but which nonetheless are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. CSSC should be considered during the environmental review process. CSSC that have the potential or have been documented to occur within or adjacent to the Project area, include, but are not limited to: Le Conte's thrasher (*Toxostoma crissale*), Bendire's thrasher (*Toxostoma bendirei*), coast horned lizard (*Phrynosoma blainvillii*), loggerhead shrike (*Lanius ludovicianus*), and yellow-breasted chat (*Icteria virens*).

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4. *Mitigation*: CDFW considers adverse Project-related impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the EIR should include mitigation measures for adverse Project-related impacts to these resources. Mitigation measures should emphasize avoidance and reduction of Project impacts. For unavoidable impacts, onsite habitat restoration and/or enhancement, and preservation should be evaluated and discussed in detail. Where habitat preservation is not available onsite, offsite land acquisition, management, and preservation should be evaluated and discussed in detail.

The EIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset Project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.

If sensitive species and/or their habitat may be impacted from the Project, CDFW recommends the inclusion of specific mitigation in the EIR. CEQA Guidelines section 15126.4, subdivision (a)(1)(8) states that formulation of feasible mitigation measures should not be deferred until some future date. The Court of Appeal in *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645 struck down mitigation measures which required formulating management plans developed in consultation with State and Federal wildlife agencies after Project approval. Courts have also repeatedly not supported conclusions that impacts are mitigable when essential studies, and therefore impact assessments, are incomplete (*Sundstrom v. County of Mendocino* (1988) 202 Cal. App. 3d. 296; *Gentry v. County of Murrieta* (1995) 36 Cal. App. 4th 1359; *Endangered Habitat League, Inc. v. County of Orange* (2005) 131 Cal. App. 4th 777).

CDFW recommends that the EIR specify mitigation that is roughly proportional to the level of impacts, in accordance with the provisions of CEQA (CEQA Guidelines, §§ 15126.4(a)(4)(B), 15064, 15065, and 16355). The mitigation should provide long-term conservation value for the suite of species and habitat being impacted by the Project. Furthermore, in order for mitigation measures to be effective, they need to be specific, enforceable, and feasible actions that will improve environmental conditions.

5. *Habitat Revegetation/Restoration Plans*: Plans for restoration and revegetation should be prepared by people with expertise in southern California ecosystems and native plant restoration techniques. Plans should identify the assumptions used to develop the proposed restoration strategy. Each plan should include, at a minimum:
(a) the location of restoration sites and assessment of appropriate reference sites;
(b) the plant species to be used, sources of local propagules, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) a local seed and

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cuttings and planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation onsite; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity. Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought.

CDFW recommends that local onsite propagules from the Project area and nearby vicinity be collected and used for restoration purposes. Onsite seed collection should be initiated in the near future in order to accumulate sufficient propagule material for subsequent use in future years. Onsite vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes. Reference areas should be identified to help guide restoration efforts. Specific restoration plans should be developed for various Project components as appropriate.

Restoration objectives should include protecting special habitat elements or re-creating them in areas affected by the Project; examples could include retention of woody material, logs, snags, rocks, and brush piles.

6. *Nesting Birds and Migratory Bird Treaty Act*: Please note that 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 makes it 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) 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 the 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.).

CDFW recommends that the EIR include the results of avian surveys, as well as 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. The EIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the Project site. Pre-construction surveys should be proposed in the EIR and CDFW recommends that they be

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required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted sooner.

7. *Moving out of Harm's Way*: To avoid direct mortality, CDFW recommends that the County condition the EIR to require that a CDFW-approved qualified biologist be retained to be onsite prior to and during all ground- and habitat-disturbing activities to move out of harm's way non-CESA or non-Fish and Game Code protected wildlife of low or limited mobility that would otherwise be injured or killed from Project-related activities. Movement of wildlife out of harm's way should be limited to only those individuals that would otherwise be injured or killed, and individuals should be moved only as far as necessary to ensure their safety (i.e., CDFW does not recommend relocation to other areas). Furthermore, it should be noted that the relocation of wildlife does not constitute effective mitigation for the purposes of offsetting Project impacts associated with habitat loss.
8. *Translocation of Species*: CDFW generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species as studies have shown that these efforts are experimental in nature and largely unsuccessful.

