



STATE OF CALIFORNIA
DEPARTMENT OF FISH AND WILDLIFE

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Sent via email

Cesar Garcia
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I-40 BRIDGE SCOUR PROJECT (PROJECT)
MITIGATED NEGATIVE DECLARATION (MND)
SCH# 2026030943

Dear Cesar Garcia:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt an MND from the California Department of Transportation, District 8 (Caltrans) for the Project pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

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

CDFW ROLE

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

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

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.

PROJECT DESCRIPTION SUMMARY

Proponent: California Department of Transportation, District 8 (Caltrans)

Objective: The objective of the Project is to upgrade structures along Interstate 40 from Post Mile R139.0 to R152.2 in Needles, San Bernardino County, California. Primary Project activities include replacing rock slope protection apron areas at Whale Mountain Wash (Bridge Numbers 54-0668L and 54-0668R), upgrading guard rail end treatments, and installing vegetation control, new sign panels, and lighting.

Location: The Project is located along Interstate 40 from Post Mile R 139.0 to R152.2 in the city of Needles, San Bernardino County. Whale Mountain Wash is located at approximately Post Mile R152.15; Latitude 34.718933, Longitude -114.531051.

Timeframe: Construction is anticipated to occur from March 2029 to August 2030.

COMMENTS AND RECOMMENDATIONS

CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (i.e., biological resources). CDFW offers the comments and recommendations below to assist Caltrans in adequately identifying and mitigating the Project's significant, or potentially significant, direct and indirect impacts on biological resources. The MND has not adequately identified and disclosed the Project's direct, indirect, and cumulative impacts on biological resources or whether those impacts are reduced to less than significant.

CDFW's comments and recommendations on the MND are explained in greater detail below and summarized here. Because the MND refers to a Natural Environment Study (NES) for this Project, dated November 2025, CDFW reviewed the NES for details not given in the MND. In this letter, CDFW recommends revisions to the MND if both the MND and NES lack sufficient information to facilitate a meaningful review by CDFW. CDFW is concerned that the MND does not adequately identify or mitigate the Project's significant, or potentially significant, impacts to biological resources. CDFW requests that additional avoidance, minimization, and mitigation measures be added to a revised MND, to avoid or reduce impacts to less than significant.

Mitigation Measures

CEQA requires that an MND include mitigation measures to avoid or reduce significant impacts. CDFW is concerned that the mitigation measures proposed in the MND are not adequate to avoid or reduce impacts to biological resources to below a level of significance. To support Caltrans in ensuring that Project impacts to biological resources are reduced to less than significant, CDFW recommends revising or adding mitigation measures regarding plant surveys, nesting bird surveys, burrowing owl surveys, bat avoidance, artificial lighting, desert tortoise, desert bighorn sheep, Crotch's bumble bee, and CDFW's Lake and Streambed Alteration Program.

Pursuant to the CEQA Guidelines, section 15097(f), CDFW has prepared a draft mitigation monitoring and reporting program (MMRP) in Attachment 1 for revised and proposed measures.

Comment 1: Special-Status Plant Surveys

CDFW is concerned that the field assessment for the MND was not sufficient in timing and scope to detect special-status plant species that may occur on the Project site. Page 16 of the NES states that vegetation surveys were conducted in

October 2025. The NES also acknowledges that this timing did not coincide with seasons when plants were growing, flowering, or fruiting, and therefore plants were not easily identifiable.

Page 24 of the NES indicates that the Project area includes habitat for spiny-hair blazing star (*Mentzelia tricuspis*). Spiny-hair blazing star has a California Rare Plant Rank of 2B.1, which indicates plants that are seriously threatened in California. Impacts to these species must be analyzed during preparation of environmental documents relating to CEQA because they meet the definition of rare or endangered under CEQA Guidelines §15125 (c) and/or §15380.

The MND indicates that no special-status plants were observed during the field assessments. CDFW is concerned that the field assessment was not conducted at the appropriate time of year to detect special-status plants. Floristic assessments typically involve multiple visits to the project site at various times of year to detect plants in various blooming seasons. If the presence of special-status plant species is not determined through floristic based surveys, unauthorized take or disturbance of special-status plant species could occur. CDFW recommends a thorough, floristic-based assessment of special-status plants at the appropriate time of year, usually involving multiple visits to the Project area.

CDFW considers the mitigation measure for rare plants in the MND to be inadequate in scope and timing to avoid or reduce impacts to special-status plants to a level less than significant. To support Caltrans in avoiding or reducing impacts to special-status plants to a level of less than significant, CDFW recommends Mitigation Measure BIO-Plant-2 is revised as follows, with additions in **bold italics** and removals in ~~strike through~~:

BIO-Plant-2 Rare Plant Pre-Construction Surveys **(Revised)**

~~Within 1 week prior~~ **Prior** to construction, a preconstruction survey must be conducted by a ~~contractor-supplied~~ **CDFW-approved** biologist for special-status plants within the Project Impact Area **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>)**. Any rare plant species identified must be flagged for visual identification to construction personnel for work avoidance. Rare plant species detected that feature multiple plants in a single location must be fenced with temporary high-visibility fencing. **Should any state-listed plant species be present in the Project area, the Project proponent shall obtain appropriate CESA authorization for those species prior to the start of Project activities. Should other special-status plants or natural communities be present in the Project area, on-site or off-site habitat restoration (whichever is applicable) and/or enhancement and preservation should be evaluated and discussed in detail. Where habitat preservation is not available on-site, off-site land acquisition, management, and preservation should be evaluated.**

Comment 2: Nesting Bird Surveys

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: Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto. Fish and Game Code section 3503.5 makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto.

Fish and Game Code section 3513 makes it unlawful to take or possess any migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. § 703 et seq.).

Page 2-7 of the MND states that “special status bird species burrowing owl, Crissal thrasher, and summer tanager, as well as migratory birds have the potential to occur...” and “These species have the potential to nest in trees and other vegetation and bridges within the [Project area], particularly in Whale Mountain Wash.” CDFW agrees that the Project site contains suitable nesting and foraging habitat for nesting birds. CDFW also notes that the Project is within predicted habitat for cliff swallows (*Petrochelidon pyrrhonota*), which may build nests on bridge structures. Surveys for nesting birds should therefore include surveys of any bridge structure within the Project site for bridge-nesting birds.

The MND includes Mitigation Measure BIO-Avian-1 Pre-Construction Nesting Bird Survey, which calls for surveys only between February 1 and September 30. CDFW considers the mitigation measure for nesting birds in the MND to be inadequate in scope and timing to avoid or reduce impacts to nesting birds to a level less than significant.

CDFW recommends that Project construction activities are conducted outside of the peak nesting bird season. CDFW also recommends the completion of nesting bird surveys *regardless of the time of year* to ensure that impacts to nesting birds and their nests and eggs are avoided. The timing of the nesting season varies greatly depending on several factors, such as bird species, weather conditions in any given year, and long-term climate changes (e.g., drought, warming, etc.). In response to warming, birds have been reported to breed earlier, thereby reducing temperatures that nests are exposed to during breeding and tracking shifts in availability of resources.² CDFW staff have observed that climate change conditions may result in the nesting bird season occurring earlier and later in the year than historical nesting season dates. CDFW recommends that disturbance of occupied nests of migratory birds and raptors within the Project site and surrounding area be avoided any time birds are nesting on site. CDFW therefore recommends the completion of nesting bird surveys regardless of the time of year to ensure compliance with all applicable laws pertaining to nesting and migratory birds.

