



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Ave
Fresno, California 93710
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



Governor's Office of Planning & Research

April 20, 2023

Apr 21 2023

STATE CLEARINGHOUSE

Cecilia Boudreau
California Department of Transportation
500 South Main Street
Bishop, California 93514

**Subject: State Route 58 Truck Climbing Lane Project (Project)
Mitigated Negative Declaration
State Clearinghouse No: 2023030602**

Dear Cecilia Boudreau:

The California Department of Fish and Wildlife (CDFW) received an Initial Study with Proposed Mitigated Negative Declaration (MND) from the California Department of Transportation (Caltrans) for the above-referenced 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, CDFW appreciates 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. While the comment period may have ended, CDFW would appreciate it if you would still consider our comments.

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

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.

Conserving California's Wildlife Since 1870

Cecilia Boudreau
California Department of Transportation
April 20, 2023
Page 1

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.), related authorization as provided by the Fish and Game Code may be required.

In this role, CDFW is responsible for providing, as available, biological expertise during public agency environmental review efforts (e.g., CEQA), focusing specifically on project activities that have the potential to adversely affect fish and wildlife resources. CDFW provides recommendations to identify potential impacts and possible measures to avoid or reduce those impacts.

Bird Protection: CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include, sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

Fully Protected Species: CDFW has jurisdiction over fully protected species of birds, mammals, amphibians, reptiles, and fish pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any fully protected species is prohibited and CDFW cannot authorize their incidental take.

PROJECT DESCRIPTION SUMMARY

Proponent: California Department of Transportation (Caltrans)

Objective: Caltrans, in cooperation with the Kern Council of Governments, proposes to construct a 12-foot-wide truck climbing lane along the eastbound side of State Route 58 in Kern County. The Project would also include operational improvements involving removal of the Bena Road and State Route 58 at grade intersection and construction of an eastbound acceleration lane at the at-grade intersection of Bealville Road and State Route 58. The Project would also widen the inside and outside shoulders to the

Cecilia Boudreau
California Department of Transportation
April 20, 2023
Page 1

standard 10-foot width and construct a 5-foot maintainable dirt shoulder adjacent to the outside paved shoulder. Other highway improvements include drainage upgrades to accommodate the roadway widening, rumble strip installation, guardrail replacement, new or replaced signage, and relocation of lighting near the at-grade intersection of Bealville Road and State Route 58.

Location: The proposed Project is located on State Route 58 approximately 10 miles west of the City of Tehachapi, in Kern County. The Project limits extend from post mile 76.3, 0.30 mile east of the intersection of State Route 58 and State Route 223, to post mile 79.8, 0.30 mile west of Hart Flat Road. The Project spans several Township and Ranges in the Mount Diablo Base and Meridian within the Bena, Oiler Peak and Keene U. S. Geological Survey 7.5-minute quadrangle maps.

Timeframe: Project construction is estimated to occur during the 2026/2027 fiscal year and to be completed in the 2027/2028 fiscal year. Project duration is anticipated to take approximately 300 working days or 14 working months (typically 22 days per working month).

COMMENTS AND RECOMMENDATIONS

CDFW offers the following comments and recommendations to assist Caltrans in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. The attached Mitigation Monitoring and Reporting Program (MMRP) provides a summary of CDFW's additional impact minimization, mitigation and monitoring recommendations that are described below. Editorial comments or other suggestions may also be included to improve the document.

Based on the description of habitat types and proposed Project activities in the MND, CDFW is concerned regarding potential impacts to nesting birds and special-status species including, but not limited to the following listed animal species: State threatened Tehachapi slender salamander (*Batrachoseps stebbinsi*); State threatened Swainson's hawk (*Buteo swainsoni*); State fully protected golden eagle (*Aquila chrysaetos*); State candidate endangered Crotch bumblebee (*Bombus crotchii*); as well as the following State species of special concern: burrowing owl (*Athene cunicularia*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), spotted bat (*Euderma maculatum*), western mastiff bat (*Eumops perotis californicus*), and western red bat (*Lasiurus blossevillii*).

