

## 2.18 Animal Species

This section of the document discusses animal species with the potential to occur within the BSA and summarizes the results of research and fieldwork conducted to date and the NES (September 2010) [and Supplemental NES \(December, 2010\)](#).

### 2.18.1 Regulatory Setting

Many State and federal laws regulate impacts to wildlife. The US Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's [National Marine Fisheries Service](#) (NOAA [Fisheries Service](#)) Fisheries and the California Department of Fish and Game (CDFG) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with [animals](#) not listed or proposed for listing under the State or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.19. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern, [and USFWS or NOAA Fisheries Service candidate species](#).

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act (NEPA)
- Migratory Bird Treaty Act (MBTA)
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act (CEQA)
- Sections 1600 – 1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

### 2.18.2 Affected Environment

The BSA supports suitable habitat for a variety of special-status wildlife species. After a thorough literature review, it was determined that 73 special-status wildlife species have the potential to occur within the BSA. A total of 19 of these species are federally and/or State-listed as endangered or threatened, or are considered fully protected species by the State of California, and are discussed further in Section 2.19, Threatened and Endangered Species, of this document. Further information on the remaining 54 special-status species (considered special-status by CDFG, USFWS,

local agencies, and/or special-interest groups), including their status, habitat requirements, and potential for occurrence, are summarized in Table 2.18-1 and discussed further below. Although not federally or State-listed, these species are perceived as having declining populations or local populations that are sparse, rapidly dwindling, or otherwise unstable. In addition, native bird species and their nests are protected under the MBTA (16 USC 703–712). The MBTA states that all migratory birds and their parts (including eggs, nests, and feathers) are fully protected. The MBTA prohibits the take, possession, import, export, transport, sale, purchase, or barter, or offering for sale, purchase, or barter, any migratory bird and its eggs, parts, and nests, except as authorized under a valid permit.

### **2.18.2.1 Special-Status Coastal Sage Scrub Animal Species**

Special-status species with the potential to occur in CSS habitat in the BSA are silvery legless lizard, orange-throated whiptail, coastal western whiptail, northern red-diamond rattlesnake, San Diego horned lizard, Southern California rufous-crowned sparrow, burrowing owl, Costa’s hummingbird, Lawrence’s goldfinch, lark sparrow, merlin, loggerhead shrike, and San Diego desert woodrat. While much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species, some suitable habitat exists within the BSA.

None of these species were observed in the BSA during the surveys conducted in 2009 and 2010. Although most of these species were not observed during those surveys, the surveys were not directed toward these species. In addition, it is possible for them to move onto the site prior to construction. While almost all of the habitat on site is disturbed, degraded by infestations of nonnative species, or developed, some good-quality CSS habitat exists in the BSA for these species as described in the CSS natural communities section (Section 2.15.1.3). Further information on these species is summarized in Table 2.18-1.

### **2.18.2.2 Special-Status Riparian and Riverine Animal Species**

Special-status animal species with the potential to occur in riparian and riverine habitats in the BSA are monarch butterfly, partially armored threespine stickleback, arroyo chub, southwestern pond turtle, silvery legless lizard, coastal western whiptail, San Bernardino ring-necked snake, San Diego horned lizard, two-striped garter snake, Cooper’s hawk, tricolored blackbird, great blue heron, Lawrence’s goldfinch, California yellow warbler, merlin, saltmarsh common yellowthroat, yellow-breasted chat, loggerhead shrike, black-crowned night-heron, California brown pelican, Nuttall’s woodpecker, Allen’s hummingbird, western mastiff bat, western red bat,