CDFW considers the mitigation measure for nesting birds in the MND to be inadequate in scope and timing to avoid or reduce impacts to nesting birds to a level less than significant. To support Caltrans in avoiding or reducing impacts to nesting birds to a level of less than significant, CDFW recommends Mitigation Measure BIO-Avian-1 is revised as follows, with additions in **bold italics** and removals in ~~strike through~~:

BIO-Avian-1 Pre-Construction Nesting Bird Survey (**Revised**)

To the greatest extent feasible, the Project will avoid construction activities during the peak nesting season ~~If project activities cannot avoid the nesting bird season, February 1 - September 30.~~ **Regardless of the time of year**, ~~then~~ preconstruction nesting bird surveys shall be conducted by a ~~qualified contractor-supplied~~ **CDFW-approved** biologist ~~in areas of suitable habitat within the project limits and up to the limit of the BSA,~~ no more than 3 days prior to construction to locate and avoid nesting birds. **Pre-construction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified biologist will make every**

² Socolar JB, Epanchin PN, Beissinger SR and Tingley MW (2017). Phenological shifts conserve thermal niches. Proceedings of the National Academy of Sciences 114(49): 12976-12981.

effort to avoid potential nest predation as a result of survey and monitoring efforts. If active nests are found during the pre-construction nesting bird surveys, a qualified biologist shall establish an appropriate nest buffer to be marked on the ground. If an active avian nest is located, a no-construction buffer (**of at least 300**~~400~~ feet for non-passerines, 300 feet for passerines, and 500 feet for raptors) shall be established and monitored by a qualified ~~contractor-supplied~~ **CDFW-approved** biologist. **Construction activities may not occur inside the established buffers, which shall remain on-site until a qualified biologist determines the young have fledged or the nest is no longer active. Active nests and adequacy of the established buffer distance shall be monitored daily by the qualified biologist until the qualified biologist has determined the young have fledged or the Project has been completed. The qualified biologist has the authority to stop work if nesting pairs exhibit signs of disturbance.**

Comment 3: Burrowing Owl Surveys

On October 10, 2024, the Fish and Game Commission determined that western burrowing owl (*Athene cunicularia*) warrants protection as a candidate species under the California Endangered Species Act (Fish & G. Code, § 2050 et seq.). During the candidacy period, western burrowing owl will be afforded the same protection as threatened and endangered species under CESA. If Project activities, including relocation, could result in take, appropriate CESA authorization (i.e., Incidental Take Permit under Fish and Game Code section 2081) should be obtained prior to commencement of Project activities.

Take of individual burrowing owls and their nests or eggs is defined by Fish and Game Code section 86, and prohibited by sections 3503, 3503.5, and 3513. Take is defined in Fish and Game Code section 86 as "hunt, pursue, catch, capture or kill, or attempt to hunt, pursue, catch, capture or kill." Fish and Game Code sections 3503, 3503.5, and 3513 afford protective measures as follows: section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto. Fish and Game Code section 3503.5 makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto. Fish and Game Code section 3513 makes it unlawful to take or possess any migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. § 703 et seq.).

Page 62 of the NES states that "Appropriate nesting and foraging habitat for burrowing owl is present... There are three recent recorded observations within the Needles quad, two of which are within the BSA [Biological Study Area]." CDFW agrees that the Project site contains suitable nesting and foraging habitat for burrowing owl.

Regarding survey methods, page 16 of the NES states that habitat surveys were conducted in October 2025 by biologists from Caltrans and TYP SA Group Inc. The MND and its supporting documents lack information on whether focused surveys for burrowing owl were conducted and the methods used to conduct any surveys for burrowing owl. Because the MND lacks the findings of recent focused surveys for burrowing owl following the guidelines in the *Staff Report on Burrowing Owl Mitigation*,³ or other protocol agreed upon by CDFW, the number and locations of

³ California Department of Fish and Game (CDFG). 2012. Staff report on burrowing owl mitigation. State of California, Natural Resources Agency. Available for download at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843&inline>

suitable and occupied burrows within the Project site are unknown. Given the lack of results from focused surveys for burrowing owl following recommended or approved protocols and the lack of survey reports, CDFW is limited in its ability to provide biological expertise to support Caltrans in reducing impacts to burrowing owl to a level less than significant. CDFW recommends that the MND is revised to include the results of four focused surveys for burrowing owl within the entire Project site and surrounding area, including survey reports,⁴ following the guidelines outlined in Appendix D of the *Staff Report on Burrowing Owl Mitigation* and to incorporate appropriate avoidance, minimization, and mitigation measures for burrowing owl. Focused surveys are needed to inform appropriate avoidance, minimization, and mitigation measures and support Caltrans in avoiding or reducing impacts to burrowing owl to a level less than significant. CDFW requests that if burrowing owls are detected during focused surveys, survey results are submitted to CDFW, and that Caltrans initiate consultation with CDFW to identify a path forward regarding the protection of burrowing owls.

The MND includes Mitigation Measure BIO-Avian-2, which calls for two burrowing owl preconstruction surveys. In addition to pre-construction surveys, CDFW recommends that focused burrowing owl surveys are first conducted and the results submitted to CDFW. This provides time for the Project proponent to start coordination with CDFW early to identify appropriate avoidance, minimization, and mitigation measures and reduce the chance of Project delays. Without details on focused surveys and appropriate information sharing and coordination with CDFW, CDFW considers Mitigation Measure BIO-Avian-2 to be inadequate in scope and timing to avoid or reduce impacts to burrowing owl to a level less than significant.

To support Caltrans in avoiding or reducing impacts to burrowing owl to a level less than significant, CDFW recommends that Mitigation Measure BIO-Avian-2 is revised with the following, with additions in **bold italics** and removals in ~~strike through~~:

BIO-Avian-2 Pre-Construction Burrowing Owl Survey **(Revised)**

Suitable burrowing owl habitat has been confirmed on the site; therefore, focused burrowing owl surveys shall be conducted by a CDFW-approved qualified biologist prior to any Project activities, including vegetation- or ground-disturbing activities. CDFW strongly recommends that focused surveys are conducted in accordance with the Staff Report on Burrowing Owl Mitigation (2012 or most recent version)⁵. If burrowing owls are detected during the focused surveys, the qualified biologist and Project proponent shall begin coordination with CDFW immediately, and shall submit the results of focused surveys to CDFW as soon results become available and before commencement of any Project activities, including any vegetation- or ground-disturbing activities. CDFW recommends that the information included in the survey results be consistent with Appendix D of the Staff Report on Burrowing Owl Mitigation, including a detailed map showing locations of all burrowing owls, burrowing owl sign, potential burrows, and occupied burrows (occupied means at least one burrowing owl or its sign has been observed within the last three years; may be indicated by owl sign

⁴ Survey reports should include details on survey methods and results, including, but not limited to, the names and qualifications of surveyor(s); a description of survey methods; a description of the conditions of the project site and recent photos; map(s) showing the locations of all suitable burrows, occupied burrows, burrowing owls, and burrowing owl sign; descriptions of burrowing owl behavior observed; California Natural Diversity Database (CNDDDB) field survey forms, etc. For more information, see Appendix D, Survey Reports, of the CDFW 2012 Staff Report on Burrowing Owl Mitigation.

