

# Memo

То:	Julie Newton, Senior Planner, Sacramento County Planning and Environmental Review
From:	Dustin Brown, Senior Biologist Ginger Fodge, Principal
Date:	21 September 2023
Subject:	6809 Fleming Avenue South Sacramento Habitat Conservation Plan Biological Survey Report

#### Introduction

Mr. Prem Singh is proposing a tentative parcel map for a property at 6809 Fleming Avenue in unincorporated Sacramento County, California (**Figure 1**). The property is located in Section 3, Township 7 North, Range 5 East as shown on the *Florin, California* 7.5-minute United States Geological Survey quadrangle (USGS 2021). This memo is intended to provide biological resource information for the project parcel as outlined in the Sacramento County *SSHCP Biological Survey Report Guidelines* (County of Sacramento 2021).

The 6809 Fleming Avenue tentative parcel map project (Project) proposes to spilt an existing 1.52-acre parcel (APN 051-0120-005) into four (4) residential parcels (total of approximately 0.74 acre gross) and one (1) common/open area parcel (approximately 0.78 acre gross). The four residential parcels would be accessed via a new 150-foot-long access roadway that parallels the western limit of the parcel. The common/open area parcel would encompass existing drainage easements and a 100-year floodplain associated with Florin Creek, which passes through the northern end of the Project property. No development would occur on the common/open area parcel and/or within the 100-year floodplain and there would be no effects to Florin Creek, which occurs within a drainage easement. The four residential parcels would be situated in the southern half of the property and be accessed from Fleming Avenue via a new access roadway. A copy of the preliminary parcel map is included as **Attachment A**.

#### Methods

Madrone senior biologist Dustin Brown conducted a survey of the Project site and accessible areas within 250 feet (Study Area) on 29 June 2023. Mr. Brown's resume is on file with Sacramento County. Prior to his site visit, Mr. Brown consulted the South Sacramento Habitat Conservation Plan (SSHCP) baseline land cover map and SSHCP modeled species habitats identified for the Project site. Mr. Brown also reviewed aerial photography of the site in preparation for his survey.



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6809 Fleming Avenue Tentative Parcel Map 21 September 2023 Page 2 of 9

During the 29 June 2023 survey Mr. Brown walked meandering pedestrian transects through the Project site and areas open to the public within 250-feet of the Project site. Mr. Brown surveyed the Project site for the presence of aquatic resources, special-status species habitats, and other biological resources such as protected native oak trees, or nesting birds. In addition, all land cover types were identified within the Project site and dominant plant species were recorded. A species list of all wildlife observed during the survey was also recorded. The survey commenced at approximately 0900 hours, which is an ideal time of the day to observe nesting birds and other wildlife.

#### Results

#### **General Site Conditions**

The Project site is located within a semi-rural portion of Sacramento County that is surrounded by higher density developed areas. Land use in the immediate vicinity of the Project includes low-density and medium-density residential lots. The Project site sits at an elevation of 20 to 30 feet above mean sea level, is relatively flat, and gently slopes from south to north. The southern portion of the Project site contains a single-family home, detached garage/accessory dwelling unit, sheds, a vegetable garden, and an above ground pool. The central and eastern portion of the Project site is currently being used to store items including three vehicles, a car hauling trailer, several jet skis and trailers, wooden pallets, firewood, and other various refuse items. Most of the Project site is fenced and contains two large dogs that guard the property. To the north of the fenced yard there is a paved multi-purpose path and Florin Creek, which was dry at the time of the survey.

A total of ten trees were identified within the Project area including seven nonnative trees consisting of plum (*Prunus* sp.), ash (*Fraxinus* sp.), olive (*Olea europea*), and crape myrtle (*Lagerstroemia indica*). Two small native northern California black walnut (*Juglans hindsii*) and one interior live oak (*Quercus wislizeni*) were also identified in the Project site (**Figure 2**). There is a roadside ditch located along Fleming Avenue within the Project site. This feature did not contain hydrophytic vegetation, hydric soils, or wetland hydrology and is not an aquatic resource. It appears that this feature only contains water during and shortly after rain events. Please see **Attachment B** for representative photographs of the Project site.

#### Land Cover

The SSHCP baseline land cover map shows that the Study Area supports low-density development, valley grassland, stream/creek, and high-density development (**Figure 3**). Because the SSHCP baseline land cover mapping was largely conducted in 2004 via analyzing aerial imagery at a very large scale, Mr. Brown's survey included "ground truthing" the accuracy of the SSHCP baseline land cover mapping for the Study Area. Mr. Brown's survey found that the Study Area supports areas of low-density development, valley grassland, and stream/creek land cover types. **Figure 4** shows and **Table 1** summarizes the existing SSHCP land covers for the Study Area.

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Туре	Baseline (acres)	Existing (acres)
Natural Land Covers		
Valley Grassland	1.0	0.54
Stream/Creek	0.02	0.08
Total	1.02	0.62
Developed/Non-Habitat Land Co	overs	
Low-Density Development	0.38	0.90
High-Density Development	0.12	0.00
Total	0.50	0.90
GRAND TOTAL	1.52	1.52

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Summation errors may occur due to rounding.

The four proposed residential lots and access road, which comprise an area of 0.74 acre, would be entirely within the area mapped as low-density development. The SSHCP describes low-density development as follows:

The low-density development land cover type consists of relatively sparse residences and other structures, such as farm buildings, and small rural neighborhoods with large individual property sizes per house. Plant nurseries are also included in this category.

The SSHCP classifies low-density development as a developed/non-habitat land cover type that provides little to no SSHCP covered species habitat value. Mr. Brown's survey confirmed that, as a non-habitat land cover type, the low-density development portion of the Study Area does not provide suitable habitat for SSHCP covered species.

The existing land cover mapping shows most of the common/open area parcel as valley grassland, with an inclusion of stream/creek (Florin Creek). Under the SSHCP, valley grassland and stream/creek and considered natural land covers that provide habitat value for covered species.

#### Natural Land Covers in the Study Area

The SSHCP describes valley grassland as follows:

Valley grassland in the SSHCP Plan Area is an annual herbaceous plant community now characterized mostly by naturalized annual grasses. Generally, its composition in the Plan Area varies with geographic, and land use factors, such as rainfall, temperature, elevation, slope, aspect, grazing, and other herbivory (e.g., livestock, wildlife, rodent, songbird, and insect use), and fire frequency and duration. In the Plan Area, valley grassland is dominated by naturalized herbaceous annual forbs, and includes patches with relatively high proportions of native grasses and forbs along the eastern border of the Plan Area.

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Total	0.50	0.90
GRAND TOTAL	1.52	1.52

Table 1. Baseline and Existing Land Covers in the Study Area

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The valley grassland present in the Study Area had been mowed several weeks prior to the survey and was dominated by seaside barley (*Hordeum marinum*), wild oat (*Avena fatua*), hairy hawkbit (*Leontadon saxatilis*), ripgut brome (*Bromus diandrus*), field bindweed (*Convolvulus arvensis*), and chicory (*Chicorium intybus*). There is one native interior live oak located in this land cover along the western Project boundary that will be avoided as part of the Project. As noted above, the area supporting valley grassland would not be designated for development as part of the tentative parcel map. As such, the Project would not convert or otherwise affect the valley grassland land cover type present in the Study Area.

The SSHCP describes the stream/creek land cover within the designated Urban Development Area (UDA) thusly:

Within the UDA, this land cover type includes streams identified by the U.S. Army Corps of Engineers. A separate category was created for aqueducts throughout the Plan Area.

The SSHCP Stream/Creek land cover includes rivers such as the Cosumnes River, streams such as Laguna Creek, and smaller intermittent or perennial creeks. The Stream/Creek land cover type was mapped from aerial photographs. ... Polygons of the Stream and Creek land cover occur in Valley Grassland, Blue Oak Woodland, Blue Oak Savanna, Agriculture, and Developed land cover types.

The SSHCP designates required avoidance buffers (setbacks) for stream/creek features in the UDA. Florin Creek is considered to be a minor tributary to a UDA stream, which requires a minimum 25-foot setback from adjacent development under the SSHCP (Avoidance and Minimization Measure [AMM] STREAM-3). This section of Florin Creek has historically been channelized and maintained as a storm water conveyance and provides little/no aquatic habitat for SSHCP covered species. As noted above, the creek was dry at the time of Mr. Brown's survey and thus did not support any aquatic species. Regardless of the findings, because this section of Florin Creek is within a combined 75-foot side drainage easement that would be entirely within the common/open area and not subject to disturbance, the Project would not result in any impacts to the stream/creek land cover type.

### Land Cover Impact Summary

The Project impact area is limited to the four residential parcels and access roadway, which is included in the gross acreage for the residential parcel area. The entirety of the common/open area would be avoided. **Table 2** summarizes and **Figure 5** shows expected impacts to SSHCP land cover types. As shown in the table and as described above, the Project would not affect any natural land covers that provide habitat value.

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Туре	Impacted (acres)	Avoided (acres)
Natural Land Covers		
Valley Grassland	0.00	0.54
Stream/Creek	0.00	0.08
Developed/Non-Habitat Land	Covers	
Low-Density Development	0.74	0.16
GRAND TOTAL	0.74	0.78

#### Table 2. Existing Land Cover Impacts

Summation errors may occur due to rounding.

As proposed, the Project does not appear to trigger any land cover conversion fees because it would not affect any natural land cover types. However, it should be noted that Sacramento County will complete an independent estimate of potential land cover impacts and may assign land cover conversion fees if it determines the Project would affect land cover types that provide habitat value.

#### **Covered Species Habitat**

As noted above, the portion of the Study Area that would support the four residential parcels and access road has a low-density residential land use cover, which does not provide SSHCP covered species habitat value.

Along with baseline land cover, the SSHCP identifies areas of modeled habitat for the SSHCP covered species. Modeled habitat designations shown in the SSHCP are based on each covered species' needs for breeding, foraging, and shelter at each life history stage; information from Plan Area species surveys; documented species occurrences within the Plan Area; and information on species range, including soil type associations and elevation limits. This information was used to generate a map-based model of potential covered species' habitat distribution. The SSHCP notes that "covered species may associate with a land cover at varying degrees of frequency over its lifetime due to seasonal habitat changes (i.e., wet and dry season, crop rotations, irrigation/flooding, food availability), and seasonal changes in a covered species life history and habitat needs."

Madrone queried the SSHCP modeled species habitat for the Study Area. **Table 3** summarizes the results of the query and whether the Project could affect modeled species habitat.

<b>Covered Species with Modeled</b>	Associated SSHCP Land	Potential Impacts
Habitat in Study Area	Cover in Study Area <sup>1</sup>	in the Study Area
Sagittaria sanfordii	Stream/creek	None. The Project will not affect any areas of
Sanford's arrowhead		stream/creek (Florin Creek).
Spea hammondii	Stream/creek (aquatic),	None. The Project will not affect any areas of
Western spadefoot toad	valley grassland (upland)	stream/creek (Florin Creek) or valley grassland.
Emys marmorata	Stream/creek (aquatic),	None. The Project will not affect any areas of
Western pond turtle	valley grassland (upland)	stream/creek (Florin Creek) or valley grassland.

Table 3. SSHCP Modeled Habitat and Potential Impacts for the Study Area

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Agelaius tricolor	Valley grassland	None. The Project will not affect any areas of
Tricolored blackbird	(foraging and nesting)	valley grassland.
Athene cunicularia	Valley grassland	None. The Project will not affect any areas of
Burrowing owl	(wintering)	valley grassland.
Buteo regalis	Valley grassland	None. The Project will not affect any areas of
Ferruginous hawk	(foraging)	valley grassland.
Buteo swainsoni	Valley grassland	None. The Project will not affect any areas of
Swainson's hawk	(foraging)	valley grassland.
Circus hudsonius	Valley grassland	None. The Project will not affect any areas of
Northern harrier	(foraging)	valley grassland.
Elanus leucurus	Valley grassland	None. The Project will not affect any areas of
White-tailed kite	(foraging)	valley grassland.
Lanius ludovicianus	Valley grassland	None. The Project will not affect any areas of
Loggerhead shrike	(foraging)	valley grassland.
Lasiurus blossevillii	Stream/creek, valley	None. The Project will not affect any areas of
Western red bat	grassland (foraging)	stream/creek (Florin Creek) or valley grassland.
Taxidea taxus	Valley grassland (entire	None. The Project will not affect any areas of
American badger	lifecycle)	valley grassland.

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<sup>1</sup> Species-land cover associations from SSHCP Table 3-2.

The Project would not directly affect any natural land covers and thus would not affect any potential habitat for SSHCP covered species. The results of Mr. Brown's Study Area survey confirm this conclusion. However, it should be noted that Sacramento County will complete an independent estimate of potential covered species modeled habitat impacts and may assign species-specific AMMs if it determines the Project would affect modeled and/or potential covered species habitat.

### **Other Resource Protection Considerations**

#### <u>Trees</u>

The SSHCP does not address the removal of individual trees. The Sacramento County Tree Preservation and Protection Ordinance (Sacramento County Code Chapter 19.12), which applies to native oak trees, states that "No person shall trench, grade or fill within the dripline of any tree or destroy, kill or remove any tree as defined, in the designated urban area of the unincorporated area of Sacramento County, on any property, public or private, without a tree permit, or unless authorized as a condition of a discretionary project approval by the Board of Supervisors, County Planning Commission, Zoning Board of Appeals, the Zoning Administrator or the Subdivision Review Committee." As a discretionary project, the parcel map process would address the removal of oak trees as a condition of approval, as appropriate.

Sacramento County Code Chapter 19.04 addresses tree removal from the public right-of-way. Such activity requires a permit from the public works director and may require compensatory mitigation, at the director's discretion.

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The one native oak tree in the Study Area, a 6-inch DBH interior live oak located in the avoided common/open area, would not be affected by the Project. Other non-native trees within the avoided/common area would also not be affected by the Project. Two native California black walnut trees located along the western boundary of the site are in an area that would not be developed and the trees would not be removed. One non-native 24-inch DBH ash tree along the southern edge of the parcel boundary (along Fleming Avenue) will need to be removed during construction. While the Sacramento County Tree Preservation and Protection Ordinance does not apply to non-native trees, the County may address the removal of this tree as part of the discretionary review. If the tree is within the County's road right-of-way, a tree removal permit would be required.

#### Nesting Migratory Birds

The Migratory Bird Treaty Act (MBTA) prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, any native migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11.). Likewise, Section 3513 of the California Fish & Game Code prohibits the "take or possession" of any migratory non-game bird identified under the MBTA. Therefore, activities that may result in the injury or mortality of native migratory birds, including eggs and nestlings, would be prohibited under the MBTA. While the SSHCP provides preventative AMMs for migratory birds that are SSHCP covered species, it does not provide guidance for avoiding impacts to other species not covered by the plan. Construction activity could disrupt nesting migratory birds, which could result in a violation of the MBTA.

#### Roosting Bats

Bats utilize trees and buildings for roosting. If trees are removed and/or buildings demolished at a time when special-status bats (including western red bat, a SSHCP covered species) may be present, the bats could be injured or killed. The one existing residence will remain, but if outbuildings elsewhere on the property need to be removed as part of the project, roosting bats could be injured or killed if they are present at the time of building demolition. Additionally, removal of the 24-inch DBH ash tree along the southern edge of the parcel boundary could affect special-status bats if they are using the tree for roosting at the time of its removal.

### Avoidance and Minimization Measures SSHCP Avoidance and Minimization Measures

If Sacramento County determines SSHCP authorization is required, it may assign SSHCP AMMs to the Project. Although the Project would not directly affect any land cover types that provide habitat value, the County may assign species-specific AMMs due to the Project impact area's proximity to the valley grassland land cover type in the avoided common/open area. These AMMs would need to be applied just prior to and during construction. Given the condition and location of the valley grassland in the Study Area, we anticipate that the County could prescribe the following AMMs:

- Swainson's hawk: SWHA-1 and possibly SWHA-2 through SWHA-5 depending on the results of SWHA-1
- Burrowing owl: WBO-1 and possibly WBO-2 through WBO-4 depending on the results of WBO-1

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The one native oak tree in the Study Area, a 6-inch DBH interior live oak located in the avoided common/open area, would not be affected by the Project. Other non-native trees within the avoided/common area would also not be affected by the Project. Two native California black walnut trees located along the western boundary of the site are in an area that would not be developed and the trees would not be removed. One non-native 24-inch DBH ash tree along the southern edge of the parcel boundary (along Fleming Avenue) will need to be removed during construction. While the Sacramento County Tree Preservation and Protection Ordinance does not apply to non-native trees, the County may address the removal of this tree as part of the discretionary review. If the tree is within the County's road right-of-way, a tree removal permit would be required.

#### Nesting Migratory Birds

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## Avoidance and Minimization Measures SSHCP Avoidance and Minimization Measures

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- Covered raptor species: RAPTOR-1 and possibly RAPTOR-2 through RAPTOR-4 depending on the results of RAPTOR-1
- Western red bat: BAT-1 through BAT-4 depending on the potential presence of roosting habitat

Additionally, if the County determines that SSHCP authorization is required, it may prescribe General SSHCP AMMs as follows:

- BMP-1: Construction Fencing
- BMP-2: Erosion Control
- BMP-3: Equipment Storage and Fueling
- BMP-4: Erodible Materials
- BMP-5: Dust Control
- BMP-6: Construction Lighting
- BMP-8: Training of Construction Staff
- BMP-11: Speed Limit
- STREAM-3: Minor Tributaries to UDA Streams
- SPECIES-1: Litter Removal Program
- SPECIES-2: No Pets in Construction Areas
- SPECIES-3: Take Report
- SPECIES-4: Post-Construction Compliance Report

Descriptions of all SSHCP AMMs are contained in **Attachment C**. If SSHCP authorization is required, Sacramento County would complete an independent review of the Project impacts and may require a different combination of and/or more or fewer AMMs. Note that many of the SSHCP AMMs are similar to conditions of approval routinely required as part of the project review process.

