Memo Report

To:	David Oulrey 827 7th Street, Room 225, Sacramento, CA 95814	From:	John Holson, Senior Biologist Stantec Consulting Services, Inc.
Cc:	Ryan Chen, Stantec Project Manager Stantec Consulting Services, Inc.	Date:	July 29, 2022

Reference: **Biological Resource Survey and Report for the 3100 52nd Avenue Truck Parking Lot Expansion Project (Assessor's Parcel Number: 041-00092-001)**

BACKGROUND AND PURPOSE

This memorandum report documents the results of biological resources surveys conducted by Stantec biologist Brendan Cohen, on June 24, 2022. The surveys were conducted in accordance with the Final South Sacramento Habitat Conservation Plan (SSHCP) associated with the 3100 52nd Avenue Parking Lot Expansion Project (Project) as seen in Attachment 1. Project Vicinity Map.

METHODS

The evaluation for the Project consisted of a pre-field investigation to determine potential special-status species, in addition to a pedestrian survey recording habitats and biological resources that could constrain future activities on the property. The survey area included the Project boundaries (Project Site) outlined in Attachment 1, plus a 250-foot buffer for special-status species as well as nesting passerine bird species, and a 500-foot buffer for nesting raptor species. Photos of the Project Site can be observed in Attachment 2. Representative Photos.

Surveys were conducted in compliance with the *SSHCP Bio Report Guidelines* (County of Sacramento et. al. 2018) as outlined in the SSHCP (County of Sacramento et. al. 2018) for the Project Site. This included a survey for potential wetlands, Other Waters of the US, and special aquatic sites according to the methodology of the US Army Corps of Engineers (Corps) *1987 Wetland Delineation Manual* (Environmental Laboratory 1987) and the Corps Supplement for the *Arid West* Region (USACE 2008).

PRE-FIELD INVESTIGATION

Stantec reviewed the SSHCP (County of Sacramento et. al. 2018), California Native Plant Society (CNPS) Rare Plant Database (CNPS 2022) and the California Natural Diversity Database (California Department of Fish and Wildlife 2022) to review information regarding those special status species known to occur or having the potential to occur in the Project Site. Attachment 3. SSHCP Table 6-2 includes the species covered under the SSHCP and the species that were examined for habitat on the Project Site. In summary, the SSHCP yielded the following results of species that are covered under the SSHCP (County of Sacramento et. al. 2018):

- Eight species of special-status plant species: Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), Dwarf downingia (*Downingia*

pusilla), Legenere (*Legenere limosa*), Pincushion navarretia (*Navarretia myersii*), Sacramento Orcutt grass (*Orcuttia viscida*), Slender Orcutt grass (*Orcuttia tenuis*), and Sanford's arrowhead (*Sagittaria sanfordii*)

- Five species of invertebrates; Vernal pool fairy shrimp (*Branchinecta lynchii*), Midvalley fairy shrimp (*Branchinecta mesovallensis*), vernal pool tadpole shrimp (*Lepidurus packardi*), Ricksecker's water scavenger beetle (*Hydrochara ricksecker*i), and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus)*

- Four species of amphibians or reptiles; California tiger salamander (*Abystoma californiense*), western spadefoot toad (*Spea hammondii*), giant garter snake (*Thamnophis gigas*), and western pond turtle (*Actinmeys marmorata*)

- Nine species of birds; Cooper's hawk (*Accipiter cooperii),* ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), Northern harrier (*Circus cyaneus*), Western burrowing owl (*Athene cunicularia*), Loggerhead shrike (*Lanius ludovicianus*), Greater sandhill crane (*Grus canadensis*), and Tricolored blackbird (*Agelaius tricolor*)

- Two species of mammals; American badger (*Taxidea taxidus*), and western red bat (*Lasiurus blossevillii*)

BIOLOGICAL RESOURCE FIELD SURVEY

Stantec biologist Brendan Cohen conducted a biological habitat assessment and an aquatic resources delineation on June 24th, 2022. The biologist arrived at 11:00 am and checked in with the security guard at the property to obtained access into the Project Site. The weather at the time of the survey was clear skies and the temperature was approximately 80-85 degrees Fahrenheit.