California Endangered Species Act

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. CDFW recommends that a CESA ITP be obtained if the Project has the potential to result in take of State-listed or CESA candidate species, either through construction or over the life of the Project. It is the policy of CESA to conserve, protect, enhance, and restore CESA species and their habitats.

CDFW encourages early consultation with CDFW, as significant modification to the proposed Project and avoidance, minimization, and mitigation measures may be necessary to obtain a CESA ITP. CDFW must comply with CEQA for issuance of a CESA ITP. CDFW therefore recommends that the EIR addresses all Project impacts to listed species and candidate species, and specify a mitigation monitoring and reporting program that will meet the requirements of CESA.

Lake and Streambed Alteration Program

Based on review of material submitted with the NOP and review of aerial photography, potential drainage features traverse the Project site. Depending on how the Project is designed and constructed, it is likely that the Project applicant will need to notify CDFW per Fish and Game Code section 1602. 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;

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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. Please 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.

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 your 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 EIR 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 package, please go to <https://wildlife.ca.gov/Conservation/Environmental-Review/EPIMS>.

ADDITIONAL COMMENTS AND RECOMMENDATIONS

Groundwater Pumping and Fish and Game Code Section 1602 Resources

The Project's proposed extraction of up to 2,250 acre-feet of groundwater annually poses significant risks to water availability and the ecological health of streams and habitats in the Mojave Desert that may rely on groundwater; therefore, potentially impacting Fish and Game Code section 1602 resources. CDFW is concerned that the significant increase in groundwater use may substantially impact stream flow, receptor springs such as Piute Spring and other desert springs, and associated riparian habitat. For example, an increase in local water extraction in the Lanfair Valley Groundwater Basin will harm protected resources in Piute Springs, causing a minimum decrease in flows of approximately 8%, and potentially reducing riparian habitat, thus leading to a loss in ecological value of an area that serves as an ecological reserve as National Park Service lands. Further, the proposed new off-site water extraction near Nipton in the Ivanpah Valley Groundwater Basin will significantly impact resources for desert tortoise in California including Desert Tortoise Critical Habitat (in addition to significant impacts from the proposed water pipelines).

Due to CDFW's concern with impacts to Fish and Game Code section 1602 resources, the EIR should include a detailed analysis of the impacts to groundwater resources from the proposed increase in groundwater use, including a standalone, groundwater flow

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model development and analysis report appended to the EIR. The model report should be of sufficient detail to provide the information described in USGS Scientific Investigations Report 2004-5038 (Rilley et al.) and should include access to the numerical groundwater model files. Key areas that should be covered in the modeling report (but not limited to) are:

- Modeling approach;
- Sensitivity analysis results;
- Model calibration;
- Representation of initial conditions; and,
- Uncertainties between data availability and modeled parameters.

Wildlife Connectivity

Since the proposed Project area is relatively remote and surrounded by existing conservation lands, it is key to providing important habitat and wildlife connectivity. Some important wildlife habitats and crucial connectivity include:

- Mojave Desert Tortoise Critical Habitat
- Mojave Desert Tortoise Conservation Areas
- California Desert Bighorn Sheep Mountain and Intermountain Habitat
- Designated Important Bird Areas – East Mojave Peaks

These habitats need to be analyzed as part of the impact analysis.

The Project is located within the known distribution range of a population of desert bighorn sheep, a Fully Protected species under California Fish and Game Code section 4700. No take of the species is allowed unless the Project meets the requirements under Fish and Game Code section 2081.15. The Project site supports essential habitat features for breeding, foraging, and movement of large mammals, including but not limited to desert big horn sheep. Project activities, including increased noise, human presence, and habitat alteration/fragmentation, could disrupt wildlife movement by eliminating or making wildlife corridors less favorable. Additionally, the Project may lead to population fragmentation and Jahner et al. (2018) found that population fragmentation due to barriers (natural and anthropogenic) affects genetic diversity in desert bighorn sheep. Additionally, the Project may reduce surface water due to groundwater pumping, reducing wildlife access to water, such as springs/streams (e.g., Piute Spring and others). The impact to wildlife from potentially reduced surface water due to groundwater pumping needs to be carefully and fully analyzed, including impacts to migratory bird species along the interior Pacific flyway that rely on these discreet water sources during migration.

