
APPENDIX D
BIOLOGICAL RESOURCES DATA

APPENDIX D1

SPECIAL-STATUS SPECIES APPENDIX

TABLE D1-1			
SPECIAL STATUS PLANT SPECIES THAT OCCUR OR POTENTIALLY COULD OCCUR ON THE MERCED UNIVERSITY COMMUNITY PLAN SITE			
Scientific Name Common Name	Status* (Federal/State/CNPS)	Associated Habitat	Potential for Occurrence**
<i>Agrostis hendersonii</i> Henderson's bent grass	SOC/none/3	vernal pools, grasslands	high
<i>Astragalus tener</i> var. <i>tener</i> Alkali milkvetch	none/none/1B	alkali meadows	low; no alkali soils present on-site
<i>Atriplex cordulata</i> Heartscale	SOC/none/1B	alkali grasslands	low; no alkali soils present on-site
<i>Atriplex depressa</i> Brittlescale	none/none/1B	alkali grasslands	low; no alkali soils present on-site
<i>Atriplex joaquiniana</i> San Joaquin saltbrush	SOC/none/1B	alkali meadows, grasslands	low, no alkali soils present on-site
<i>Atriplex minuscula</i> Lesser saltbrush	none/none/1B	alkali grasslands, playas	low; no alkali soils present on-site
<i>Atriplex persistens</i> Vernal pool saltbrush	SOC/none/1B	alkali vernal pools, grasslands	low; no alkali soils present on-site
<i>Atriplex vallicola</i> Lost Hills crownscale	SOC/none/1B	alkali vernal pools, grasslands	low, no alkali soils present on-site
<i>Calycadenia hooveri</i> Hoover's calycadenia	SOC/none/1B	grasslands, woodlands	moderate
<i>Castilleja campestris</i> ssp. <i>succulenta</i> Succulent owl's clover	FT/SE/1B	vernal pools	known
<i>Chamaesyce hooveri</i> Hoover's spurge	FT/none/1B	vernal pools	moderate
<i>Clarkia rostrata</i> Beaked clarkia	SOC/none/1B	grassland, woodlands	moderate
<i>Cordylanthus mollis</i> ssp. <i>hispidus</i> Hispid bird's beak	SOC/none/1B	meadows, playas	moderate
<i>Delphinium recurvatum</i> Recurved larkspur	SOC/none/1B	grasslands, woodlands	moderate
<i>Downingia pusilla</i> Dwarf downingia	none/none/2	vernal pools, grasslands	high
<i>Eryngium racemosum</i> Delta coyote thistle	--/SE/1B	riparian scrub, vernal mesic clay depressions	low, no suitable habitat on-site
<i>Eryngium spinosepalum</i> Spiny-sepaled button-celery	SOC/none/1B	vernal pools, grasslands	moderate
<i>Gratiola heterosepala</i> Bogg's Lake hedge-hyssop	none/SE/1B	vernal pools, marshes and swamps	moderate

TABLE D1-1			
SPECIAL STATUS PLANT SPECIES THAT OCCUR OR POTENTIALLY COULD OCCUR ON THE MERCED UNIVERSITY COMMUNITY PLAN SITE			
Scientific Name Common Name	Status* (Federal/State/CNPS)	Associated Habitat	Potential for Occurrence**
<i>Hollisteria lanata</i> Hollisteria	SOC/--/--	grasslands	moderate
<i>Monardella leucocephala</i> Merced monardella	SOC/none/1A	grasslands	moderate
<i>Navarretia myersii</i> (ssp. <i>myersii</i>) Pincushion navarretia	FT/SE/1B	vernal pools	moderate
<i>Navarretia nigelliformis</i> ssp. <i>radians</i> Shining navarretia	none/none/1B	vernal pools, grasslands	known
<i>Neostapfia colusana</i> Colusa grass	FT/SE/1B	vernal pools	high
<i>Orcuttia inaequalis</i> San Joaquin Valley orcutt grass	FT/SE/1B	vernal pools	high
<i>Orcuttia pilosa</i> Hairy orcutt grass	FE/SE/1B	vernal pools	high
<i>Phacelia ciliata</i> var. <i>opaca</i> Merced phacelia	SOC/none/1B	grasslands	high
<i>Pseudobahia bahiifolia</i> Hartweg's golden sunburst	FE/SE/1B	grasslands, woodlands	low; outside of known range and sensitive to high grazing pressures
<i>Pseudobahia peirsonii</i> San Joaquin adobe sunburst	FT/SE/1B	annual grassland	low; outside of known range and sensitive to high grazing pressures
<i>Sagittaria sanfordii</i> Sanford's arrowhead	SOC/none/1B	marshes and swamps	moderate
<i>Streptanthus insignis</i> ssp. <i>lyonii</i> Arburua Ranch jewel-flower	SOC/--/1B	serpentine grasslands	low; outside of known range
<i>Trichocoronis wrightii</i> var. <i>wrightii</i> Wright's trichocoronis	none/none/2	vernal pools, marshes and swamps, meadows	low; outside of known range
<i>Tuctoria greenei</i> Greene's tuctoria	FE/Rare/1B	vernal pools	moderate
<p>Notes: Habitat = Habitat associations are based on Fifth Ed. California Native Plant Society's <i>Inventory of Rare and Endangered Vascular Plants of California</i>. February 1994. Nomenclature was taken from Fifth Ed. California Native Plant Society's <i>Inventory of Rare and Endangered Vascular Plants of California</i>. February 1994. Parenthetical notation indicates a difference in CNPS and US Fish and Wildlife Service listings. *Status = Status of species relative to the Federal and State Endangered Species Acts and Fish and Game Code of California. Federal status: FE = Federally listed as endangered. FT = Federally listed as threatened. SOC = Federal species of concern. CNPS status: 1A = Presumed extinct in California. 1B = Rare or Endangered in California and elsewhere. 2 = Rare or Endangered in California, more common elsewhere. 3 = Plants for which we need more information. State status: Rare = State listed as rare. SE = State listed as endangered. ST = State listed as threatened.</p> <p>** A rating of "known" indicates that the species has been observed on the site. A rating of "high" indicates that the species has not been observed, but sufficient information is available that indicates suitable habitat and conditions are present on-site for the species to occur. A rating of "moderate" indicates that it is not known if the species is present but suitable habitat exists on-site. A rating of "low" indicates that species was not found during biological surveys conducted to date on the site, no suitable habitat is present, on-site, or the project site is outside the species' known regional distribution.</p> <p>Source: CNDDDB, 2001. CNPS, 1994, 2000. Hickman, 1993. Munz and Keck, 1973. EIP Associates, 2001.</p>			