The entire property was surveyed on foot and reviewed for habitat types and suitability to support special-status species. If found, biological resources observed in or near the Project site would be flagged, documented by photograph, and mapped using a handheld Global Positioning System (GPS).

RESULTS

Observations recorded during the field survey showed that the study area was highly disturbed and showed signs that the soil had been manipulated by frequent grading, disking, or other disturbance. Aerial photographs (Google Earth 2022) show that the site is graded on annual basis and has been since at least 2006. The site is surrounded by urban and industrial development including large warehouses to the North, an active railroad to the west, residential complexes to the south, and a vegetated fallow field to the east.

Although the site is heavily disturbed an assortment of annual grasses and forbs and several ornamental trees cover the site; the site therefore, can be classified as *Wild Oats and Annual Brome Grassland* according to the Manual of California Vegetation (Sawyer et. al. 2009). This habitat type is classified in Chapter 3 of the SSCHCP as Valley grassland (County of Sacramento et. al. 2018). In total, seven covered species with potential to occur based on SSHCP modeled

habitat: tricolored blackbird, Swainson's hawk, Western burrowing owl, loggerhead shrike, Northern harrier, white-tailed kite, and American badger.

The Valley grassland habitat, though disturbed, is considered habitat for these species and is mapped as such in the SSHCP (County of Sacrament et. al. 2018). Although there is habitat for burrowing owl, however no suitable burrows were observed, and the soils were heavily compacted at the time of the survey. The ornamental trees onsite provide limited and marginal nesting habitat for SSHCP raptor species such as Swainson's hawk, loggerhead shrike, and white-tailed kite.

No nesting birds, common or special-status, were observed on the Project Site during the time of the surveys. In addition, no blue elderberry shrubs (associated with the Valley elderberry longhorn beetle) were observed, nor were any other sensitive biological resources observed on the Project site. No aquatic resources including wetlands, other waters, or special aquatic sites were found during the survey.

DISCUSSION

Based on the results of the survey as well as the mitigation guidelines outlined in the SSHCP (County of Sacramento et. al. 2018), several avoidance and mitigation measures (AMMs) are applicable to the Project site. These pertain to the species with potential to occur, and cover tricolored blackbird, Swainson's hawk, Western burrowing owl, and the remaining raptor species. AMMs for American Badger were not included in the SSHCP other than those for general species. These are included in Attachment 4. Applicable AMMs from the SSHCP.

In addition, it is recommended that pre-construction surveys for nesting birds occurs if construction is to occur between February 28 and September 1st. Pre-construction surveys should occur within seven days prior to construction.

Please do not hesitate to call (916-397-9832) or email (John.Holson@stantec.com) with any comments or questions.

Stantec Consulting Services, Inc.

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SOURCES CITED

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Attachment 1
Project Vicinity Map


Attachment 1. Project Vicinity Map
3100 52nd Avenue Truck Parking Lot Expansion Project
Legend
Photo Point
Project Site
Photo Point 1
Photo Point 2
Photo Point 4
Photo Point 5
Nancy Ln
Painter Tech
Sav Bryce Beauty
Google Earth
200 ft
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Attachment 2
Representative Photographs

Photo 1. Looking north at valley grassland vegetation on the Project site.

Photo 2. Looking south at the non-native, valley grassland on the Project site.

Photo 3. Looking east at a large Chinese elm tree on the Project site.

Photo 4.Looking to the north of giant reed cane vegetation observed on the Project site.