I. Environmental Setting and Related Impact

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or

Cecilia Boudreau
California Department of Transportation
April 20, 2023
Page 1

special-status species in local or regional plans, policies, or regulations, or by CDFW or the United States Fish and Wildlife Service (USFWS)?

COMMENT 1: Blasting

Issue: According to information in the MND, geotechnical investigations have not been completed. As such, it is unclear if blasting may be needed for Project implementation. Blasting is a novel stimulus which could result in significant effects to most wildlife species. CDFW advises that Caltrans determine if blasting will be needed for Project implementation as part of the environmental review process and update biological technical studies and re-evaluate effects to wildlife species if needed.

Recommended Avoidance, Minimization, and/or Mitigation Measures for blasting:

If geotechnical investigations conclude that blasting will not be necessary, CDFW advises that the MND include an overall measure that precludes the potential use of blasting by the contractor. If geotechnical investigations conclude that blasting may be needed, CDFW advises that the MND limit the timing of blasting to outside of the general bird nesting and wildlife breeding season in the spring through summer and provide additional protective measures, such as vibration and dust control and biological monitoring. Species-specific measures may be warranted depending on location, timing, and blasting methods.

COMMENT 2: Tehachapi slender salamander (TSS)

Issue: The Project is within range of, and has potentially suitable habitat for, the TSS. The MND has concluded that TSS are not present based on field surveys in April and August 2022 and an incorrect statement that the nearest records are 15 miles north of the Biological Study Area. There are several records 4 to 5 miles north along Caliente Bodfish Road (CDFW 2023). Tehachapi slender salamander is a terrestrial salamander species that is most active near the surface at night and during the rainy season. It is known to occur in oak and pine woodland and riparian habitats in the region, under flat talus rocks in moist areas, under leaf litter or the bark of trees, or in termite tunnels and earthworm burrows. It may prefer north-facing talus slopes, but the species is not well known so may occur in other areas (Morey 2005).

Construction disturbances could potentially include loss of habitat, inadvertent entrapment, and potential direct mortality of individuals due to habitat removal, crushing by construction equipment, or suffocation due to burial or excessive dust. The risk of direct take of TSS increases if Project activities are performed at night or in the rainy season when the species is most active and migrating. Any take of TSS

Cecilia Boudreau
California Department of Transportation
April 20, 2023
Page 1

without appropriate incidental take authorization from CDFW would be a violation of Fish and Game Code.

Recommended Avoidance, Minimization, and/or Mitigation Measures for TSS:

Based on the proximity of the Project area to potentially suitable habitat and the potential for TSS to be under the ground surface, CDFW recommends that a qualified biologist conduct focused surveys during the active season of the species (rainy season) to determine the presences of TSS in the Project area. CDFW recommends that Caltrans coordinate with CDFW for an appropriate survey protocol, which may necessitate a Scientific Collection permit, pursuant to Fish and Game Code section 2081(a). If TSS are found on or near the Project area where Project activities may result in take (as defined in section 86 of Fish and Game Code), authorization for take would occur through the acquisition of an Incidental Take Permit (ITP), pursuant to Fish and Game Code section 2081 subdivision (b).

In the absence of appropriately-timed focused surveys, the applicant can assume presence of TSS within the Project area and seek an ITP. For information regarding ITPs, please see the following link: <https://www.wildlife.ca.gov/Conservation/CESA>. Included in the ITP would be measures required to avoid and/or minimize direct take of TSS on the Project area, as well as measures to fully mitigate the impact of the take.

CDFW advises that Caltrans restore TSS habitat features that are temporarily disturbed to pre-project conditions, and that Caltrans maintain and monitor restored areas for a minimum of five years.