⁵ California Department of Fish and Wildlife (CDFW). 2012. Staff Report on Burrowing Owl Mitigation. State of California, Natural Resources Agency. Available for download at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843>.

including feathers, pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance or perch site); a description of the behavior of burrowing owls during surveys; a description of survey methods; and other items listed in Appendix D of the Staff Report on Burrowing Owl Mitigation under "Survey Reports." Consultation with CDFW and USFWS must be completed prior to commencement of any Project activities, including vegetation- or ground-disturbing activities. If impacts to occupied burrowing owl habitat or burrow(s) or burrowing owl individuals, nests, or eggs cannot be avoided, appropriate CESA authorization (i.e., Incidental Take Permit under Fish and Game Code section 2081(b)) should be obtained from CDFW prior to commencement of Project activities, including vegetation- or ground-disturbing activities.

Two burrowing owl preconstruction surveys must be performed by a **CDFW-approved** qualified contractor-supplied biologist: one survey 14-30 days prior to project activities, and one survey **within** 24 hours prior to project activities. The surveys will be conducted within the area of suitable burrowing owl habitat within State right-of-way and within the project limits **and an appropriate buffer, in accordance with the Staff Report on Burrowing Owl Mitigation (2012 or most recent version). Preconstruction surveys should be repeated when there is a pause in construction of more than 30 days. Preconstruction surveys shall be performed by a CDFW-approved qualified biologist following the recommendations and guidelines provided in the Staff Report on Burrowing Owl Mitigation.** If pre-construction surveys confirm occupied burrowing owl habitat within this area, **Project activities shall be immediately halted and the CDFW-approved** qualified contractor-supplied biologist will coordinate with CDFW **and USFWS** on additional measures that may be needed to ensure that no take of burrowing owl occurs. **Project activities shall not recommence until consultation with CDFW and USFWS is completed.**

Comment 4: Bat Avoidance

Page 67 of the NES identifies suitable roosting habitat for California leaf-nosed bat (*Macrotus californicus*), pallid bat (*Antrozous pallidus*), and Yuma myotis (*Myotis yumanensis*) within Whale Mountain Wash and near the remainder of the Project area. CDFW agrees that the Project area includes suitable bat roosting habitat. The MND includes Mitigation Measure BIO-Bat-1-PSM-12, which calls for a pre-construction survey at the Whale Mountain Wash bridges.

To support Caltrans in avoiding or reducing impacts to bats to a level less than significant, CDFW recommends that Mitigation Measure BIO-Bat-1-PSM-12 is revised with the following, with additions in **bold italics** and removals in ~~strike through~~:

BIO-Bat-1-PSM-12 Bat Focused and Preconstruction Surveys (Revised)

Prior to work activities, ~~a~~ pre-construction surveys at the Whale Mountain Wash bridges (Bridge No. 54-0668L and 54-0558R; PM 152.1/152.2), and an appropriate survey buffer **of remaining Project areas (including culverts)** shall be conducted for the presence of **daytime, nighttime, wintering (hibernacula), and maternity** bat roosts by a **CDFW-approved** qualified contractor-supplied bat biologist. **Each survey shall consist of one dusk emergence survey (start one hour before sunset and last for three hours), followed by one pre-dawn re-entry survey (start one hour before sunrise and last for two hours), and one daytime visual inspection of all potential roosting habitat on the Project site. Surveys shall be conducted within one 24-hour period. Visual inspections shall focus on the identification of bat sign (i.e., individuals, guano, urine staining, corpses, feeding remains, scratch marks and bats squeaking and chattering). Bat detectors, bat call analysis, and**

visual observation shall be used during all dusk emergence and pre-dawn re-entry surveys. Because bats have the potential to roost year-round in cliff swallow nests, use of cliff swallow nests on any bridge structure by bats shall also be determined through surveys and inspection of nests not occupied by cliff swallows. If active maternity roosts are identified in the work area or 500 feet extending from the work area, Project construction will only occur between October 1 and February 28, outside of the maternity roosting season when young bats are present but are not yet ready to fly out of the roost. Maternity roosts shall not be evicted, excluded, removed, or disturbed. If active hibernacula are identified in the work area or 500 feet extending from the work area, a minimum 500-foot no-work buffer shall be provided around hibernacula. Buffers shall be left in place until the end of Project construction and activities or until a CDFW-approved qualified bat biologist determines that the hibernacula are no longer active. Project-related construction and activities shall not occur between 30 minutes before sunset and 30 minutes after sunrise. Hibernacula roosts shall not be evicted, excluded, removed, or disturbed. Initial **focused** surveys are recommended to be conducted at least 6 months prior to the initiation of work within or adjacent to these bridges, ideally during the maternity season (typically April 1 to ~~August 31~~ **September 15**), to allow time to prepare **avoidance, minimization, and mitigation measures, and/or exclusion plans** if needed, **in coordination** ~~in accordance~~ with CDFW guidelines. If the pre-construction surveys determines that no active roosts are present, then work activities shall commence within two weeks following the pre-construction surveys.

Comment 5: Artificial Lighting

Page 1-1 of the MND indicates that the Project will upgrade “lighting to the latest standards.” The MND also raises the possibility of night-time Project activities, on page 2-14, in Mitigation Measure BIO-Bat-2-PSM-13. The MND lacks additional information on lighting plans. The MND also lacks an analysis of direct, indirect, and cumulative impacts of artificial nighttime lighting, including impacts associated with long-term operations, on biological resources including migratory birds that fly at night, burrowing owls, bats, and other nocturnal and crepuscular wildlife. The Project site is located adjacent to mostly vacant, undeveloped areas—areas that provide suitable nesting, roosting, foraging, and refugia habitat for birds, migratory birds that fly at night, burrowing owls, bats, and other nocturnal and crepuscular wildlife. The Project’s proposed artificial nighttime lighting has the potential to significantly and adversely affect wildlife in these vacant areas adjacent to the Project site. Artificial lighting alters ecological processes including the temporal niches of species, the repair and recovery of physiological function, the measurement of time through interference with the detection of circadian and lunar and seasonal cycles, the detection of resources and natural enemies, and navigation.⁶ Many species use photoperiod cues for communication (e.g., bird song⁷), determining when to begin foraging,⁸ behavioral thermoregulation,⁹ and migration.¹⁰ Phototaxis, a phenomenon that results in attraction and movement towards light, can disorient, entrap, and temporarily blind wildlife species that experience it.¹⁰

⁶ Gatson, K. J., Bennie, J., Davies, T., Hopkins, J. 2013. The ecological impacts of nighttime light pollution: a mechanistic appraisal. *Biological Reviews*, 88.4: 912-927.