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Attachment 3
SSHCP Table 6-2

Table 6-2
Covered Species Vulnerability to Environmental Stressors

Covered Species	Temporary Environmental Stressors								Permanent Environmental Stressors															
	Construction Noise	*Construction Ground Vibration*	*Construction Lighting*	*Construction Dust*	*Increased Human Presence*	*Laydown or Trampling*	*Construction Trash and Debris*	*Temporary Alterations to Hydrographs and Water Quality Effects*	*Loss of Land Covers and Covered Species Habitat*	*Habitat Fragmentation*	*Wildlife Community Alterations*	*Permanent Alterations to Hydrographs and Water Quality Effects*	*Vernal Pool Hydrologic Alterations*	*Invasive Plants*	*Invasive Animals*	*Mesopredators*	*Pesticides and Fertilizers*	*Chronic Ground Vibration and Noise*	*Lighting*	*Increased Human Activity*	*Increased Wildfire*	*Wildlife Disease*	*Vehicle and Aircraft Collisions with Wildlife*	*Aboveground Utilities*
Plants																								
Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*)			X	X	X	X	X	X	X	X		X	X	X	X		X		X	X	X			
Boggs Lake hedge-hyssop (*Gratiola heterosepala*)			X	X	X	X	X	X	X	X		X	X	X	X		X		X	X	X			
Dwarf downingia (*Downingia pusilla)*			X	X	X	X	X	X	X	X		X	X	X	X		X		X	X	X			
Legenere (*Legenere limosa)*			X	X	X	X	X	X	X	X		X	X	X	X		X		X	X	X			
Pincushion navarretia (*Navarretia myersii)*			X	X	X	X	X	X	X	X		X	X	X	X		X		X	X	X			
Sacramento Orcutt grass (*Orcuttia viscida*)			X	X	X	X	X	X	X	X		X	X	X	X		X		X	X	X			
Slender Orcutt grass (*Orcuttia tenuis*)			X	X	X	X	X	X	X	X		X	X	X	X		X		X	X	X			

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Sanford's arrowhead (*Sagittaria sanfordii*)			X	X	X	X	X	X	X	X		X		X	X		X		X	X	X			
Invertebrates																									
Vernal pool fairy shrimp (*Branchinecta lynchi*)			X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X			
Midvalley fairy shrimp (*Branchinecta mesovallensis*)			X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X			
Vernal pool tadpole shrimp			X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X			
Ricksecker's water scavenger beetle (*Hydrochara ricksecker*i)			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)			X	X	X	X	X	X	X	X	X	X		X	X		X		X	X	X			

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Reptiles and Amphibians																									
California tiger salamander (*Ambystoma californiense*)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Western spadefoot (*Spea hammondii*)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Giant gartersnake (*Thamnophis gigas*)	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
Western pond turtle (*Actinemys marmorata*)	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
Birds																									
Cooper's hawk (*Accipiter cooperii*)	X	X	X		X			X	X	X	X	X				X	X	X	X	X	X	X	X	X	X
Ferruginous hawk (*Buteo regalis*)					X			X	X	X	X	X					X			X	X	X	X	X	X

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Swainson's hawk (*Buteo swainsoni*)	X	X	X	X	X		X		X	X	X					X		X	X	X	X	X	X	X	X
White-tailed kite (*Elanus leucurus*)	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
Northern harrier (*Circus cyaneus*)	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
Western burrowing owl (*Athene cunicularia*)	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X
Loggerhead shrike (*Lanius ludovicianus*)	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X
Greater sandhill crane (*Grus canadensis*)	X	X	X	X	X	X	X	X	X	X		X					X	X	X	X	X	X	X	X	X
Tricolored blackbird (*Agelaius tricolor*)	X	X	X	X	X		X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X

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Mammals																									
American badger (*Taxidea taxus*)	X	X	X		X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X		
Western red bat (*Lasiurus blossevillii*)	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X		X	

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Attachment 4
Applicable AMMS from the SSHCP