The EIR should fully evaluate all direct, indirect, and cumulative impacts to desert bighorn sheep and wildlife connectivity. The industrialization of currently undeveloped desert landscapes introduces serious risks. New roads may lead to unpermitted

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recreation and increased human intrusion. Ground disturbance can remove mature vegetation and spread invasive plants, degrading habitat quality. Lighting, fencing, and powerlines may fragment habitat, disrupt wildlife behavior, and attract predators. Noise and traffic may displace wildlife and increase roadkill. These impacts can permanently alter habitat and isolate wildlife populations.

An impact assessment should be completed to evaluate potential direct, indirect, and cumulative impacts to desert bighorn sheep and their habitat. This analysis should consider:

- Noise and human disturbance during construction and operation
- Habitat fragmentation or loss of access to habitat or water
- Disruption of migration corridors or herd movement patterns
- Increased risk of disease transmission from domestic animals
- Hazards created by Project structures
- Effects on genetic diversity from habitat fragmentation

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 CNDDDB. Information can be submitted online or via completion of the CNDDDB field survey form at the following link: <https://wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The completed form can be mailed electronically to CNDDDB at the following email address: CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at the following link: <https://wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of 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 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 NOP of a EIR for the Project and recommends that the County address CDFW's comments and concerns in the forthcoming EIR. If you should have any questions pertaining to the comments

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provided in this letter, please contact Scott Jakubowski, Senior Environmental Scientist (Specialist) at (909) 354-0919 or at scott.jakubowski@wildlife.ca.gov.

Sincerely,

DocuSigned by:

84FBB8273E4C480...

Alisa Ellsworth
Environmental Program Manager

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Attachment B: Mitigation Monitoring and Reporting Program

Measure Number	Biological (BIO) Mitigation Measure (MM)	Implementation Schedule	Responsible Party
MM-BI-1.8	Desert Tortoise Protection. The Project Applicant/owner shall obtain a CESA incidental take permit (ITP) for desert tortoise. The Project Applicant/owner shall undertake appropriate measures to manage the construction site and related facilities in a manner to avoid or minimize impacts to desert tortoise as outlined in the CESA ITP. Methods for clearance surveys, fence specification and installation, tortoise handling, artificial burrow construction, egg handling, and other procedures shall be consistent with those described in the CESA ITP and the USFWS's Desert Tortoise (Mojave Population) Field Manual (USFWS 2009) or more current guidance provided by CDFW and USFWS. The Project Applicant/owner shall also implement all terms and conditions described in the CESA ITP and BO to be prepared by USFWS. These measures include, but are not limited to, the following, subject to modification by the terms of incidental take authorizations issued by the USFWS and CDFW.	Prior to commencement of Project activities	Project Proponent and Qualified Biologist
MM-BI-1.9	Desert Tortoise Exclusion Fence Installation. To avoid impacts to desert tortoise, permanent desert tortoise exclusion	Prior to commencement of Project activities	Project Proponent and Qualified Biologist