⁷ Miller, M. W. 2006. Apparent effects of light pollution on singing behavior of American robins. *The Condor* 108:130-139.

⁸ Stone, E. L., G. Jones, and S. Harris. 2009. Street lighting disturbs commuting bats. *Current Biology* 19:1123-1127.

⁹ Beiswenger, R. E. 1977. Diet patterns of aggregative behavior in tadpoles of *Bufo americanus*, in relation to light and temperature. *Ecology* 58:98-108.

¹⁰ Longcore, T., and C. Rich. 2004. Ecological light pollution - Review. *Frontiers in Ecology and the Environment* 2:191-198.

Regarding construction activities that may occur at night, CDFW recommends that Caltrans revise Mitigation Measure BIO-Bat-2-PSM-13 with the following additions in **bold italics** and removals in ~~strike through~~:

BIO-Bat-2-PSM-13 Work Restriction Hours (Revised)

Work activities should be restricted to daylight hours at work locations with suitable bat habitat (Whale Mountain Wash bridges (Bridge No. 54-0668L and 54-0558R; PM 152.1/152.2). This would reduce the potential of direct or indirect impacts to bat species that may be foraging in the vicinity of the BSA. ~~Should work activities be required at night, night lighting should be focused on the direct area of work~~ **Project-related construction and activities in these areas (and within a suitable buffer) shall not occur between 30 minutes before sunset and 30 minutes after sunrise.**

To support Caltrans in avoiding, minimizing, and mitigating for the Project's direct and indirect impacts of permanent artificial nighttime lighting on biological resources, CDFW recommends that Caltrans include in a revised MND the following mitigation measure:

Mitigation Measure BIO-[A]: Artificial Nighttime Lighting (New)

Throughout construction and the lifetime operations of the Project, Caltrans shall eliminate all nonessential lighting throughout the Project area and avoid or limit the use of artificial light at night during the hours of dawn and dusk when many wildlife species are most active. Caltrans shall ensure that all lighting for the Project is fully shielded, cast downward and directed away from surrounding open-space and agricultural areas, reduced in intensity to the greatest extent possible, and does not result in lighting trespass including glare into surrounding areas or upward into the night sky (see the International Dark-Sky Association standards at <http://darksky.org/>). Caltrans shall ensure use of LED lighting with a correlated color temperature of 3,000 Kelvins or less, proper disposal of hazardous waste, and recycling of lighting that contains toxic compounds with a qualified recycler.

Comment 6: CDFW's Lake and Streambed Alteration Program

Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: substantially divert or obstruct the natural flow of any river, stream or lake; substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or deposit debris, waste or other materials that could pass into any river, stream or lake. Note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams, desert washes, and water courses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

Pages 2-8 and 2-9 of the MND indicate that CDFW jurisdictional waters may be impacted by the Project. Given the presence of streams on-site that will be impacted by the Project, CDFW recommends the Project proponent notify CDFW's Lake and Streambed Alteration Program.

To support Caltrans in avoiding or reducing impacts to streams to a level less than significant, CDFW recommends the revised MND include the following mitigation measure:

Mitigation Measure BIO-[B]: CDFW's Lake and Streambed Alteration Program (New)

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

Comment 7: Desert Tortoise

Consistent with CEQA Guidelines, Section 15380, the status of the desert tortoise (*Gopherus agassizii*) as a threatened species pursuant to the federal Endangered Species Act (16 U.S.C. § 1531 et seq.) and as an endangered species under the California Endangered Species Act (Fish & G. Code, § 2050 et seq.) qualifies it as an endangered, rare, or threatened species under CEQA. Desert tortoise populations have declined significantly in recent decades as a result of human activities in their native habitat including land development, off-road vehicle use, overgrazing, agricultural development, military activities, predation, and the spread of invasive plant species.¹¹ The desert tortoise population in the western Mojave Desert has declined by 90% since the 1980s. Desert tortoises can take up to 20 years to reach sexual maturity, which limits their ability to recover from even small losses in population numbers.

Page 2-7 of the MND states that “Due to the prevalence of creosote bush scrub in the Project area and historical occurrences of desert tortoise in the Project area, the species is assumed to have a moderate probability of occurrence within the PIA, particularly in the Whale Mountain Wash, where drainage work would occur in the form of rock slope protection.” CDFW agrees that the Project area includes desert tortoise habitat. The MND includes Mitigation Measure BIO-General-4b, which calls for pre-construction desert tortoise surveys.

CDFW considers the MND’s mitigation measure for desert tortoise to be inadequate in scope and timing to avoid or reduce impacts to desert tortoise to a level less than significant. To support Caltrans in avoiding or reducing impacts to a level of less than significant, CDFW recommends that the measure be revised as follows, with additions in **bold italics** and removals in ~~strike through~~:

Mitigation Measure BIO-General-4b **Focused and** Pre-construction Desert Tortoise Surveys **(Revised)**

~~Pre-construction~~ **Focused** surveys for desert tortoise must be conducted by a **CDFW-approved** qualified ~~contractor-supplied~~ biologist within the Project Impact Area and any staging areas ~~within 7 days prior to project activities and following a habitat suitability assessment. If one of the species listed above or other special status species is located, the Resident Engineer and Caltrans biologist must be contacted and additional measures and/or agency coordination may be required.~~ **according to protocols in Preparing for Any Action that May Occur within the Range of the Mojave Desert Tortoise (USFWS 2019; <https://www.fws.gov/sites/default/files/documents/Mojave%20Desert%20Tortoise%20Pre-project%20Survey%20Protocol%202019.pdf>), during the species’ most active periods (April through May or September through October). CDFW recommends working with USFWS and CDFW concurrently to ensure a consistent and adequate approach to planning survey work and that**

¹¹ U.S. Fish and Wildlife Service (USFWS). (2011). Revised recovery plan for the Mojave population of the desert tortoise (*Gopherus agassizii*). <https://www.fws.gov/sites/default/files/documents/USFWS.2011.RRP%20for%20the%20Mojave%20Desert%20Tortoise.pdf>.

biologists retained to complete desert tortoise protocol-level surveys submit their qualifications to CDFW and USFWS prior to initiation of surveys. If desert tortoise is found to be present, the qualified biologist shall immediately notify CDFW and USFWS to determine appropriate avoidance, minimization, and mitigation measures. If impacts to desert tortoise cannot be avoided, appropriate CESA authorization (i.e., Incidental Take Permit under Fish and Game Code section 2081(b)) should be obtained from CDFW prior to commencement of Project activities, including vegetation- or ground-disturbing activities.