Design with community in mind

AMM Number	AMM Name	Description
General Covered Species Take AMMs Applicable to the Project Site		
SPECIES-1	Litter Removal Program	A litter control program will be instituted for the entire Project site. All workers will ensure that their food scraps, paper wrappers, food containers, cans, bottles, and other trash are deposited in covered or closed trash containers. All garbage will be removed from the Project site at the end of each work day, and construction personnel will not feed or otherwise attract wildlife to the area where construction activities are taking place.
SPECIES-2	No Pets in Construction Area	To avoid harm and harassment of native species, workers and visitors will not bring pets onto a Project site.
SPECIES-3	Take Report	If accidental injury or death of any Covered Species occurs, workers will immediately inform the approved biologist or on-site monitor and site supervisor. The approved biologist or on-site monitor will phone the appropriate contact person at the Implementing Entity. The Implementing Entity will immediately contact the Wildlife Agencies by telephone. A memorandum will be provided to the Implementing Entity and Wildlife Agencies within 1 working day of the incident. The report will provide the date and location of the incident, number of individuals taken, the circumstances resulting in the take, and any corrective measures taken to prevent additional take.
SPECIES-4	Post-Construction Compliance Report	A post-construction compliance report will be submitted to the SSHCP Implementing Entity within 30 calendar days of completion of construction activities or within 30 calendar days of any break in construction activity that lasts more than 30 days. The report will detail the construction start and completion dates, any information about meeting or failing to meet species take Avoidance and Minimization Measures (AMM), effectiveness of each AMM that was applied at the Project site, and any known Project effects to Covered Species.
Covered Species AMMs Applicable to the Project Site		
Tricolored Blackbird		
TCB-1	Tricolored Blackbird Surveys	If modeled habitat for tricolored blackbird is present within a Covered Activity's Project footprint or within 500 feet of a Project footprint, then an approved biologist will conduct a field investigation to determine if existing or potential nesting or foraging sites are present within the Project footprint and adjacent areas within 500 feet of the Project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Within the Plan Area, potential tricolor blackbird nest sites are often associated with freshwater marsh and seasonal wetlands, or in thickets of willow,

AMM Number	AMM Name	Description
		blackberry, wild rose, thistle, and other thorny vegetation. Tricolored blackbirds are also known to nest in crops associated with dairy farms. Foraging habitat is associated with annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields (such as large tracts of alfalfa and pastures with continuous haying schedules and recently tilled fields), cattle feedlots, and dairies. The Third-Party Project Proponent will map all existing or potential nesting or foraging sites and provide these maps to the Local Land Use Permittees and Implementing Entity. Nesting sites must also be noted on plans that are submitted to a Local Land Use Permittee. See Chapter 10 for the process to conduct and submit survey information.
TCB-2	Tricolored blackbird Pre-construction Surveys	Pre-construction surveys will be required to determine if active nests are present within a Project footprint or within 500 feet of a Project footprint if existing or potential nest sites were found during design surveys and construction activities will occur during the breeding season (March 1 through September 15). An approved biologist will conduct pre-construction surveys within 30 days and within 3 days of ground-disturbing activities, and within the proposed Project footprint and 500 feet of the proposed Project footprint to determine the presence of nesting tricolored blackbird. Pre-construction surveys will be conducted during the breeding season (March 1 through August 31). Surveys conducted in February (to meet pre-construction survey requirements for work starting in March) must be conducted within 14 days and 3 days in advance of ground-disturbing activities. If a nest is present, then TCB-3 and TCB-4 will be implemented. The approved biologist will inform the Land Use Authority Permittee and the Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies.
TCB-3	Tricolored Blackbird Nest Buffer	If active nests are found within the Project footprint or within 500 feet of any Project-related Covered Activity, the Third-Party Project Proponent will establish a 500-foot temporary buffer around the active nest until the young have fledged.
TCB-4	Tricolored Blackbird Nest Buffer Monitoring	If nesting tricolored blackbirds are present within the Project footprint or within 500 feet of any Project-related Covered Activity, then an approved biologist experienced with tricolored blackbird behavior will be retained by the Third-Party Project Proponent to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist will be on site daily while construction-related activities are taking place near the disturbance buffer. Work within the nest disturbance buffer will not be permitted. If the approved biologist determines that tricolored blackbirds are exhibiting agitated behavior, construction will cease until the buffer size is increased to a distance necessary to result in no harm or harassment to the nesting tricolored blackbirds. If the biologist determines that the colonies are at risk, a meeting with the Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies will be held to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a that a tricolored blackbird flies into an active construction zone (i.e., outside the buffer zone).