	fencing shall be installed along the permanent perimeter security fence and temporarily installed along road corridors during construction according to the CESA ITP. The proposed alignments for the permanent perimeter fence and temporary fencing shall be flagged and surveyed within 24 hours prior to the initiation of fence construction. Clearance surveys of the perimeter fence and temporary fencing areas shall be conducted by the Designated Biologist(s) using techniques outlined in the USFWS's Desert Tortoise (Mojave Population) Field Manual and the CESA ITP. Biological Monitors may assist the Designated Biologist under his or her supervision. These fence clearance surveys shall provide 100% coverage of all areas to be disturbed and an additional transect along both sides of the fence line covering an area approximately 90 feet wide centered on the fence alignment. Transects shall be no greater than 15 feet apart. All desert tortoise burrows and burrows constructed by other species that might be used by desert tortoise shall be examined to assess occupancy of each burrow by desert tortoise and handled in accordance with the USFWS's Desert Tortoise Field Manual. Any desert tortoise located during fence clearance surveys shall be handled by the Designated Biologist in accordance with the USFWS's 2009 Desert Tortoise (Mojave Population) Field Manual (USFWS 2009) and the CESA ITP.		
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MM-BI-1.10	Desert Tortoise Clearance Surveys. Clearance surveys shall be conducted in accordance with the USFWS Desert Tortoise (Mojave Population) Field Manual (USFWS 2009) (Chapter 6 – Clearance Survey Protocol for the Desert Tortoise – Mojave Population) and the CESA ITP and shall consist of two surveys covering 100% of the study area by walking transects no more than 15 feet apart. If a desert tortoise is located during the second survey, a third survey shall be conducted. Each separate survey shall be walked in a different direction to allow opposing angles of observation. Clearance surveys of the Project Area may only be conducted when tortoises are most active (April–May or September–October) unless the Project receives approval from CDFW and USFWS. Any tortoise located during clearance surveys shall be translocated or relocated and monitored in accordance with the Desert Tortoise Translocation Plan (DTP) (MM-BI1.13) approved by CDFW pursuant to a CESA ITP. The Designated Biologist, who may be assisted by the Biological Monitors, shall assess occupancy of each burrow by desert tortoise in accordance with the USFWS Desert Tortoise (Mojave Population) Field Manual (USFWS 2009) and the CESA ITP. All potential desert tortoise burrows located during clearance surveys shall be excavated by hand, tortoises removed, and burrows collapsed or blocked to prevent	Prior to commencement of Project activities	Project Proponent and Qualified Biologist
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	occupation by desert tortoise in accordance with the DTTP.		
MM-BI-1.16	Desert Tortoise Compensatory Mitigation. To fully mitigate for habitat loss and potential take of desert tortoise, the Project owner shall provide compensatory mitigation consistent with federal and CDFW requirements in the CESA ITP, adjusted to reflect the final Project footprint. The acreage for mitigation of desert tortoise habitat will be at a ratio determined by CDFW in the CESA ITP. For the purposes of this condition, the Project footprint means all lands disturbed in the construction and operation of the Project, including all Project linears, as well as undeveloped areas inside the Project's boundaries that will no longer provide viable long-term habitat for the desert tortoise. To satisfy this condition, the Project owner shall acquire, protect, and transfer desert tortoise habitat according to the compensatory mitigation in the CESA ITP, and provide associated funding for the acquired lands, as specified below and in the CESA ITP.	Prior to commencement of Project activities	Project Proponent and Qualified Biologist
MM-BI-1.20	Desert Bighorn Sheep Compensatory Mitigation. Compensatory mitigation for loss of desert bighorn sheep habitat at a ratio determined by CDFW and that meets all of the other requirements (i.e., requirements for acquisition, initial improvement, and long-term	Prior to commencement of Project activities	Project Proponent and Qualified Biologist

	management of compensation lands) and protections (e.g., conservation easement and endowment) will be required.		
MM-BI-1.25	Burrowing Owl Protection Measures. Prior to the start of ground disturbance, a preconstruction surveys for burrowing owls during the breeding and non-breeding season shall be conducted by a qualified biologist in conformance with the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012) within suitable habitat at every work area and within an appropriate buffer zone determined by the qualified biologist of each work area. If conducting breeding and non-breeding season surveys is infeasible, Project Proponent shall coordinate with CDFW to propose and receive approval of an alternate survey schedule. Work areas will be resurveyed following periods of inactivity of 2 weeks or more. The Project Applicant/owner shall submit the results of the preconstruction survey to BLM's Authorized Officer and CDFW. The Project Applicant/owner shall also submit evidence of conformance with federal and state regulations regarding the protection of the burrowing owl by demonstrating compliance with the following: a. Unless otherwise authorized by BLM and CDFW, a 650-foot (200-meter) buffer within which no activity will be permissible shall be maintained between project	Prior to commencement of Project activities	Project Proponent and Qualified Biologist