**Table 2.18-1 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur in and in the Vicinity of the BSA**

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/Absent	Rationale
<b>INVERTEBRATES</b>					
Globose dune beetle	<i>Coelus globosus</i>	CSA	Inhabits foredunes and sand hummocks in sand dune habitat and is most common beneath dune vegetation. Occurs from Bodega Head in Sonoma County south to Ensenada, Mexico.	A	Suitable habitat is absent from the BSA.
Monarch butterfly (winter roost sites)	<i>Danaus plexippus</i>	CSA	Roosts in wind-protected groves of eucalyptus, Monterey pine, and cypress with water sources nearby. Occurs along the coast from northern Mendocino County to Baja California, Mexico.	HP	Suitable winter roost habitat is present in the BSA, but no roosts are known from the area.
<b>FISH</b>					
Partially armored threespine stickleback	<i>Gasterosteus aculeatus microcephalus</i>	CSA	Occurs in slow-water stream sections with mud or sand bottoms in the Los Angeles Basin south coastal streams. Known to occur in upper San Juan Creek.	HP	Limited suitable habitat is present in the BSA.
Arroyo chub	<i>Gila orcuttii</i>	SSC	Occurs in slow-water stream sections with mud or sand bottoms in the Los Angeles Basin south coastal streams. Known to occur in San Juan Creek.	HP	Limited suitable habitat is present in the BSA.
<b>AMPHIBIANS</b>					
Western spadefoot	<i>Spea hammondi</i>	SSC	Occurs primarily in grassland and other relatively open habitats. Found in elevations ranging from sea level to 4,500 ft. Requires temporary pools for breeding.	HP	Marginally suitable habitat for this species is present in the BSA.
Coast range newt	<i>Taricha torosa torosa</i>	SSC	Breeds in ponds, reservoirs, and slow-moving streams; uses nearby upland areas, including grassland, chaparral, and woodland. Occurs in coastal drainages from Mendocino County south to San Diego County, with populations from Monterey County south designated as sensitive.	A	Suitable habitat is absent from the BSA.
<b>REPTILES</b>					
Southwestern pond turtle	<i>Actinemys marmorata pallida</i>	SSC	Occurs in a variety of habitats, including woodland, grassland, and open forest. Thoroughly aquatic, existing in high-quality ponds, marshes, rivers, streams, and irrigation ditches that have rocky or muddy bottoms. Requires basking sites such as partially submerged logs, vegetation mats, or open mud banks.	HP	Marginally suitable habitat for this species is present in the BSA.

**Table 2.18-1 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur in and in the Vicinity of the BSA**

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/ Absent	Rationale
Silvery legless lizard	<i>Anniella pulchra pulchra</i>	SSC	Inhabits moist, loose soil and humus from central California to northern Baja California. Rarely seen above ground.	HP	Suitable habitat for this species is present in the BSA.
Orange-throated whiptail	<i>Aspidoscelis hyperythra</i>	SSC	Inhabits low-elevation coastal scrub, chaparral, and valley hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food, termites.	HP	Marginally suitable habitat for this species is present in the BSA.
Coastal western whiptail	<i>Aspidoscelis tigris stejnegeri</i>	CSA	Occurs in deserts and semi-arid areas with sparse vegetation. Often found in woodland and riparian areas.	HP	Marginally suitable habitat for this species is present in the BSA.
San Diego banded gecko	<i>Coleonyx variegatus abbotti</i>	CSA	Found in granite or rocky outcrops in coastal scrub and chaparral habitats.	A	Suitable habitat is absent from the BSA.
Northern red-diamond rattlesnake	<i>Crotalus ruber ruber</i>	SSC CSA	Associated with chaparral, woodland, grassland, and desert communities from Los Angeles County to Baja California Sur. Prefers rocky areas with dense vegetation. Needs rodent burrows, cracks in rocks, or surface cover objects for shelter.	HP	Marginally suitable habitat for this species is present in the BSA.
San Bernardino ring-necked snake	<i>Diadophis punctatus modestus</i>	CSA	Found under surface objects along drainage courses in mesic chaparral and oak and walnut woodland communities.	HP	Suitable habitat for this species is present in the BSA.
San Diego horned lizard	<i>Phrynosoma coronatum (blainvillii population)</i>	SSC	Occurs in coastal scrub, open chaparral, riparian woodland, and annual grassland habitats that support adequate prey species.	HP	Marginally suitable habitat for this species is present in the BSA; however, no food sources (e.g., harvester ants) were observed during surveys.
Two-striped garter snake	<i>Thamnophis hammondi</i>	SSC	Highly aquatic. Found in or near permanent fresh water. Often found along streams with rocky beds and riparian growth.	HP	Marginally suitable habitat for this species is present in the BSA.
Coronado skink	<i>Eumeces skiltonianus interparietalis</i>	SSC	Occurs in a variety of plant communities, including coastal sage scrub, mesic chaparral, oak woodland, pinyon-juniper woodland, and riparian woodland to pine forests. Found west of the deserts from Riverside and San Diego Counties to Baja California.	HP	Suitable habitat for this species is present in the BSA.