TABLE D1-2

**SPECIAL STATUS WILDLIFE SPECIES THAT OCCUR OR POTENTIALLY
COULD OCCUR ON THE MERCED UNIVERISTY COMMUNITY PLAN SITE**

Common Name <i>Scientific Name</i>	Status*: Federal/State	Habitat Association	Probability of Occurrence**
<u>INVERTEBRATES</u>			
California linderiella <i>Linderiella occidentalis</i>	--/--	Vernal pool	known
Ciervo aegialian scarab beetle <i>Aegialia concinna</i>	SOC/--	Sand dune	none; no suitable habitat on-site
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	FE/--	Vernal pool	none; no occurrences resulted from 3 years of surveys
Longhorn fairy shrimp <i>Branchinecta longiantenna</i>	FE/--	Alkaline vernal pools	none; outside known range and no suitable habitat present on-site
Midvalley fairy shrimp <i>Branchinecta mesovalliensis</i>	--/--	Vernal pool	known
Molestan blister beetle <i>Lytta morrisoni</i>	SOC/--	Dried vernal pools	moderate
San Joaquin dune beetle <i>Voelus (Coelus) gracilis</i>	SOC/--	Sand dune	none; no suitable habitat on site
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT/--	Elderberry bushes/Riparian	none; no suitable habitat on site
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT/--	Vernal pool	known
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE/--	Vernal pool	known
<u>AMPHIBIANS</u>			
California red-legged frog <i>Rana aurora draytonii</i>	FT/SSC, CP	Streams/Marshes/Ponds	low; extirpated from most of the San Joaquin Valley
California tiger salamander <i>Ambystoma californiense</i>	FE/CP	Grassland/Vernal pools/Stockponds	known
Foothill yellow-legged frog <i>Rana boylei</i>	SOC/SSC, CP	Rocky Streams	low; outside of known range
Western spadefoot toad <i>Scaphiophus hammondi</i>	SOC/SSC, CP	Grassland/Vernal pools	moderate
<u>REPTILES</u>			
Blunt-nosed leopard lizard <i>Gambelia (Crotaphytus) sila</i>	FE/SE, CFP	Vegetated alkali/Desert scrub	none; outside of known range and no suitable habitat present on-site
California horned lizard <i>Phrynosoma coronatum frontale</i>	SOC/SSC, CP	Grassland/Chaparral	low; no suitable habitat on-site
Giant garter snake <i>Thamnophis gigas</i>	FT/ST, CP	Riparian/Wetland/Grassland	none; outside of known range
Northwestern pond turtle <i>Clemmys marmorata marmorata</i>	SOC/SSC, CP	Riparian/Wetlands/Lakes and Rivers	moderate

TABLE D1-2

**SPECIAL STATUS WILDLIFE SPECIES THAT OCCUR OR POTENTIALLY
COULD OCCUR ON THE MERCED UNIVERISTY COMMUNITY PLAN SITE**

Common Name Scientific Name	Status*: Federal/State	Habitat Association	Probability of Occurrence**
San Joaquin coachwhip (whipsnake) <i>Masticophis flagellum ruddocki</i>	SOC/SSC, CP	Grassland/Shrubland/ Pasture	low; outside of known range
Silvery legless lizard <i>Anniella pulchra pulchra</i>	SOC/SSC	Shrubland	low; outside of known range
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	SOC/SSC, CP	Riparian/Wetlands/Lakes and Rivers	low; outside of known range
Western pond turtle <i>Clemmys marmorata</i>	SOC/SSC, CP	Riparian/Wetlands/Lakes and Rivers	moderate
BIRDS			
Aleutian Canada goose <i>Branta canadensis leucopareia</i>	FT, FPD/--	Lakes/Wetlands	low; no suitable habitat on-site
American bittern <i>Botaurus lentiginosus</i>	SOC/--	Wetlands	known
American peregrine falcon <i>Falco peregrinus anatum</i>	Delisted/SE, CFP	Riparian/Wetlands/ Woodlands/Forest	low; potential migratory habitat
American white pelican <i>Pelecanus erythrorhynchos</i>	--/SSC	Lakes and Rivers	low; no suitable habitat on site
Bald eagle <i>Haliaeetus leucocephalus</i>	FT, FPD/SE, CFP	Lakes and Rivers	high
Bank swallow <i>Riparia riparia</i>	--/ST	Riparian/Lakes	low; no suitable habitat on site
Bell's sage sparrow <i>Amphispiza belli belli</i>	SOC/SSC	Scrubland	low; no suitable habitat on-site
Black-crowned night heron <i>Nycticorax nycticorax</i>	--/--	Lakes and Rivers/Wetlands	low; no suitable habitat on-site
Black tern <i>Chlidonias niger</i>	SOC/SSC	Wetland	moderate
Brewer's sparrow <i>Spizella breweri</i>	SOC/--	Shrubland/Cropland	low; no suitable habitat on-site
Bewick's wren <i>Thryomanes bewickii</i>	SOC/--	Shrubland/Woodland/ Conifer forests	low; no suitable habitat on-site
California horned lark <i>Eremophila alpestris actia</i>	--/SSC	Grassland/Riparian	high
Cooper's hawk <i>Accipiter cooperi</i>	--/SSC	Oak woodland/ Grassland/Riparian	low; potential migratory habitat
Costa's hummingbird <i>Calypte costae</i>	--/--	Chaparral/Scrubland	low; no suitable habitat on-site
Double-crested cormorant <i>Phalacrocorax auritus</i>	--/SSC	Lakes and Rivers	low; no suitable habitat on-site
Ferruginous hawk <i>Buteo regalis</i>	SOC/SSC	Riparian/Grassland/Oak woodland/Wetland	moderate
Golden eagle <i>Aquila chrysaetos</i>	--/SSC, CFP	Wetland/Grassland	high
Grasshopper sparrow <i>Ammodramus savannarum</i>	SOC/--	Grasslands on moderate slopes	moderate
Greater sandhill crane <i>Grus canadensis tabida</i>	--/ST, CFP	Lakes/Wetland/Grassland/ Riparian	high