	activities and nesting burrowing owls during the nesting season. This protected area shall remain in effect until August 31 or at CDFW's discretion and, based on monitoring evidence, until the young owls are foraging independently. No disturbance shall occur within 160 feet (50 m) of occupied burrows during the non-breeding season (September 1–January 31). Eviction outside the nesting season may be permitted pending evaluation of eviction plans (developed in accordance with CDFW protocol for burrowing owls) by CDFW and receipt of formal written approval from CDFW and through a CESA incidental take permit (ITP) authorizing the eviction. A Burrowing Owl Mitigation and Monitoring Plan following the guidance in the CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012) and CESA ITP shall be submitted to the BLM's Authorized Officer and CDFW for review and approval prior to passive relocation. b. In the event that an occupied burrow cannot be avoided, passive relocation of owls may be implemented through a CESA ITP prior to construction activities only if a qualified biologist approved by BLM and CDFW verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Eviction outside the nesting season		
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	may be permitted pending evaluation of eviction plans (developed in accordance with BLM protocol for burrowing owls) by CDFW and receipt of formal written approval from BLM authorizing the eviction and with authorization from CDFW through a CESA ITP. A Burrowing Owl Mitigation and Monitoring Plan shall be submitted to the BLM and CDFW for review and approval prior to passive relocation. c. If accidental take (disturbance, injury, or death of owls) occurs, the Designated Biologist and CDFW shall be notified immediately. d. Impacts to active burrowing owl territories shall be mitigated at a minimum 3:1 ratio through a combination of off-site habitat compensation and/or off-site restoration of disturbed habitat capable of supporting this species. The acquisition of occupied habitat off-site shall be in an area where energy facilities would not pose a mortality risk. Acquisition of habitat shall be consistent with the CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012) and the Project's CESA ITP. The preserved habitat shall be occupied by burrowing owl and shall be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by a qualified ornithologist. The site shall be approved by BLM and		
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	CDFW. Land shall be purchased and/or placed in a conservation easement in perpetuity and managed to maintain suitable habitat. The off-site area to be preserved can coincide with other off-site mitigation lands, with the approval of CDFW. e. The Designated Biologist or Biological Monitor(s) shall remain on-site until all vegetation is cleared and, at a minimum, conduct site and fence inspections on a regular (monthly) schedule throughout construction to ensure that the project is in compliance with the mitigation measures. Employees and contractors shall look under vehicles and equipment for the presence of wildlife prior to moving vehicles and equipment. If present, the animal shall be left to move on its own or until it is removed by the approved biologist. No listed species shall be handled without concurrence from USFWS and proper CESA authorization from CDFW, as applicable.		
MM-BI-1.28	Bird and Bat Conservation Strategy (BBCS). The Project Applicant/owner shall develop a BBCS to address project impacts to special status avian and bat species. The Project Applicant/owner shall submit the BBCS to the CDFW and USFWS for review and approval prior to initiation of project construction. The BBCS shall include an assessment of	Prior to commencement of Project activities	Project Proponent and Qualified Biologist

	potential avian and bat impacts from lighting, noise, collision, electrocution, and attraction of ravens, as applicable; measures to mitigate for the effects to birds; a description of general avoidance and minimization measures applicable during construction, operation and maintenance, and postconstruction to include nest management and postconstruction monitoring; a description of the reporting requirements and reporting schedule and duration; and the adaptive management strategy. A raven management element shall be included in the BBCS or provided separately that includes measures such as storage of garbage in raven-proof containers and installation of anti-nesting devices on structures where raven nests could be built. At a minimum the BBCS shall include: a. Maternity Roosting Season Avoidance. The Project shall avoid impacts to maternity roosts during March through August. If the maternity roosting season cannot be avoided, then roost exclusion shall occur outside the maternity roosting season during September through February. b. No less than 14 days prior to the initiation of Project activities, Project Proponent shall construct and place artificial bat boxes for species that will utilize bat boxes, as determined by qualified biologists, to provide roosting habitat for roosts that will be removed. In coordination with a qualified biologist, Project Proponent		
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	shall install two or more (dependent on colony size) bat boxes. Bat boxes shall be multi-chambered and ventilated to allow for temperature regulation. Following the placement of bat boxes, the qualified biologist shall conduct subsequent surveys and monitoring to detect whether any roosting bats have relocated to the bat boxes. The qualified biologist shall establish a no-disturbance buffer around the bat boxes which may be modified at the discretion of the qualified biologist. c. When a maternal roost is absent and vegetation that provides roosting habitat to bats needs to be removed, Project Proponent shall remove the vegetation in phases (e.g., sections, working outward in) to avoid direct mortality to vegetation roosting bat species. The qualified biologist shall monitor the removal of any roosting habitat. The goal is to create a disturbance sufficient to cause any bats roosting in the tree to leave that night and not return, but not at a level of intensity that will cause bats to fly out during the disturbance itself (i.e., during the daytime, when leaving the roost will likely result in predation).		
MM-BI-30	Crotch's Bumble Bee. A habitat assessment in accordance with the 2023 CDFW <i>Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species</i> (CDFW 2023) shall be conducted prior to commencement of Project	Prior to commencement of Project activities	Project Proponent and Qualified Biologist