**Table 2.18-1 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur in and in the Vicinity of the BSA**

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/ Absent	Rationale
<b>BIRDS</b>					
Cooper's hawk	<i>Accipiter cooperii</i>	CSA (nesting)	Nests in a wide variety of woodland and forest habitats.	HP	Suitable nesting habitat for this species is present in the BSA.
Tricolored blackbird	<i>Agelaius tricolor</i>	BCC SSC (nesting)	Breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, and tall herbs, and forages in grassland and cropland habitats. Seeks cover for roosting in emergent wetland vegetation, especially cattails and tules, and also in trees and shrubs. Occurs in nondesert lowlands throughout California.	HP	Suitable foraging habitat is present in the BSA but suitable nesting habitat is absent.
Southern California rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	CSA	Resident in Southern California coastal scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	HP	Suitable habitat for this species is present in the BSA.
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SSC (nesting)	Occurs in dense grassland, preferring native grassland with a mixture of forbs and shrubs.	A	Suitable nesting habitat is absent from the BSA.
Great blue heron	<i>Ardea herodias</i>	CSA (rookery site)	Nests in tall trees in proximity to foraging areas; occurs in marshes, lake margins, tide flats, rivers, streams, and wet meadows. Colonial nester.	HP	Marginally suitable nesting habitat for this species is present in the BSA.
Long-eared owl	<i>Asio otus</i>	SSC (nesting)	Rare resident in Southern California coastal and foothill areas and uncommon resident in desert areas. Occurs in dense willow-riparian woodland and oak woodland. Breeds from valley foothill hardwood up to ponderosa pine habitat.	A	Suitable habitat is absent from the BSA.
Burrowing owl	<i>Athene cunicularia</i>	BCC SSC (burrow sites)	Burrows in open, dry annual or perennial grasslands; deserts; and scrublands characterized by low-growing vegetation. Subterranean nester, dependent on burrowing mammals, most notably the California ground squirrel.	HP	Limited, marginally suitable habitat for this species is present in the BSA. Some suitable burrows were observed during the 2009 surveys.
Costa's hummingbird	<i>Calypte costae</i>	CSA (nesting)	Found primarily in deserts; arid, brushy foothills; and chaparral. Wanders widely.	HP	Suitable habitat for this species is present in the BSA.