#### **Other Avoidance and Minimization Measures**

To ensure that the Project does not affect any sensitive biological resources not addressed by a SSHCP authorization, we recommend application of the following avoidance and minimization measure:

• Nesting Migratory Birds: If construction is scheduled to begin between February 1 and August 31, a qualified biologist shall conduct a pre-construction nesting bird survey of the Study Area and areas within a 300-foot radius of proposed construction areas, where access is available, no more than 15 days prior to the initiation of construction. The qualified biologist shall survey accessible areas within a 300-foot radius around the project area. If no active nests are found, project activities may proceed as scheduled. If there is a break in construction activity of more than two (2) weeks, then subsequent surveys shall be conducted.

If an active nest is found, active nests shall be avoided, and a no disturbance or destruction buffer shall be determined and established by a qualified biologist. The buffer shall be kept in place until after the breeding nesting season or the qualified biologist confirms the young have fledged, are foraging independently, and the nest is no longer active for the season. The extent of these buffers

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A report summarizing the survey results shall be provided to the County within 30 days of the completed surveys. Reports may be in electronic format and delivered by email.

Roosting Bats: If building demolition or removal of the 24-inch ash tree occurs between the months of April through August (the bat pupping season), a qualified biologist shall conduct a pre-removal roosting bat survey no more than 14 days prior to building demolition and/or tree removal. If the pre-demolition/pre-removal survey indicates that no bat roosts are present, or that roosts are inactive or potential habitat is unoccupied, the demolition/removal may commence. If roosting bats are found, exclusion shall be conducted as recommended by the qualified biologist. For tree removal, a two-step process supervised by the qualified biologist may be utilized. Two-step tree removal occurs over two days and involves removal of all branches that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree. Building exclusion may include installing passive one-way doors or netting when the bats are not present to prevent reoccupation. Once the bats have been excluded and/or are confirmed to have vacated the roost, tree or building removal may occur.

#### Summary

Residential development consistent with the proposed parcel map would not directly affect any SSHCP natural land covers that provide habitat value and thus would not be expected to affect any covered species. As such, if Sacramento County requires the Project to be authorized under the SSHCP, we do not anticipate the current SSHCP land cover conversion fee schedule would apply. However, Sacramento County would complete an independent review of the potential Project impacts and may reach a different conclusion. Because the area that would be developed (parcels 1 through 4) is proximate to an area of valley grassland, a land cover type that does provide habitat value, the County may require application of species-specific SSHCP AMMs regardless of whether any land cover conversion fees are assessed.

#### Literature Cited

County of Sacramento. 2021. SSHCP Biological Survey Report Guidelines.

- County of Sacramento, City of Rancho Cordova, City of Galt, Sacramento County Water Agency, and the Southeast Connector Joint Powers Authority. 2018. Final South Sacramento Habitat Conservation Plan. February. Sacramento, CA.
- U.S. Department of the Interior, Geological Survey (USGS). 2021. Florin, California 7.5-minute quadrangle. Geological Survey. Denver, Colorado.

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# Figures

Figure 1. Site and Vicinity

- Figure 2. Survey Results
- Figure 3. Baseline SSHCP Land Cover
- Figure 4. Existing SSHCP Land Cover
- Figure 5. Land Cover Impacts

# Figures

Figure 1. Site and Vicinity

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Source: United States Geologic Survey, 2021 Section 3, Township 7 North, Range 5 East, MDB&M "Florin, California" 7.5-Minute Topographic Quadrangle Longitude -121.423263, Latitude 38.488157





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Feet 0 50 100 Figure 2 Survey Results





100

**Survey Results** 





N Feet 0 50 100





Figure 3 Baseline SSHCP Land Cover



6809 Fleming Ave Sacramento County, California

N Feet 0 50 100



N Feet 0 50 100

Figure 4 Existing SSHCP Land Cover





N Feet 0 50 100





e MADRONE



 Land Cover Impacts

 6809 Fleming Ave

 Sacramento County, California

# Attachments

Attachment A: Preliminary Parcel Map

Attachment B: Representative Photographs of the Project Area

Attachment C: SSHCP Avoidance and Minimization Measures Checklist

# Attachments

Attachment A: Preliminary Parcel Map

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**Preliminary Parcel Map** 

Preliminary Parcel Map



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**Representative Photographs of the Project Area** 

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Facing northeast from Fleming Avenue at the onsite residence and 24-inch ash tree. Note non-aquatic resource roadside ditch.



Facing east at the non-aquatic resource roadside ditch along Fleming Avenue.



Facing northeast from Fleming Avenue at the onsite residence and 24-inch ash tree. Note non-aquatic resource roadside ditch.



Facing east at the non-aquatic resource roadside ditch along Fleming Avenue.



Facing east at the onsite residence area. This area is low density development and is where the additional homes are proposed to be built.



Facing west at the dry Florin Creek and the paved multi-use path in the northern portion of the Project site. This area will not be developed as part of this project.



Facing east at the onsite residence area. This area is low density development and is where the additional homes are proposed to be built.



Facing west at the dry Florin Creek and the paved multi-use path in the northern portion of the Project site. This area will not be developed as part of this project.



Facing north from the southwestern portion of the Project. Low-Density Development in the foreground and Valley Grassland in the background.



Facing southwest at the native interior live oak along the western Project boundary. This tree will be avoided by the Project.



Facing north from the southwestern portion of the Project. Low-Density Development in the foreground and Valley Grassland in the background.



Facing southwest at the native interior live oak along the western Project boundary. This tree will be avoided by the Project.

6809 Fleming Avenue Representative Site Photographs **SSHCP Avoidance and Minimization Measures Checklist** 

SSHCP Avoidance and Minimization Measures Checklist

# SSHCP Project Specific Avoidance and Minimization Measures <u>THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP</u> <u>\*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document</u>

Based upon review of the SSHCP Permit Application, the Project must be constructed in compliance with the Avoidance and Minimization Measures (AMMs) listed below. The applicant will be responsible for reporting compliance with AMMs as applicable. Please submit all required reporting documents to <u>SSHCP@saccounty.net</u> and reference the project Control Number in the correspondence.

**Instructions**: For each Condition and AMM outlined below, indicate how the Project has or will comply with each provision in the 'Project Compliance' box. If a condition is not applicable to your project, indicate such in the 'Project Compliance' box.

Condition 1. Avoid and Minimize Urban Development Impacts to Watershed Hydrology and Water Quality		
Avoidance and Minimization Measure	Project Compliance	
<b>LID-1 (Stormwater Quality):</b> When the size of a project exceeds the thresholds established by the State Water Resources Control Board (SWRCB) (see the most recent Stormwater Quality Design Manual for the Sacramento and South Placer Regions, or future SWRCB-approved design manuals applicable to the Plan Area), incorporate stormwater management into site design to satisfy the requirements outlined in the most recent Stormwater Quality Design Manual for the Sacramento and South Placer Regions. Stormwater Quality Design Manual for the Sacramento and South Placer Regions. Stormwater management may include groundwater recharge (LID-2) and natural site features (LID-3).	Not applicable. The Project does not exceed the thresholds outlined in Table 3-2 of the Stormwater Quality Design Manual.	
<b>LID-2 (Groundwater Recharge):</b> When siting SSHCP Preserves containing Riparian, Open Water, or Freshwater Marsh SSHCP land cover types, the Implementing Entity will prioritize locations that are suitable for groundwater recharge.	Not applicable.	
<b>LID-3 (Natural Site Features</b> ): Incorporate preservation of a site's natural aquatic features (such as creeks and streams) into project design to retain natural hydrologic patterns and to retain habitat that might be used by Covered Species.	Not applicable; development avoids creek channel.	
Condition 3. Implement Construction Best Management Practices Condition 3 applies to all Covered Activities		
Avoidance and Minimization Measure	Project Compliance	
<b>BMP-1 (Construction Fencing)</b> : Orange construction fencing will be installed to ensure that ground disturbance does not extend beyond the allowed construction footprint (i.e., the limit of project construction plus equipment staging areas and access roads). Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will mark the outer boundary of any Preserve Setback or Stream Setback adjacent to or within the project site with orange construction fencing prior to ground disturbance. This fencing will remain in place until project completion, as identified by the Plan Permittee.	Would apply to Project if HCP authorization required.	
<b>BMP-2 (Erosion Control):</b> Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will install temporary control measures for sediment, stormwater, and pollutant runoff as required by the Plan Permittee to protect water quality and species habitat. Silt fencing or other appropriate sediment control device(s) will be installed downslope of any Covered Activity that disturbs soils.	Would apply to Project if HCP authorization required.	

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# SSHCP Project Specific Avoidance and Minimization Measures <u>THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP</u> <u>\*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document</u>

Fiber rolls and seed mixtures used for erosion control will be certified as free of viable noxious weed seed. As discussed in Section 5.4.2, Covered Species Take Avoidance and Minimization Measures, erosion controls installed in or adjacent to Plan Area modeled habitat for giant gartersnake ( <i>Thamnophis gigas</i> ), western pond turtle ( <i>Actinemys marmorata</i> ), California tiger salamander (California tiger salamander), or western spadefoot (see Chapter 3) must be of appropriate design and materials that will not entrap the species (e.g., not contain mesh netting). Regular monitoring and maintenance of the project's erosion control measures will be conducted until project completion to ensure effective operation of erosion control measures.	
<ul> <li>BMP-3 (Equipment Storage and Fueling): Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will ensure that equipment storage and staging will occur in the development footprint only (not sited in any existing on-site Preserve, planned on-site Preserve, Preserve Setback, Stream Setback, or aquatic land cover type). Fuel storage and equipment fueling will occur away from waterways, stream channels, stream banks, and other environmentally sensitive areas within the development footprint.</li> <li>However, certain equipment storage and fueling activities can be allowed on Preserves within habitat re-establishment/establishment sites (refer to Section 5.2.7) if no location outside of the site is available. If a Covered Activity results in a spill of fuel, hydraulic fluid, lubricants, or other petroleum products, the spill will be absorbed and waste disposed of in a manner to prevent pollutants from entering a waterway, Preserve, Preserve Setback, or Stream Setback.</li> </ul>	Would apply to Project if HCP authorization required.
<b>BMP-4 (Erodible Materials</b> ): Plan Permittees and Third-Party Project Proponents implementing Covered Activities must not deposit erodible materials into waterways. Vegetation clippings, brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks. Erodible material must be disposed of such that it cannot enter a waterway, Preserve, Preserve Setback, Stream Setback, or aquatic land cover type. If water and sludge must be pumped from a subdrain or other structure, the material will be conveyed to a temporary settling basin to prevent sediment from entering a waterway.	Would apply to Project if HCP authorization required.
<b>BMP-5 (Dust Control):</b> Plan Permittees and Third-Party Project Proponents implementing ground- disturbing Covered Activities will water active construction sites regularly, if warranted, to avoid or minimize impacts from construction dust on adjacent vegetation and wildlife habitats. No surface water will be used from aquatic land covers; water will be obtained from a municipal source or existing groundwater well.	Would apply to Project if HCP authorization required.
<b>BMP-6 (Construction Lighting):</b> Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will direct all temporary construction lighting (e.g., lighting used for security or nighttime equipment maintenance) away from adjacent natural habitats, and particularly Riparian and Wetland habitats and wildlife movement areas.	Would apply to Project if HCP authorization required.
<b>BMP-7 (Biological Monitor):</b> If a Covered Activity includes ground disturbance within Covered Species modeled habitat, an approved biologist will be on site during the period of ground disturbance, and may need to be on site during other construction activities depending on the Covered Species affected. After ground-disturbing project activities are complete, the approved biologist will train an individual to act as the on-site construction monitor for the remainder of construction, with the concurrence of the Permitting Agencies. The on-site monitor will attend the training described in BMP-8. The approved biologist and the on-site monitor will have oversight over implementation of Avoidance and Minimization Measures, and will have the authority to stop	Would apply to Project if HCP authorization required.

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<b>BMP-4 (Erodible Materials</b> ): Plan Permittees and Third-Party Project Proponents implementing Covered Activities must not deposit erodible materials into waterways. Vegetation clippings, brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks. Erodible material must be disposed of such that it cannot enter a waterway, Preserve, Preserve Setback, Stream Setback, or aquatic land cover type. If water and sludge must be pumped from a subdrain or other structure, the material will be conveyed to a temporary settling basin to prevent sediment from entering a waterway.	Would apply to Project if HCP authorization required.
<b>BMP-5 (Dust Control):</b> Plan Permittees and Third-Party Project Proponents implementing ground- disturbing Covered Activities will water active construction sites regularly, if warranted, to avoid or minimize impacts from construction dust on adjacent vegetation and wildlife habitats. No surface water will be used from aquatic land covers; water will be obtained from a municipal source or existing groundwater well.	Would apply to Project if HCP authorization required.
<b>BMP-6 (Construction Lighting):</b> Plan Permittees and Third-Party Project Proponents implementing ground-disturbing Covered Activities will direct all temporary construction lighting (e.g., lighting used for security or nighttime equipment maintenance) away from adjacent natural habitats, and particularly Riparian and Wetland habitats and wildlife movement areas.	Would apply to Project if HCP authorization required.
<b>BMP-7 (Biological Monitor):</b> If a Covered Activity includes ground disturbance within Covered Species modeled habitat, an approved biologist will be on site during the period of ground disturbance, and may need to be on site during other construction activities depending on the Covered Species affected. After ground-disturbing project activities are complete, the approved biologist will train an individual to act as the on-site construction monitor for the remainder of construction, with the concurrence of the Permitting Agencies. The on-site monitor will attend the training described in BMP-8. The approved biologist and the on-site monitor will have oversight over implementation of Avoidance and Minimization Measures, and will have the authority to stop	Would apply to Project if HCP authorization required.

# SSHCP Project Specific Avoidance and Minimization Measures <u>THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP</u> <u>\*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document</u>

activities if any of the requirements associated with those measures are not met. If the monitor requests that work be stopped, the Wildlife Agencies will be notified within one working day by email. The approved biologist and/or on-site monitor will record all observations of listed species on California Natural Diversity Database field sheets and submit them to the California Department of Fish and Wildlife. The approved biologist or on-site monitor will be the contact source for any employee or contractor who might inadvertently kill or injure a Covered Species or who finds a dead, injured or entrapped individual. The approved biologist and on-site monitor's names and telephone numbers will be provided to the Wildlife Agencies prior to the initiation of ground-disturbing activities. Refer to species-specific measures for details on requirements for biological monitors.	
<b>BMP-8 (Training of Construction Staff):</b> A mandatory Worker Environmental Awareness Program will be conducted by an approved biologist for all construction workers, including contractors, prior to the commencement of construction activities. The training will include how to identify Covered Species that might enter the construction site, relevant life history information and habitats, SSHCP and statutory requirements and the consequences of non-compliance, the boundaries of the construction area and permitted disturbance zones, litter control training (SPECIES-2), and appropriate protocols if a Covered Species is encountered. Supporting materials containing training information will be prepared and distributed by the approved biologist. When necessary, training and supporting materials will also be provided in Spanish. Upon completion of training, construction personnel will sign a form stating that they attended the training and understand all of the Avoidance and Minimization Measures. Written documentation of the training must be submitted to the Implementing Entity within 30 days of completion of the training, and the Implementing Entity will provide this information to the Wildlife Agencies.	Would apply to Project if HCP authorization required.
<b>BMP-9 (Soil Compaction):</b> After construction is complete, all temporarily disturbed areas will be restored similar to pre-project conditions, including impacts relating to soil compaction, water infiltration capacity, and soil hydrologic characteristics.	Would apply to Project if HCP authorization required.
<b>BMP-10 (Revegetation):</b> Plan Permittees and Third-Party Project Proponents implementing ground- disturbing Covered Activities will revegetate any cut-and-fill slopes with native or existing non- invasive, non-native plants (e.g., non-native grasses) suitable for the altered soil conditions and in compliance with EDGE-2 and EDGE-8, if applicable.	Would apply to Project if HCP authorization required.
<b>BMP-11 (Speed Limit):</b> Project-related vehicles will observe the posted speed limits on paved roads and a 10-mile-per-hour speed limit on unpaved roads and during travel in project areas. Construction crews will be given weekly tailgate instruction to travel only on designated and marked existing, cross-country, and project-only roads.	Would apply to Project if HCP authorization required.
Condition 4. Avoid and Minimize Impacts that May Result from Implementation of	Covered Transportation
<b>Projects</b> Note: This Condition only applies to projects that include road improvements.	
Avoidance and Minimization Measure	Project Compliance
<b>ROAD-1 (Road Project Location):</b> Road projects will be located in the least environmentally sensitive area to avoid, to the maximum extent practicable, impacts on Covered Species, Covered Species habitat, and waters of the United States. Road project alignments will follow existing roads.	Not applicable.

# SSHCP Project Specific Avoidance and Minimization Measures <u>THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP</u> <u>\*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document</u>

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<b>BMP-9 (Soil Compaction):</b> After construction is complete, all temporarily disturbed areas will be restored similar to pre-project conditions, including impacts relating to soil compaction, water infiltration capacity, and soil hydrologic characteristics.	Would apply to Project if HCP authorization required.
<b>BMP-10 (Revegetation):</b> Plan Permittees and Third-Party Project Proponents implementing ground- disturbing Covered Activities will revegetate any cut-and-fill slopes with native or existing non- invasive, non-native plants (e.g., non-native grasses) suitable for the altered soil conditions and in compliance with EDGE-2 and EDGE-8, if applicable.	Would apply to Project if HCP authorization required.
<b>BMP-11 (Speed Limit):</b> Project-related vehicles will observe the posted speed limits on paved roads and a 10-mile-per-hour speed limit on unpaved roads and during travel in project areas. Construction crews will be given weekly tailgate instruction to travel only on designated and marked existing, cross-country, and project-only roads.	Would apply to Project if HCP authorization required.
Condition 4. Avoid and Minimize Impacts that May Result from Implementation of Projects Note: This Condition only applies to projects that include road improvements.	Covered Transportation
Avoidance and Minimization Measure	Project Compliance
<b>ROAD-1 (Road Project Location):</b> Road projects will be located in the least environmentally sensitive area to avoid, to the maximum extent practicable, impacts on Covered Species, Covered Species habitat, and waters of the United States. Road project alignments will follow existing roads.	Not applicable.