No more than 14 calendar days prior to start of Project activities and after any pause in Project activities lasting 30 days or more, a CDFW-approved qualified biologist shall conduct pre-construction surveys for desert tortoise as described in the USFWS 2019 desert tortoise survey methodology (Preparing for Any Action that May Occur within the Range of the Mojave Desert Tortoise;

[https://www.fws.gov/sites/default/files/documents/Mojave%20Desert%20Tortoise Pre-project%20Survey%20Protocol 2019.pdf](https://www.fws.gov/sites/default/files/documents/Mojave%20Desert%20Tortoise%20Pre-project%20Survey%20Protocol%202019.pdf)). Pre-construction surveys shall be completed using perpendicular survey routes and 100-percent visual coverage for desert tortoise and their sign within the Project area and 50-foot buffer zone. Pre-activity surveys cannot be combined with other surveys conducted for other species while using the same personnel. Project activities cannot start until two negative results from consecutive surveys using perpendicular survey routes for desert tortoise are documented. Results of the surveys shall be submitted to CDFW prior to construction start. If the pre-construction surveys confirm desert tortoise absence, the qualified biologist shall ensure desert tortoise do not enter the Project area. Should desert tortoise presence be confirmed during the survey, the qualified biologist shall immediately notify CDFW and USFWS to determine appropriate avoidance, minimization, and mitigation measures.

Comment 8: Desert Bighorn Sheep

Desert bighorn sheep (*Ovis canadensis*) is a Fully Protected species (Fish & G. Code § 4700), which qualifies it as an endangered, rare, or threatened species under CEQA. Lambing season can be variable, depending on patterns of precipitation, with the peak lambing period occurring from December 1 through June 30. Impacts from disease are a major threat to bighorn sheep in this area, and disease prevention is of the utmost importance. CDFW is also concerned that activities that could impede desert bighorn sheep access to water sources are avoided.

Desert bighorn sheep are unable to survive long periods of hot, arid conditions without water (Campbell and Remington, 1981). Research on desert bighorn sheep populations suggests that bighorn sheep will modify their water-use activity patterns in response to disturbance from construction activities (Campbell and Remington, 1981; Leslie and Douglas 1980). Sheep were observed changing their water visits to the short period between dawn and the start of the workday, or postponing water use until the end of the workday (Campbell and Remington, 1981). Additionally, sheep shifted from frequent opportunistic water use to brief, infrequent use of water amidst construction activities (Campbell and Remington, 1981). Bighorn sheep have also been observed to change water-sourcing locations due to construction activity when multiple water sources are available. These behavior changes may cause resulting changes in energy expenditure, which could be especially impactful during lambing and amid any other population stressors.

Page 67 of the NES states that "Suitable habitat for desert bighorn sheep is present within the BSA, particularly in Whale Mountain Wash, with its rugged terrain, open habitat, and alluvial fan bisected by rocky or sandy washes, with available water.

The elevation of this area, below 4,500 feet, is also suitable for this species..." The MND includes Mitigation Measure BIO-General-4c, which calls for preconstruction desert bighorn sheep surveys.

CDFW considers the MND's mitigation measure for desert bighorn sheep to be inadequate in scope and timing to avoid or reduce impacts to desert bighorn sheep to a level less than significant. To support Caltrans in avoiding or reducing impacts to a level of less than significant, CDFW recommends that the measure be revised as follows, with additions in **bold italics** and removals in ~~strike through~~:

Mitigation Measure BIO-General-4b Preconstruction Desert Bighorn Sheep Surveys **(Revised)**

~~A preconstruction desert bighorn sheep survey consistent with CDFW, USFWS, and BLM guidelines must be conducted by a qualified contractor supplied biologist no more than 3 days prior to project activities within Whale Mountain Wash and following a habitat assessment. If a desert bighorn sheep individual or sign is located, the Resident Engineer and Caltrans biologist must be contacted and additional measures and/or agency coordination may be required.~~

Desert bighorn sheep is a fully protected species (Fish & G. Code, § 4700). CDFW will determine desert bighorn sheep habitat within the project area based on data gathered by CDFW Wildlife Biologists. Caltrans, in conjunction with a CDFW-approved Designated Biologist(s), will coordinate with CDFW to obtain information on desert bighorn sheep habitat, including lambing habitat and water sources, within the project area in advance of project activities, and Caltrans will implement appropriate avoidance measures to avoid impacts to desert bighorn sheep in these areas. Avoidance measures shall be in place prior to the start of construction and any ground-disturbing activities.

Limited Operating Period. Activities within desert bighorn sheep habitat will be avoided during the peak lambing period (December 1 through June 30). Furthermore, no sudden, loud noises (e.g., chainsaws, heavy machinery, low-elevation helicopter flights, blasting, pile driving, etc.) shall occur within 1 km of lambing habitat. Sound pressure levels shall not exceed 85 dB measured at 50 ft from the noise.

Pre-construction Surveys and Ongoing Monitoring. When work is being implemented in or within 1-km of desert bighorn sheep habitat, a Designated Biologist(s) will assess presence of bighorn sheep in the vicinity of work areas. The Designated Biologist will coordinate directly with CDFW Wildlife Biologists for guidance with specific questions as situations arise. If bighorn sheep are present within 1 km of the work area, work will be suspended in that area. The 1-km buffer may be reduced in coordination with CDFW if it is determined that bighorn sheep are not at risk. Factors such as distance of the activities from the sheep, nature of construction activities, duration of activities, topography, work area located in trees or other natural features that attenuate the sound, etc., should be taken into consideration. The Designated Biologist will be present at the work site(s) to monitor for bighorn sheep during all activities in bighorn sheep habitat. The Designated Biologist will work with project personnel to cease or defer activities when bighorn sheep are close enough to be disturbed by the activities.

Disease Prevention. A boot disinfection station will be set up at the staging area. If workers have any potential contact with grounds occupied by sheep or goats (for example, at home, visiting a farm,

attending a County fair, going to a petting zoo, etc.), they shall disinfect their boots before going to the work site. Workers will also ensure that their vehicles/equipment are washed at either a project wash station or a commercial wash if there is a chance that the tires or interior may be contaminated. Alternatively, personnel can be required to change their footwear so that contaminated footwear is not used in work vehicles or on the project site.

Water Sources. In the event that bighorn sheep abandon the use of one or more water sources as a result of disturbance associated with the project, the Permittee shall create additional water sources after consulting with appropriate agency personnel (CDFW and USFWS) to select location(s) and provide assistance in establishing additional water sources(s).

Comment 9: Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) is a Candidate Endangered species under CESA. As a Candidate species, *B. crotchii* receives the same legal protection as Endangered or Threatened species under CESA (Fish & G. Code, § 2085). Crotch's bumble bees are generalist foragers and have been reported visiting a wide variety of flowering plants (Biesmeijer et al. 2006). Suitable Crotch's bumble bee habitat includes areas of grasslands and scrub that contain requisite habitat elements, such as small mammal burrows.

Page 2-6 of the MND states that the Project impact area "contains seasonally suitable habitat for special-status invertebrate species monarch butterfly and Crotch's bumblebee." Page 25 of the NES indicates that "Whale Mountain Wash contains potentially suitable habitat including annual wildflowers and abandoned rodent burrows." The MND includes Mitigation Measure BIO-General-9, which calls for the designation of Environmentally Sensitive Areas for several species, including *B. crotchii*.

CDFW is concerned that surveys for Crotch's bumble bee were not conducted as part of the MND. CDFW recommends that a qualified entomologist conduct focused surveys for *B. crotchii* to determine presence/absence, identify potential nest sites, and to further evaluate the quality of habitat present for Crotch's bumble bee. Special focus should be placed on identifying potential nest and overwintering sites as any ground disturbance may lead to take of adults, eggs, or larvae that are in the ground.