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Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/Absent	Rationale
San Diego cactus wren	<i>Campylorhynchus brunneicapillus sandiegensis</i>	BCC SSC	Occurs in coastal sage scrub habitats. Requires tall <i>Opuntia</i> cactus for nesting and roosting.	A	Suitable habitat is absent from the BSA.
Lawrence's goldfinch	<i>Carduelis lawrencei</i>	BCC CSA (nesting)	Usually inhabits oak woodland but also uses chaparral, riparian woodland, coastal scrub, forests, and pinyon-juniper woodland; plantings of cypress, cedars, or junipers; tall weeds; and adjacent rural residential areas. A water source such as a stream, small lake, or pond within 0.3 mi is probably required. Nests throughout much of the nondesert part of California and Baja California.	HP	Marginally suitable habitat for this species is present in the BSA.
Lark sparrow	<i>Chondestes grammacus</i>	CSA (nesting)	Inhabits open areas with scattered bushes or trees. Breeds throughout much of western North America and winters from the southern United States to southern Mexico.	HP	Marginally suitable nesting habitat for this species is present in the BSA.
Northern harrier	<i>Circus cyaneus</i>	SSC (nesting)	Occurs in grasslands and marshy habitats in Southern California. Uncommon resident in open desert and brushlands.	A	Suitable nesting habitat is absent from the BSA.
California yellow warbler	<i>Dendroica petechia brewsteri</i>	SSC (nesting)	Occurs in riparian woodland while nesting in the western United States and northwestern Baja California; more widespread in brushy areas and woodlands during the migration season and winter, when it occurs from western Mexico to northern South America.	HP	Suitable foraging habitat is present but suitable nesting habitat is limited in the BSA.
Merlin	<i>Falco columbarius</i>	CSA (nonbreeding/wintering)	Occurs in open country; breeds in the Holarctic Region and winters south to the tropics. Rare fall migrant and winter visitor to southwestern California.	HP	Suitable habitat for this species is present in the BSA.
Saltmarsh common yellowthroat	<i>Geothlypis trichas sinuosa</i>	BCC SSC	Nests primarily in brackish and freshwater marshes in the San Francisco Bay area and disperses, at least historically, along the California coast as far north as Humboldt Bay and as far south as San Diego.	HP	Suitable wintering habitat for this species is present in the BSA.
Yellow-breasted chat	<i>Icteria virens</i>	SSC (nesting)	Occurs in riparian thickets of willows and brushy tangles near watercourses. Nests in riparian woodland throughout much of western North America. Winters in Central America.	HP	Marginally suitable nesting habitat for this species is present in the BSA.

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Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/ Absent	Rationale
Loggerhead shrike	<i>Lanius ludovicianus</i>	SSC (nesting)	Occurs in open fields with scattered trees or shrubs, open country with short vegetation, pastures, old orchards, cemeteries, golf courses, riparian areas, and open woodlands. Found in open country in much of North America.	HP	Suitable habitat for this species is present in the BSA.
Black-crowned night-heron	<i>Nycticorax nycticorax</i>	CSA (rookery site)	Occurs in a wide range of wetland habitats in much of the temperate and tropical zones worldwide. Nests primarily in trees and sometimes in urban habitats.	HP	Marginally suitable nesting habitat for this species is present in the BSA.
California brown pelican	<i>Pelecanus occidentalis</i>	FD CD	Occurs in a wide range of coastal habitats. Nests primarily on steep, rocky slopes.	A	Suitable habitat for this species is absent from the BSA.
Nuttall's woodpecker	<i>Picoides nuttallii</i>	CSA (nesting)	Resident in oak and riparian woodland throughout most of California west of the deserts.	HP	Limited suitable nesting habitat for this species is present in the BSA.
Allen's hummingbird	<i>Selasphorus sasin</i>	CSA (nesting)	Nests in residential areas, chaparral, open oak woodland, and riparian woodland in coastal areas the length of California. Generally restricted to exotic vegetation in urban areas in winter.	HP	Suitable nesting habitat for this species is present in the BSA.
<b>MAMMALS</b>					
Pallid bat	<i>Antrozous pallidus</i>	SSC	Occurs in varied habitats in western North America; found throughout California in grasslands, shrublands, woodlands, deserts, and forests. Primarily day roosts in bridges, hollows, or crevices of trees, or buildings. Occasionally roosts in mines, caves, and cliff/rock crevices. Night roosts may be more open sites, such as porches, open buildings, and bridges.	HP	Suitable habitat for this species is present in the BSA.
Dulzura pocket mouse	<i>Chaetodipus californicus femoralis</i>	SSC	Found in a range of habitats, generally with sparse cover.	A	Suitable habitat is present in the BSA, but the BSA is outside the range of this subspecies.
Northwestern San Diego pocket mouse	<i>Chaetodipus fallax fallax</i>	SSC	Occurs in a variety of habitats, including coastal scrub, chaparral, and grassland, and is attracted to grass-chaparral edges in San Diego County.	A	Suitable habitat is present in the BSA, but the BSA is outside the range of this subspecies.
Mexican long-tongued bat	<i>Choeronycteris mexicana</i>	SSC	Occasionally found in San Diego County. Feeds on nectar and pollen of night-blooming succulents. Roosts in relatively well-lit caves as well as in and around buildings.	HP	Suitable habitat for this species is present in the BSA.