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road easements, and rights-of-way, or be sited in disturbed areas to minimize habitat loss and additional habitat fragmentation.	
<b>ROAD-2 (Wildlife Crossing Structures):</b> Road projects that are Urban Development Covered Activities (see Section 5.2.1) (including the Capital Southeast Connector, see Section 5.2.1.1) or are Rural Transportation Covered Activities (see Section 5.2.3) will include an adequate number of wildlife crossing structures, as depicted in Figure 5-10. An adequate number of wildlife crossing structures within the Urban Development Area (UDA) and outside the UDA will provide for continued dispersal and movement of native wildlife throughout the SSHCP Plan Area, as required by the SSHCP Biological Goals and Objectives (see Chapter 7).	Not applicable.
The Plan defines "wildlife crossing structure" as a physical structure specifically designed or retrofitted to facilitate undercrossing for target wildlife species. The Plan further classifies wildlife crossings as hydrologic crossings and dry crossings. Hydrologic crossings are built where there is an existing stream, creek, or intermittent drainage to maintain existing hydrologic connectivity within the Plan Area. As described below, hydrologic crossings require specialized features to be built into the crossing structure, such as elevated platforms to allow wildlife to pass under a crossing structure when it is inundated with water. Dry wildlife crossings are built where there is no hydrologic feature but where a crossing is needed to provide for overland connectivity. SSHCP wildlife crossing structures may include structures such as bridges, arches, or box and pipe culverts.	
Plan Permittees expect that future wildlife movement and dispersal within the UDA will occur almost entirely within the boundaries of the future interconnected SSHCP Preserve System (see Section 7.5). Therefore, wildlife crossings are needed wherever a roadway crosses (bisects) the conceptual SSHCP Preserve System (see Figure 5-10). Wildlife crossing structures inside the UDA will be sized to accommodate movement of a highly mobile native indicator species (i.e., coyote (Canis latrans)). By designing UDA wildlife crossing structures to meet the movement and dispersal requirements of coyote, the Plan Permittees anticipate that the crossing structure will also accommodate most native wildlife species that currently occupy the UDA (see Chapter 3).	
The Plan Permittees expect that most of the Plan Area outside of the UDA will remain as Open Space over the 50-year Permit Term (see Chapter 4). Therefore, the Plan Permittees expect that the Rural Transportation Project Covered Activities proposed outside the UDA will have a relatively small effect on the movement and dispersal of larger or more mobile native wildlife species, including coyote. Consequently, the Plan Permittees anticipate that the design of Rural Transportation Project Covered Activities outside the UDA will need to include wildlife crossing structures primarily where the Rural Transportation Project Covered Activities occur within California tiger salamander modeled habitat (see CTS-3 and also Chapter 3, Figure 3-16).	
The design and location of wildlife crossing structures both inside the UDA and outside the UDA will be determined by collaboration between the Third-Party Project Proponent, the Land Use Authority, and the Implementing Entity. Crossing design will use the best available scientific and commercial information for the target species. The design of crossing structures will be based on demonstrated effectiveness of design for the target species when such information is available, or will be designed with a high level of certainty of success based on studies of similar taxa in similar environmental settings. The proposed wildlife crossing structures designs will be reviewed and approved by the Implementing Entity prior to final design.	

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The Implementing Entity will develop a Wildlife Crossing Maintenance Manual to be provided to the entity responsible for maintaining the wildlife crossing. The Wildlife Crossing Maintenance Manual will identify vegetation management, clearing of obstructions, and other techniques to maintain the desired movement and hydrologic connectivity, and to avoid effects to adjacent Preserves. All SSHCP wildlife crossing structures in the UDA will include the following design elements: Open-bottom bridges or arches where the roadway crosses a river or stream. Where an openbottom bridge or arch is used, the span of the crossing will be at least 1.2 times the bankfull width of the stream and span the banks to allow for dry wildlife passage along each side of the stream and to avoid or minimize piers or footings within the stream. (Bankfull width refers to the width of a stream channel at the point where over-bank flow begins during a flood event.) • Any wildlife crossing structure that also maintains hydrologic connectivity will be designed to maintain pre-construction water capacity, depth, and velocity. The crossing structure will not restrict or impede normal flows or flood flows, unless a primary purpose of the structure is to manage such flow(s). Wildlife crossing structures must be designed to provide a dry passage (e.g., a platform ledge) higher than flows for a 10-year storm event to allow wildlife to pass through an inundated crossing structure. Wildlife crossing structures in the UDA will be designed and sized to accommodate movement of at least medium-sized mammals (e.g., coyote). The opening must be at least 3 feet high and the crossing structure must have a minimum openness ratio of at least 0.4. • Vegetation leading up to the entrance of a crossing structure and the substrate leading into and within the crossing structure will be natural and appropriate to provide for continuity of habitat, attract the target animal species for which the crossing is designed, and facilitate use of the crossing structure. • A wildlife crossing under six-lane roads or larger will be designed to provide ambient light and temperature in the longer crossing structures (e.g., either by providing a larger opening or a grate at the top of the structure to improve the attractiveness of the crossing to certain Covered Species and wildlife that may hesitate to cross through dark, confined structures or one with a temperature gradient (Jackson and Griffin 2000)). If a road is less than six lanes in width, these designs will be optional. Lighting will not be placed at or near the entrance of a wildlife crossing structure to maintain natural ambient light conditions at night and to increase chances of wildlife use. However, a Land Use Authority Permittees may allow lighting if necessary for human health or safety. Outside the UDA, wildlife crossing structures may be required for California tiger salamander (refer to CTS-1), and could also be required for other native species. For example, for all rural transportation Covered Activity projects located in giant gartersnake modeled aquatic habitat, certain design features must be implemented to improve opportunities for giant gartersnake passage and dispersal. In addition, rural transportation Covered Activity projects in PPU-6 that are not within giant gartersnake modeled aquatic habitat, but are located between areas of mapped giant gartersnake modeled habitat (e.g. some Bruceville Road improvements) will also be required to implement such project design features. Appropriate project design features shall be incorporated when the rural transportation project includes the replacement or the modification of an existing drainage feature, and/or the project crosses a stream, creek, ditch, or other drainage. The South Sacramento Conservation Agency and the appropriate Land Use Authority Permittee shall collaborate with the proponents of each rural transportation Covered Activity to determine the

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#### need for, the design, and appropriate locations of snake passage structures. Acceptable giant gartersnake passage structures and design features for rural transportation Covered Activities shall be determined by the South Sacramento Conservation Agency in collaboration with the USFWS, CDFW, and TAC species experts, using the best available scientific and commercial information. The SSHCP Wildlife Crossing Maintenance Manual shall identify techniques for the maintenance and the management of structures and aquatic habitat that provide passage opportunities for the giant gartersnake. This AMM has been revised to reflect USFWS and/or CDFW permit conditions ROAD-3 (Roadside Pesticide Use): If pesticide use is necessary along roadsides, the appropriate Not applicable. SSHCP Permittee will ensure that the pesticide application strictly complies with the pesticide label and all other applicable federal, state, and local authorities pertaining to the use, safety, storage, disposal, and reporting of the pesticide. Where roadside weed infestations have reached a critical control point, the Implementing Entity or a Land Use Authority Permittee will apply the appropriate manual, mechanical, or chemical treatment. In addition, the Implementing Entity or appropriate Land Use Authority Permittee will post signs along road shoulders adjacent to sensitive areas that are within the SSHCP Preserve System (e.g., California tiger salamander breeding ponds, endemic plant populations, vertebrates that rely on insects for part of their diet). The signs will identify pesticide use restrictions or other roadside maintenance restrictions. Condition 7. Avoid and Minimize Impacts to Streams and Creeks AMMs associated with Condition 7 must be applied to all Covered Activities where a stream or creek is located within a project footprint. **Avoidance and Minimization Measure Project Compliance** STREAM-1 (Laguna Creek Wildlife Corridor): A 150-foot setback measured from the top of the bank Not applicable. on both sides of the stream will be applied to Laguna Creek within the Urban Development Area (minimum 300-foot corridor width). If trails are located within the Laguna Creek Wildlife Corridor, the nearest edge of the trail will be located at least 80 feet from the top of the bank. Stream Setback Minimum Requirements in the Urban Development Area Minimum Setback (from the Top of Bank Measured in Aerial Perspective) on Both Stream Sides of the Stream Elder Creek 100 feet 100 feet or as depicted as part of the NewBridge development project hardline Preserve (see Frye Creek Appendix K) 100 feet Gerber Creek Morrison 100 feet Creek Central 100 feet or as depicted as part of the Cordova Hills development project hardline Preserve Paseo (Appendix K) Sun Creek 100 feet or as depicted as part of the Sun Creek development project hardline Preserve (see Appendix K)

# SSHCP Project Specific Avoidance and Minimization Measures THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

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gartersnake pa be determined CDFW, and TA SSHCP Wildlife management gartersnake.	lesign, and appropriate locations of snake passage structures. Acceptable giant assage structures and design features for rural transportation Covered Activities shall I by the South Sacramento Conservation Agency in collaboration with the USFWS, C species experts, using the best available scientific and commercial information. The Crossing Maintenance Manual shall identify techniques for the maintenance and the of structures and aquatic habitat that provide passage opportunities for the giant	
This AMM has	been revised to reflect USFWS and/or CDFW permit conditions	
ROAD-3 (Road SSHCP Permitt and all other a disposal, and r control point, manual, mech Land Use Auth are within the plant populati pesticide use r	<b>side Pesticide Use):</b> If pesticide use is necessary along roadsides, the appropriate ee will ensure that the pesticide application strictly complies with the pesticide label pplicable federal, state, and local authorities pertaining to the use, safety, storage, eporting of the pesticide. Where roadside weed infestations have reached a critical the Implementing Entity or a Land Use Authority Permittee will apply the appropriate anical, or chemical treatment. In addition, the Implementing Entity or appropriate ority Permittee will post signs along road shoulders adjacent to sensitive areas that SSHCP Preserve System (e.g., California tiger salamander breeding ponds, endemic ons, vertebrates that rely on insects for part of their diet). The signs will identify estrictions or other roadside maintenance restrictions.	Not applicable.
Condition 7	Avoid and Minimize Impacts to Streams and Creeks	
AMMs associ project footp	ated with Condition 7 must be applied to all Covered Activities where a stream rint.	or creek is located within a
Avoidance a		
	nd Minimization Measure	Project Compliance
STREAM-1 (La on both sides (minimum 300 the nearest ec Stream	guna Creek Wildlife Corridor): A 150-foot setback measured from the top of the bank of the stream will be applied to Laguna Creek within the Urban Development Area b-foot corridor width). If trails are located within the Laguna Creek Wildlife Corridor, ge of the trail will be located at least 80 feet from the top of the bank. Setback Minimum Requirements in the Urban Development Area	Project Compliance Not applicable.
STREAM-1 (La on both sides (minimum 300 the nearest ec Stream	guna Creek Wildlife Corridor): A 150-foot setback measured from the top of the bank of the stream will be applied to Laguna Creek within the Urban Development Area b-foot corridor width). If trails are located within the Laguna Creek Wildlife Corridor, ge of the trail will be located at least 80 feet from the top of the bank. Setback Minimum Requirements in the Urban Development Area Minimum Setback (from the Top of Bank Measured in Aerial Perspective) on Both Sides of the Stream	Project Compliance Not applicable.
STREAM-1 (La on both sides (minimum 300 the nearest ec Stream Stream Elder Creek	guna Creek Wildlife Corridor): A 150-foot setback measured from the top of the bank         of the stream will be applied to Laguna Creek within the Urban Development Area         -foot corridor width). If trails are located within the Laguna Creek Wildlife Corridor,         ge of the trail will be located at least 80 feet from the top of the bank.         Setback Minimum Requirements in the Urban Development Area         Minimum Setback (from the Top of Bank Measured in Aerial Perspective) on Both         Sides of the Stream         100 feet	Project Compliance Not applicable.
STREAM-1 (La on both sides (minimum 300 the nearest ec Stream Elder Creek Frye Creek	guna Creek Wildlife Corridor): A 150-foot setback measured from the top of the bank         of the stream will be applied to Laguna Creek within the Urban Development Area         of ot corridor width). If trails are located within the Laguna Creek Wildlife Corridor,         ge of the trail will be located at least 80 feet from the top of the bank.         Setback Minimum Requirements in the Urban Development Area         Minimum Setback (from the Top of Bank Measured in Aerial Perspective) on Both         Sides of the Stream         100 feet         100 feet or as depicted as part of the NewBridge development project hardline Preserve (see Appendix K)	Project Compliance Not applicable.
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STREAM-1 (La on both sides of (minimum 300) the nearest eco Stream Elder Creek Frye Creek Gerber Creek Morrison Creek Central Paseo	and Minimization Measure         guna Creek Wildlife Corridor): A 150-foot setback measured from the top of the bank of the stream will be applied to Laguna Creek within the Urban Development Area -foot corridor width). If trails are located within the Laguna Creek Wildlife Corridor, ge of the trail will be located at least 80 feet from the top of the bank.         Setback Minimum Requirements in the Urban Development Area         Minimum Setback (from the Top of Bank Measured in Aerial Perspective) on Both Sides of the Stream         100 feet	Project Compliance Not applicable.

# SSHCP Project Specific Avoidance and Minimization Measures THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

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STRI side strea plus the 1 ban STRI ban tribu (Tab head	<ul> <li>AM-2 (UDA Stream Setbacks): A 100-foot setback measured from the top of the bank on both s of the stream channel will be applied to all streams listed in Table 5-2 (see also Figure 2-4). If a am reach supports woody riparian vegetation, the setback will be equal to the riparian edge 25 feet or will be the setback defined above, whichever is greater. If trails are located within Stream Setback, the nearest edge of the trail will be located at least 50 feet from the top of the ta.</li> <li>AM-3 (Minor Tributaries to UDA Streams): A 25-foot setback measured from the top of the con both sides of the stream channel will be applied to all avoided first and second order utaries to the streams listed in Table 5-2 and Laguna Creek. Refer to Objective W6 in Chapter 7 le 7-1) regarding avoided first and second order tributaries. Trails are not permitted within the top of the table of the trained and second order tributaries.</li> </ul>	Not applicable. Project provides at least a 25-foot setback from Florin Creek.
STRI Cove com mea	AM-4 (Minimize Effects from Temporary Channel Re-Routing): When an Urban Development ered Activity temporarily re-routes a stream, creek, or drainage, the re-routing will be pleted in a manner that minimizes impacts to beneficial uses and habitat. The following sures will be employed to minimize disturbances that will adversely impact water quality:	Not applicable.
•	No equipment will be operated in areas of flowing or standing water. Construction materials and heavy equipment must be stored outside of the active flow of any waters. When work within waters is necessary, the entire stream flow will be diverted around the work area. In the event of rain, the disturbed in-water work area will be temporarily stabilized before water body flow exceeds the capacity of the diversion structure. The disturbed water body will be stabilized so that the disturbed areas will not come in contact with the flow. Once construction is complete, all project-introduced material (e.g., pipes, gravel, cofferdam, sandbags) must be removed, leaving the water as it was before construction. Excess materials will be disposed of at an appropriate disposal site. All work areas will be effectively isolated from stream flows using suitable control measures before commencement of any in-water work. The diverted stream flow will not be contaminated by construction activities. Structures for isolating the in-water work area and/or diverting the stream flow (e.g., cofferdam, geo-textile silt curtain) will not be removed until all disturbed areas are cleaned and stabilized. Any flow diversion used during construction will be designed in a manner to prevent pollution and minimize siltation, and will provide flows to downstream reaches. Flows will be maintained to support existing aquatic life, riparian wetlands, and habitat that may be located upstream and downstream from any temporary diversion. All surface waters, including ponded waters, will be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity that may result in a discharge to waters. All temporary dewatering methods will be designed to have the minimum necessary impacts to waters to isolate the immediate work area. All dewatering methods will be installed such that natural flow is maintained upstream and downstream of the diversion area. Any	
	temporary dams and diversions will be installed such that the diversion does not cause sedimentation, siltation, or erosion upstream or downstream of the diversion area. All dewatering methods will be removed immediately upon completion of diversion activities.	

# SSHCP Project Specific Avoidance and Minimization Measures THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

#### \*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

STREAM-2 (UDA Stream Sethacks): A 100-foot sethack measured from the top of the bank on both	
sides of the stream channel will be applied to all streams listed in Table 5-2 (see also Figure 2-4). If a	Not applicable.
stream reach supports woody riparian vogetation, the sotback will be equal to the riparian edge	
stream reach supports woody mpanan vegetation, the setback will be equal to the mpanan edge	
plus 25 leet of will be the setback defined above, whichever is greater. If trains are located within	
the Stream Setback, the hearest edge of the trail will be located at least 50 feet from the top of the	
bank.	
STREAM-3 (Minor Tributaries to UDA Streams): A 25-foot setback measured from the top of the	
bank on both sides of the stream channel will be applied to all avoided first and second order	Project provides at
tributaries to the streams listed in Table 5-2 and Laguna Creek. Refer to Objective W6 in Chapter 7	least a 25-foot
(Table 7-1) regarding avoided first and second order tributaries. Trails are not permitted within	setback from Florin
headwater ephemeral Stream Setbacks.	Creek.
STREAM-4 (Minimize Effects from Temporary Channel Re-Routing): When an Urban Development	Not applicable
Covered Activity temporarily re-routes a stream, creek, or drainage, the re-routing will be	
completed in a manner that minimizes impacts to beneficial uses and habitat. The following	
measures will be employed to minimize disturbances that will adversely impact water quality:	
<ul> <li>No equipment will be operated in areas of flowing or standing water.</li> </ul>	
• Construction materials and heavy equipment must be stored outside of the active flow of any	
waters.	
When work within waters is necessary, the entire stream flow will be diverted around the	
work area.	
<ul> <li>In the event of rain, the disturbed in-water work area will be temporarily stabilized before</li> </ul>	
water body flow exceeds the capacity of the diversion structure. The disturbed water body will	
be stabilized so that the disturbed areas will not come in contact with the flow.	
• Once construction is complete, all project-introduced material (e.g., pipes, gravel, cofferdam,	
sandbags) must be removed, leaving the water as it was before construction. Excess materials	
will be disposed of at an appropriate disposal site	
<ul> <li>All work areas will be effectively isolated from stream flows using suitable control measures.</li> </ul>	
• All work areas will be effectively isolated from stream hows using suitable control measures	
before commencement of any in-water work. The unverted stream now winnot be	
contaminated by construction activities. Structures for isolating the in-water work area and/or	
diverting the stream flow (e.g., cofferdam, geo-textile silt curtain) will not be removed until all	
disturbed areas are cleaned and stabilized.	
Any flow diversion used during construction will be designed in a manner to prevent pollution	
and minimize siltation, and will provide flows to downstream reaches. Flows will be	
maintained to support existing aquatic life, riparian wetlands, and habitat that may be located	
upstream and downstream from any temporary diversion.	
<ul> <li>All surface waters, including ponded waters, will be diverted away from areas undergoing</li> </ul>	
grading, construction, excavation, vegetation removal, and/or any other activity that may	
result in a discharge to waters.	
All temporary dewatering methods will be designed to have the minimum necessary impacts	
to waters to isolate the immediate work area. All dewatering methods will be installed such	
that natural flow is maintained upstream and downstream of the diversion area. Any	
temporary dams and diversions will be installed such that the diversion does not cause	
sedimentation, siltation, or erosion upstream or downstream of the diversion area. All	
dewatering methods will be removed immediately upon completion of diversion activities.	