TABLE D1-2			
SPECIAL STATUS WILDLIFE SPECIES THAT OCCUR OR POTENTIALLY COULD OCCUR ON THE MERCED UNIVERISTY COMMUNITY PLAN SITE			
Common Name <i>Scientific Name</i>	Status*: Federal/State	Habitat Association	Probability of Occurrence**
Hermit warbler <i>Dendroica occidentalis</i>	SOC/--	Conifer forest/	low; no suitable habitat on-site
Lark sparrow <i>Chondestes grammacus</i>	SOC/--	Oak woodland/ Grassland/Chaparral	moderate
Lawrence's goldfinch <i>Carduelis lawrencei</i>	SOC/--	Oak woodland	low; no suitable habitat on-site
Lewis woodpecker <i>Melanerpes lewis</i>	SOC/--	Oak savannah	low; no suitable habitat on-site
Little willow flycatcher <i>Empidonax traillii brewsteri</i>	SOC/--	Riparian/Rivers/Meadows	low; no suitable habitat on-site
Loggerhead shrike <i>Lanius ludovicianus</i>	SOC/SSC	Woodland/Cropland/ Grassland	moderate
Long-billed curlew <i>Numenius americanus</i>	SOC/SSC	Grassland/Riparian/Lakes and Rivers	moderate
Long-eared owl <i>Asio otus</i>	--/SSC	Grassland/Riparian/Oak woodland/Cropland	low; no suitable roost habitat on-site
Merlin <i>Falco columbarius</i>	--/SSC	Grassland/Riparian/Rivers and Lakes/Oak woodland/Wetland	moderate
Mountain plover <i>Charadrius montanus</i>	FPT/SSC	Annual and perennial grasslands	moderate
Northern harrier <i>Circus cyaneus</i>	--/SSC	Rivers/Grassland/Wetland	moderate
Olive-sided flycatcher <i>Contopus cooperi</i>	SOC/--	Forest/Woodland	low; outside known range
Pacific-slope flycatcher <i>Empidonax difficilis</i>	SOC/--	Moist woodlands	low; outside known range
Prairie falcon <i>Falco mexicanus</i>	--/SSC	Oak woodland/ Grassland/Riparian	moderate
Rufous hummingbird <i>Selasphorus rufus</i>	SOC/--	Riparian/Forests	low; no suitable habitat on-site
Sharp-shinned hawk <i>Accipiter striatus</i>	--/SSC	Oak woodland/ Grassland/Riparian	low; potential migratory habitat
Short-eared owl <i>Asio flammeus</i>	--/SSC	Grassland/Oak woodland/Wetland	high
Swainson's hawk <i>Buteo swainsoni</i>	--/ST	Grassland/Cropland	moderate
Tricolored blackbird <i>Agelaius tricolor</i>	SOC/SSC	Wetland/Riparian/Annual grassland	moderate
Vaux swift <i>Chaetura vauxi</i>	SOC/SSC	Redwood and Douglas fir forests	low; no suitable habitat on-site
Western burrowing owl <i>Athene cunicularia hypugea</i>	SOC/SSC	Grassland	known
Western least bittern <i>Ixobrychus exilis hesperis</i>	SOC/SSC	Wetlands	moderate
White-faced ibis <i>Plegadis chihi</i>	SOC/SSC	Wetlands/Lakes	low; no suitable habitat on-site

TABLE D1-2			
SPECIAL STATUS WILDLIFE SPECIES THAT OCCUR OR POTENTIALLY COULD OCCUR ON THE MERCED UNIVERISTY COMMUNITY PLAN SITE			
Common Name <i>Scientific Name</i>	Status*: Federal/State	Habitat Association	Probability of Occurrence**
White-tailed (black shouldered) kite <i>Elanus leucurus</i>	--/CFP	Grassland/Cropland/ Riparian	moderate
Wood stork <i>Mycteria americana</i>	--/SSC	Rivers and Lakes	low; no suitable habitat on-site
<u>FISH</u>			
Central Valley fall/late fall-run chinook salmon <i>Oncorhynchus tshawytscha</i>		Pacific Ocean/Coastal streams and rivers	none; outside known range
Central Valley steelhead <i>Oncorhynchus mykiss</i>	FT/--	Pacific Ocean/Coastal streams and rivers	none; outside known range
Delta smelt <i>Hypomesus transpacificus</i>	FT/ST	San Joaquin-Sacramento Delta	none; no suitable habitat on-site and outside known range
Green sturgeon <i>Acipenser medirostris</i>	SOC/SSC	Pacific Ocean/Estuaries of large rivers	none; outside known range
Hardhead <i>Mylopharodon conocephalus</i>	--/SSC	Clear, deep pools	none; no suitable habitat on-site and outside known range
Kern brook lamprey <i>Lampetra hubbsi</i>	SOC/SSC	Pacific Ocean/ Coastal streams and rivers	none; no suitable habitat on-site and outside known range
Longfin smelt <i>Spirinchus thaleichthys</i>	SOC/SSC	Saline water in bays and estuaries	none; outside known range
Pacific lamprey <i>Lampetra tridentata</i>	SOC/--	Pacific Ocean/Estuaries of large rivers	none; outside known range
River lamprey <i>Lampetra ayresi</i>	SOC/SSC	San Joaquin-Sacramento Delta	none; outside known range
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FT/SSC	Sloughs of major rivers	none; outside known range
San Joaquin Valley roach <i>Lavinia symmetricus</i>	--/SSC	Intermittent, perennial, and human-modified streams	none; no suitable habitat on-site and outside known range
<u>MAMMALS</u>			
American badger <i>Taxidea taxus</i>	--/--	Grassland	moderate
Fresno kangaroo rat <i>Dipodomys nitratooides exilis</i>	FE/SE	Grassland	none; outside of known range
Fringed myotis bat <i>Myotis thysanodes</i>	SOC/--	Hardwood forest	none; outside of known range
Giant kangaroo rat <i>Dipodomys ingens</i>	FE/SE	Grassland	low; outside known range
Greater western mastiff-bat <i>Eumops perotis californicus</i>	SOC/SSC	Woodland/Grassland/ Urban	none; outside of known range
Long-eared myotis bat <i>Myotis evotis</i>	SOC/--	Woodland/Forest	none; outside of known range