COMMENT 3: Swainson's Hawk (SWHA)

Issue: As identified in the MND, the Project is within breeding range for SHWA and suitable nesting habitat occurs in the Project area. The Natural Environment Study (NES) identified that focused surveys for SWHA were performed following CDFW-approved protocols, and active nests were not identified within the area surveyed. According to the Swainson's Hawk Survey Report performed for the Project, active nesting behavior was observed within 900 feet of the highway and even closer in proximity to the Project impact area (PIA). Because Project activities will involve varying degrees of ground disturbance within and near the right-of-way, Project activities would represent a novel stimulus which could result in nest abandonment if they occur within half-mile of an active SWHA nest. If nesting in the Project vicinity, Project activities that involve noise, groundwork, and movement of construction vehicles and equipment have the potential to result in nest abandonment or loss of foraging habitat, significantly impacting local nesting SWHA. CDFW considers that nest abandonment resulting from Project-related activities is a significant impact to SWHA as well as potentially resulting in take.

Cecilia Boudreau
California Department of Transportation
April 20, 2023
Page 1

Recommended Avoidance, Minimization, and/or Mitigation Measures for SWHA:

The MND identifies appropriate pre-construction surveys and half-mile no-disturbance buffers. CDFW advises that larger no-disturbance buffers may be appropriate if blasting occurs during the nesting season. If an active SWHA nest is detected, and a no-disturbance buffer is not feasible, consultation with CDFW is warranted to discuss how to implement the Project and avoid take. If take cannot be avoided, take authorization would occur through the issuance of an ITP by CDFW, pursuant to Fish and Game Code section 2081 subdivision (b).

Additionally, CDFW recommends compensation for the loss of SWHA foraging habitat as described in CDFW's "Staff Report Regarding Mitigation for Impacts to Swainson's Hawks" (CDFG 1994) to reduce impacts to foraging habitat to less than significant. The Staff Report recommends that mitigation for habitat loss occur within a minimum distance of 10 miles from known nest sites. CDFW has the following recommendations based on the Staff Report:

For projects within 1 mile of an active nest tree, a minimum of 1 acre of habitat management (HM) land for each acre of development.

For projects within 5 miles of an active nest but greater than 1 mile, a minimum of $\frac{3}{4}$ acre of HM land for each acre of development.

For projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree, a minimum of $\frac{1}{2}$ acre of HM land for each acre of development.

COMMENT 4: Golden Eagle (GOEA)

Issue: As identified in the MND, the Project is within breeding range for GOEA and suitable nesting habitat occurs in the region. The NES identified that bird nesting surveys were performed in 2021 and 2022 and no nesting GOEA were observed. CDFW has several records of GOEA nests near the Project area that are not in CNDDDB (internal records). Because Project activities will involve varying degrees of ground disturbance within and near the ROW, CDFW considers it possible that the Project-related activities would represent a novel stimulus which could result in nest abandonment if they occur within half-mile of an active GOEA nest. If nesting in the Project vicinity, Project activities that involve noise, groundwork, and movement of construction vehicles and equipment have the potential to result in nest abandonment or loss of foraging habitat, significantly impacting local nesting GOEA. Due to their status, take must be avoided for fully protected species.

Cecilia Boudreau
California Department of Transportation
April 20, 2023
Page 1

Recommended Avoidance, Minimization, and/or Mitigation Measures for GOEA:

The MND identifies that pre-construction surveys will be performed, and 500-foot no-disturbance buffers will be implemented. CDFW advises that minimum half-mile no-disturbance buffers be implemented, and larger buffers may be appropriate if blasting occurs during the nesting season. If Project-specific activities will take place during the nesting season (February 1 to August 31), and active nests are identified, CDFW recommends that a minimum half-mile no-disturbance buffers be delineated and maintained around each nest. The no-disturbance buffer should be maintained until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. If the no-disturbance buffer is not feasible, coordination with CDFW is recommended to discuss additional avoidance measures.

COMMENT 5: Burrowing Owl (BUOW)

Issue: The Project vicinity is within the known range of BUOW and based on our review of aerial imagery BUOW has the potential to occur in or adjacent to the Project area. BUOW inhabit open grassland or adjacent canal banks, rights-of-ways, vacant lots, containing small mammal burrows, a requisite habitat feature used by BUOW for nesting and cover (Gervais et al. 2008). BUOW rely on burrow habitat year-round for their survival and reproduction. The NES for the MND identified that a general bird nesting survey was conducted in the PIA and a 30-foot buffer.