# SSHCP Project Specific Avoidance and Minimization Measures THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

### \*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

٠	A method of containment must be used below any bridge, boardwalk, and/or temporary	
	crossing to prevent debris from falling into the waters through the entire duration of a project.	
٠	If temporary surface water diversions and/or dewatering are anticipated, the Third-Party	
	Project Proponent will develop and maintain on site a surface water diversion and/or	
	dewatering plan. The plan(s) must be developed prior to initiation of any water diversions and	
	will include the proposed method and duration of diversion activities. The plan(s) must be	
	made available to Central Valley Water Board staff upon request.	
•	When work in a flowing stream is unavoidable and any dam or other artificial obstruction is	
	being constructed, maintained, or placed in operation, sufficient water will be allowed at all	
	times to pass downstream to maintain beneficial uses of waters below the dam. Construction,	
	dewatering, and removal of temporary cofferdams will not violate the turbidity, settle-able	
	matter, pH, temperature, or dissolved oxygen requirements of any Water Quality Control Plan.	
٠	Any temporary dam or other artificial obstruction will only be built from clean materials such	
	as sandbags, gravel bags, water dams, or clean/washed gravel that will cause little or no	
	siltation. Stream flow will be temporarily diverted using gravity flow through temporary	
	culverts or pipes, or pumped around the work site with the use of hoses.	
стр	AM 5 (Design for Stream Channel Pe Pouting Widening or Deepening): When an Urban	
Dow	alapment Covered Activity alters a stream, creak, or drainage by re-routing, widening, or	Not applicable.
door	people a channel, the project decign will include the following:	23 - 22
uce	sening a charmer, the project design with include the following.	
•	The main channel of a re-routed channel will be free to migrate laterally over its active and	
	terrace floodplain.	
٠	Channel geometry (plan, profile, and cross-section) of the site will be appropriate for the	
	watershed location and physical/hydrologic condition.	
•	Local, native materials will be used as fill material to the extent practicable.	
	Bioengineering techniques will be used for construction and maintenance of bank stabilization.	
	Bioengineered bank stabilization structures will use vegetation in combination with bank	
	reshaping; biodegradeable geotextile materials; and, in some cases, a minimal amount of rock	
	or wood to the extent practicable to dissipate erosive energy. Third-Party Project Proponents	
	will consult a professional engineer when considering using bioengineering techniques.	
	All re-routed, widened, or deepened streams are required to establish Stream Setbacks with	
	minimum widths required under STREAM-1, STREAM-2, or STREAM-3. All re-routed, widened,	
	or deepened streams must re-establish/ establish and maintain native Woody Riparian land	
	cover and/or native Grassland Riparian land cover in the entire Stream Setback.	
~		
Cor	idition 8. Avoid and ivinimize impacts to Covered Species from Utility and Utilit	y Waintenance Covered
Act	ivities	
Note	e: AMMs associated with Condition 8 must be applied to all Covered Activities associated with cor	struction and maintenance
of in	frastructure projects.	

Avoidance and Minimization Measure	Project Compliance
<b>UTILITY-1 (Avian Collision Avoidance</b> ): Installation of new, or relocation of existing, utility poles, lines, and cell towers located within the Preserve System or within 1,000 feet of a Preserve boundary will be coordinated with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. The applicant or relevant utility/service provider will install utility poles, lines, and	Not applicable.

# SSHCP Project Specific Avoidance and Minimization Measures THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

#### \*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

•	A method of containment must be used below any bridge, boardwalk, and/or temporary	
	crossing to prevent debris from falling into the waters through the entire duration of a project.	
•	If temporary surface water diversions and/or dewatering are anticipated, the Third-Party	
	Project Proponent will develop and maintain on site a surface water diversion and/or	
	dewatering plan. The plan(s) must be developed prior to initiation of any water diversions and	
	will include the proposed method and duration of diversion activities. The plants) must be	
	Made available to Central valley water Board stall upon request.	
	when work in a nowing stream is unavoidable and any dam or other artificial obstruction is	
	times to pass downstream to maintain beneficial uses of waters below the dam. Construction	
	dewatering and removal of temporary cofferdams will not violate the turbidity settle-able	
	matter nH temperature or dissolved oxygen requirements of any Water Quality Control Plan	
	Any temporary dam or other artificial obstruction will only be built from clean materials such	
	as sandbags, gravel bags, water dams, or clean/washed gravel that will cause little or no	
	siltation. Stream flow will be temporarily diverted using gravity flow through temporary	
	culverts or pipes, or pumped around the work site with the use of hoses.	
-		
STR	EAM-5 (Design for Stream Channel Re-Routing, Widening, or Deepening): When an Urban	Not applicable.
Dev	elopment Covered Activity alters a stream, creek, or drainage by re-routing, widening, or	na supersegner for an and a supersegner supersegner.
dee	bening a channel, the project design will include the following:	
•	The main channel of a re-routed channel will be free to migrate laterally over its active and	
	terrace floodplain.	
•	Channel geometry (plan, profile, and cross-section) of the site will be appropriate for the	
	watershed location and physical/hydrologic condition.	
•	Local, native materials will be used as fill material to the extent practicable.	
•	Bioengineering techniques will be used for construction and maintenance of bank stabilization.	
	Bioengineered bank stabilization structures will use vegetation in combination with bank	
	reshaping; biodegradeable geotextile materials; and, in some cases, a minimal amount of rock	
	or wood to the extent practicable to dissipate erosive energy. Third-Party Project Proponents	
12	will consult a professional engineer when considering using bioengineering techniques.	
•	All re-routed, widened, or deepened streams are required to establish Stream Setbacks with	
	minimum widths required under SIREAM-1, SIREAM-2, or SIREAM-3. All re-routed, widened,	
	or deepened streams must re-establish/ establish and maintain native Woody Riparian land	
	cover ana/or native grassiand riparian land cover in the entire Stream Setback.	
Cor	dition 8. Avoid and Minimize Impacts to Covered Species from Utility and Utilit	y Maintenance Covered
Act	ivities	
Not	e: AMMs associated with Condition 8 must be applied to all Covered Activities associated with cor	nstruction and maintenance
of ir	frastructure projects.	
_		
Avo	idance and Minimization Measure	Project Compliance
UTI	ITY-1 (Avian Collision Avoidance): Installation of new, or relocation of existing, utility poles.	
lines	s, and cell towers located within the Preserve System or within 1,000 feet of a Preserve	Not applicable.
bou	ndary will be coordinated with the U.S. Fish and Wildlife Service and California Department of	

Fish and Wildlife. The applicant or relevant utility/service provider will install utility poles, lines, and

# SSHCP Project Specific Avoidance and Minimization Measures

# THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

cell towers in conformance with Avian Powerline Interaction Committee (APLIC) standards for collision-reducing techniques, as outlined in Reducing Avian Collisions with Power Lines: State of the Art in 2012 (APLIC 2012), or any superseding document issued by the APLIC.	
<b>UTILITY-2 (Utility Maintenance on Preserves):</b> Utility maintenance inside SSHCP Preserves and SSHCP Preserve Setbacks containing vernal pools will occur only when vernal pools have been dry for 30 days, except in emergency situations related to human health and safety.	Not applicable.
<b>UTILITY-3 (Trenchless Construction Methods):</b> Where a pipeline or conduit crosses an existing or planned Preserve or will be located between adjacent Preserves (e.g., under a roadway that has a Preserve on both sides), trenchless construction methods will be used to minimize impacts to the existing soil profile (including impacts to a hardpan or duripan) to maintain the perched aquifer in Vernal Pool Grassland land cover type.	Not applicable.
<b>UTILITY-4 (Siting of Entry and Exit Location):</b> The entry and exit locations for the trenchless construction method (see Utility-3) will be sited to avoid impacts to vernal pools and Riparian Woodland, and to avoid direct take of SSHCP Covered Species.	Not applicable.
<b>Covered Species Take Avoidance and Minimization Measures</b> Note: These AMMs apply to all Projects that contain modeled species habitat.	
Avoidance and Minimization Measure	Project Compliance
<b>SPECIES-1 (Litter Removal Program):</b> 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.	Would apply to Project if HCP authorization required.
<b>SPECIES-2 (No Pets in Construction Areas):</b> To avoid harm and harassment of native species, workers and visitors will not bring pets onto a project site.	Would apply to Project if HCP authorization required.
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.	Would apply to Project if HCP authorization required.

# SSHCP Project Specific Avoidance and Minimization Measures

# THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

cell towers in conformance with Avian Powerline Interaction Committee (APLIC) standards for collision-reducing techniques, as outlined in Reducing Avian Collisions with Power Lines: State of the Art in 2012 (APLIC 2012), or any superseding document issued by the APLIC.	
<b>UTILITY-2 (Utility Maintenance on Preserves):</b> Utility maintenance inside SSHCP Preserves and SSHCP Preserve Setbacks containing vernal pools will occur only when vernal pools have been dry for 30 days, except in emergency situations related to human health and safety.	Not applicable.
<b>UTILITY-3 (Trenchless Construction Methods):</b> Where a pipeline or conduit crosses an existing or planned Preserve or will be located between adjacent Preserves (e.g., under a roadway that has a Preserve on both sides), trenchless construction methods will be used to minimize impacts to the existing soil profile (including impacts to a hardpan or duripan) to maintain the perched aquifer in Vernal Pool Grassland land cover type.	Not applicable.
<b>UTILITY-4 (Siting of Entry and Exit Location):</b> The entry and exit locations for the trenchless construction method (see Utility-3) will be sited to avoid impacts to vernal pools and Riparian Woodland, and to avoid direct take of SSHCP Covered Species.	Not applicable.
<b>Covered Species Take Avoidance and Minimization Measures</b> Note: These AMMs apply to all Projects that contain modeled species habitat.	
Avoidance and Minimization Measure	Project Compliance
<b>SPECIES-1 (Litter Removal Program):</b> 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.	Would apply to Project if HCP authorization required.
SPECIES-2 (No Pets in Construction Areas): To avoid harm and harassment of native species, workers and visitors will not bring pets onto a project site.	Would apply to Project if HICP authorization required
<b>SPECIES-3 (Take Report):</b> 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.	Would apply to Project if HCP authorization required.

# SSHCP Project Specific Avoidance and Minimization Measures <u>THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP</u>

PLANT-1 (Rare Plant Surveys): If a Covered Activity project site contains modeled habitat for Ahart's dwarf rush (Juncus leiospermus var. ahartii), Bogg's Lake hedge-hyssop (Gratiola heterosepala), dwarf downingia (Downingia pusilla), Legenere (Legenere limosa), pincushion navarretia (Navarretia myersii), or Sanford's arrowhead (Sagittaria sanfordii), the Covered Activity project site will be surveyed for the rare plant by an approved biologist and following the California Department of Fish and Wildlife (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities dated March 20, 2018or the most recent CDFW rare plant survey protocols. An approved biologist will conduct the field surveys and will identify and map plant species occurrences according to the protocols. See Chapter 10 for the process to submit survey information to the Plan Permittee and the Permitting Agencies. The appropriate timing of surveys and use of reference populations is applicable to all covered rare plant species, as described in the 2018 CDFW survey protocol referenced above. For Bogg's Lake hedge-hyssop which is an annual plant with seed banks that may not germinate every year , the project proponent may be required to survey a project site for more than one year to substantiate negative findings if the previous year was either extremely dry or extremely wet (which may be found in the Department of Water Resources Water Supply Index Bulletin (http://cdec.water.ca.gov/reportapp/javareports?name=WSI). However, if local reference populations of the species are detectable at the time of survey and none of the species are observed on a project site, a negative finding will be made.	Not applicable; no suitable habitat in the Project development area.
<b>PLANT-2 (Rare Plant Protection):</b> If a rare plant listed in AMM PLANT-1 is detected within an area proposed to be disturbed by a Covered Activity or is detected within 250 feet of the area proposed to be disturbed by a Covered Activity, the Implementing Entity will assure one unprotected occurrence of the species is protected within a SSHCP Preserve before any ground disturbance occurs a the project site.	Not applicable.
ORCUTT-1 (Orcutt Grass Surveys): If a Covered Activity project site is located within or adjacent to (within 1 mile of) the Mather Core Recovery Area and contains the Vernal Pool land cover type, the project site will be surveyed for Sacramento and slender Orcutt grass by an approved biologist following California Department of Fish and Wildlife (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities dated March 20, 2018 or most recent CDFW guidelines to determine if Sacramento and/or slender Orcutt grass is present. An approved biologist will conduct the field investigation to identify and map occurrences. See Chapter 10 for the process to conduct and submit survey information.	Not applicable; project is more than one mile from the Mather Core.
<b>ORCU I I-2 (Orcutt Grass Protection):</b> Where known or new Sacramento or slender Orcutt grass occurrences are found, they will be protected within an SSHCP Preserve that is at least 50 acres. The occurrence will be located interior to the Preserve at a distance of no less than 300 feet from the edge of the Preserve boundary. If a Third-Party Project Proponent encounters a previously undiscovered occurrence of Sacramento or slender Orcutt grass on a Covered Activity project site, the Third-Party Project Proponent will contact the Implementing Entity or Land Use Authority Permittee with authority over the project, who will coordinate with the Wildlife Agencies for written concurrence of avoidance to ensure that the project does not cause take of the species.	Not applicable.

# SSHCP Project Specific Avoidance and Minimization Measures <u>THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP</u>

PLANT-1 (Rare Plant Surveys): If a Covered Activity project site contains modeled habitat for Ahart's dwarf rush (Juncus leiospermus var. ahartii), Bogg's Lake hedge-hyssop (Gratiola heterosepala), dwarf downingia (Downingia pusilla), Legenere (Legenere limosa), pincushion navarretia (Navarretia myersii), or Sanford's arrowhead (Sagittaria sanfordii), the Covered Activity project site will be surveyed for the rare plant by an approved biologist and following the California Department of Fish and Wildlife (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities dated March 20, 2018or the most recent CDFW rare plant survey protocols. An approved biologist will conduct the field surveys and will identify and map plant species occurrences according to the protocols. See Chapter 10 for the process to submit survey information to the Plan Permittee and the Permitting Agencies. The appropriate timing of surveys and use of reference populations is applicable to all covered rare plant species, as described in the 2018 CDFW survey protocol referenced above. For Bogg's Lake hedge-hyssop which is an annual plant with seed banks that may not germinate every year , the project proponent may be required to survey a project site for more than one year to substantiate negative findings if the previous year was either extremely dry or extremely wet (which may be found in the Department of Water Resources Water Supply Index Bulletin (http://cdec.water.ca.gov/reportapp/javareports?name=WSI). However, if local reference populations of the species are detectable at the time of survey and none of the species are observed on a project site, a negative finding will be made.	Not applicable; no suitable habitat in the Project development area.
<b>PLANT-2 (Rare Plant Protection):</b> If a rare plant listed in AMM PLANT-1 is detected within an area proposed to be disturbed by a Covered Activity or is detected within 250 feet of the area proposed to be disturbed by a Covered Activity, the Implementing Entity will assure one unprotected occurrence of the species is protected within a SSHCP Preserve before any ground disturbance occurs a the project site.	Not applicable.
<b>ORCUTT-1 (Orcutt Grass Surveys)</b> : If a Covered Activity project site is located within or adjacent to (within 1 mile of) the Mather Core Recovery Area and contains the Vernal Pool land cover type, the project site will be surveyed for Sacramento and slender Orcutt grass by an approved biologist following California Department of Fish and Wildlife (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities dated March 20, 2018 or most recent CDFW guidelines to determine if Sacramento and/or slender Orcutt grass is present. An approved biologist will conduct the field investigation to identify and map occurrences. See Chapter 10 for the process to conduct and submit survey information.	Not applicable; project is more than one mile from the Mather Core.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
<b>ORCUTT-2 (Orcutt Grass Protection):</b> Where known or new Sacramento or slender Orcutt grass occurrences are found, they will be protected within an SSHCP Preserve that is at least 50 acres. The occurrence will be located interior to the Preserve at a distance of no less than 300 feet from the edge of the Preserve boundary. If a Third-Party Project Proponent encounters a previously undiscovered occurrence of Sacramento or slender Orcutt grass on a Covered Activity project site, the Third-Party Project Proponent will contact the Implementing Entity or Land Use Authority Permittee with authority over the project, who will coordinate with the Wildlife Agencies for written concurrence of avoidance to ensure that the project does not cause take of the species.	Not applicable.