TABLE D1-2			
SPECIAL STATUS WILDLIFE SPECIES THAT OCCUR OR POTENTIALLY COULD OCCUR ON THE MERCED UNIVERISTY COMMUNITY PLAN SITE			
Common Name Scientific Name	Status*: Federal/State	Habitat Association	Probability of Occurrence**
Long-legged myotis bat <i>Myotis volans</i>	SOC/--	Woodland/Forest	none, outside of known range
Merced kangaroo rat <i>Dipodomys heermanni dixonii</i>	SOC/--	Grassland	high
Pale big-eared bat <i>Corynorhinus (Plecotus) townsendii pallescens</i>	SOC/SSC	Mesic	low; no suitable roost habitat on-site
Pallid bat <i>Antrozous pallidus</i>	--/SSC	Grassland/Shrubland/ Woodland	moderate
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	FE/SE	Riparian	low; no suitable habitat on-site
Riparian (San Joaquin Valley) woodrat <i>Neotoma fuscipes riparia</i>	FE/SSC	Forest/Chaparral/Riparian	low; no suitable habitat on-site
San Joaquin (Nelson's) antelope squirrel <i>Ammospermophilus nelsoni</i>	SOC/ST	Grassland	low; outside known range
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	FE/ST	Grassland	moderate
San Joaquin pocket mouse <i>Perognathus inornatus inornatus</i>	SOC/--	Grassland	None; no occurrences resulted from 2 years of surveys
Short-nosed kangaroo rat <i>Dipodomys nitratooides brevinasus</i>	SOC/SSC	Alkali grassland/Scrubland	none; outside known range
Small-footed myotis bat <i>Myotis ciliolabrum</i>	SOC/--	Arid woodlands near water	none; outside of known range
Spotted bat <i>Euderma maculatum</i>	SOC/SSC	Desert/Grassland/Mixed conifer forest	none; outside known range
Townsend's western big-eared bat <i>Corynorhinus townsendii townsendii</i>	SOC/ SSC	Mesic	low; no suitable habitat on-site
Yuma myotis <i>Myotis yumanensis</i>	SOC/SSC	Open forest/Woodland/ Urban	moderate

TABLE D1-2

**SPECIAL STATUS WILDLIFE SPECIES THAT OCCUR OR POTENTIALLY
 COULD OCCUR ON THE MERCED UNIVERISTY COMMUNITY PLAN SITE**

Common Name <i>Scientific Name</i>	Status*: Federal/State	Habitat Association	Probability of Occurrence**
<p>*Status = Status of species relative to the Federal and State Endangered Species Acts and Fish and Game Code of California.</p> <p>Federal status: FE = Federally listed as endangered. FT = Federally listed as threatened. FPE = Federally proposed for listing as endangered. FPT = Federally proposed for listing as threatened. FPD = Federally proposed for delisting.</p> <p>Delisted = Species has recovered to the extent that it has been removed from the federally Threatened and Endangered Species Lists. SOC = Federal species of concern.</p> <p>State status: SE = State listed as endangered. ST = State listed as threatened. SSC = California Department of Fish and Game "Species of Special Concern." CFP = California Fully Protected. CP = California Protected.</p> <p>** A rating of "known" indicates that the species has been observed on the site. A rating of "high" indicates that the species has not been observed, but sufficient information is available that indicates suitable habitat and conditions are present on site for the species to occur. A rating of "moderate" indicates that it is not known if the species is present but suitable habitat is or may be present. A rating of "low" indicates that species was not found during biological surveys conducted to date on the site, no suitable habitat is present, or the project area is outside of the species known regional distribution.</p> <p>Sources: CNDDB, 2001. EIP Associates, 2001. CDFG, California Wildlife Habitat Relationships System 7.0, 1999. CDFG, Special Animals List, 1/2001. Ingles, _____. Denton and Belk, 1997.</p>			

APPENDIX D2

SPECIAL-STATUS PLANT SPECIES LIFE HISTORIES

***Agrostis hendersonii* (Henderson's bent grass)**

Henderson's bent grass is a federal species of concern and a CNPS List 3 species. *Agrostis* ssp. are mostly annual or perennial grasses that are delicate to rather coarse with flat leaves. *Agrostis hendersonii* is found in the vernal pools of the Central Valley grasslands, usually below 980 feet in elevation. Also is located in the foothills of the Cascade Range, the northern Sierra Nevada foothills, the Sacramento Valley and San Joaquin Valley, as well as in Oregon. Blooming period is from May through July. The 1999 botanical survey found Henderson's bent grass (*Agrostis hendersonii*) in a limited number of selected vernal pools in the vicinity of Black Rascal Creek. The predominantly red color of the plant made it easily identifiable in these areas. In general, this species was found with other common vernal pool plant species such as coyote thistle, Fremont's goldfields, and *Epilobium*. This species has no potential for occurrence within the UCP Area. While the UCP Area does contain supporting habitat for this species, this species has not been detected during extensive field surveys of the UCP Area.

***Astragalus tener* var. *tener* (Alkali milkvetch)**

Alkali milkvetch is a CNPS List 1B species. *Astragalus* ssp. are typically annual or perennial herbs. They are notoriously toxic, though a few provide excellent forage. The *Astragalus tener* var. *tener* is found in grassy, alkaline flats, playas, meadows, and alkaline vernal pools that are moist in the spring. Located at elevations less than 500 feet in the Central Valley and Delta region from Solano County to San Francisco Bay and south to the lower San Benito and Salinas valleys. The alkali milkvetch blooms from March through June. There is low potential for this species to occur within the UCP Area because, based on the habitat description in Skinner and Pavlik's *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*, the habitats this species needs are not found within the project site.¹

***Atriplex cordulata* (Heartscale)**

Heartscale is a federal species of concern and a CNPS List 1B species. This is a rigid annual herb found in hard and/or trampled alkaline soils at less than 650 feet in elevation. Located in the Central Valley grasslands, and the Sacramento and San Joaquin Valleys. Blooming period is from May through October. There is low potential for this species to occur within the UCP Area because, based on the habitat description in Skinner and Pavlik's *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*, the supporting alkali soils this species needs do not occur on-site.

***Atriplex depressa* (Brittlescale)**

Brittlescale is a CNPS List 1B species. *Atriplex* spp. are herbs or shrubs, usually grayish or whitish. There are over 100 species of *Atriplex*, most of them primarily cosmopolitan. *Atriplex depressa* is found on alkaline or clay soils in alkali flats in largely grassland areas of the Sacramento Valley and San Joaquin Valley less than 650 feet in elevation. Located in cismontane southern California to the edge of the deserts, through the Central Valley to Glenn County. Blooming period is from June through October. This species has a low potential for occurrence within the UCP Area because, based on the habitat description in Skinner and Pavlik's *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*, the alkali soils this species needs do not occur in the project area.