Habitat loss and degradation are considered the greatest threats to BUOW in California (Gervais et al. 2008). Potentially significant direct impacts associated with Project activities include burrow collapse, inadvertent entrapment, nest abandonment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals. In addition, and as described in CDFW's "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), excluding and/or evicting BUOW from their burrows is considered a potentially significant impact under CEQA. Construction activities near active burrows could result in potentially significant impacts to nesting or overwintering owls.

Recommended Avoidance, Minimization, and/or Mitigation Measures for BUOW:

CDFW advises that a qualified biologist assess if suitable BUOW habitat features are present within 500 feet of the Project area (e.g., burrows). If suitable habitat features are present, CDFW recommends assessing presence/absence of BUOW by having a qualified biologist conduct surveys following guidelines by the California Burrowing Owl Consortium (CBOC 1993) and CDFW (CDFG 2012). Specifically, CBOC and CDFW recommend three or more surveillance surveys conducted during

Cecilia Boudreau
 California Department of Transportation
 April 20, 2023
 Page 1

daylight with each visit occurring at least three weeks apart during the peak breeding season (April 15 to July 15), when BUOW are most detectable.

If active BUOW burrows are observed, CDFW recommends that the burrows shall be avoided and monitored by a qualified biologist during Project-related activities. CDFW recommends no-disturbance buffers, as outlined in the “Staff Report on Burrowing Owl Mitigation” (CDFG 2012), be implemented prior to and during any ground-disturbing activities. Specifically, CDFW’s Staff Report recommends that impacts to occupied burrows be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1-Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16-Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16-Mar 31	50 m	100 m	500 m

* meters (m)

COMMENT 6: Crotch’s Bumblebee (CBB)

Issue: The Project vicinity is within the known range of CBB, but the NES and MND did not include an evaluation of potential Project impacts on this species. Suitable CBB habitat includes areas of grasslands, openings in woodlands, and upland scrub that contain requisite habitat elements, such as small mammal burrows. CBB primarily nest underground in abandoned small mammal burrows in late February through late October 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. 2015). Overwintering sites utilized by CBB mated queens include soft, disturbed soil (Goulson 2010), or under leaf litter or other debris (Williams et al. 2014).

Ground disturbance and vegetation removal associated with Project implementation may significantly impact local CBB populations, if present. CBB was once common throughout most of the central and southern California; however, it now appears to be absent from most of it, especially in the central portion of its historic range within California’s Central Valley (Hatfield et al. 2014). Analyses by the Xerces Society et al. (2018) suggest there have been sharp declines in relative abundance by 98% and persistence by 80% over the last ten years. Project-related ground disturbance of CBB habitat could result in significant effects to the species. Because the CBB is a candidate for State listing, take of the species would be subject to Fish and Game

Cecilia Boudreau
California Department of Transportation
April 20, 2023
Page 1

Code 2081. Any take of CBB without appropriate incidental take authorization from CDFW would be a violation of Fish and Game Code.

Recommended Avoidance, Minimization, and/or Mitigation Measures for CBB:

CDFW recommends that a qualified biologist with experience in invertebrate, and particularly bee species, conduct focused surveys for CBB and their requisite habitat features to evaluate impacts resulting from potential ground- and vegetation-disturbing activities that may result from the construction of the Project. The U.S. Fish and Wildlife Rusty Patch Bumble Bee (*Bombus affinis*) Survey Protocol (USFWS 2019) may be used to inform a focused survey method for this species (. However, CDFW recommends that a qualified biologist modify the rusty patch bumble bee protocol as needed for CBB within the Project area and submit the proposed CBB survey method for review and written approval to CDFW.