# SSHCP Project Specific Avoidance and Minimization Measures

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#### Valley Elderberry Longhorn Beetle **Project Compliance Avoidance and Minimization Measure** VELB-1 (Valley Elderberry Longhorn Beetle Avoidance): If a Covered Activity is planned within Not applicable; no modeled habitat for valley elderberry longhorn beetle, project proponents will conduct a survey for suitable habitat on presence of elderberry shrubs within 100 feet of the project area. If elderberry shrubs are found, site protocol level surveys will be conducted. Direct impacts (within 20 feet of construction, shall be avoided as much as possible. Indirect impacts (shrubs between 20-100 feet of construction) shall also be avoided as much as possible. Any direct loss of elderberry shrubs shall be compensated for according to USFWS Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999b). This AMM has been revised to reflect USFWS and/or CDFW permit conditions California Tiger Salamander **Avoidance and Minimization Measure Project Compliance** CTS-1 (California Tiger Salamander Daily Construction Schedule): Ground-disturbing Covered Not applicable: no Activities within California tiger salamander modeled habitat (Figure 3-16) will occur outside the habitat present in the breeding and dispersal season (occur after July 31 and before October 15), to the maximum extent Project Area. practicable. If Covered Activities must be implemented in modeled habitat (Figure 3-16) during the breeding and dispersal season (after October 15 and before July 31), construction activities will not start until 30 minutes after sunrise and must be complete 30 minutes prior to sunset. CTS-2 (California Tiger Salamander Exclusion Fencing): If a Covered Activity must be implemented Not applicable. in modeled habitat (Figure 3-16) during the breeding and dispersal season (after October 15 and before July 31), exclusion fencing will be installed around the project footprint before October 15. Temporary high-visibility construction fencing will be installed along the edge of work areas, and exclusion fencing will be installed immediately outside of the temporary high-visibility construction fencing to exclude California tiger salamanders from entering the construction area or becoming entangled in the construction fencing. Exclusion fencing will be at least 1 foot tall and be buried at least 6 inches below the ground to prevent salamanders from going under the fencing. Fencing will remain in place until all construction activities within the construction area are complete. No project activities will occur outside the delineated project footprint. An approved biologist must inspect the exclusion fencing and project site every morning before 7:00 a.m. for integrity and for any entrapped California tiger salamanders. If a California tiger salamander is encountered, refer to CTS-5, below. (However, the Implementing Entity may, with approval of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), determine that it is appropriate for a Covered Activity project to not implement CTS-2 for certain long and linear roadway Covered Activity projects if it appears that the exclusion fencing will likely trap individuals or cause more take of California tiger salamander than it would prevent.) CTS-3 (California Tiger Salamander Monitoring): If Covered Activities must be implemented in Not applicable. modeled habitat (Figure 3-16), an approved biologist experienced with California tiger salamander identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking

Project Specific Avoidance and Minimization Measures

place, and will inspect the project site for California tiger salamander every morning before 7:00

# SSHCP Project Specific Avoidance and Minimization Measures

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Valley Elderberry Longhorn Beetle	
Avoidance and Minimization Measure	Project Compliance
<b>VELB-1 (Valley Elderberry Longhorn Beetle Avoidance):</b> If a Covered Activity is planned within modeled habitat for valley elderberry longhorn beetle, project proponents will conduct a survey for presence of elderberry shrubs within 100 feet of the project area. If elderberry shrubs are found, protocol level surveys will be conducted. Direct impacts (within 20 feet of construction, shall be avoided as much as possible. Indirect impacts (shrubs between 20-100 feet of construction) shall also be avoided as much as possible. Any direct loss of elderberry shrubs shall be compensated for according to <i>USFWS Conservation Guidelines for the Valley Elderberry Longhorn Beetle</i> (USFWS 1999b). <b>This AMM has been revised to reflect USFWS and/or CDFW permit conditions</b>	Not applicable; no suitable habitat on site.
California Tiger Salamander	
Avoidance and Minimization Measure	Project Compliance
<b>CTS-1 (California Tiger Salamander Daily Construction Schedule):</b> Ground-disturbing Covered Activities within California tiger salamander modeled habitat (Figure 3-16) will occur outside the breeding and dispersal season (occur after July 31 and before October 15), to the maximum extent practicable. If Covered Activities must be implemented in modeled habitat (Figure 3-16) during the breeding and dispersal season (after October 15 and before July 31), construction activities will not start until 30 minutes after sunrise and must be complete 30 minutes prior to sunset.	Not applicable; no habitat present in the Project Area.
<b>CTS-2 (California Tiger Salamander Exclusion Fencing)</b> : If a Covered Activity must be implemented in modeled habitat (Figure 3-16) during the breeding and dispersal season (after October 15 and before July 31), exclusion fencing will be installed around the project footprint before October 15. Temporary high-visibility construction fencing will be installed along the edge of work areas, and exclusion fencing will be installed immediately outside of the temporary high-visibility construction fencing to exclude California tiger salamanders from entering the construction area or becoming entangled in the construction fencing. Exclusion fencing will be at least 1 foot tall and be buried at least 6 inches below the ground to prevent salamanders from going under the fencing. Fencing will remain in place until all construction activities within the construction area are complete. No project activities will occur outside the delineated project footprint. An approved biologist must inspect the exclusion fencing and project site every morning before 7:00 a.m. for integrity and for any entrapped California tiger salamanders. If a California tiger salamander is encountered, refer to CTS-5, below. (However, the Implementing Entity may, with approval of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), determine that it is appropriate for a Covered Activity project to not implement CTS-2 for certain long and linear roadway Covered Activity projects if it appears that the exclusion fencing will likely trap individuals or cause more take of California tiger salamander than it would prevent.)	Not applicable.
<b>CTS-3 (California Tiger Salamander Monitoring</b> ): If Covered Activities must be implemented in modeled habitat (Figure 3-16), an approved biologist experienced with California tiger salamander identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place, and will inspect the project site for California tiger salamander every morning before 7:00	Not applicable.

# SSHCP Project Specific Avoidance and Minimization Measures <u>THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP</u>

# \*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

a.m., or prior to construction activities. As required by BMP-8 (Training of Construction Staff), the	
approved biologist will also train construction personnel on the required California tiger salamander	
avoidance procedures, exclusion fencing, and correct protocols in the event that a California tiger	
salamander enters an active construction zone. If a California tiger salamander is encountered, refer	
to CTS-5, below.	
. 24. Inspire 16.0 Structureshops	
<b>CTS-4 (Avoid California Tiger Salamander Entrapment)</b> : If Covered Activities must be implemented in modeled habitat, all excavated steep-walled holes or trenches more than 6 inches deep will be	Not applicable.
provided with one or more escape ramps constructed of earth fill or wooden planks at the end of	
each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes or	
trenches will be inspected by the approved biologist each morning to ensure that no wildlife has	
become entrapped. All construction pipes, culverts, similar structures, construction equipment, and	
construction debris left overnight within California tiger salamander modeled habitat will be	
inspected for California tiger salamanders by the approved biologist prior to being moved. If a	
California tiger salamander is encountered, refer to CTS-5, below.	
CTS-5 (California Tiger Salamander Encounter Protocol): If a California tiger salamander is	
encountered during construction activities, the approved biologist will notify the Wildlife Agencies	Not applicable.
immediately (California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service	
(USEWS)) Construction activities will be suspended in a 100-foot radius of the animal until the	
animal is relocated (as described in the Relocation Plan, AMM CTS-8) by an approved biologist with	
appropriate handling permits from the Wildlife Agencies. Prior to relocation, the approved biologist	
will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If	
the animal is bandled, a report will be submitted, including date(s), location(s), babitat description	
and any corrective measures taken to protect the salamander, within 1 husiness day to the Wildlife	
Agencies The biologist will report any take of listed species to LISEWS and CDEW immediately. Any	
worker who inadvertently injures or kills a California tiger salamander or who finds dead injured or	
entranned California tiger salamander(s) must immediately report the incident to the approved	
hiologist	
Mologist.	
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
CIS-6 (Erosion Control Materials in California Tiger Salamander Habitat): If erosion control (BMP-	Not applicable.
2) is implemented within California tiger salamander modeled habitat (Figure 3-16), non-entangling	ne landerska kon menin serialaren barren mesalabat
erosion control material will be used to reduce the potential for entrapment. Lightly woven fiber	
netting (mesh size less than 0.25 inch) or similar material will be used to ensure that salamanders	
are not trapped (no monofilament). Coconut coir matting and fiber rolls with burlap are examples of	
acceptable erosion control materials. This limitation will be communicated to the contractor	
through use of special provisions included in the bid solicitation package.	
CTS-7 (Rodent Control): CTS-7 only applies to projects that are within California tiger salamander	Kalendar (C. Sawaawa and Kalendar (C. Sawaawa
modeled habitat (Figure 3-16) and on Covered Activities. Rodent control will be allowed only in	Not applicable.
developed portions of a Covered Activity project site. 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.	
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	

# SSHCP Project Specific Avoidance and Minimization Measures THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

a.m., or prior to construction activities. As required by BMP-8 (Training of Construction Staff), the approved biologist will also train construction personnel on the required California tiger salamander avoidance procedures, exclusion fencing, and correct protocols in the event that a California tiger salamander enters an active construction zone. If a California tiger salamander is encountered, refer to CTS-5, below.	
<b>CTS-4 (Avoid California Tiger Salamander Entrapment</b> ): If Covered Activities must be implemented in modeled habitat, all excavated steep-walled holes or trenches more than 6 inches deep will be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes or trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within California tiger salamander modeled habitat will be inspected for California tiger salamanders by the approved biologist prior to being moved. If a California tiger salamander is encountered, refer to CTS-5, below.	Not applicable.
CTS-5 (California Tiger Salamander Encounter Protocol): If a California tiger salamander is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately (California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS)). Construction activities will be suspended in a 100-foot radius of the animal until the animal is relocated (as described in the Relocation Plan, AMM CTS-8) by an approved biologist with appropriate handling permits from the Wildlife Agencies. Prior to relocation, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the salamander, within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to USFWS and CDFW immediately. Any worker who inadvertently injures or kills a California tiger salamander or who finds dead, injured, or entrapped California tiger salamander(s) must immediately report the incident to the approved biologist. <u>This AMM has been revised to reflect USFWS and/or CDFW permit conditions</u>	Not applicable.
<b>CTS-6 (Erosion Control Materials in California Tiger Salamander Habitat</b> ): If erosion control (BMP-2) is implemented within California tiger salamander modeled habitat (Figure 3-16), non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that salamanders are not trapped (no monofilament). Coconut coir matting and fiber rolls with burlap are examples of acceptable erosion control materials. This limitation will be communicated to the contractor through use of special provisions included in the bid solicitation package.	Not applicable.
<b>CTS-7 (Rodent Control)</b> : CTS-7 only applies to projects that are within California tiger salamander modeled habitat (Figure 3-16) and on Covered Activities. Rodent control will be allowed only in developed portions of a Covered Activity project site. 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. <b>This AMM has been revised to reflect USFWS and/or CDFW permit conditions</b>	Not applicable.

# SSHCP Project Specific Avoidance and Minimization Measures <u>THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP</u> <u>\*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document</u>

The following California tiger salamander AMMs are conditions of the CDFW Incidental Take Permit and are in addition to the previous AMMs. For example, relocation may not occur without notification and discussion with USFWS, as described in CTS-5 above.

<b>CTS-8 (California Tiger Salamander Relocation Plan)</b> : Project proponents shall prepare a California tiger salamander Relocation Plan (Relocation Plan) for Covered Activities occurring in California tiger salamander modeled habitat. The Relocation Plan shall include the name(s) of the approved biologists(s) who will relocate California tiger salamander; pre-construction habitat assessment methodology; measures to minimize temporary impacts to California tiger salamander habitat outside the permanent impact area; capture, handling, and relocation methods; a map and description of the relocation area(s) for captured California tiger salamander, including relative location, quality of habitat, non-native species or the potential for California tiger salamander-barred tiger salamander hybrids to be present, identified upland burrows determined to be suitable for California tiger salamander placement, distance to aquatic habitat, and potential barriers for movement; written permission from the landowner to use their land as a relocation site; and identification of a wildlife rehabilitation center or veterinary facility that routinely evaluates or treats amphibians. Project proponents shall submit the Relocation Puroval at least 15 days prior to the beginning of any Covered Activities, including preconstruction surveys. If California tiger salamander is found within a construction site or 200 feet beyond the construction site (200-foot boundary), Project personnel shall notify the approved biologist(s) shall relocate California tiger salamander to a safe area in accordance with the Relocation Plan. Otherwise, California tiger salamander to a safe area in accordance with the Relocation Plan. Otherwise, California tiger salamander to Abitities, and bandled by the Approved Biologist(s). The Permittees or Authorized Party shall notify CDFW within 24 hours of each time California tiger salamander is relocated. Notification to CDFW shall be via telephone or email, followed by a written incident.	Not applicable.
<b>CTS-9. (California Tiger Salamander Pre-Construction Surveys).</b> The approved biologist(s) shall complete a visual survey in each of the construction sites located within suitable upland habitat and within a 200-foot boundary, including access roads. The approved biologist(s) shall pay particular attention to suitable California tiger salamander habitat features and search beneath woody debris. If California tiger salamander is found within the construction site, access roads, or the 200-foot boundary, the approved biologist(s) shall delay installation of the exclusion barrier until the approved biologist(s) relocate(s) the California tiger salamander out of the Project Area and 200-foot boundary in accordance with AMM CTS-8. The approved biologist(s) shall visually inspect all potential burrow within suitable upland habitat in the construction site, access roads, and 200-foot boundary, prior to installing exclusionary fencing.	Not applicable.
Western Spadefoot	
Avoidance and Minimization Measure	Project Compliance

# SSHCP Project Specific Avoidance and Minimization Measures <u>THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP</u> <u>\*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document</u>

The following California tiger salamander AMMs are conditions of the CDFW Incidental Take Permit and are in addition to the previous AMMs. For example, relocation may not occur without notification and discussion with USFWS, as described in CTS-5 above.

<b>CTS-8 (California Tiger Salamander Relocation Plan</b> ): Project proponents shall prepare a California tiger salamander Relocation Plan (Relocation Plan) for Covered Activities occurring in California tiger salamander modeled habitat. The Relocation Plan shall include the name(s) of the approved biologists(s) who will relocate California tiger salamander; pre-construction habitat assessment methodology; measures to minimize temporary impacts to California tiger salamander habitat outside the permanent impact area; capture, handling, and relocation methods; a map and description of the relocation area(s) for captured California tiger salamander, including relative location, quality of habitat, non-native species or the potential for California tiger salamander-barred tiger salamander placement, distance to aquatic habitat, and potential barriers for movement; written permission from the landowner to use their land as a relocation site; and identification of a wildlife rehabilitation center or veterinary facility that routinely evaluates or treats amphibians. Project proponents shall submit the Relocation Plan to the Land Use Authority Permittee or Implementing Entity, who will send it CDFW for written approval at least 15 days prior to the beginning of any Covered Activities, including preconstruction surveys. If California tiger salamander is encountered within a construction site, is directly threatened by Covered Activities, and is unable to move to a safe area on its own, the approved biologist(s) shall relocate California tiger salamander to a safe area on its own, the approved biologist(s) shall relocate California tiger salamander is encountered within a construction site, is directly threatened by Covered Activities, and is unable to move to a safe area on its own, the approved biologist(s) shall relocate California tiger salamander to a safe area on its own, the approved biologist(s) shall relocate California tiger salamander to a safe area on its own, the approved biologist(s) shall relocate California t	Not applicable.
and is unable to move to a safe area on its own, the approved biologist(s) shall relocate California tiger salamander to a safe area in accordance with the Relocation Plan. Otherwise, California tiger	
salamander may only be captured and handled by the Approved Biologist(s). The Permittees or Authorized Party shall notify CDFW within 24 hours of each time California tiger salamander is	
relocated. Notification to CDFW shall be via telephone or email, followed by a written incident report. Notification shall include the date, time, location, and circumstances of the incident.	
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
<b>CTS-9. (California Tiger Salamander Pre-Construction Surveys).</b> The approved biologist(s) shall complete a visual survey in each of the construction sites located within suitable upland habitat and within a 200-foot boundary, including access roads. The approved biologist(s) shall pay particular attention to suitable California tiger salamander habitat features and search beneath woody debris. If California tiger salamander is found within the construction site, access roads, or the 200-foot boundary, the approved biologist(s) shall delay installation of the exclusion barrier until the approved biologist(s) relocate(s) the California tiger salamander out of the Project Area and 200-foot boundary in accordance with AMM CTS-8. The approved biologist(s) shall visually inspect all potential burrow within suitable upland habitat in the construction site, access roads, and 200-foot boundary, prior to installing exclusionary fencing.	Not applicable.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
western Spadefoot	
Avoidance and Minimization Measure	Project Compliance
#### \*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

<b>WS-1 (Western Spadefoot Work Window):</b> Ground-disturbing Covered Activities within western spadefoot modeled habitat (Figure 3-17) will occur outside the breeding and dispersal season (after May 15 and before October 15), to the maximum extent practicable.	Not applicable; no habitat present in the Project Area.
WS-2 (Western Spadefoot Exclusion Fencing): If Covered Activities must be implemented in modeled habitat (Figure 3-17) after October 15 and before May 15, exclusion fencing will be installed around the project footprint before October 15, and the project site must be monitored by an approved biologist following rain events. Temporary high-visibility construction fencing will be installed along the edge of work areas, and silt fencing will be installed immediately behind the temporary high-visibility construction fencing to exclude western spadefoot from entering the construction area. Fencing will remain in place until all construction activities within the construction area are completed. No project activities will occur outside the delineated project footprint. If a western spadefoot is encountered, refer to WS-6, below.	Not applicable.
<b>WS-3 (Western Spadefoot Monitoring):</b> If Covered Activities must be implemented in modeled habitat (Figure 3-17) in the breeding and dispersal season (after October 15 and before May 15), an approved biologist experienced with western spadefoot identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place, and will inspect the project site daily for western spadefoot prior to construction activities. The approved biologist will also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a western spadefoot enters an active construction zone (i.e., outside the buffer zone). If a western spadefoot is encountered, refer to WS-6, below.	Not applicable.
WS-4 (Avoid Western Spadefoot Entrapment): If a Covered Activity occurs in western spadefoot modeled habitat (Figure 3-17), all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within western spadefoot modeled habitat will be inspected for western spadefoot by the approved biologist prior to being moved. If a western spadefoot is encountered, refer to WS-6, below.	Not applicable.
<b>WS-5 (Erosion Control Materials in Western Spadefoot Habitat):</b> If erosion control (BMP-2) is implemented within western spadefoot modeled habitat (Figure 3-17), non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that western spadefoots are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.	Not applicable.
WS-6 (Western Spadefoot Encounter Protocol): If Covered Activities must be implemented in modeled habitat (Figure 3-17) during the breeding and dispersal season (after October 15 and before May 15), and a western spadefoot is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately. Construction activities will be suspended in a 100-foot radius of the animal until the animal leaves the project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted,	Not applicable.