***Atriplex joaquiniana* (San Joaquin saltbush)**

San Joaquin saltbush is a federal species of concern and a CNPS List 1B species. It prefers grasslands and meadows on alkaline soils at less than 980 feet in elevation. It is found in the southern Sacramento Valley, San Joaquin Valley, and southern Coast Ranges. Its blooming period is from April through September. Threatened by grazing, agriculture, and development. There is low potential for this species to occur within the UCP Area because, based on the habitat description in Skinner and Pavlik's *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*, the habitats this species requires are not found within the project site.

***Atriplex minuscula* (Lesser saltbush)**

Lesser saltbush is a CNPS List 1B species. This species is closely related to *Atriplex depressa* (Brittlescale). Found on alkaline soils in valley and foothill grasslands and playas at less than 650 feet in elevation. Located in the southern San Joaquin Valley. Blooming period is from June through October. Historical occurrences have been extirpated by agriculture. This species has a low potential for occurrence within the UCP Area because, based on the habitat description in Skinner and Pavlik's *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*, the supporting alkali soils this species needs do not occur within the project area.

***Atriplex persistens* (Vernal pool saltbush)**

Vernal pool saltbush is a CNPS List 1B species. This species has a low potential for occurrence within the UCP Area because the alkali soils it needs do not occur on the project site.

***Atriplex vallicola* (Lost Hills crownscale)**

Lost Hills crownscale is a federal species of concern and a CNPS List 1B species. Found in alkaline vernal pools and valley and foothill grasslands on alkaline soils at less than 650 feet in elevation. Located in the Central Valley grasslands and, specifically, the San Joaquin Valley. Lost Hills crownscale blooms from June through August. This species is threatened by grazing and agricultural conversion. There is low potential for this species to occur within the UCP Area because, based on the habitat description in

Skinner and Pavlik's *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*, the habitats required by this species are not found within the project site.

***Calycadenia hooveri* (Hoover's calycadenia)**

Hoover's calycadenia is a federal species of concern and a CNPS List 1B species. It is typically found in cismontane woodlands and valley foothill grasslands on rocky, exposed places at less than 980 feet in elevation, in the northern and central Sierra Nevada foothills. Blooming period is from July through September. It is unlikely that this species would occur within the UCP Area. While the UCP Area does contain supporting habitat for this species, this species has not been detected during extensive field surveys of the UCP Area.

***Castilleja campestris* ssp. *succulenta* (Succulent owl's clover)**

Succulent owl's clover is federally listed as threatened, California listed as endangered, and a CNPS List 1B species. It inhabits vernal pools and moist places below 2,400 feet in elevation in the southern Sierra Nevada Mountain foothills, and eastern San Joaquin Valley. It is threatened by urbanization and agriculture. Blooming period is from April through July. This species is threatened by urbanization, agriculture, grazing, and flood control. Succulent owl's clover (*Castilleja campestris* ssp. *succulenta*) was a common special-status plant observed in the 1992 botanical survey of the Virginia Smith Trust Property, and the 1999 survey completed for the existing SUDP area. Succulent owl's clover was found in vernal pools and pools with other plant species that are typically indicative of longer pool inundation. Other pools contained associated plant species that only occur in more shallowly ponded vernal pools. Succulent owl's clover therefore appears to be tolerant of a variety of inundation regimes. This species is known to occur within the UCP Area.

***Chamaesyce hooveri* (Hoover's spurge)**

Hoover's spurge is federally listed as threatened, and a CNPS List 1B species. *Chamaesyce* (or *Euphorbia*) ssp. are typically herbs or shrubs with milky acid juice. The stems can be leafy and slender to almost leafless and fleshy. This is a diversified genus with possibly 1,000 species. *Chamaesyce hooveri* can be found in vernal pools and dried mud flats in the Central Valley grasslands at less than 800 feet in elevation. This species blooms in July and is threatened by habitat loss through grazing, agriculture, and non-native plants. It is unlikely that this species would occur within the UCP Area. While the UCP Area does contain supporting habitat for this species, this species has not been detected during extensive field surveys of the UCP Area.

***Clarkia rostrata* (Beaked clarkia)**

Beaked clarkia is a federal species of concern and a CNPS List 1B species. *Clarkia* ssp. are annual plants with slender to stout stems. They are located in the central Sierra Nevada foothills in Mariposa County, and near Bear Valley. Beaked clarkia is found in valley foothill grasslands and cismontane woodlands in the San Joaquin Valley's Merced River drainage – probably in ephemeral populations. Blooming period is from April through May. It is unlikely that this species would occur within the UCP Area. While the

UCP Area does contain supporting habitat for this species, this species has not been detected during extensive field surveys of the UCP Area.

***Cordylanthus mollis* ssp. *hispidus* (Hispid bird's beak)**

Hispid bird's beak is a federal species of concern and a CNPS List 1B species. *Cordylanthus* spp. in general are branched annuals with yellow roots. This species is found in saline marshes and flats, alkaline meadows, and playas at less than 100 feet in elevation. Located in the Central Valley in Solano, Merced, and Kern Counties. Blooming period is from June to September. This species is suspected to be extirpated from most of the lower San Joaquin Valley, and is threatened by agricultural conversion, development, and grazing. There is moderate potential for this species to occur within the UCP Area because suitable habitat may exist on-site.

***Delphinium recurvatum* (Recurved larkspur)**

Recurved larkspur is a federal species of concern and a CNPS List 1B species. Found in vernal pools, valley and foothill grasslands, and cismontane woodlands on subalkaline soils of brushy or open places in Glenn and Butte Counties, and Contra Costa County to Kern County. Located at elevations between 100 feet and 1950 feet. Its blooming period is from March through May. Much of its habitat has been converted to agriculture and grazing. There is moderate potential for this species to occur within the UCP Area because suitable habitat may exist on-site.

***Downingia pusilla* (Dwarf downingia)**

Dwarf downingia is a CNPS List 2 species. *Downingia* spp. are soft-stemmed annuals that are rather succulent and tender. Dwarf downingia are found in vernal pools and roadside ditches in the valley and foothill grasslands, the southern Sacramento Valley, and north and central San Joaquin Valley. Blooming period is from March through May. Threats to this species include urbanization, agriculture, grazing, and off road vehicles. Dwarf downingia (*Downingia pusilla*) was observed during the 1999 botanical survey in vernal pools in an area located directly north of the UCP Area. This diminutive plant was found in association with other *Downingia* sp., *Plagiobothrys* sp., and woolly marbles. In general, this species was found in the bottom of sparsely vegetated vernal pools with red, acid-based soils. This species has no potential for occurrence on the project site. While the UCP Area does contain supporting habitat for this species, this species has not been detected during extensive field surveys of the UCP Area.