AMM Number	AMM Name	Description
Swainson's Hawk		
SWHA-1	Swainson's Hawk Surveys	If modeled habitat for Swainson's hawk (Figure 3-25) is present within a Covered Activity's Project footprint or within 0.25 mile of a Project footprint, then an approved biologist will conduct a survey to determine if existing or potential nesting sites are present within the Project footprint and adjacent areas within 0.25 mile of the Project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Nest sites are often associated with Riparian land cover, but also include lone trees in fields, trees along roadways, and trees around structures. Nest trees may include, but are not limited to, Fremont's cottonwood (*Populus fremontii*), oaks (*Quercus* spp.), willows (*Salix* spp.), walnuts (*Juglans* spp.), eucalyptus (*Eucalyptus* spp.), pines (*Pinus* spp.), and Deodar cedar (*Cedrus deodara*). The Third-Party Project Proponent will map all existing and potential nesting sites and provide these maps to the Local Land Use Permittees and Implementing Entity. Nesting sites must also be noted on plans that are submitted to a Local Land Use Permittee. See Chapter 10 for the process to conduct and submit survey information.
SWHA-2	Swainson's Hawk Pre-Construction Surveys	Pre-construction surveys will be required to determine if active nests are present within a Project footprint or within 0.25 mile of a Project footprint if existing or potential nest sites were found during initial surveys and construction activities will occur during the breeding season (March 1 through September 15). An approved biologist will conduct pre-construction surveys within 30 days and 3 days of ground-disturbing activities to determine presence of nesting Swainson's hawk. Pre-construction surveys will be conducted during the breeding season (March 1 through September 15). If a nest is present, then SWHA-3 and SWHA-4 will be implemented. The approved biologist will inform the Land Use Authority Permittee and Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies.
SWHA-3	Swainson's Hawk Nest Buffer	If active nests are found within the Project footprint or within 0.25 mile of any Project-related Covered Activity, the Third-Party Project Proponent will establish a 0.25 mile disturbance buffer around the active nest until the young have fledged, with concurrence from the Wildlife Agencies.
SWHA-4	Swainson's Hawk Nest Buffer Monitoring	If nesting Swainson's hawks are present within the Project footprint or within 0.25 mile of any Project-related Covered Activity, then an approved biologist experienced with Swainson's hawk behavior will be retained by the Third-Party Project Proponent to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist will be on site daily while construction-related activities are taking place within the buffer. Work within the temporary nest disturbance buffer can occur with the written permission of the Implementing Entity and Wildlife Agencies. If nesting Swainson's hawks begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the approved biologist will have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies will meet to

AMM Number	AMM Name	Description
		determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a Swainson's hawk flies into an active construction zone (i.e., outside the buffer zone).
Western Burrowing Owl		
WBO-1	Western Burrowing Owl Surveys	Surveys within modeled habitat are required for both the breeding and non-breeding season. If the Project site falls within modeled habitat, an approved biologist will survey the Project site and map all burrows, noting any burrows that may be occupied. Occupied burrows are often (but not always) indicated by tracks, feathers, egg shell fragments, pellets, prey remains, and/or excrement. Surveying and mapping will be conducted by the approved biologist while walking transects throughout the entire Project site plus all accessible areas within a 250-foot radius from the Project site. The centerline of these transects will be no more than 50 feet apart and will vary in width to account for changes in terrain and vegetation that can preclude complete visual coverage of the area. For example, in hilly terrain with patches of tall grass, transects will be closer together, and in open areas with little vegetation, they can be 50 feet apart. This methodology is consistent with current survey protocols for this species (California Burrowing Owl Consortium 1993). Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. If suitable habitat is identified during the initial survey, and if the Project does not fully avoid the habitat, pre-construction surveys will be required. Burrowing owl habitat is fully avoided if Project-related activities do not impinge on a 250-foot buffer established by the approved biologist around suitable burrows. See Chapter 10 for the process to conduct and submit survey information.
WBO-2	Western Burrowing Owl Pre-Construction Surveys	Prior to any Covered Activity ground disturbance, an approved biologist will conduct pre-construction surveys in all areas that were identified as suitable habitat during the initial surveys. The purpose of the pre-construction surveys is to document the presence or absence of burrowing owls on the Project site, particularly in areas within 250 feet of construction activities. To maximize the likelihood of detecting owls, the pre-construction survey will last a minimum of 3 hours. The survey will begin 1 hour before sunrise and continue until 2 hours after sunrise (3 hours total), or begin 2 hours before sunset and continue until 1 hour after sunset. Additional time may be required for large Project sites. A minimum of two pre-construction surveys will be conducted (if owls are detected on the first survey, a second survey is not needed). All owls observed will be counted and their location will be mapped. Surveys will conclude no more than 2 calendar days prior to construction. Therefore, the Third-Party Project Proponent must begin surveys no more than 4 days prior to construction (2 days of surveying plus up to 2 days between surveys and construction). To avoid last-minute changes in schedule or contracting that may occur if burrowing owls are found, the Third-Party Project Proponent may also conduct a preliminary survey up to 15 days before construction. This preliminary survey