	activities to identify suitable habitat for Crotch's bumble bee. Within suitable habitat for Crotch's bumble, surveys shall be conducted during the appropriate season when adult bees are active and floral resources are available in accordance with the 2023 CDFW <i>Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species</i> (CDFW 2023). If Crotch's bumble bee is detected during surveys or construction activities and full avoidance is not feasible, the Project Proponent shall obtain a CESA ITP from CDFW prior to commencing/resuming any vegetation or ground-disturbing activities. Any unauthorized take of Crotch's bumble bee would constitute a violation of Fish and Game Code section 2080 et seq.		
MM-BI-3.1	The Project Proponent shall implement the following measures to avoid, minimize, and mitigate for direct and indirect impacts to waters of the State and to satisfy requirements of California Fish and Game Code Sections 1602 and the Porter Cologne Water Quality Control Act. Details and final acreages will be determined through permitting process with the CDFW and RWQCB. a. The Project Proponent shall notify CDFW and RWQCB of unavoidable impacts to potentially jurisdictional aquatic resources through their respective Streambed Alteration Agreement (SAA) and Waste Discharge Requirements programs.	Prior to commencement of Project activities	Project Proponent

	b. To compensate for the loss of aquatic resources resulting from project impacts by implementing off-site mitigation measures that ensure no net loss of aquatic functions and values, the Project Applicant shall implement Mitigation Measure MM-BI-3.1.b.1 OR MM-BI-3.1.b.2: 1. The Project Proponent shall purchase mitigation credits from a CDFW approved mitigation bank that provides credits for similar aquatic resource types and functions as those ephemeral drainages impacted by the project. Mitigation credits shall include at least 9.75 acres of state waters (including 9.33 acres of RWQCB-regulated areas) and shall be based on actual project impacts to ephemeral drainages and associated habitat (applicable to CDFW) (depending upon the actual project impacts) that meet mitigation ratios determined by CDFW in the SAA and RWQCB in the waste discharge requirement. The number of credits purchased shall be sufficient to fully offset the loss of aquatic resource functions and values. Mitigation for impacts shall occur as close to the project site as possible. Temporary impacts to CDFW-regulated areas (including 1.31 acres of RWQCB-regulated areas) will be replaced through a revegetation plan, acquisition		
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	and permanent conservation and management of habitat management lands, or through purchasing mitigation credits, whichever is determined appropriate during permitting process. OR 2. The Project Proponent shall fund or undertake habitat creation or restoration activities at an off-site location. If habitat creation or restoration is an option in the SAA to mitigate for permanent impacts to Fish and Game Code section 1602 resources, the Project Proponent shall conserve the created/restored habitat in perpetuity through a conservation easement and provide for management of the habitat in perpetuity through an endowment amount determined by CDFW. This will include restoring aquatic habitats to ensure the replacement of lost functions and values. The habitat creation or restoration site shall be selected based on its ecological suitability. The Project Proponent shall develop and implement a monitoring plan to assess the success of the off-site mitigation over time. The monitoring plan report shall detail the success criteria including relative plant cover and timeframe in which the success criteria will be achieved. Reports detailing the		
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	progress and effectiveness of the mitigation efforts shall be prepared annually until the defined success criteria has been met. If monitoring indicates that the mitigation is not achieving the desired outcomes, the Project Proponent shall implement adaptive management strategies. Adaptive management strategies may include additional habitat enhancements, further monitoring, or other corrective actions.		
MM-GF-1	Gilded Flicker Avoidance and Protection. A qualified biologist shall conduct a habitat assessment prior to any Project activities occurring to determine if suitable habitat for gilded flicker is present. If gilded flicker suitable habitat is present within the Project Area, the Project Proponent shall implement the following measures, or Project Proponent may assume presence of gilded flicker and acquire a CESA ITP prior to initiating Project activities. a) Seasonal Work Restriction. To the extent feasible, all construction activities occurring within 500 feet of suitable gilded flicker nesting habitat shall be scheduled outside the peak breeding season (March 1–July 31). b) Pre-Construction Surveys/Sweeps. If construction	Prior to commencement of Project activities	Project Proponent and Qualified Biologist