Crotch's bumble bee primarily nest in late February through late October underground in abandoned small mammal burrows but may also nest under perennial bunch grasses or thatched annual grasses, under-brush piles, in old bird nests, and in dead trees or hollow logs (Williams et al. 2014; Hatfield et al. 2018). Overwintering sites utilized by Crotch's bumble bee mated queens include soft, disturbed soil (Goulson 2010), or under leaf litter or other debris (Williams et al. 2014). Despite the presence of suitable Crotch's bumble bee habitat on-site, the MND does not provide information as to what criteria would be used to conclude that the species is not present. Without adequate presence/absence surveys, ground disturbance and vegetation removal associated with Project implementation during the breeding season could result in the incidental loss of breeding success or otherwise lead to nest abandonment in areas adjacent to the Project site. Project activities may result in temporal or permanent loss of colonies, and suitable nesting and foraging habitat.

To support Caltrans in avoiding or reducing impacts to Crotch's bumble bee to a level of less than significant, CDFW recommends that the following measure be included in the MND as follows, with additions in ***bold italics***.

Mitigation Measure BIO-[C]: Crotch's Bumble Bee Surveys(New)

Surveys for Crotch's bumble bee shall be performed by a qualified entomologist familiar with the species behavior and life history to determine the presence/absence of Crotch's bumble bee within one year prior to vegetation removal and/or grading. Surveys should be conducted during flying season when the species is most likely to be detected above ground, between March 1 to September 1 (Thorp et al. 1983). Survey results, including negative findings, should be submitted to CDFW prior to implementing Project-related ground-disturbing activities. At minimum, a survey report should provide the following:

a) A description and map of the survey area, focusing on areas that could provide suitable habitat for Crotch's bumble bee. CDFW recommends the map show surveyors track lines to document that the entire site was covered during field surveys.

b) Field survey conditions that should include names of qualified entomologists and brief qualifications; date and time of survey; survey duration; general weather conditions; survey goals, and species searched.

c) Maps showing the location of nests/colonies.

d) A description of physical (e.g., soil, moisture, slope) and biological (e.g., plant composition) conditions where each nest/colony is found. A sufficient description of biological conditions, primarily impacted habitat, should include native plant composition (e.g., density, cover, and abundance) within impacted habitat (e.g., species list separated by vegetation class; density, cover, and abundance of each species).

If impacts to Crotch's bumble bee cannot be avoided, appropriate CESA authorization (i.e., Incidental Take Permit under Fish and Game Code section 2081(b)) should be obtained from CDFW prior to commencement of Project activities, including vegetation- or ground-disturbing activities.

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 MND to assist Caltrans in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Chris Briggs, Senior Environmental Scientist (Specialist), at 909-758-6774 or Christopher.Briggs@wildlife.ca.gov.

Sincerely,

DocuSigned by:

84F92FFEEFD24C8...

Kim Freeburn
Environmental Program Manager

Attachment 1: MMRP for CDFW-Proposed Mitigation Measures

ec: Heather Brashear, CDFW
Heather.Brashear@Wildlife.ca.gov

Office of Planning and Research, State Clearinghouse, Sacramento
state.clearinghouse@lci.ca.gov

ATTACHMENT 1: MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

Mitigation Measures	Timing and Methods	Responsible Parties
<p>BIO-Plant-2 Rare Plant Pre-Construction Surveys (Revised)</p> <p>Prior to construction, a preconstruction survey must be conducted by a CDFW-approved biologist for special-status plants within the Project Impact Area 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/P_lants). Any rare plant species identified must be flagged for visual identification to construction personnel for work avoidance. Rare plant species detected that feature multiple plants in a single location must be fenced with temporary high-visibility fencing. Should any state-listed plant species be present in the Project area, the Project proponent shall obtain appropriate CESA authorization for those species prior to the start of Project activities. Should other</p>	<p>Timing: Methods: See Mitigation Measure</p>	<p>Implementation: Caltrans</p> <p>Monitoring and Reporting: Caltrans</p>

<p>special-status plants or natural communities be present in the Project area, on-site or off-site habitat restoration (whichever is applicable) and/or enhancement and preservation should be evaluated and discussed in detail. Where habitat preservation is not available on-site, off-site land acquisition, management, and preservation should be evaluated.</p>		
<p>BIO-Avian-1 Pre-Construction Nesting Bird Survey (Revised)</p> <p>To the greatest extent feasible, the Project will avoid construction activities during the peak nesting season, February 1 - September 30. Regardless of the time of year, preconstruction nesting bird surveys shall be conducted by a CDFW-approved biologist no more than 3 days prior to construction to locate and avoid nesting birds. Pre-construction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified biologist will make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If active nests are found during the pre-construction nesting bird surveys, a qualified biologist shall establish an appropriate nest buffer to be marked on the ground. If an active avian nest is located, a no-construction buffer (of at least 300 feet for non-passerines, 300 feet for passerines, and 500 feet for raptors) shall be established and monitored by a qualified CDFW-approved biologist. Construction activities may not occur inside the established buffers, which shall remain on-site until a qualified biologist determines the young have fledged or the nest is no longer active. Active nests and adequacy of the established buffer distance shall be monitored daily by the qualified biologist until the qualified biologist has determined the young have fledged or the Project has been completed. The qualified biologist has the authority to stop work if nesting pairs exhibit signs of disturbance.</p>	<p>Timing: Methods: Three (3) days prior to commencing project activities.</p>	<p>Implementation: Caltrans</p> <p>Monitoring and Reporting: Caltrans</p>
<p>BIO-Avian-2 Pre-Construction Burrowing Owl Survey (Revised)</p> <p>Suitable burrowing owl habitat has been confirmed on the site; therefore, focused burrowing owl surveys shall be conducted by a CDFW-approved qualified biologist prior to any Project activities, including vegetation- or ground-disturbing activities.</p>	<p>Timing: Methods: Focused surveys according to timing in 2012 Staff Report. Preconstruction surveys 14 days and 24 hours prior to ground disturbance and repeated after</p>	<p>Implementation: Caltrans</p> <p>Monitoring and Reporting: Caltrans</p>