AMM Number	AMM Name	Description
		may count as the first of the two required surveys as long as the second survey concludes no more than 2 calendar days in advance of construction.
WBO-3	Burrowing Owl Avoidance	If western burrowing owl or evidence of western burrowing owl is observed on the Project site or within 250 feet of the Project site during pre-construction surveys, then the following will occur: During Breeding Season: If the approved biologist finds evidence of western burrowing owls within a Project site during the breeding season (February 1 through August 31), all Project-related activities will avoid nest sites during the remainder of the breeding season or while the nest remains occupied by adults or young (nest occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance is establishment of a minimum 250-foot buffer zone around nests. Construction and other Project-related activities may occur outside of the 250-foot buffer zone. Construction and other Project-related activities may be allowed inside of the 250-foot non-disturbance buffer during the breeding season if the nest is not disturbed, and the Third-Party Project Proponent develops an avoidance, minimization, and monitoring plan that is approved by the Implementing Entity and Wildlife Agencies prior to Project construction based on the following criteria: • The Implementing Entity and Wildlife Agencies approve of the avoidance and minimization plan provided by the Project applicant. • An approved biologist monitors the owls for at least 3 days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction). • The same approved biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities. If there is any change in owl nesting and foraging behavior as a result of construction activities, the approved biologist will have authority to shut down activities within the 250-foot buffer. Construction cannot resume within the 250-foot buffer until any owls present are no longer affected by nearby construction activities, and with written concurrence from the Wildlife Agencies. If monitoring by the approved biologist indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use, the non-disturbance buffer zone may be removed if approved by the Wildlife Agencies. The approved biologist will excavate the burrow in accordance with the latest California Department of Fish and Wildlife guidelines for burrowing owl to prevent reoccupation after receiving approval from the Wildlife Agencies. The Implementing Entity and Wildlife Agencies will respond to a request from the Third-Party Project Proponent to review the proposed construction monitoring plan within 21 days.