	cannot be avoided during the peak breeding season (March 1–July 31), a qualified biologist shall conduct pre-construction surveys within 500 feet of all work areas no more than three days prior to any Project activities. Surveys shall identify any direct or indirect evidence of nesting. c) Avoidance Buffers for Active Nests. If an active gilded flicker nest is detected, a 500-foot no-disturbance buffer shall be established and clearly demarcated in the field. No construction activities shall occur within the buffer until the qualified biologist confirms that chicks have fledged and are no longer dependent on the nest. Monitoring shall be conducted from a distance using binoculars to avoid disturbance. Work shall stop and buffers expanded if birds exhibit distress. If Gilded Flicker is observed within the Project Area during Project activities, and full avoidance isn't possible, Permittee shall pause Project activities in the vicinity of the occurrence and contact CDFW immediately (within 24 hours).		
MM-GOEA-1	Golden Eagle Avoidance and Protection. The Project Proponent shall determine whether suitable nesting habitat or wintering habitat features are present for golden eagle on or	Prior to commencement of Project activities	Project Proponent and Qualified Biologist

	within a half-mile of the Project Area. If suitable nesting habitat features are present, Project Proponent shall perform Project activities as follows: a. Project Proponent shall not conduct Project activities during the nesting season (February 1 - August 31) unless a qualified biologist conducts CDFW-approved protocol surveys for active nests within the Project Area and a half-mile radius of the Project Area prior to the start of Project activities. Surveys shall be done during the appropriate time of day to maximize detectability and shall concentrate on suitable nesting structures for the species. Project Proponent shall submit survey results to CDFW. b. Project Proponent shall establish a minimum half-mile no-disturbance buffer around active nests until the breeding season has ended or until a qualified biologist determines that all young have fledged and are no longer reliant upon the nest or parental care for survival. Permittee shall halt any Project activities that could affect the foraging or feeding behavior of golden eagle until golden eagle has left of its own volition.		
MM-SH-1	Swainson's Hawk Protection. a. Seasonal Work Restriction. Absent take authorization covering the Project Area, and if Project activities will be initiated during or extend into the breeding season for	Prior to commencement of Project activities	Project Proponent and Qualified Biologist

	Swainson's hawk (February 15 through September 15), Project Proponent shall determine whether suitable nesting habitat features for Swainson's hawk are present at or within a half-mile of the Project Area. If suitable nesting habitat features are present, and Project activities will occur during the species breeding season, Project Proponent shall perform Project activities via one of the following options: b. Pre-Construction Surveys/Sweeps. A qualified biologist shall conduct nesting surveys prior to the start of Project activities. Project Proponent shall submit survey results to CDFW prior to the start of Project activities. If nesting is observed, Permittee shall establish a minimum half-mile no disturbance buffer around active nests until the breeding season has ended or until the qualified biologist has determined, that all young have fledged and are no longer reliant upon the nest or parental care for survival. c. Avoidance Buffers. If Swainson's hawk is detected the Project Proponent shall implement a minimum half-mile no disturbance buffer. If full avoidance cannot be implemented, Project Proponent is advised to acquire CESA take authorization from CDFW prior		
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	to commencing Project activities. d. If Swainson's Hawk is observed within the Project Area during Project activities, and full avoidance isn't possible, Permittee shall pause Project activities in the vicinity of the occurrence and contact CDFW immediately within 24 hours) to discuss additional avoidance measures or acquire CESA take authorization from CDFW prior to continuing Project activities. e. Permittee may assume presence of Swainson's hawk and acquire a CESA ITP prior to initiating Project activities.		
MM-THRASHERS-1	Thrasher Pre-construction Survey. If suitable habitat is present, a qualified biologist with the appropriate CESA authorization shall conduct pre-construction surveys for Le Conte's thrasher and Bendire's thrasher in accordance with the Desert Thrasher Working Group Clearance Protocol (Clearance Survey Protocol - Google Drive). The qualified biologist shall conduct the surveys 30 minutes before sunrise and up to 4 hours after sunrise during appropriate weather conditions (not be conducted in rainy or windy conditions (> 12 mph sustained)). The qualified biologist shall perform three surveys spaced 20-35 days apart between January 15th and April 30th. If Project activities are set to commence outside of the recommended survey period, the Project Proponent shall contact	Prior to commencement of Project activities	Project Proponent and Qualified Biologist

	CDFW to review and approve alternative methodology and protocol. If Le Conte's thrasher or Bendire's thrasher is detected during surveys, Project Proponent shall fully avoid impacts by maintaining a buffer of 500 feet or obtain a CESA ITP if impacts cannot be fully avoided. If Le Conte's thrasher is observed within the Project Area during Project activities, and full avoidance isn't possible, Permittee shall pause Project activities in the vicinity of the occurrence and contact CDFW immediately (within 24 hours).		
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