<p>CDFW strongly recommends that focused surveys are conducted in accordance with the Staff Report on Burrowing Owl Mitigation (2012 or most recent version)¹². If burrowing owls are detected during the focused surveys, the qualified biologist and Project proponent shall begin coordination with CDFW immediately, and shall submit the results of focused surveys to CDFW as soon results become available and before commencement of any Project activities, including any vegetation- or ground-disturbing activities. CDFW recommends that the information included in the survey results be consistent with Appendix D of the Staff Report on Burrowing Owl Mitigation, including a detailed map showing locations of all burrowing owls, burrowing owl sign, potential burrows, and occupied burrows (occupied means at least one burrowing owl or its sign has been observed within the last three years; may be indicated by owl sign including feathers, pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance or perch site); a description of the behavior of burrowing owls during surveys; a description of survey methods; and other items listed in Appendix D of the Staff Report on Burrowing Owl Mitigation under "Survey Reports." Consultation with CDFW and USFWS must be completed prior to commencement of any Project activities, including vegetation- or ground-disturbing activities. If impacts to occupied burrowing owl habitat or burrow(s) or burrowing owl individuals, nests, or eggs cannot be avoided, appropriate CESA authorization (i.e., Incidental Take Permit under Fish and Game Code section 2081(b)) should be obtained from CDFW prior to commencement of Project activities, including vegetation- or ground-disturbing activities.</p> <p>Two burrowing owl preconstruction surveys must be performed by a CDFW-approved qualified biologist: one survey 14 days prior to project activities, and one survey within 24 hours prior to project activities. The surveys will be conducted within the area of suitable burrowing owl habitat within the project limits and an appropriate buffer, in accordance with the Staff Report on Burrowing Owl Mitigation (2012 or most recent version). Preconstruction surveys</p>	<p>any pause in construction lasting 30 days or longer.</p>	
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¹² California Department of Fish and Wildlife (CDFW). 2012. Staff Report on Burrowing Owl Mitigation. State of California, Natural Resources Agency. Available for download at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843>.

<p>should be repeated when there is a pause in construction of more than 30 days. Preconstruction surveys shall be performed by a CDFW-approved qualified biologist following the recommendations and guidelines provided in the Staff Report on Burrowing Owl Mitigation. If pre-construction surveys confirm occupied burrowing owl habitat within this area, Project activities shall be immediately halted and the CDFW-approved qualified biologist will coordinate with CDFW and USFWS on additional measures that may be needed to ensure that no take of burrowing owl occurs. Project activities shall not recommence until consultation with CDFW and USFWS is completed.</p>		
<p>BIO-Bat-1-PSM-12 Bat Focused and Preconstruction Surveys (Revised)</p> <p>Prior to work activities, pre-construction surveys at the Whale Mountain Wash bridges (Bridge No. 54-0668L and 54-0558R; PM 152.1/152.2), and an appropriate survey buffer of remaining Project areas (including culverts) shall be conducted for the presence of daytime, nighttime, wintering (hibernacula), and maternity bat roosts by a CDFW-approved qualified bat biologist. Each survey shall consist of one dusk emergence survey (start one hour before sunset and last for three hours), followed by one pre-dawn re-entry survey (start one hour before sunrise and last for two hours), and one daytime visual inspection of all potential roosting habitat on the Project site. Surveys shall be conducted within one 24-hour period. Visual inspections shall focus on the identification of bat sign (i.e., individuals, guano, urine staining, corpses, feeding remains, scratch marks and bats squeaking and chattering). Bat detectors, bat call analysis, and visual observation shall be used during all dusk emergence and pre-dawn re-entry surveys. Because bats have the potential to roost year-round in cliff swallow nests, use of cliff swallow nests on any bridge structure by bats shall also be determined through surveys and inspection of nests not occupied by cliff swallows. If active maternity roosts are identified in the work area or 500 feet extending from the work area, Project construction will only occur between October 1 and February 28, outside of the maternity roosting season when young bats are present but are not yet ready to fly out of the roost. Maternity roosts shall not be</p>	<p>Timing: Methods: Focused surveys at least 6 months in advance of project activities, ideally during the maternity season (typically April 1 to September 15). Pre-construction surveys prior to start of project activities.</p>	<p>Implementation: Caltrans</p> <p>Monitoring and Reporting: Caltrans</p>

<p>evicted, excluded, removed, or disturbed. If active hibernacula are identified in the work area or 500 feet extending from the work area, a minimum 500-foot no-work buffer shall be provided around hibernacula. Buffers shall be left in place until the end of Project construction and activities or until a CDFW-approved qualified bat biologist determines that the hibernacula are no longer active. Project-related construction and activities shall not occur between 30 minutes before sunset and 30 minutes after sunrise. Hibernacula roosts shall not be evicted, excluded, removed, or disturbed. Initial focused surveys are recommended to be conducted at least 6 months prior to the initiation of work within or adjacent to these bridges, ideally during the maternity season (typically April 1 to September 15), to allow time to prepare avoidance, minimization, and mitigation measures, if needed, in coordination with CDFW. If the pre-construction surveys determine that no active roosts are present, then work activities shall commence within two weeks following the pre-construction surveys.</p>		
<p>BIO-Bat-2-PSM-13 Work Restriction Hours (Revised)</p> <p>Work activities should be restricted to daylight hours at work locations with suitable bat habitat (Whale Mountain Wash bridges (Bridge No. 54-0668L and 54-0558R; PM 152.1/152.2). This would reduce the potential of direct or indirect impacts to bat species that may be foraging in the vicinity of the BSA. Project-related construction and activities in these areas (and within a suitable buffer) shall not occur between 30 minutes before sunset and 30 minutes after sunrise.</p>	<p>Timing: Methods: See Mitigation Measure</p>	<p>Implementation: Caltrans</p> <p>Monitoring and Reporting: Caltrans</p>
<p>Mitigation Measure BIO-[A]: Artificial Nighttime Lighting (New)</p> <p>Throughout construction and the lifetime operations of the Project, Caltrans shall eliminate all nonessential lighting throughout the Project area and avoid or limit the use of artificial light at night during the hours of dawn and dusk when many wildlife species are most active. Caltrans shall ensure that all lighting for the Project is fully shielded, cast downward and directed away from surrounding open-space and agricultural areas, reduced in intensity to the greatest extent possible, and does not</p>	<p>Timing: Methods: See Mitigation Measure</p>	<p>Implementation: Caltrans</p> <p>Monitoring and Reporting: Caltrans</p>

<p>result in lighting trespass including glare into surrounding areas or upward into the night sky (see the International Dark-Sky Association standards at http://darksky.org/). Caltrans shall ensure use of LED lighting with a correlated color temperature of 3,000 Kelvins or less, proper disposal of hazardous waste, and recycling of lighting that contains toxic compounds with a qualified recycler.</p>		
<p>Mitigation Measure BIO-[B]: CDFW’s Lake and Streambed Alteration Program (New)</p> <p>Prior to construction and issuance of any grading permit, the Project Sponsor shall obtain written correspondence from the California Department of Fish and Wildlife (CDFW) stating that notification under section 1602 of the Fish and Game Code is not required for the Project, OR the Project Sponsor should obtain a CDFW-executed Lake and Streambed Alteration Agreement, authorizing impacts to Fish and Game Code section 1602 resources associated with the Project.</p>	<p>Timing: Methods: See Mitigation Measure</p>	<p>Implementation: Caltrans</p> <p>Monitoring and Reporting: Caltrans</p>
<p>Mitigation Measure BIO-General-4b Focused and Pre-construction Desert Tortoise Surveys (Revised)</p> <p>Focused surveys for desert tortoise must be conducted by a CDFW-approved qualified biologist within the Project Impact Area and any staging areas according to protocols in Preparing for Any Action that May Occur within the Range of the Mojave Desert Tortoise (USFWS 2019; https://www.fws.gov/sites/default/files/documents/Mojave%20Desert%20Tortoise_Pre-project%20Survey%20Protocol_2019.pdf), during the species’ most active periods (April through May or September through October). CDFW recommends working with USFWS and CDFW concurrently to ensure a consistent and adequate approach to planning survey work and that biologists retained to complete desert tortoise protocol-level surveys submit their qualifications to CDFW and USFWS prior to initiation of surveys. If desert tortoise is found to be present, the qualified biologist shall immediately notify CDFW and USFWS to determine appropriate avoidance, minimization, and mitigation measures. If impacts to desert tortoise cannot be avoided, appropriate CESA authorization (i.e., Incidental Take Permit under Fish and</p>	<p>Timing: Methods: Focused surveys in advance of project activities. Pre-construction surveys 14 days prior to project activities and repeated after any pause of 30 days or more.</p>	<p>Implementation: Caltrans</p> <p>Monitoring and Reporting: Caltrans</p>