If CBB is observed in the Project area, consultation with CDFW is warranted to determine if the Project can avoid take. If take cannot be avoided, take authorization prior to any ground- disturbing activities may be warranted. Take authorization would occur through issuance of an ITP by CDFW, pursuant to Fish and Game Code section 2081 subdivision (b).

COMMENT 7: Bats

Issue: The Project area is within the known range of four special status bat species (listed above), as well as potentially other bat species. The NES identifies that a habitat assessment for bats was conducted, but there is no discussion of survey methods, location, findings, or an evaluation of possible Project impacts on bats in the NES or MND. Table 10 of the NES which lists wildlife species observed during camera studies identified that bats were observed in two of the Project culverts. Pallid, Townsend's big-eared and western mastiff bats may roost in a variety of natural and man-made habitats that are present at or near the Project area, including trees, cliffs, and man-made structures such as buildings, bridges and culverts. Western red bats roost in trees, in forest habitats adjacent to streams, fields, or urban areas. Without appropriate avoidance and minimization measures for bats, Project activities may result in potentially significant impacts to roosting or maternal bats, including potential inadvertent entrapment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals.

Recommended Avoidance, Minimization, and/or Mitigation Measures for Bats:

CDFW advises that a qualified biologist conduct focused surveys for bats and potential roosting habitat within 400 feet of the Project site prior to Project activities. Avoidance whenever possible is encouraged via delineation and observance of a no-disturbance buffer according to activity and species, as recommended in Table 7-

Cecilia Boudreau
California Department of Transportation
April 20, 2023
Page 1

1 of "Caltrans Bat Mitigation: A Guide to Developing Feasible and Effective Solutions" (H. T. Harvey & Associates 2021), ranging from 100 feet to 400 feet. If roosting bats are observed on the Project area and buffer areas, CDFW recommends that Caltrans stop work in the buffer area and coordinate with CDFW for site-specific impact minimization recommendations.

II. Editorial Comments and/or Suggestions

Nesting birds: CDFW encourages that Project implementation occur during the bird non-nesting season; however, if ground-disturbing or vegetation-disturbing activities must occur during the breeding season (February 1 through September 15), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above.

The MND includes avoidance and minimization measures for nesting birds that include pre-construction nesting bird surveys within the PIA, and minimum no-disturbance buffers of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. To evaluate Project-related impacts on nesting birds, CDFW recommends that a qualified wildlife biologist conduct pre-activity surveys for active nests no more than seven days prior to the start of ground or vegetation disturbance to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover the minimum buffer distances so that the survey can adequately identify nests, determine their status, and ensure sufficient no-disturbance buffers.

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. The CNDDDB field survey form can be found at the following link: <https://www.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://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

FILING FEES

If it is determined that the Project has the potential to impact biological resources, an assessment of filing fees will be 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

Cecilia Boudreau
California Department of Transportation
April 20, 2023
Page 1

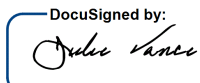
approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish and Game Code, § 711.4; Pub. Resources Code, § 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the Project to assist Caltrans in identifying and mitigating the Project's impacts on biological resources.

More information on survey and monitoring protocols for sensitive species can be found at CDFW's website (<https://www.wildlife.ca.gov/Conservation/Survey-Protocols>). If you have any questions, please contact Mindy Trask, Senior Environmental Scientist (Specialist), at the address provided on this letterhead, by telephone at (559) 939-0282, or by electronic mail at Mary.Trask@wildlife.ca.gov.