AMM Number	AMM Name	Description
		During Non-Breeding Season: During the non-breeding season (September 1 through January 31), the approved biologist will establish a minimum 250-foot non-disturbance buffer around occupied burrows. Construction activities outside of this 250-foot buffer will be allowed. Construction activities within the non-disturbance buffer will be allowed if the following criteria are met to prevent owls from abandoning over-wintering sites: • An approved biologist monitors the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction). • The same approved biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities. • If there is any change in owl foraging behavior as a result of construction activities, the approved biologist will have authority to shut down activities within the 250-foot buffer. • If the owls are gone for at least 1 week, the Third-Party Project Proponent may request approval from the Implementing Entity and Wildlife Agencies that an approved biologist excavate usable burrows and install one-way exclusionary devices to prevent owls from re-occupying the site. After all usable burrows are excavated, the buffer zone will be removed and construction may continue.
WBO-4	Burrowing Owl Construction Monitoring	During construction of Covered Activities, 250-foot construction buffer zones will be established and maintained around any occupied burrow. An approved biologist will monitor the site to ensure that buffers are enforced and owls are not disturbed. The approved biologist will also train construction personnel on avoidance procedures, buffer zones, and protocols in the event that a burrowing owl flies into an active construction zone.
WBO-5	Burrowing Owl Passive Relocation	Passive relocation is not allowed without the express written approval of the Wildlife Agencies. Passive owl relocation may be allowed on a case-by-case basis on Project sites during the non-breeding season (September 1 through January 31) with the written approval of the Wildlife Agencies if the other measures described in this condition preclude work from continuing. Passive relocation must be done in accordance with the latest California Department of Fish and Wildlife guidelines for burrowing owl. Passive relocation will only be proposed if the burrow needing to be removed or with the potential to collapse from construction activities is the result of a Covered Activity. If passive relocation is approved by the Wildlife Agencies, an approved biologist can passively exclude birds from their burrows during the non-breeding season by installing one-way doors in burrow entrances. These doors will be in place for 48 hours to ensure that owls have left the burrow, and then the biologist will excavate the burrow to prevent reoccupation. Burrows will be excavated using hand tools only. During excavation, an escape route will be maintained at all times. This may include inserting an artificial structure into the burrow to avoid having materials collapse into the burrow

AMM Number	AMM Name	Description
		and trap owls inside. Other methods of passive relocation, based on best available science, may be approved by the Wildlife Agencies over the 50-year Permit Term.
WBO-7	Rodent Control	Rodent control will be allowed only in developed portions of a Covered Activity Project site within western burrowing owl modeled habitat. Where rodent control is allowed, the method of rodent control will comply with the methods of rodent control discussed in the 4(d) Rule published in the U.S. Fish and Wildlife Service's (2004) final listing rule for tiger salamander.
Covered Raptor Species		
RAPTOR-1	Raptor Survey	If modeled habitat for a covered raptor species (Figures 3-20, 3-23, 3-24, or 3-28) is present within a Covered Activity's Project footprint or within 0.25 mile of a Project footprint, then an approved biologist will conduct a field investigation to determine if existing or potential nesting sites are present within the Project footprint and adjacent areas within 0.25 mile of the Project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. The Third-Party Project Proponent will map all existing or potential nesting sites and provide these maps to the Local Land Use Permittees and Implementing Entity. Nesting sites must also be noted on plans that are submitted to a Local Land Use Permittee. See Chapter 10 for the process to conduct and submit survey information.
RAPTOR-2	Raptor Pre-Construction Surveys	Pre-construction surveys will be required to determine if active nests are present with a Project footprint or within 0.25 mile of a Project footprint if existing or potential nest sites are found during initial surveys and construction activities will occur during the raptor breeding season. An approved biologist will conduct pre-construction surveys within 30 days and 3 days of ground-disturbing activities within the proposed Project footprint and within 0.25 mile of the proposed Project footprint to determine presence of nesting covered raptor species. Pre-construction surveys will be conducted during the raptor breeding season. If a nest is present, then RAPTOR-3 and RAPTOR-4 will be implemented. The approved biologist will inform the Land Use Authority Permittee and Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies.
RAPTOR-3	Raptor Nest/Roost Buffer	If active nests are found within the Project footprint or within 0.25 mile of any Project-related Covered Activity, the Third-Party Project Proponent will establish a 0.25 mile temporary nest disturbance buffer around the active nest until the young have fledged.
RAPTOR-4	Raptor Nest/Roost Buffer Monitoring	If Project-related Covered Activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then an approved biologist experienced with raptor behavior will be retained by the Third-Party Project Proponent to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist will be on site daily while construction-

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		related activities are taking place within the disturbance buffer. Work within the temporary nest disturbance buffer can occur with the written permission of the Implementing Entity and Wildlife Agencies. If nesting raptors begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the approved biologist/monitor will have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies will meet to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a covered raptor species flies into an active construction zone (i.e., outside the buffer zone).