#### \*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

<b>WS-1 (Western Spadefoot Work Window):</b> Ground-disturbing Covered Activities within western spadefoot modeled habitat (Figure 3-17) will occur outside the breeding and dispersal season (after May 15 and before October 15), to the maximum extent practicable.	Not applicable; no habitat present in the Project Area.
WS-2 (Western Spadefoot Exclusion Fencing): If Covered Activities must be implemented in modeled habitat (Figure 3-17) after October 15 and before May 15, exclusion fencing will be installed around the project footprint before October 15, and the project site must be monitored by an approved biologist following rain events. Temporary high-visibility construction fencing will be installed along the edge of work areas, and silt fencing will be installed immediately behind the temporary high-visibility construction fencing the construction fencing will remain in place until all construction activities within the construction area are completed. No project activities will occur outside the delineated project footprint. If a western spadefoot is encountered, refer to WS-6, below.	Not applicable.
WS-3 (Western Spadefoot Monitoring): If Covered Activities must be implemented in modeled habitat (Figure 3-17) in the breeding and dispersal season (after October 15 and before May 15), an approved biologist experienced with western spadefoot identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place, and will inspect the project site daily for western spadefoot prior to construction activities. The approved biologist will also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a western spadefoot enters an active construction zone (i.e., outside the buffer zone). If a western spadefoot is encountered, refer to WS-6, below.	Not applicable.
WS-4 (Avoid Western Spadefoot Entrapment): If a Covered Activity occurs in western spadefoot modeled habitat (Figure 3-17), all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within western spadefoot modeled habitat will be inspected for western spadefoot by the approved biologist prior to being moved. If a western spadefoot is encountered, refer to WS-6, below.	Not applicable.
WS-5 (Erosion Control Materials in Western Spadefoot Habitat): If erosion control (BMP-2) is implemented within western spadefoot modeled habitat (Figure 3-17), non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that western spadefoots are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.	Not applicable.
WS-6 (Western Spadefoot Encounter Protocol): If Covered Activities must be implemented in modeled habitat (Figure 3-17) during the breeding and dispersal season (after October 15 and before May 15), and a western spadefoot is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately. Construction activities will be suspended in a 100-foot radius of the animal until the animal leaves the project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted.	Not applicable.

including date(s), location(s), habitat description, and any corrective measures taken to protect the	
western spadefoot within 1 business day to the Wildlife Agencies. The biologist will report any take	
or listed species to the U.S. Fish and wildlife Service and California Department of Fish and wildlife	
injured, or entranned western spadefoot(s) must immediately report the incident to the approved	
high each of entrapped western space of this infine dately report the incident to the approved	
Giant Garter Snake	
Avoidance and Minimization Measure	Project Compliance
<b>GGS-1 (Giant Gartersnake Surveys):</b> If the SSHCP giant gartersnake modeled habitat maps (Figure 3- 18) show that modeled habitat for giant gartersnake is present within a Covered Activity's project footprint or within 300 feet of a project footprint, then an approved biologist will conduct a field investigation to delineate giant gartersnake aquatic habitat within the project footprint and adjacent areas within 300 feet of the project footprint. In addition to the SSHCP land cover types shown in Figure 3-18, giant gartersnake aquatic habitat includes, but is not limited to, low-gradient streams and creeks, open water, freshwater marsh, agricultural ditches, and rice fields. 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 sites and provide these maps to the Local Land Use Permittees and the Implementing Entity. Locations of delineated giant gartersnake habitat must also be noted on plans that are submitted to a Local Land Use Permittee. The applicant will use this information to finalize project design. Covered Activities may occur throughout the year as long as giant gartersnake habitat is identified and fully avoided. Otherwise, Covered Activities must comply with GGS-2 through GGS-8, below. See Chapter 10 for the process to conduct and submit survey information.	Not applicable; no habitat is present in or within 300 feet of the Project impact area.
GGS-2 (Giant Gartersnake Work Window): Covered Activities that do not fully avoid giant gartersnake modeled habitat (Figure 3-18) will be conducted during the snake's active season. Construction and ground-disturbing activities will be initiated after May 1 and will end prior to September 15. If it appears that these activities may go beyond September 15, the Third-Party Project Proponent or Plan Permittee will contact the Land Use Authority Permittee and the Implementing Entity as soon as possible, but not later than September 1. The Land Use Authority Permittee and the Implementing Entity will discuss with the Wildlife Agencies additional measures necessary to minimize take. The additional measures would vary depending on where the work is occurring. For example, if the work outside the giant gartersnake active season is a continuation of work within a dewatered channel or within a disturbed area where no more than two days have passed without ground-disturbing activities, burrows are no longer expected to be occupied by giant gartersnake, therefore no additional measures may be necessary. However, if ground disturbing work will occur outside the giant gartersnake active season in an area that was not previously disturised in the active season, or there has been no ground disturbance for more than two days, an approved biologist may be necessary on-site during earth moving activities, to monitor for giant gartersnake presence.	Not applicable.
<b>GGS-3 (Giant Gartersnake Monitoring):</b> If a Covered Activity is occurring in giant gartersnake modeled habitat (Figure 3-18), an approved biologist experienced with giant gartersnake	Not applicable.

# SSHCP Project Specific Avoidance and Minimization Measures THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

\*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document including date(s), location(s), habitat description, and any corrective measures taken to protect the western spadefoot within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife immediately. Any worker who inadvertently injures or kills a western spadefoot or who finds dead, injured, or entrapped western spadefoot(s) must immediately report the incident to the approved biologist. **Giant Garter Snake** Avoidance and Minimization Measure **Project Compliance** GGS-1 (Giant Gartersnake Surveys): If the SSHCP giant gartersnake modeled habitat maps (Figure 3-Not applicable; no 18) show that modeled habitat for giant gartersnake is present within a Covered Activity's project habitat is present in or footprint or within 300 feet of a project footprint, then an approved biologist will conduct a field within 300 feet of the investigation to delineate giant gartersnake aquatic habitat within the project footprint and Project impact area. adjacent areas within 300 feet of the project footprint. In addition to the SSHCP land cover types shown in Figure 3-18, giant gartersnake aquatic habitat includes, but is not limited to, low-gradient streams and creeks, open water, freshwater marsh, agricultural ditches, and rice fields. 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 sites and provide these maps to the Local Land Use Permittees and the Implementing Entity. Locations of delineated giant gartersnake habitat must also be noted on plans that are submitted to a Local Land Use Permittee. The applicant will use this information to finalize project design. Covered Activities may occur throughout the year as long as giant gartersnake habitat is identified and fully avoided. Otherwise, Covered Activities must comply with GGS-2 through GGS-8, below. See Chapter 10 for the process to conduct and submit survey information. GGS-2 (Giant Gartersnake Work Window): Covered Activities that do not fully avoid giant Not applicable. gartersnake modeled habitat (Figure 3-18) will be conducted during the snake's active season. Construction and ground-disturbing activities will be initiated after May 1 and will end prior to

Construction and ground-disturbing activities will be initiated after May 1 and will end prior to September 15. If it appears that these activities may go beyond September 15, the Third-Party Project Proponent or Plan Permittee will contact the Land Use Authority Permittee and the Implementing Entity as soon as possible, but not later than September 1. The Land Use Authority Permittee and the Implementing Entity will discuss with the Wildlife Agencies additional measures necessary to minimize take. The additional measures would vary depending on where the work is occurring. For example, if the work outside the giant gartersnake active season is a continuation of work within a dewatered channel or within a disturbed area where no more than two days have passed without ground-disturbing activities, burrows are no longer expected to be occupied by giant gartersnake, therefore no additional measures may be necessary. However, if ground disturbing work will occur outside the giant gartersnake active season in an area that was not previously disturised in the active season, or there has been no ground disturbance for more than two days, an approved biologist may be necessary on-site during earth moving activities, to monitor for giant gartersnake presence. This AMIM has been revised to reflect USFWS and/or CDFW permit conditions

 GGS-3 (Giant Gartersnake Monitoring): If a Covered Activity is occurring in giant gartersnake
 Not applicable.

 modeled habitat (Figure 3-18), an approved biologist experienced with giant gartersnake
 Not applicable.

identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place in aquatic habitat or within 300 feet of aquatic habitat, and will inspect the project site daily	
for giant gartersnake prior to construction activities. If a giant gartersnake is encountered, refer to GGS-7. The approved biologist will also train construction personnel on the required avoidance	
procedures, exclusion fencing, and protocols in the event that a giant gartersnake enters an active	
construction zone (i.e., outside the buffer zone).	
giant gartersnake aquatic habitat, aquatic habitat will be dewatered and then remain dry and absent of aquatic prey (e.g., fish and tadpoles) for 15 days prior to initiation of construction activities. If complete dewatering is not possible, the Implementing Entity will be contacted to determine what additional measures may be necessary to minimize effects to giant gartersnake. After aquatic habitat has been dewatered 15 days prior to construction activities, exclusion fencing will be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic	Not applicable.
and adjacent upland habitat. Exclusionary fencing will be erected 36 inches above ground and buried at least 6 inches below the ground to prevent snakes from attempting to move under the fence into the construction area. In addition, high-visibility fencing will be erected to identify the construction limits and to protect adjacent habitat from encroachment of personnel and equipment. Giant gartersnake habitat outside construction fencing will be avoided by all construction personnel. The fencing and the work area will be inspected by the approved biologist to ensure that the fencing is intact and that no snakes have entered the work area before the start of each work day. The fencing will be maintained by the contractor until completion of the project. If giant gartersnake is encountered, refer to GGS-7, below.	
<b>GGS-5 (Avoid Giant Gartersnake Entrapment):</b> If a Covered Activity occurs in giant gartersnake modeled habitat (Figure 3-18), all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps at an angle of no more than 30 degrees constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within giant gartersnake modeled habitat will be inspected for giant gartersnake by the approved biologist prior to being moved. If a giant gartersnake is encountered, refer to GGS-7.	Not applicable.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
<b>GGS-6 (Erosion Control Materials in Giant Gartersnake Habitat):</b> If erosion control (BMP-2) is implemented within giant gartersnake modeled habitat (Figure 3-18), non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure snakes are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.	Not applicable.
<b>GGS-7 (Giant Gartersnake Encounter Protocol):</b> If a giant gartersnake is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately. Construction activities will be suspended in a 100-foot radius of the animal until the animal leaves	Not applicable.

identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place in aquatic habitat or within 300 feet of aquatic habitat, and will inspect the project site daily for giant gartersnake prior to construction activities. If a giant gartersnake is encountered, refer to GGS-7. The approved biologist will also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a giant gartersnake enters an active construction zone (i.e., outside the buffer zone).	
<b>GGS-4 (Giant Gartersnake Habitat Dewatering and Exclusion):</b> If construction activities will occur in giant gartersnake aquatic habitat, aquatic habitat will be dewatered and then remain dry and absent of aquatic prey (e.g., fish and tadpoles) for 15 days prior to initiation of construction activities. If complete dewatering is not possible, the Implementing Entity will be contacted to determine what additional measures may be necessary to minimize effects to giant gartersnake. After aquatic habitat has been dewatered 15 days prior to construction activities, exclusion fencing will be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat. Exclusionary fencing will be erected 36 inches above ground and buried at least 6 inches below the ground to prevent snakes from attempting to move under the fence into the construction area. In addition, high-visibility fencing will be avoided by all construction personnel. The fencing and the work area will be inspected by the approved biologist to ensure that the fencing is intact and that no snakes have entered the work area before the start of each work day. The fencing will be maintained by the contractor until completion of the project. If giant gartersnake is encountered, refer to GGS-7, below.	Not applicable.
GGS-5 (Avoid Giant Gartersnake Entrapment): If a Covered Activity occurs in giant gartersnake modeled habitat (Figure 3-18), all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps at an angle of no more than 30 degrees constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within giant gartersnake modeled habitat will be inspected for giant gartersnake by the approved biologist prior to being moved. If a giant gartersnake is encountered, refer to GGS-7.	Not applicable.
<b>GGS-6 (Erosion Control Materials in Giant Gartersnake Habitat):</b> If erosion control (BMP-2) is implemented within giant gartersnake modeled habitat (Figure 3-18), non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure snakes are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.	Not applicable.
<b>GGS-7 (Giant Gartersnake Encounter Protocol):</b> If a giant gartersnake is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately. Construction activities will be suspended in a 100-foot radius of the animal until the animal leaves	Not applicable.

the project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the giant gartersnake within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the U.S. Fish and Wildlife Service and CDFW immediately. Any worker who inadvertently injures or kills a giant gartersnake or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist. Any giant gartersnake observed during Covered Activities will be allowed to move away from danger on its own or be moved by the approved biologist with CDFW and USFWS approval to handle the snake and in accordance with the CDFW-approved Giant Gartersnake Relocation Plan detailed in AMM GGS-9. <b>This AMM has been revised to reflect USFWS and/or CDFW permit conditions</b>	
GGS-8 (Giant Gartersnake Post-Construction Restoration): After completion of ground-disturbing Covered Activities, the applicant will remove any temporary fill and construction debris and will restore temporarily disturbed areas to pre-project conditions. Restoration work includes such activities as re-vegetating the banks and active channels with an appropriate native seed mix. Appropriate methods and plant species used to re-vegetate such areas will be determined on a site- specific basis in consultation with the Implementing Entity. Restoration work may include replanting emergent aquatic vegetation. Refer to the U.S. Fish and Wildlife Service's (USFWS) Guidelines for the Restoration and/or Replacement of Giant Gartersnake Habitat (USFWS 1997), or the most current USFWS guidelines at the time of the activity. A photo documentation report showing pre- and post-project conditions will be submitted to the Implementing Entity 1 month after implementation of the restoration. <b>This AMM has been revised to reflect USFWS and/or CDFW permit conditions</b>	Not applicable.
GGS-9 (Giant Gartersnake Relocation Plan): Project proponents shall prepare a Giant Gartersnake Relocation Plan (Relocation Plan) for Covered Activities occurring in giant gartersnake modeled habitat. Project proponents shall submit the Relocation Plan to the Land Use Authority Permittee or Implementing Entity, who will send it CDFW for written approval at least 30 days prior to the beginning of any Covered Activities. The Relocation Plan shall include, at a minimum, the proposed giant gartersnake capture and handling technique; a quantification of the amount, relative location, and quality of suitable habitat (aquatic and upland) within proposed relocation site(s) including invasive and non-native species present, available upland burrows for aestivation and high-water refugia, suitable prey items, and potential barriers for movement; written permission from the landowner to use their land as a relocation site; and identification of a wildlife rehabilitation center or veterinary facility that routinely evaluates or treats snakes and is permitted to handle giant gartersnake. This AMIM has been revised to reflect USFWS and/or CDFW permit conditions	Not applicable.
<b>GGS-10 (Giant Gartersnake Pre-construction Surveys):</b> If Covered Activities will occur within 200 feet of modeled giant gartersnake aquatic habitat, the approved biologist(s) shall conduct one pre-construction survey within 24 hours prior to beginning ground disturbing activities. The approved biologist(s) shall investigate all small mammal burrows within suitable upland habitat. The Project Area will be resurveyed whenever there is a lapse in construction activity of two weeks or more.	Not applicable.

the project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the giant gartersnake within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the U.S. Fish and Wildlife Service and CDFW immediately. Any worker who inadvertently injures or kills a giant gartersnake or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist. Any giant gartersnake observed during Covered Activities will be allowed to move away from danger on its own or be moved by the approved biologist with CDFW and USFWS approval to handle the snake and in accordance with the CDFW-approved Giant Gartersnake Relocation Plan detailed in AMM GGS-9.	
GGS-8 (Giant Gartersnake Post-Construction Restoration): After completion of ground disturbing	
Covered Activities, the applicant will remove any temporary fill and construction debris and will restore temporarily disturbed areas to pre-project conditions. Restoration work includes such activities as re-vegetating the banks and active channels with an appropriate native seed mix. Appropriate methods and plant species used to re-vegetate such areas will be determined on a site-specific basis in consultation with the Implementing Entity. Restoration work may include replanting emergent aquatic vegetation. Refer to the U.S. Fish and Wildlife Service's (USFWS) Guidelines for the Restoration and/or Replacement of Giant Gartersnake Habitat (USFWS 1997), or the most current USFWS guidelines at the time of the activity. A photo documentation report showing pre-and post-project conditions will be submitted to the Implementing Entity 1 month after implementation of the restoration.	Not applicable.
GGS-9 (Giant Gartersnake Relocation Plan): Project proponents shall prepare a Giant Gartersnake	Not applicable
Relocation Plan (Relocation Plan) for Covered Activities occurring in giant gartersnake modeled habitat. Project proponents shall submit the Relocation Plan to the Land Use Authority Permittee or Implementing Entity, who will send it CDFW for written approval at least 30 days prior to the beginning of any Covered Activities. The Relocation Plan shall include, at a minimum, the proposed giant gartersnake capture and handling technique; a quantification of the amount, relative location, and quality of suitable habitat (aquatic and upland) within proposed relocation site(s) including invasive and non-native species present, available upland burrows for aestivation and high-water refugia, suitable prey items, and potential barriers for movement; written permission from the landowner to use their land as a relocation site; and identification of a wildlife rehabilitation center or veterinary facility that routinely evaluates or treats snakes and is permitted to handle giant gartersnake. <b>This AMM has been revised to reflect USFWS and/or CDFW permit conditions</b>	
GGS-10 (Giant Gartersnake Pre-construction Surveys): If Covered Activities will occur within 200	
feet of modeled giant gartersnake aquatic habitat, the approved biologist(s) shall conduct one pre- construction survey within 24 hours prior to beginning ground disturbing activities. The approved biologist(s) shall investigate all small mammal burrows within suitable upland habitat. The Project Area will be resurveyed whenever there is a lapse in construction activity of two weeks or more.	Not applicable.