<p>Game Code section 2081 (b)) should be obtained from CDFW prior to commencement of Project activities, including vegetation- or ground-disturbing activities.</p> <p>No more than 14 calendar days prior to start of Project activities and after any pause in Project activities lasting 30 days or more, a CDFW-approved qualified biologist shall conduct pre-construction surveys for desert tortoise as described in the USFWS 2019 desert tortoise survey methodology (Preparing for Any Action that May Occur within the Range of the Mojave Desert Tortoise; https://www.fws.gov/sites/default/files/documents/Mojave%20Desert%20Tortoise_Pre-project%20Survey%20Protocol_2019.pdf).</p> <p>Pre-construction surveys shall be completed using perpendicular survey routes and 100-percent visual coverage for desert tortoise and their sign within the Project area and 50-foot buffer zone. Pre-activity surveys cannot be combined with other surveys conducted for other species while using the same personnel. Project activities cannot start until two negative results from consecutive surveys using perpendicular survey routes for desert tortoise are documented. Results of the surveys shall be submitted to CDFW prior to construction start. If the pre-construction surveys confirm desert tortoise absence, the qualified biologist shall ensure desert tortoise do not enter the Project area. Should desert tortoise presence be confirmed during the survey, the qualified biologist shall immediately notify CDFW and USFWS to determine appropriate avoidance, minimization, and mitigation measures.</p>		
<p>Mitigation Measure BIO-General-4b Preconstruction Desert Bighorn Sheep Surveys (Revised)</p> <p>Desert bighorn sheep is a fully protected species (Fish & G. Code, § 4700). CDFW will determine desert bighorn sheep habitat within the project area based on data gathered by CDFW Wildlife Biologists. Caltrans, in conjunction with a CDFW-approved Designated Biologist(s), will coordinate with CDFW to obtain information on desert bighorn sheep habitat, including lambing habitat and water sources, within the project area in advance of project activities, and Caltrans will implement appropriate avoidance</p>	<p>Timing: Methods: See Mitigation Measure</p>	<p>Implementation: Caltrans</p> <p>Monitoring and Reporting: Caltrans</p>

<p>measures to avoid impacts to desert bighorn sheep in these areas. Avoidance measures shall be in place prior to the start of construction and any ground-disturbing activities.</p> <p><u>Limited Operating Period.</u> Activities within desert bighorn sheep habitat will be avoided during the peak lambing period (December 1 through June 30). Furthermore, no sudden, loud noises (e.g., chainsaws, heavy machinery, low-elevation helicopter flights, blasting, pile driving, etc.) shall occur within 1 km of lambing habitat. Sound pressure levels shall not exceed 85 dB measured at 50 ft from the noise.</p> <p><u>Pre-construction Surveys and Ongoing Monitoring.</u> When work is being implemented in or within 1-km of desert bighorn sheep habitat, a Designated Biologist(s) will assess presence of bighorn sheep in the vicinity of work areas. The Designated Biologist will coordinate directly with CDFW Wildlife Biologists for guidance with specific questions as situations arise. If bighorn sheep are present within 1 km of the work area, work will be suspended in that area. The 1-km buffer may be reduced in coordination with CDFW if it is determined that bighorn sheep are not at risk. Factors such as distance of the activities from the sheep, nature of construction activities, duration of activities, topography, work area located in trees or other natural features that attenuate the sound, etc., should be taken into consideration. The Designated Biologist will be present at the work site(s) to monitor for bighorn sheep during all activities in bighorn sheep habitat. The Designated Biologist will work with project personnel to cease or defer activities when bighorn sheep are close enough to be disturbed by the activities.</p> <p><u>Disease Prevention.</u> A boot disinfection station will be set up at the staging area. If workers have any potential contact with grounds occupied by sheep or goats (for example, at home, visiting a farm, attending a County fair, going to a petting zoo, etc.), they shall disinfect their boots before going to the work site. Workers will also ensure that their vehicles/equipment are washed at either a project wash station or a commercial wash if there is a chance that the tires or interior may be contaminated. Alternatively, personnel can be required to change their footwear so</p>		
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<p>that contaminated footwear is not used in work vehicles or on the project site.</p> <p><u>Water Sources.</u> In the event that bighorn sheep abandon the use of one or more water sources as a result of disturbance associated with the project, the Permittee shall create additional water sources after consulting with appropriate agency personnel (CDFW and USFWS) to select location(s) and provide assistance in establishing additional water sources(s).</p>		
<p>Mitigation Measure BIO-[C]: Crotch's Bumble Bee Surveys(New)</p> <p>Surveys for Crotch's bumble bee shall be performed by a qualified entomologist familiar with the species behavior and life history to determine the presence/absence of Crotch's bumble bee within one year prior to vegetation removal and/or grading. Surveys should be conducted during flying season when the species is most likely to be detected above ground, between March 1 to September 1 (Thorp et al. 1983). Survey results, including negative findings, should be submitted to CDFW prior to implementing Project-related ground-disturbing activities. At minimum, a survey report should provide the following:</p> <p>a) A description and map of the survey area, focusing on areas that could provide suitable habitat for Crotch's bumble bee. CDFW recommends the map show surveyors track lines to document that the entire site was covered during field surveys.</p> <p>b) Field survey conditions that should include names of qualified entomologists and brief qualifications; date and time of survey; survey duration; general weather conditions; survey goals, and species searched.</p> <p>c) Maps showing the location of nests/colonies.</p> <p>d) A description of physical (e.g., soil, moisture, slope) and biological (e.g., plant composition) conditions where each nest/colony is found. A sufficient description of biological conditions, primarily impacted habitat, should include native plant composition (e.g., density, cover, and abundance) within impacted habitat (e.g., species list separated by vegetation class;</p>	<p>Timing: Methods: Within one year prior to vegetation removal and/or grading.</p>	<p>Implementation: Caltrans</p> <p>Monitoring and Reporting: Caltrans</p>

<p>density, cover, and abundance of each species).</p> <p>If impacts to Crotch's bumble bee cannot be avoided, appropriate CESA authorization (i.e., Incidental Take Permit under Fish and Game Code section 2081 (b)) should be obtained from CDFW prior to commencement of Project activities, including vegetation- or ground-disturbing activities.</p>		
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