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Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/ Absent	Rationale
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SSC	Found in all but subalpine and alpine habitats throughout California. Requires caves, mines, tunnels, buildings, or other similar structures for roosting. Occasionally roosts in hollow spaces of bridges or buildings. Will occasionally roost in hollow trees. Highly sensitive to disturbance.	HP	Suitable habitat for this species is present in the BSA.
Mexican long-tongued bat	<i>Choeronycteris mexicana</i>	SSC	Found in a variety of habitats in the southwestern United States through Mexico to El Salvador and Honduras. In California, this species has been observed in San Diego County, likely as a seasonal migrant. Feeds on nectar and pollen of night-blooming succulents; may visit hummingbird feeders. Roosts in caves, mines, and occasionally buildings. Not known to use bridges for roosting.	A	Suitable habitat is present in the BSA, but the BSA is outside the range of this species.
Western mastiff bat	<i>Eumops perotis californicus</i>	SSC	Ranged historically throughout much of the southwestern United States and northwestern Mexico. In California, most records are from rocky areas at low elevations. Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in vertical cliff faces, high buildings, trees, and tunnels throughout southwestern California. May roost in tall bridges. Foraging individuals wander widely.	HP	Suitable roosting habitat for this species is present in the BSA.
Western red bat	<i>Lasiurus blossevillii</i>	SSC	Ranges throughout most of California west of the deserts. Forages over a wide range of habitats but is often associated with intact riparian habitat and particularly with willows, cottonwoods, and sycamores. Typically solitary, roosting in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas.	HP	Suitable habitat for this species is present in the BSA.
Hoary bat	<i>Lasiurus cinereus</i>	CSA	Widespread in North America and Hawaii and ranges throughout most of California. Forages over a wide range of habitats but prefers open habitats with access to trees (for roosting) and water. Typically solitary, roosting in the foliage of shrubs or coniferous and deciduous trees. Roosts are usually near the edge of a clearing.	HP	Suitable habitat for this species is present in the BSA.

**Table 2.18-1 Listed, Proposed, and Special-Status Wildlife Species Potentially Occurring or Known to Occur in and in the Vicinity of the BSA**

Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/ Absent	Rationale
Western yellow bat	<i>Lasiurus xanthinus</i>	SSC	Found in varied habitats from the southwestern United States to southern Mexico; often associated with palms and desert riparian habitats. In Southern California, occurs in palm oases and residential areas with untrimmed palm trees. Roosts primarily in trees, especially the dead fronds of palm trees, although it has also been documented to roost under the leaves of deciduous trees such as cottonwoods.	HP	Suitable habitat for this species is present in the BSA.
San Diego black-tailed jackrabbit	<i>Lepus californicus bennettii</i>	SSC	Occurs in the open country of coastal Southern California and northern Baja California.	A	Suitable habitat for this species is not present in the BSA.
Western small-footed myotis	<i>Myotis ciliolabrum</i>	CSA	Occupies a wide variety of habitats, primarily relatively arid wooded and brushy uplands near water. Individuals are known to roost singly or in small groups in cliff and rock crevices, buildings, concrete overpasses, caves, and mines.	HP	Suitable foraging habitat for this species is present in the BSA.
Yuma myotis	<i>Myotis yumanensis</i>	CSA	Occurs in a variety of habitats, including riparian areas, arid scrublands and deserts, and forests. Optimal habitats are open forests and woodlands with sources of water over which to feed. Roosts in bridges, culverts, buildings, rock crevices, caves, mines, and trees. May also occasionally roost in swallow nests.	HP	Suitable habitat for this species is present in the BSA.
San Diego desert woodrat	<i>Neotoma lepida intermedia</i>	SSC	Occurs in coastal sage scrub and chaparral; most commonly associated with cactus and rocky cliffs and slopes. Found in coastal Southern California from San Diego County to San Luis Obispo County.	HP	Marginally suitable nesting habitat for this species is present in the BSA.
Pocketed free-tailed bat	<i>Nyctinomops femorosaccus</i>	SSC	Primarily occurs in arid habitats from the southwestern United States to South America but has been recorded far "out of range" during migration. Roost sites include cliffs, buildings, and hollow trees.	HP	Suitable habitat for this species is present in the BSA.
Big free-tailed bat	<i>Nyctinomops macrotis</i>	SSC	Mainly an inhabitant of rugged, rocky habitats in arid landscapes of southwestern North America. Needs high cliffs or rocky outcrops for roosting. Feeds principally on large moths. Roosts primarily in cliffs/rock crevices and rarely in buildings, caves, and tree cavities. Not known to use bridges for roosting.	HP	Suitable habitat for this species is present in the BSA.