#### SSHCP Project Specific Avoidance and Minimization Measures

#### THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

#### \*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
Western Pond Turtle	
Avoidance and Minimization Measure	Project Compliance
<b>WPT-1 (Western Pond Turtle Surveys):</b> If the SSHCP western pond turtle modeled habitat maps (Figure 3-19) show that modeled habitat for western pond turtle is present within a Covered Activity's project footprint or within 300 feet of a project footprint, then an approved biologist will conduct a field investigation to delineate western pond turtle aquatic habitat within the project footprint and within 300 feet of the project footprint. In addition to the SSHCP land cover types shown in Figure 3-19, western pond turtle aquatic habitat includes, but is not limited to, low-gradient streams and creeks, open water, freshwater marsh, and rice fields. 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 sites and provide those maps to the Local Land Use Permittees and the Implementing Entity. Locations of delineated western pond turtle habitat must also be noted on plans that are submitted to a Local Land Use Permittee. The applicant will use this information to finalize project design. Covered Activities may occur throughout the year as long as western pond turtle habitat is identified and fully avoided. Otherwise, Covered Activities must comply with WPT-2 through WPT-9. See Chapter 10 for the process to conduct and submit survey information.	Not applicable; no habitat is present in or within 300 feet of the Project impact area.
WPT-2 (Western Pond Turtle Work Window): Maintenance and improvements to existing structures may occur throughout the year as long as western pond turtle habitat is identified and avoided, and movement of equipment is confined to existing roads. Otherwise, construction and ground-disturbing Covered Activities must be conducted outside of western pond turtle's active season. Covered Activities will be initiated after May 1 and will commence prior to September 15. If it appears that these activities may go beyond September 15, the appropriate Plan Permittee will contact the Land Use Authority Permittee and the Implementing Entity as soon as possible, but not later than September 1, to determine if additional measures are necessary to minimize take.	Not applicable.
WPT-3 (Western Pond Turtle Monitoring): If a Covered Activity is occurring in western pond turtle modeled habitat (Figure 3-19), an approved biologist experienced with western pond turtle identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while Covered Activities are taking place in aquatic habitat or within 300 feet of aquatic habitat, and will inspect the project site daily for western pond turtle prior to these activities. The approved biologist will also train construction or maintenance personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a western pond turtle enters an active construction or maintenance zone (i.e., outside the buffer zone). This AMM has been revised to reflect USFWS and/or CDFW permit conditions	Not applicable.
<b>WPT-4 (Western Pond Turtle Habitat Dewatering and Exclusion):</b> If Covered Activities will occur in western pond turtle aquatic habitat, aquatic habitat for the turtle will be dewatered and then remain dry and absent of aquatic prey (e.g., crustaceans and other aquatic invertebrates) for 15 days prior to the initiation of construction activities. If complete dewatering is not possible, the	Not applicable.

## SSHCP Project Specific Avoidance and Minimization Measures

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\*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
Western Pond Turtle	
Avoidance and Minimization Measure	Project Compliance
<b>WPT-1 (Western Pond Turtle Surveys):</b> If the SSHCP western pond turtle modeled habitat maps (Figure 3-19) show that modeled habitat for western pond turtle is present within a Covered Activity's project footprint or within 300 feet of a project footprint, then an approved biologist will conduct a field investigation to delineate western pond turtle aquatic habitat within the project footprint and within 300 feet of the project footprint. In addition to the SSHCP land cover types shown in Figure 3-19, western pond turtle aquatic habitat includes, but is not limited to, low-gradient streams and creeks, open water, freshwater marsh, and rice fields. 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 sites and provide those maps to the Local Land Use Permittees and the Implementing Entity. Locations of delineated western pond turtle habitat must also be noted on plans that are submitted to a Local Land Use Permittee. The applicant will use this information to finalize project design. Covered Activities may occur throughout the year as long as western pond turtle habitat is identified and fully avoided. Otherwise, Covered Activities must comply with WPT-2 through WPT-9. See Chapter 10 for the process to conduct and submit survey information.	Not applicable; no habitat is present in or within 300 feet of the Project impact area.
WPT-2 (Western Pond Turtle Work Window): Maintenance and improvements to existing structures may occur throughout the year as long as western pond turtle habitat is identified and avoided, and movement of equipment is confined to existing roads. Otherwise, construction and ground-disturbing Covered Activities must be conducted outside of western pond turtle's active season. Covered Activities will be initiated after May 1 and will commence prior to September 15. If it appears that these activities may go beyond September 15, the appropriate Plan Permittee will contact the Land Use Authority Permittee and the Implementing Entity as soon as possible, but not later than September 1, to determine if additional measures are necessary to minimize take.	Not applicable.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	1
<b>WPT-3 (Western Pond Turtle Monitoring):</b> If a Covered Activity is occurring in western pond turtle modeled habitat (Figure 3-19), an approved biologist experienced with western pond turtle identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while Covered Activities are taking place in aquatic habitat or within 300 feet of aquatic habitat, and will inspect the project site daily for western pond turtle prior to these activities. The approved biologist will also train construction or maintenance personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a western pond turtle enters an active construction or maintenance zone (i.e., outside the buffer zone).	Not applicable.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
<b>WPT-4 (Western Pond Turtle Habitat Dewatering and Exclusion):</b> If Covered Activities will occur in western pond turtle aquatic habitat, aquatic habitat for the turtle will be dewatered and then remain dry and absent of aquatic prey (e.g., crustaceans and other aquatic invertebrates) for 15 days prior to the initiation of construction activities. If complete dewatering is not possible, the	Not applicable.

Implementing Entity will be contacted to determine what additional measures may be necessary to minimize effects to western pond turtle. After aquatic habitat has been dewatered 15 days prior to Covered Activities, exclusion fencing will be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat. Exclusionary fencing will be erected 36 inches above ground and buried at least 6 inches below the ground to prevent turtles from attempting to burrow or move under the fence into the work area. In addition, high-visibility fencing will be erected to identify work area limits and to protect adjacent habitat from encroachment of personnel and equipment. Western pond turtle habitat outside exclusionary fencing will be avoided by all construction or maintenance personnel. The fencing and work area will be inspected by the approved biologist to ensure that the fencing is intact and that no turtles have entered the work area before the start of each work day. Fencing will be maintained by the contractor or maintenance entity until completion of the project. If, after exclusion fencing and dewatering, western pond turtles are found within the project footprint or within 300 feet of the project footprint, the Third-Party Project Proponent will discuss the next best steps with the Implementing Entity and Wildlife Agencies.	
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
WPT-5 (Avoid Western Pond Turtle Entrapment): If a Covered Activity occurs within western pond turtle modeled habitat (Figure 3-19), all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within western pond turtle modeled habitat will be inspected for western pond turtle by the approved biologist prior to being moved.	Not applicable.
<b>WPT-6 (Erosion Control Materials in Western Pond Turtle Habitat):</b> If erosion control (BMP-2) is implemented within western pond turtle modeled habitat (Figure 3-19), non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that turtles are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.	Not applicable.
WPT-7 (Western Pond Turtle Modeled Habitat Speed Limit): Covered Activity construction and maintenance vehicles will observe a 20-mile-per-hour speed limit within western pond turtle modeled upland habitat (Figure 3-19).	Not applicable.
<b>WPT-8 (Western Pond Turtle Encounter Protocol):</b> If a western pond turtle is encountered during Covered Activities, the approved biologist will notify the Wildlife Agencies immediately. Covered Activities will be suspended in a 100-foot radius of the animal until the animal leaves the project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the turtle, within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the U.S. Fish and Wildlife Service immediately. Any worker who	Not applicable.

Implementing Entity will be contacted to determine what additional measures may be necessary to minimize effects to western pond turtle. After aquatic habitat has been dewatered 15 days prior to Covered Activities, exclusion fencing will be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat. Exclusionary fencing will be erected 36 inches above ground and buried at least 6 inches below the ground to prevent turtles from attempting to burrow or move under the fence into the work area. In addition, high-visibility fencing will be erected to identify work area limits and to protect adjacent habitat from encroachment of personnel and equipment. Western pond turtle habitat outside exclusionary fencing will be avoided by all construction or maintenance personnel. The fencing and work area will be inspected by the approved biologist to ensure that the fencing is intact and that no turtles have entered the work area before the start of each work day. Fencing will be maintained by the contractor or maintenance entity until completion of the project. If, after exclusion fencing and dewatering, western pond turtles are found within the project footprint or within 300 feet of the project footprint, the Third-Party Project Proponent will discuss the next best steps with the Implementing Entity and Wildlife Agencies.	
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
WPT-5 (Avoid Western Pond Turtle Entrapment): If a Covered Activity occurs within western pond turtle modeled habitat (Figure 3-19), all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within western pond turtle modeled habitat will be inspected for western pond turtle by the approved biologist prior to being moved.	Not applicable.
<b>WPT-6 (Erosion Control Materials in Western Pond Turtle Habitat):</b> If erosion control (BMP-2) is implemented within western pond turtle modeled habitat (Figure 3-19), non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that turtles are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.	Not applicable.
<b>WPT-7 (Western Pond Turtle Modeled Habitat Speed Limit):</b> Covered Activity construction and maintenance vehicles will observe a 20-mile-per-hour speed limit within western pond turtle modeled upland habitat (Figure 3-19).	Not applicable.
<b>WPT-8 (Western Pond Turtle Encounter Protocol):</b> If a western pond turtle is encountered during Covered Activities, the approved biologist will notify the Wildlife Agencies immediately. Covered Activities will be suspended in a 100-foot radius of the animal until the animal leaves the project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the turtle, within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the U.S. Fish and Wildlife Service immediately. Any worker who	Not applicable.

#### \*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

<ul> <li>inadvertently injures or kills a western pond turtle or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist.</li> <li>This AMM has been revised to reflect USFWS and/or CDFW permit conditions</li> <li>WPT-9 (Western Pond Turtle Post-Construction Restoration): After completion of Covered Activities, the applicant will remove any temporary fill and construction debris and will restore temporarily disturbed areas to pre-project conditions. Restoration work includes such activities as re-vegetating the banks and active channels with a seed mix similar to pre-project conditions. Appropriate methods and plant species used to re-vegetate such areas will be determined on a site-specific basis in consultation with the Implementing Entity. Restoration work may include replanting emergent aquatic vegetation and placing appropriate artificial or natural basking areas in waterways and wetlands. A photo documentation report showing pre- and post-project conditions</li> </ul>	Not applicable.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
Tricolored Blackbird	
Avoidance and Minimization Measure	Project Compliance
TCB-1 (Tricolored Blackbird Surveys): If modeled habitat for tricolored blackbird (Figure 3-26) is present within a Covered Activity's project footprint or within 500 feet of a project footprint, or if Covered Activity impacts include the Mixed Riparian Scrub land cover type, regardless of whether it is included in the modeled habitat map, 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, 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 must also be noted on plans that are submitted to a Land Use Authority Permittee. See Chapter 10 for the process to conduct and submit survey information.	Not applicable; no habitat is present in or within 500 feet of the Project Area.
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 again 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. The surveys should be separated by at least three weeks. Pre-construction surveys will be conducted during the breeding	Not applicable.

## SSHCP Project Specific Avoidance and Minimization Measures THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

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inadvertently injures or kills a western pond turtle or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist.	
This AMM has been revised to reflect USEWS and /or CDEW permit conditions	
This Alwin has been revised to renect our wis and/or corw permit conditions	
<b>WPT-9 (Western Pond Turtle Post-Construction Restoration</b> ): After completion of Covered Activities, the applicant will remove any temporary fill and construction debris and will restore temporarily disturbed areas to pre-project conditions. Restoration work includes such activities as re-vegetating the banks and active channels with a seed mix similar to pre-project conditions. Appropriate methods and plant species used to re-vegetate such areas will be determined on a site- specific basis in consultation with the Implementing Entity. Restoration work may include replanting emergent aquatic vegetation and placing appropriate artificial or natural basking areas in waterways and wetlands. A photo documentation report showing pre- and post-project conditions will be submitted to the Implementing Entity 1 month after implementation of the restoration.	Not applicable.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
Tricolored Blackbird	
Avoidance and Minimization Measure	Project Compliance
TCB-1 (Tricolored Blackhird Surveys): If modeled habitat for tricolored blackbird (Figure 3-26) is present within a Covered Activity's project footprint or within 500 feet of a project footprint, or if Covered Activity impacts include the Mixed Riparian Scrub land cover type, regardless of whether it is included in the modeled habitat map, 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, 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 must also be noted on plans that are submitted to a Land Use Authority Permittee. See Chapter 10 for the process to conduct and submit survey information.	Not applicable; no habitat is present in or within 500 feet of the Project Area.
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 again 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. The surveys should be separated by at least three weeks. Pre-construction surveys will be conducted during the breeding.	Not applicable.

season (March 1 through September 15). 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 Lise Authority Permittee and the	
Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
<b>TCB-3 (Tricolored Blackbird Nest Buffer):</b> 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.	Not applicable.
<b>TCB-4 (Tricolored Blackbird Nest Buffer Monitoring):</b> 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 tricolored blackbird flies into an active construction zone (i.e., outside the buffer zone).	Not applicable.
<b>TCB-5 (Timing of Pesticide Use and Harvest Timing on Agricultural Preserves):</b> On SSHCP Agricultural Preserves, pesticides (including herbicides) will not be applied from January 1 through July 15.	Not applicable.
Swainson's Hawk	
Avoidance and Minimization Measure	Project Compliance
<b>SWHA-1 (Swainson's Hawk Surveys):</b> 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.	Modeled and suitable nesting habitat are present within

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	
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
<b>TCB-3 (Tricolored Blackbird Nest Buffer):</b> 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.	Not applicable.
<b>TCB-4 (Tricolored Blackbird Nest Buffer Monitoring):</b> 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 tricolored blackbird flies into an active construction zone (i.e., outside the buffer zone).	Not applicable.
<b>TCB-5 (Timing of Pesticide Use and Harvest Timing on Agricultural Preserves):</b> On SSHCP Agricultural Preserves, pesticides (including herbicides) will not be applied from January 1 through July 15.	Not applicable.
TCB-5 (Timing of Pesticide Use and Harvest Timing on Agricultural Preserves): On SSHCP       Agricultural Preserves, pesticides (including herbicides) will not be applied from January 1 through July 15.         Swainson's Hawk	Not applicable.
TCB-5 (Timing of Pesticide Use and Harvest Timing on Agricultural Preserves): On SSHCP         Agricultural Preserves, pesticides (including herbicides) will not be applied from January 1 through         July 15.         Swainson's Hawk         Avoidance and Minimization Measure	Not applicable. Project Compliance

#### \*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

<b>GSC-1 (Greater Sandhill Crane Surveys):</b> If modeled habitat for greater sandhill crane (Figure 3-22) is present within a Covered Activity's project footprint or within 0.5 mile of a project footprint, then	Not applicable;
Avoidance and Minimization Measure	Project Compliance
Greater Sandhill Crane	
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
nest trees until the last young have fledged, as verified by the approved biologist. The Implementing Entity shall provide the number of Swainsons' hawk nest trees removed each year, along with nest locations, in each Annual Report submitted to CDFW.	3WIIA-2.
<b>SWHA-5 (Swainson's Hawk Nest Tree Avoidance</b> ): Project proponents shall avoid removal of Swainson's hawk nest trees active within the last 5 years, to the maximum extent practicable. Removal of occupied nest trees shall be timed outside of the Swainson's hawk nesting season, which would limit removal to October 1 through February 1, and shall not remove any occupied	May apply depending on the application and/or results of SW/HA-2
<b>SWHA-4 (Swainson's Hawk Nest Buffer Monitoring):</b> 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 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).	May apply depending on the application and/or results of SWHA-2.
<b>SWHA-3 (Swainson's Hawk Nest Buffer):</b> 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.	May apply depending on the application and/or results of SWHA-2.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
SWHA-2 (Swainson's Hawk Pre-Construction Surveys): If existing or potential nest sites were found during surveys (SWHA-1), and construction activities will occur during the breeding season (March 1 through September 15), 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. An approved biologist will conduct pre-construction surveys within 30 days and again within 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.	May apply depending on the application and/or results of SWHA-1.
CMULA 2 (Consistential Based Developments) of aviating an extential sectorial	

#### \*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

<b>SWHA-2 (Swainson's Hawk Pre-Construction Surveys</b> ): If existing or potential nest sites were found during surveys (SWHA-1), and construction activities will occur during the breeding season (March 1 through September 15), 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. An approved biologist will conduct pre-construction surveys within 30 days and again within 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.	May apply depending on the application and/or results of SWHA-1.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
<b>SWHA-3 (Swainson's Hawk Nest Buffer):</b> 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.	May apply depending on the application and/or results of SWHA-2.
<b>SWHA-4 (Swainson's Hawk Nest Buffer Monitoring):</b> 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 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).	May apply depending on the application and/or results of SWHA-2.
SWHA-5 (Swainson's Hawk Nest Tree Avoidance): Project proponents shall avoid removal of Swainson's hawk nest trees active within the last 5 years, to the maximum extent practicable. Removal of occupied nest trees shall be timed outside of the Swainson's hawk nesting season, which would limit removal to October 1 through February 1, and shall not remove any occupied nest trees until the last young have fledged, as verified by the approved biologist. The Implementing Entity shall provide the number of Swainsons' hawk nest trees removed each year, along with nest locations, in each Annual Report submitted to CDFW.	May apply depending on the application and/or results of SWHA-2.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	
Greater Sandhill Crane	
Avoidance and Minimization Measure	Project Compliance
<b>GSC-1 (Greater Sandhill Crane Surveys):</b> If modeled habitat for greater sandhill crane (Figure 3-22) is present within a Covered Activity's project footprint or within 0.5 mile of a project footprint, then	Not applicable;

an approved biologist will conduct a field investigation to determine if existing or potential roosting sites are present within the project footprint and adjacent areas within 0.5 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. Roosting sites within the Plan Area are often associated with flooded fields, seasonal wetlands, and freshwater marsh. The Third-Party Project	no habitat is present in or within 0.5-mile of the Project Area.
Proponent will map all existing or potential roosting sites and provide these maps to the Local Land Use Permittees and Implementing Entity. Roosting 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.	
<b>GSC-2 (Greater Sandhill Crane Pre-Construction Surveys):</b> Pre-construction surveys will be required to determine if active roosting sites are present within a project footprint or within 0.5 mile of a project footprint if existing or potential roosting sites were found during initial surveys and construction activities will occur when wintering flocks are present within the Plan Area (September 1 through March 15). An approved biologist will conduct pre-construction surveys within 15 days of ground-disturbing activities, and within 0.5 mile of a project footprint, to determine presence of roosting greater sandhill cranes. Pre-construction surveys will be conducted September 1 through March 15, when wintering flocks are present within the Plan Area. If birds are present, then GSC-3, GSC-4, and GSC-5 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.	Not applicable.
<ul> <li>GSC-3 (Greater Sandhill Crane Roosting Buffer): If active roosting sites are found within the project footprint or within 0.5 mile of any project-related Covered Activity, the Third-Party Project Proponent will establish a 0.5 mile temporary roosting disturbance buffer around each roosting site until the cranes have left.</li> <li><u>This AMM has been revised to reflect USFWS and/or CDFW permit conditions</u></li> </ul>	Not applicable.
<b>GSC-4 (Greater Sandhill Crane Visual Barrier):</b> Greater sandhill cranes have low tolerance for human disturbance, and such disturbance has caused cranes to abandon foraging and roosting sites. Repeat disturbance affects their ability to feed and store energy needed for survival. If project-related activities occur within 0.5 mile of a known roosting site as identified by surveys conducted during implementation of GSC-1 or GSC-2, a visual barrier will be constructed.	Not applicable.
<b>GSC-5 (Greater Sandhill Crane Roosting Buffer Monitoring):</b> If roosting sites are found within the project footprint or within 0.50 mile of any project-related Covered Activity, an approved biologist experienced with greater sandhill crane behavior will be retained by the Third-Party Project Proponent to monitor the roosting site throughout the roosting season and to determine when the birds have left. The approved biologist will be on site daily while construction-related activities are taking place within the disturbance buffer. Work within the temporary disturbance buffer can only occur with the written permission of the Implementing Entity and Wildlife Agencies. If greater sandhill cranes are abandoning their roosting and/or forage sites, the approved biologist will have the authority to shut down construction activities. If roost abandonment occurs, the approved biologist, Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies will meet to determine the best course of action to avoid harm and harassment of individuals. The approved biologist will also train construction personnel on the avoidance procedures, buffer zones, and	Not applicable.