***Eryngium racemosum* (Delta coyote-thistle)**

Delta coyote-thistle is State listed as endangered, a federal species of concern, and a CNPS List 1B species. This species is threatened by agriculture and flood control activities. Its blooming period is from June through August. This species has a low potential for occurrence on the project site because, based on the habitat description in Skinner and Pavlik's California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California, the supporting riparian scrub habitat required by this species is not found within the project site.

***Eryngium spinosepalum* (Spiny-sepaled button-celery)**

Spiny-sepaled button-celery is a federal species of concern and a CNPS List 1B species. Found in vernal pools and depressions of the valley and foothill grasslands below 1,200 feet in eastern San Joaquin Valley adjacent to the base of the Sierra Nevada Mountain foothills from Tulare County to San Joaquin County. Blooming period is from June through August. Development, grazing, and agriculture threaten this species. It is unlikely that this species would occur within the UCP Area. While the UCP Area does contain supporting habitat for this species, this species has not been detected during extensive field surveys of the UCP Area.

***Gratiola heterosepala* (Bogg's Lake hedge-hyssop)**

Bogg's Lake hedge-hyssop is listed as endangered in California and is a CNPS List 1B species. It is located in shallow water and margins of vernal pools at less than 3,900 feet in elevation along the inner north coast ranges (from southwestern Shasta County south to west of the Russian River), central Sierra Nevada foothills, the Sacramento Valley, and Modoc Plateau. Blooming period is from April through June. Threats to this species include development, agriculture, grazing, and vehicular activity. It is unlikely that this species would occur within the UCP Area. While the UCP Area does contain supporting habitat for this species, this species has not been detected during extensive field surveys of the UCP Area.

***Hollisteria lanata* (Hollisteria)**

Hollisteria is a federal species of concern. Hollisteria is found within the San Joaquin Valley from Merced and Monterey Counties to Kern County. It prefers grasslands with clay soils. Blooming period is from April through June. There is no CNPS listing for this species because it was determined, according to Skinner and Pavlik's *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*, that this species was considered but rejected on the basis that it was too common. This species has moderate potential for occurrence within the UCP Area because suitable habitat for this species is present on-site.

***Monardella leucocephala* (Merced monardella)**

Merced monardella is a federal species of concern and a CNPS List 1A species. It is presumed extinct or almost extinct (last seen in 1941). *Monardella* ssp. are annual or perennial herbs, some woody at the base, and have a pleasant scent. The Merced monardella is found in sandy soil in the northern San Joaquin Valley grasslands of Merced and Stanislaus Counties. Its elevation range is from 160 feet to 330 feet. Its blooming period is from June through July. There is moderate potential for this species to occur within the UCP Area, however, according to Skinner and Pavlik's *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*, it is believed that this species is extinct in Merced County as a result of agricultural practices.

***Navarretia myersii* ssp. *myersii* (Pincushion navarretia)**

Pincushion navarretia is federally listed as threatened, California listed as endangered, and is a CNPS List 1B species. This species is located in the vernal pools of the Central Valley and central Sierra Nevada foothills from 65 to 300 feet in elevation. Found in Sacramento, Amador, and Merced Counties. Blooming period for the pincushion navarretia is in May. This species is threatened by development. It is unlikely that this species would occur within the UCP Area. While the UCP Area does contain supporting habitat for this species, this species has not been detected during extensive field surveys of the UCP Area.

***Navarretia nigelliformis* ssp. *radians* (Shining navarretia)**

Shining navarretia is a CNPS List 1B species. Found in vernal pools, valley and foothill grasslands, and cismontane woodlands at less than 3,000 feet in elevation. Located in the Central Valley grasslands and bordering foothill woodlands from San Luis Obispo County to Contra Costa County, and from Tulare County to Butte County. Its blooming period is from April through May. In the 1999 botanical survey, shining navarretia (*Navarretia nigelliformis* ssp. *radians*) was commonly observed on the alkali clay flats located north and northeast of the UCP Area. It was not found in association with vernal pools. Associated plant species found to co-occur with shining navarretia included hainardia, Italian rye grass, hogwallow star-fish, dwarf peppergrass, hedynois, and microseris. This species is known to occur within the UCP project site.

***Neostapfia colusana* (Colusa grass)**

Colusa grass is federally listed as threatened, California listed as endangered, and CNPS List 1B species. It is a low annual that inhabits vernal pools at less than 650 feet in elevation. Found in Colusa, Merced, Solano, and Stanislaus Counties. Blooming period is from May through July. It is threatened by agriculture, overgrazing, flood control, and competition with non-native plants. Colusa grass (*Neostapfia colusana*) was observed in four stock ponds and two vernal pools in the 1999 botanical study, north and northeast of the UCP Area. Colusa grass was generally the only species germinating at the elevation where it occurred within the stock ponds. In addition, the soils of these stock ponds were sandy and not typical of the substrate in the vernal pools of the study area. Other associated species found associated with Colusa grass were San Joaquin orcutt grass coyote thistle, popcorn flower, Epilobium, two-horned downingia, woolly marbles, Alopecurus and hair grass. It is unlikely that this species would occur within the UCP Area. While the UCP Area does contain supporting habitat for this species, Colusa grass has not been detected during extensive field surveys of the UCP Area.

***Orcuttia inaequalis* (San Joaquin Valley orcutt grass)**

San Joaquin Valley orcutt grass is federally listed as threatened, California listed as endangered, and a CNPS List 1B species. It is found in vernal pools and drying mud flats in the Central Valley grasslands of Stanislaus to Tulare Counties. It's usually found below 650 feet in elevation. The San Joaquin Valley orcutt grass blooming period is from May through June. San Joaquin Valley orcutt grass (*Orcuttia inaequalis*) was observed in one vernal pool located directly north of the UCP Area in the 1999 botanical survey. It was not observed elsewhere within the study area. The clay-bottomed pool in which this

population was found was unlike the bottom of any other vernal pools located in the study area. It is unlikely that this species would occur within the UCP Area. While the UCP Area does contain supporting habitat for this species, this species has not been detected during extensive field surveys of the UCP Area.

***Orcuttia pilosa* (Hairy orcutt grass)**

Hairy orcutt grass is both federally listed and California listed as endangered, and is a CNPS List 1B species. Found at less than 650 feet in elevation in the vernal pools of the Central Valley grasslands in Stanislaus, Madera, Merced, and Tehama Counties. Blooming period is from May through July. Threats to this species include agriculture, urbanization, overgrazing, non-native plants, and trampling. It is unlikely that this species would occur within the UCP Area. While the UCP Area does contain supporting habitat for this species, hairy orcutt grass has not been detected during extensive field surveys of the UCP Area.