Sincerely,

DocuSigned by:

FA83F09FE08945A...
Julie A. Vance
Regional Manager

ATTACHMENTS

Literature Cited
Recommended Mitigation Monitoring and Reporting Program (MMRP)

Cecilia Boudreau
California Department of Transportation
April 20, 2023
Page 1

LITERATURE CITED

- California Burrowing Owl Consortium (CBOC). 1993. Burrowing owl survey protocol and mitigation guidelines. April 1993.
- CDFG. 2012. Staff Report on Burrowing Owl Mitigation. California Department of Fish and Game. March 7, 2012.
- CDFW. 2023. Biogeographic Information and Observation System, Version 6 (BIOS 6). <https://www.wildlife.ca.gov/Data/BIOS> (accessed April 4, 2023).
- Gervais, J.A., D.D. Rosenberg, and L.A. Comrack. Burrowing Owl (*Athene cunicularia*) in Shuford, W.D. and T. Gardali, editors. 2008. *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern*. In: California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento, California, USA.
- Goulson, D. 2010. Bumblebees: Behaviour, Ecology, and Conservation. Oxford University Press, New York. 317pp.
- Hatfield, R, S. Colla, S. Jepsen, L. Richardson, R. Thorp, and S. Foltz Jordan. 2014. Draft IUCN Assessments for North American Bombus spp. for the North American IUCN Bumble Bee Specialist Group. The Xerces Society for Invertebrate Conservation, www.xerces.org, Portland, OR.
- Hatfield, R., Jepsen, S., Thorp, R., Richardson, L. & Colla, S. 2015. *Bombus crotchii*. The IUCN Red List of Threatened Species. <http://dx.doi.org/10.2305/IUCN.UK.2015--2.RLTS.T44937582A46440211.en>. Accessed April 4, 2023.
- H. T. Harvey & Associates. 2021. Caltrans Bat Mitigation: A Guide to Developing Feasible and Effective Solutions. Prepared for California Department of Transportation, Sacramento, CA. Updated October 2021. 212 pp.
- Morey, S. 2005. Tehachapi slender salamander in: Zeiner, D.C., W.F.Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Department of Fish and Game, Sacramento, California. <https://wildlife.ca.gov/Data/CWHR/Life-History-and-Range> (accessed April 3, 2023).
- U. S. Fish and Wildlife Service (USFWS). 2019. *Survey protocols for the rusty patched bumble bee (Bombus affinis)*. United States Fish and Wildlife Service. October 8, 2019.

Cecilia Boudreau
California Department of Transportation
April 20, 2023
Page 1

Williams, D. F. 1986. Mammalian species of special concern in California. California Department of Fish and Game, Sacramento. Admin. Rep. 86-1. 112pp.

Williams, P. H., R. W. Thorp, L. L. Richardson, and S. R. Colla. 2014. The Bumble Bees of North America: An Identification guide. Princeton University Press, Princeton, New Jersey, USA. 208 pp.

Xerces Society for Invertebrate Conservation, Defenders of Wildlife, and Center for Food Safety. 2018. A petition to the State of California fish and game commission to list the Crotch bumble bee (*Bombus crotchii*), Franklin's bumble bee (*Bombus franklini*), Suckley cuckoo bumble bee (*Bombus suckleyi*), and western bumble bee (*Bombus occidentalis occidentalis*) as Endangered under the California Endangered Species Act. October 2018.

Cecilia Boudreau
 California Department of Transportation
 April 20, 2023
 Page 1

**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
 RECOMMENDED MITIGATION MONITORING AND REPORTING PROGRAM
 (MMRP)**

PROJECT: Caltrans State Route 58 Truck Climbing Lane Project in Kern County

CDFW provides the following measures be incorporated into the MMRP for the Project:

RECOMMENDED MITIGATION MEASURE	STATUS/DATE/INITIALS
<i>Before Disturbing Soil or Vegetation</i>	
Blasting avoidance	
Surveys for Tehachapi slender salamander	
Potential TSS Section 2081 ITP	
Potential SWHA Section 2081 ITP	
Surveys for BUOW	
Surveys for Crotch bumblebee (CBB)	
Potential CBB Section 2081 ITP	
Surveys for bats	
Nesting bird pre-construction survey	
<i>During Construction</i>	
SWHA nest no-disturbance buffer	
Golden eagle nest no-disturbance buffer	
BUOW no-disturbance buffer	
CBB no-disturbance buffer	
Bat no-disturbance buffer	
<i>After Construction</i>	
TSS habitat restoration, maintenance and monitoring	
SWHA habitat mitigation	