an approved biologist will conduct a field investigation to determine if existing or potential roosting sites are present within the project footprint and adjacent areas within 0.5 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. Roosting sites within the Plan Area are often associated with flooded fields, seasonal wetlands, and freshwater marsh. The Third-Party Project Proponent will map all existing or potential roosting sites and provide these maps to the Local Land Use Permittees and Implementing Entity. Roosting 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.	no habitat is present in or within 0.5-mile of the Project Area.
<b>GSC-2 (Greater Sandhill Crane Pre-Construction Surveys):</b> Pre-construction surveys will be required to determine if active roosting sites are present within a project footprint or within 0.5 mile of a project footprint if existing or potential roosting sites were found during initial surveys and construction activities will occur when wintering flocks are present within the Plan Area (September 1 through March 15). An approved biologist will conduct pre-construction surveys within 15 days of ground-disturbing activities, and within 0.5 mile of a project footprint, to determine presence of roosting greater sandhill cranes. Pre-construction surveys will be conducted September 1 through March 15, when wintering flocks are present within the Plan Area. If birds are present, then GSC-3, GSC-4, and GSC-5 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.	Not applicable.
<ul> <li>GSC-3 (Greater Sandhill Crane Roosting Buffer): If active roosting sites are found within the project footprint or within 0.5 mile of any project-related Covered Activity, the Third-Party Project</li> <li>Proponent will establish a 0.5 mile temporary roosting disturbance buffer around each roosting site until the cranes have left.</li> <li><u>This AMM has been revised to reflect USFWS and/or CDFW permit conditions</u></li> </ul>	Not applicable.
<b>GSC-4 (Greater Sandhill Crane Visual Barrier):</b> Greater sandhill cranes have low tolerance for human disturbance, and such disturbance has caused cranes to abandon foraging and roosting sites. Repeat disturbance affects their ability to feed and store energy needed for survival. If project-related activities occur within 0.5 mile of a known roosting site as identified by surveys conducted during implementation of GSC-1 or GSC-2, a visual barrier will be constructed.	Not applicable.
<b>GSC-5 (Greater Sandhill Crane Roosting Buffer Monitoring):</b> If roosting sites are found within the project footprint or within 0.50 mile of any project-related Covered Activity, an approved biologist experienced with greater sandhill crane behavior will be retained by the Third-Party Project Proponent to monitor the roosting site throughout the roosting season and to determine when the birds have left. The approved biologist will be on site daily while construction-related activities are taking place within the disturbance buffer. Work within the temporary disturbance buffer can only occur with the written permission of the Implementing Entity and Wildlife Agencies. If greater sandhill cranes are abandoning their roosting and/or forage sites, the approved biologist will have the authority to shut down construction activities. If roost abandonment occurs, the approved biologist, Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies will meet to determine the best course of action to avoid harm and harassment of individuals. The approved biologist will also train construction personnel on the avoidance procedures, buffer zones, and	Not applicable.

protocols in the event that greater sandhill cranes move into an active construction zone (i.e., outside the buffer zone).	
Western Burrowing Owl	
Avoidance and Minimization Measure	Project Compliance
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.	Modeled and potentially suitable grassland habitat are present within 250 feet of the Project Area. May apply if HCP authorization required.
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 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 may count as the first of the two required surveys as long as the second survey concludes no more than 2 calendar days prior.	May apply depending on the application and/or results of WBO-1.
<b>WBO-3 (Burrowing Owl Avoidance):</b> 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:	May apply depending on the application and/or results of WBO-2.

protocols in the event that greater sandhill cranes move into an active construction zone (i.e., outside the buffer zone).	
Western Burrowing Owl	
Avoidance and Minimization Measure	Project Compliance
<b>WBO-1 (Western Burrowing Owl Surveys):</b> 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.	Modeled and potentially suitable grassland habitat are present within 250 feet of the Project Area. May apply if HCP authorization required.
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 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 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.	May apply depending on the application and/or results of WBO-1.
<b>WBO-3 (Burrowing Owl Avoidance):</b> 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:	May apply depending on the application and/or results of WBO-2.

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:	
<ul> <li>The Implementing Entity and Wildlife Agencies approve of the avoidance and minimization plan provided by the project applicant.</li> </ul>	
<ul> <li>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).</li> </ul>	
<ul> <li>The same approved biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities.</li> </ul>	
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.	
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).	
<ul> <li>The same approved biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities.</li> </ul>	
<ul> <li>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.</li> </ul>	

#### SSHCP Project Specific Avoidance and Minimization Measures <u>THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP</u> \*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

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. 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.

# SSHCP Project Specific Avoidance and Minimization Measures THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

#### \*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

<ul> <li>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.</li> <li>Monitoring must continue as described above for the non-breeding season as long as the burrow remains active.</li> </ul>	
<b>WBO-4 (Burrowing Owl Construction Monitoring):</b> 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.	May apply depending on the application and/or results of WBO-2.
<b>WBO-5 (Burrowing Owl Passive Relocation):</b> 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 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.	May apply depending on the application and/or results of WBO-2.
<b>WBO-6 (Burrowing Owl Timing of Maintenance Activities):</b> All activities adjacent to existing or planned Preserves, Preserve Setbacks, or Stream Setback areas will be seasonally timed, when safety permits, to avoid or minimize adverse effects on occupied burrows.	Not applicable.
<b>WBO-7 (Rodent Control):</b> 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.	May apply depending on the application and/or results of WBO-2.
Covered Raptor Species To avoid direct and indirect effects of Covered Activities on covered raptor species, the following AMMs will be implemented. This measure applies to Cooper's hawk (Accipiter cooperii), loggerhead shrike (Lanius Iudovicianus), northern	

harrier (Circus cyaneus), and white-tailed kite (Elanus leucurus). The following AMMs do not apply to ferruginous hawk

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<ul> <li>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.</li> <li>Monitoring must continue as described above for the non-breeding season as long as the burrow remains active.</li> </ul>	
<b>WBO-4 (Burrowing Owl Construction Monitoring):</b> 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.	May apply depending on the application and/or results of WBO-2.
<b>WBO-5 (Burrowing Owl Passive Relocation):</b> 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 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.	May apply depending on the application and/or results of WBO-2.
<b>WBO-6 (Burrowing Owl Timing of Maintenance Activities):</b> All activities adjacent to existing or planned Preserves, Preserve Setbacks, or Stream Setback areas will be seasonally timed, when safety permits, to avoid or minimize adverse effects on occupied burrows.	Not applicable.
<b>WBO-7 (Rodent Control):</b> 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.	May apply depending on the application and/or results of WBO-2.
<b>Covered Raptor Species</b> To avoid direct and indirect effects of Covered Activities on covered raptor species, the following implemented. This measure applies to Cooper's hawk ( <i>Accipiter cooperii</i> ), loggerhead shrike ( <i>Lan harrier (Circus cyaneus</i> ), and white-tailed kite ( <i>Elanus leucurus</i> ). The following AMMs do not appl	AMMs will be <i>ius ludovicianus),</i> northern y to ferruginous hawk

#### SSHCP Project Specific Avoidance and Minimization Measures THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

\*Projects containing or adjacent to preserves must also comply with AMMs specific to preserves, not included in this document

(Buteo regalis), as they do not nest in the Plan Area. The following AMMs also do not apply to Swainson's hawk or burrowing owl, as specific AMMs have been developed for these covered raptor species.

Avoidance and Minimization Measure	Project Compliance
<b>RAPTOR-1 (Raptor Surveys):</b> 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.	Modeled and suitable nesting habitat are present within 0.25-mile of the Project Area. May apply if HCP authorization required.
<b>RAPTOR-2 (Raptor Pre-Construction Surveys):</b> 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.	May apply depending on the application and/or results of RAPTOR-1.
<b>RAPTOR-3 (Raptor Nest/Roost Buffer):</b> 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.	May apply depending on the application and/or results of RAPTOR-2.
<b>RAPTOR-4 (Raptor Nest/Roost Buffer Monitoring):</b> 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-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).	May apply depending on the application and/or results of RAPTOR-2.

#### SSHCP Project Specific Avoidance and Minimization Measures THESE AMMS APPLY TO ALL COVERED ACTIVITIES UNDER THE SSHCP

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(Buteo regalis), as they do not nest in the Plan Area. The following AMMs also do not apply to Swainson's hawk or burrowing owl, as specific AMMs have been developed for these covered raptor species.

Avoidance and Minimization Measure	Project Compliance
<b>RAPTOR-1 (Raptor Surveys):</b> 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.	Modeled and suitable nesting habitat are present within 0.25-mile of the Project Area. May apply if HCP authorization required.
<b>RAPTOR-2 (Raptor Pre-Construction Surveys):</b> 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.	May apply depending on the application and/or results of RAPTOR-1.
<b>RAPTOR-3 (Raptor Nest/Roost Buffer):</b> 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.	May apply depending on the application and/or results of RAPTOR-2.
<b>RAPTOR-4 (Raptor Nest/Roost Buffer Monitoring):</b> 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-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).	May apply depending on the application and/or results of RAPTOR-2.

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#### Western Red Bat

Avoidance and Minimization Measure	Project Compliance
<b>BAT-1 (Maternity Roost Surveys</b> ): If modeled habitat (Figure 3-30) for western red bat is present within 300 feet of a Covered Activity's project footprint, and a Covered Activity is proposed between May 1 and August 31 (when pre-flight/nursing young may be present), then an approved biologist will conduct a field investigation of the project footprint and adjacent areas within 300 feet of the project footprint to determine if a potential maternity roost is present, and to identify and map potential maternity roost sites. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. If potential maternity roost sites are found, the Third-Party Project Proponent will note their locations on project designs and will design the project to avoid all areas within a 300-foot buffer around the potential maternity roost sites. As discussed in AMM BAT-3, maternity roost habitat is fully avoided if project-related activities do not impinge on a 300-foot buffer established by the approved biologist around an existing or potential maternity roost site. See Chapter 10 for the process for Covered Activity projects to conduct and submit project survey information.	Trees in Project Area may provide roosting habitat for western red bat. May apply if HCP authorization is required.
RAT-2 (Maternity Roost Pre-Construction Surveys): If the Third-Party Project Proponent elects not	
to avoid potential maternity roost sites within the project footprint plus a 300-foot buffer during May through August, additional western red bat surveys are required. Prior to any ground disturbance related to Covered Activities or staging of equipment in the project footprint, an approved biologist will conduct a pre-construction survey within 3 days of ground-disturbing activities (within the project footprint and 300 feet of the project footprint) to determine the presence of maternity roost sites. Pre-construction surveys will be conducted during the roosting season when pre-flight/nursing young may be present (May 1 through August 31). If a maternity roost is present, then AMM BAT-3 shall be implemented. The approved biologist will inform the Land Use Authority Permittee and SSHCP Implementing Entity (the South Sacramento Conservation Agency) of all roost sites and species locations, and they in turn will notify the Wildlife Agencies (USFWS and CDFW), and provide all survey information to the Wildlife Agencies. <b>This AMM has been revised to reflect USFWS and/or CDFW permit conditions</b>	May apply if HCP authorization is required and maternity roosts are present.
BAT-3 (Maternity Roost Buffer): If active maternity roost sites are found within the project	in den is annarconnt canco
footprint or within 300 feet of the project footprint between May 1 and August 31, the Third-Party Project Proponent will establish a 300-foot temporary disturbance buffer around the active maternity roost site until bats have vacated the roost and the Wildlife Agencies concur that the roost is vacant.	May apply if HCP authorization is required and maternity roosts are present.
Very few western red bats are expected to be present in the Action Area in the winter months (November 1 through March 31). However, if active winter hibernaculum sites are found within the project footprint or within 300 feet of the project footprint between November 1 and March 31, the Third-Party Project Proponent will establish the same 300-foot temporary disturbance buffer around the active winter hibernaculum site until bats have vacated the hibernaculum and the Wildlife Agencies concur that the hibernaculum is vacant	P.00011.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	

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#### Western Red Bat

Avoidance and Minimization Measure	Project Compliance
<b>BAT-1 (Maternity Roost Surveys</b> ): If modeled habitat (Figure 3-30) for western red bat is present within 300 feet of a Covered Activity's project footprint, and a Covered Activity is proposed between May 1 and August 31 (when pre-flight/nursing young may be present), then an approved biologist will conduct a field investigation of the project footprint and adjacent areas within 300 feet of the project footprint to determine if a potential maternity roost is present, and to identify and map potential maternity roost sites. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the project Proponent will note their locations on project designs and will design the project to avoid all areas within a 300-foot buffer around the potential maternity roost sites. As discussed in AMM BAT-3, maternity roost habitat is fully avoided if project-related activities do not impinge on a 300-foot buffer established by the approved biologist around an existing or potential maternity roost site. See Chapter 10 for the process for Covered Activity projects to conduct and submit project survey information.	Trees in Project Area may provide roosting habitat for western red bat. May apply if HCP authorization is required.
BAT-2 (Maternity Roost Pre-Construction Surveys): If the Third-Party Project Proponent elects not	May apply if HCP
to avoid potential maternity roost sites within the project footprint plus a 300-foot buffer during May through August, additional western red bat surveys are required. Prior to any ground disturbance related to Covered Activities or staging of equipment in the project footprint, an approved biologist will conduct a pre-construction survey within 3 days of ground-disturbing activities (within the project footprint and 300 feet of the project footprint) to determine the presence of maternity roost sites. Pre-construction surveys will be conducted during the roosting season when pre-flight/nursing young may be present (May 1 through August 31). If a maternity roost is present, then AMM BAT-3 shall be implemented. The approved biologist will inform the Land Use Authority Permittee and SSHCP Implementing Entity (the South Sacramento Conservation Agency) of all roost sites and species locations, and they in turn will notify the Wildlife Agencies (USFWS and CDFW), and provide all survey information to the Wildlife Agencies. <b>This AMM has been revised to reflect USFWS and/or CDFW permit conditions</b>	authorization is required and maternity roosts are present.
footprint or within 300 feet of the project footprint between May 1 and August 31, the Third-Party Project Proponent will establish a 300-foot temporary disturbance buffer around the active maternity roost site until bats have vacated the roost and the Wildlife Agencies concur that the roost is vacant. Very few western red bats are expected to be present in the Action Area in the winter months (November 1 through March 31). However, if active winter hibernaculum sites are found within the project footprint or within 300 feet of the project footprint between November 1 and March 31, the Third-Party Project Proponent will establish the same 300-foot temporary disturbance buffer around the active winter hibernaculum site until bats have vacated the hibernaculum and the Wildlife Agencies concur that the bibernaculum is used.	May apply if HCP authorization is required and maternity roosts are present.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	

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<b>BAT-4 (Bat Eviction Methods for Non-Maternity and Non-Hibernaculum Roosts):</b> An approved biologist will determine if non-maternity and non-hibernaculum day and night roosts are present on the project site. If direct impacts to non-maternity and non-hibernaculum day and night roosts cannot be avoided, the Third-Party Project Proponent will prepare a bat eviction plan, and inform the Land Use Authority Permittee and the SSHCP Implementing Entity (the South Sacramento Conservation Agency). They in turn shall inform the Wildlife Agencies, and provide the bat eviction plan for review. If necessary, the approved biologist may be allowed to remove the bats using safe-eviction methods acceptable to the Wildlife Agencies.	May apply if HCP authorization is required and non-maternity or non-hibernaculum roosts require eviction.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	

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<b>BAT-4 (Bat Eviction Methods for Non-Maternity and Non-Hibernaculum Roosts):</b> An approved biologist will determine if non-maternity and non-hibernaculum day and night roosts are present on the project site. If direct impacts to non-maternity and non-hibernaculum day and night roosts cannot be avoided, the Third-Party Project Proponent will prepare a bat eviction plan, and inform the Land Use Authority Permittee and the SSHCP Implementing Entity (the South Sacramento Conservation Agency). They in turn shall inform the Wildlife Agencies, and provide the bat eviction plan for review. If necessary, the approved biologist may be allowed to remove the bats using safe-eviction methods acceptable to the Wildlife Agencies.	May apply if HCP authorization is required and non-maternity or non-hibernaculum roosts require eviction.
This AMM has been revised to reflect USFWS and/or CDFW permit conditions	