***Phacelia ciliata* var. *opaca* (Merced phacelia)**

Merced phacelia is a federal species of concern and a CNPS List 1B species. This particular subspecies is found in valley and foothill grasslands on clay soils from the San Joaquin Valley, specifically, Merced County. Its blooming period is from March through May. It is unlikely that this species would occur within the UCP Area. While the UCP Area does contain supporting habitat for this species, Merced phacelia has not been detected during extensive field surveys of the UCP Area.

***Pseudobahia bahiifolia* (Hartweg's golden sunburst)**

Hartweg's golden sunburst is federally listed as endangered, California listed as endangered, and a CNPS List 1B species. This species is widely scattered on dry gravelly soil or grassy slopes from 100 to 1,000 feet in elevation. It is located on the clay soils of the Central Valley grasslands and foothill woodlands from Placer County to Madera County. Blooming period is from March through May. This species is seriously threatened by agriculture, grazing, and development. It is unlikely that Hartweg's golden sunburst would occur within the UCP Area because, according to Skinner and Pavlik's *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*, the project site is outside the known regional distribution for this species and because the grazing and agricultural pressure on the UCP site would seriously threaten the survival of this species. Additionally, this species has not been detected during extensive field surveys of the UCP Area.

***Pseudobahia peirsonii* (San Joaquin adobe sunburst)**

San Joaquin adobe sunburst is a federally listed as threatened, State listed as endangered, and a CNPS List 1B species. This species is found in cismontane woodlands and valley and foothill grasslands of the Central Valley. It is known from fewer than twenty occurrences, and is seriously threatened by agriculture, grazing, development, road construction, and flood control activities. There is no potential for this species to occur within the UCP Area because, according to Skinner and Pavlik's *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*, the UCP Area is

outside this species' known regional distribution. Additionally, this species has not been detected during extensive field surveys of the UCP Area.

***Sagittaria sanfordii* (Sanford's arrowhead)**

Sanford's arrowhead is a federal species of concern and a CNPS List 1B species. It can be found in sloughs and sluggish streams, freshwater marshes, ponds, ditches, and rice fields. Located in the vernal pools of the Central Valley (but mostly extirpated) and southern Coast area – primarily Ventura County. Its blooming period is from May through June. This species is threatened by development, agriculture, and overgrazing. It is unlikely that this species would occur on the project site. While the UCP Area does contain supporting habitat for this species, Sanford's arrowhead has not been detected during extensive field surveys of the UCP Area.

***Streptanthus insignis* ssp. *lyonii* (Arburua Ranch jewel-flower)**

The Arburua Ranch jewel-flower is a federal species of concern and a CNPS List 1B species. This plant is found in coastal scrub habitat, sometimes on serpentine soils. Its blooming period is from April through May, and is known from fewer than ten occurrences near Ortigalita Peak in western Merced County near the Merced-San Benito County line. Currently, it is threatened by grazing and reservoir construction. It is unlikely that this species would occur within the UCP Area, because based on the description in Skinner and Pavlik's *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*, and Hickman's *The Jepson Manual Higher Plants of California*, this species' known regional distribution is outside the boundaries of the project site.²

***Trichocoronis wrightii* var. *wrightii* (Wright's trichocoronis)**

Wright's trichocoronis is a CNPS List 2 species. It is believed extirpated in the Central Valley (including Merced County) due to agriculture and urbanization. It is found on alkaline soils. Located occasionally in the Central Valley and Texas, more common in northern Mexico. This species is not known from Merced County, and was last seen in 1957. Blooming period is from May through September. It is unlikely that this species would occur within the UCP Area because, based on the description in Skinner and Pavlik's *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*, this species is believed extinct in Merced County.

***Tuctoria greenei* (Greene's tuctoria)**

Greene's tuctoria is federally listed as endangered, California rare, and CNPS List 1B species that is found in vernal pools at less than 650 feet in elevation. Located in the Central Valley in Butte, Fresno, Madera, Merced, San Joaquin, Stanislaus, Tehama, and Tulare Counties. Blooming period is from May through July. Threats to this species include agriculture, urbanization, and overgrazing. It is unlikely that this species would occur within the UCP Area. While the UCP Area does contain supporting habitat for this species, this species has not been detected during extensive field surveys of the UCP Area.

ENDNOTES

1. Skinner, M., and Pavlik, B. 1994. *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*. Fifth Ed. February 1994.
2. Hickman, James. *The Jepson Manual, Higher Plants of California*. Berkeley. 1993.

APPENDIX D3

SPECIAL-STATUS PLANT SPECIES LIFE HISTORIES

Invertebrates

Linderiella occidentalis (California Linderiella Fairy Shrimp)

The California linderiella fairy shrimp is a federal species of concern that is found in seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan, or in sandstone depressions. They require water that has very low alkalinity, conductivity, and total dissolved solids. This species is known to occur within the UCP Area.

Aegialia concinna (Ciervo Aegiallan Scarab Beetle)

The Ciervo Aegiallan scarab beetle is a federal species of concern. This beetle has been associated with Delta and inland dune systems, and sandy substrates. Suitable habitats for this species are limited and highly fragmented. It is known from only four localities in Contra Costa, Fresno, San Benito and San Joaquin Counties. There is no potential for this species to occur within the UCP Area because sand dunes, which are the preferred habitat for this species, are not found within the project site. Additionally, according to the USFWS *Draft Recovery Plan for Upland Species of the San Joaquin Valley, California*, the project site is outside this species' known regional distribution.¹

Branchinecta longiantennae (Longhorn Fairy Shrimp)

The longhorn fairy shrimp is federally listed as endangered. This vernal pool crustacean is endemic to the eastern margin of central coast mountains in seasonally astatic grassland vernal pool. They inhabit small alkaline clear-water depressions in sandstone and clear to turbid clay/grass bottomed pools in shallow swales. There is no potential for this species to occur within the UCP Area because, according to Eriksen and Belk's *Fairy Shrimp of California's Puddles, Pools, and Playas*, the project site is outside this species' known range and there is no suitable habitat for longhorn fairy shrimp on-site.