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Common Name	Scientific Name	Status Listing	Habitat and Comments	Habitat Present/Absent	Rationale
American badger	<i>Taxidea taxus</i>	SSC	Occurs throughout much of North America. Primary habitat requirements seem to be sufficient food and friable soils in relatively open, uncultivated ground in grasslands, woodlands, and deserts.	A	Suitable habitat for the species not present in the BSA.

Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Delisted (FD); Birds of Conservation Concern (BCC); California Endangered (CE); California Threatened (CT); California Delisted (CD); California Species of Special Concern (SSC); California Fully Protected Species (CFP); California Special Animal (CSA)

Habitat Present/Absent:

A – No habitat is present and no further work is needed.

HP– Habitat is or may be present.

O –The species was observed in the BSA during surveys.

CH – The BSA is within a designated critical habitat unit, but this does not necessarily mean that appropriate habitat is present.

BSA = Biological Study Area

ft = feet

mi = miles

hoary bat, western yellow bat, pocketed free-tailed bat, and big free-tailed bat. While much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species, some suitable habitat exists in the BSA for these species.

None of these species were observed in the BSA during the surveys conducted in 2009 and 2010. Although these special-status species were not observed during those surveys, the surveys were not focused on these species. In addition, it is possible for them to move onto the site prior to construction. While almost all the habitat on site is developed, degraded by infestations of nonnative species, or disturbed, some riparian/riverine habitat exists in the BSA for these species as described in the riparian/riverine natural communities section 2.15.1.3. While the riparian/riverine habitat within the BSA is of poor quality, it is still suitable for species with broader habitat requirements. Further information on these species is summarized in Table 2.18-1.

### **2.18.2.3 Special-Status Grassland and Open Habitat Animal Species**

Special-status animal species with the potential to occur in grassland and open habitats in the BSA are western spadefoot, silvery legless lizard, coastal western whiptail, northern red-diamond rattlesnake, San Diego horned lizard, burrowing owl, merlin, and loggerhead shrike. While much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species, some suitable habitat exists in the BSA for these species.

None of these species were observed in the BSA during the surveys conducted in 2009 and 2010. Although these special-status species were not observed during these surveys, the surveys were not focused on these species. In addition, it is possible for them to move onto the site prior to construction. While much of the habitat on site is disturbed, developed, or degraded by infestations of nonnative species, some suitable habitat exists in the BSA for these species. Further information on these species is summarized in Table 2.18-1.

### **2.18.2.4 Special-Status Bridge- and Crevice-Dwelling Animal Species**

Special-status bridge- and crevice-dwelling animal species (i.e., bats) with the potential to occur in the BSA include pallid bat, Mexican long-tongued bat, Townsend's big-eared bat, western mastiff bat, western small-footed myotis, Yuma myotis, pocketed free-tailed bat, and big free-tailed bat. There is a high probability that Yuma myotis will be present in the BSA during the summer months. Suitable roosting and foraging habitat exists in the BSA for all of the special-status bat species.

A bat habitat suitability assessment was conducted on December 8 and 9, 2009, to ascertain the potential for bat foraging and roosting activity in the BSA. The findings of this assessment are summarized in the *Bat Habitat Suitability Assessment Memorandum* located in Appendix E of the NES.

Although none of these species were observed in the BSA during the survey conducted in 2009, the survey did not include sampling, exit counts, or acoustical monitoring to assist with identifying specific species of bats. In addition, there is a high probability that Yuma myotis will be present in the BSA during the summer months. Suitable roosting and foraging habitat exists in the BSA for all of the special-status bat species. Therefore, additional surveys will be conducted by a qualified bat biologist in the month of June prior to construction to assess the potential for the BSA's use for maternity roosting, since maternity roosts are generally formed in the late spring. The surveys will include a combination of structure inspection, sampling, exit counts, and acoustic surveys.

## **2.18.3 Environmental Consequences**

### **2.18.3.1 Temporary Impacts**

#### ***Build Alternative 4 with Design Option A (Preferred Alternative)***

The I-5 HOV Lane Extension Project is expected to have indirect and temporary impacts to special-status grassland and open habitat species through the loss of potential habitat.

Temporary impacts to Yuma myotis and other bridge- and crevice-dwelling species would include temporary indirect disturbance (such as noise, dust, night lighting, and human encroachment) from construction. Construction could also temporarily impede access to roost sites (existing and future) in the crevices of bridges, culverts, and overhead structures.

Raptors and other birds protected by the MBTA may nest in existing trees and shrubs within and adjacent to the BSA. Direct temporary impacts to birds nesting within or adjacent to the BSA may occur if construction, particularly vegetation clearing, occurs during the nesting season. Indirect temporary impacts to nesting birds would include temporary indirect disturbance (such as noise, dust, night lighting, and human encroachment) from construction activities.

With the exception of nesting/burrowing birds and bats, the special-status animal species are expected to move out of the area during construction, and with

implementation of Minimization and Avoidance Measures, temporary impacts to special-status animal species are not anticipated.

### **2.18.3.2 Permanent Impacts**

#### ***Build Alternative 4 with Design Option A (Preferred Alternative)***

As discussed above, raptors and other birds protected by the MBTA may nest in existing trees and shrubs within and adjacent to the BSA. Direct permanent impacts such as the direct removal of nests may occur (e.g., during vegetation clearing). Indirect permanent impacts such as nest failure may also occur as a result of excessive disturbance of the nesting birds (e.g., from excessive noise and disruption from increased human activities).

Alternative 4 with Design Option A is expected to potentially result in indirect permanent impacts to special-status animal species through the removal of potential habitat. However, because these species are expected to move out of the area during construction, no direct permanent impacts are expected. Therefore, project impacts for these species are the same as those described for the natural communities in Section 2.15.

### **2.18.4 Avoidance, Minimization, and/or Mitigation Measures**

In addition to the measures previously discussed, Measures BIO-1, BIO-2, and BIO-3 (in Section 2.15, Natural Communities) and the following measures will be incorporated to avoid and minimize impacts to special-status animal species:

**BIO-6** A qualified bat biologist will survey the project disturbance limits in June, prior to construction, to assess the potential for the Biological Study Area's (BSA) use for maternity roosting, since maternity roosts are generally formed in the late spring. The qualified bat biologist will also conduct preconstruction surveys because bat roosts can change seasonally. The surveys will include a combination of structure inspection, sampling, exit counts, and acoustic surveys.

**BIO-7** To avoid direct mortality to bats roosting in areas subject to impacts from construction activities, any structure with potential bat habitat will have temporary bat exclusion devices installed under the supervision of a qualified bat biologist prior to the initiation of construction activities. Exclusion will be conducted during the fall (September or October) to avoid trapping flightless young inside during the summer months or hibernating individuals during the

winter. Such exclusion efforts must be continued to keep the structures free of bats until the completion of construction. All bat exclusion techniques will be coordinated between the Department District Biologist and the resource agencies.

**BIO-8** All work conducted on bridges will take place during the day to the extent feasible. If this is not feasible to conduct this work during daylight hours, impacts will be minimized by directing lighting and noise away from night roosting areas as much as possible.

**BIO-9** Riparian vegetation adjacent to bat roosting sites will be kept intact to the extent feasible.