Branchinecta mesovalliensis (Midvalley Fairy Shrimp)

The midvalley fairy shrimp occurs in small, grassy vernal pools in the grasslands in Sacramento, Solano, Contra Costa, Madera, Merced, and Fresno Counties. This species can complete its life cycle in 16 days. Currently, the midvalley fairy shrimp has not been listed by the USFWS or CDFG. However, due to its limited distribution, it is possible that this species may be listed within the time span of this project. This species is known to occur within the UCP Area.

***Lytta morrisoni* (Molestan Blister Beetle)**

The molestan blister beetle is a federal species of concern. This beetle is black with an orange proboscis and silvery hairs on the undersurface of the thorax. The wings are light brown and the head is smooth. This beetle is found in the Central Valley of California from Contra Costa County to Kern and Tulare Counties. It has been observed from April through July. The molestan blister beetle prefers mesic soils near flowering plants, their primary food source. Little is known about the life history of this species, but it appears to be associated with vernal pool grasslands.² All adult specimens have been taken from vegetation on dried vernal pools. The CNDDDB lists one record from north of the UCP Area and one record from northwest. All specimens of adult beetles have been taken from vegetation on dried vernal pools. It is believed that the adults feed on the flower heads of various flowers (Selander, 1960). There is moderate potential for this species to occur on-site. The grasslands in the UCP Area may provide supporting habitat.

***Coelus gracilis* (San Joaquin Dune Beetle)**

The San Joaquin dune beetle is a federal species of concern. This species feeds on decomposing vegetation buried in the sand, and larvae develop and pupate exclusively in the sand. It is active from November through April. Historically, this dune beetle inhabited inland sand dunes from Contra Costa County to Kings County in the south. There is no potential for this species to occur within the UCP Area because sand dunes, which are the preferred habitat for this species, are not found within the project site. Additionally, according to the USFWS *Draft Recovery Plan for Upland Species of the San Joaquin Valley, California*, no occurrences have been documented in Merced County.

Amphibians

***Ambystoma californiense* (California Tiger Salamander)**

The California tiger salamander (CTS) is a federal candidate for listing, a State species of special concern and is a California protected species. Historically, this species used deep, long-lasting vernal pools as natal ponds. However, the species is now occasionally found in stock ponds and other water bodies that do not contain predatory fish. These ponds are crucial as breeding sites for this species. In the non-breeding season, this species can occur in grasslands where it inhabits the burrows of small mammals. The CTS occurs from Sonoma County east through the Central Valley to Yolo and Sacramento Counties, south to Tulare County, and from the vicinity of the San Francisco Bay south to Santa Barbara County. They occur at elevations up to 3,200 feet above sea level. Introduced fishes, even temporary fish introductions, in breeding ponds can reduce the survival of tiger salamander larvae, and salamander populations can be eliminated within a few years. The CTS occurs in grasslands during the non-breeding season (at least March to November) where it aestivates (spends the summer in a state of torpor) in the burrows of small mammals.

The CTS has also been documented in the UCP Area.³ CTS historically utilized only deeper, longer-lasting vernal pools as natal (birth) ponds. However, CTS is now occasionally found in stock ponds and other man-made water bodies. Within the vicinity of the UCP Area, CTS has only been found in stock

ponds, and during the surveys conducted by URS, adult CTS were observed at three locations in the study area (although no CTS larvae were detected). It is likely that the existing vernal pools in the area are too short-lived (generally less than 70 days) to support the development and metamorphosis of CTS larvae.⁴ The CTS also utilizes the surrounding upland grasslands in the vicinity of natal ponds. This species is known to occur within the UCP Area.

***Rana boylei* (Foothill Yellow-legged Frog)**

The foothill yellow-legged frog is a federal species of concern and a State species of special concern. This species ranges from West Oregon to Southern California, Los Angeles County near the coast and Kern County inland from sea level to about 6,000 feet; it is generally absent in the Central Valley. The foothill yellow-legged frog is aquatic and prefers gravelly or sandy streams with sunny banks and open woodlands nearby. Found in a variety of habitats, including valley-foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types. During cold weather individuals seek cover under rocks in the streams or on shore within a few meters of water. They breed from March to May when streams have slowed after winter runoff. Foothill yellow-legged frogs feed on aquatic and terrestrial invertebrates. Threats to this species include direct loss of habitat and habitat degradation such as streambed erosion, point source pollution and introduction of exotic species. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife, California Wildlife Habitat Relationships System, Version 7.0*, and Jennings and Hayes *Amphibian and Reptile Species of Special Concern in California*, the project site is outside the known regional distribution for this species.⁵

***Scaphiopus hammondi* (Western Spadefoot)**

The western spadefoot is a federal species of concern and state species of special concern. The western spadefoot is found in temporary pools and impoundments during the breeding season, where they reproduce, lay eggs, and raise larvae and tadpoles, then move to burrows in surrounding grasslands. The western spadefoot is most often found associated with grasslands along the Sierra Nevada Mountain foothills from sea level up to 4,500 feet in elevation. They are associated with oak woodlands, wet meadows, lakes and rivers in the Central Valley and foothills. Western spadefoot toads spend most of their life below ground in burrows that they dig themselves. They are rarely found on the surface. They are highly dependent upon adequate rains to form ponds where they breed. Habitat loss due to development and agricultural conversion are threats to this species. There is moderate potential for this species to occur within the UCP Area. The vernal pools and adjacent uplands may provide suitable habitat for breeding and aestivation.

Reptiles

***Gambelia siva* (Blunt-nosed Leopard Lizard)**

The blunt-nosed leopard lizard is large when compared with species of lizards found in its range. The blunt-nosed leopard lizard was state listed as endangered on June 27, 1971 and federally listed as endangered in March 11, 1967. The species is characterized by a short snout and distinct pale crossbands

on its body. Young lizards and breeding females develop reddish-orange spots that help in identifying the species. Breeding males develop pink or salmon color on the throat and chest and sometimes over the entire body. Habitat includes semi-arid grasslands, alkali flats, and washes. These lizards frequently use the burrows of small mammals for refuge. The diet of blunt-nosed leopards consists of insects and occasionally other lizards. There is no potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife, California Wildlife Habitat Relationships System, Version 7.0*, and Jennings and Hayes *Amphibian and Reptile Species of Special Concern in California*, the project site is outside of this species known range, and there is no suitable habitat on-site.

***Phrynosoma coronatum frontale* (California Horned Lizard)**

The California horned lizard is a federal species of concern and a state species of special concern. The California horned lizard has a range in the Central Valley-Sierra Nevada Mountain foothill range from Butte County south to Tulare County and from near sea level to about 4,000 feet in elevation. It prefers annual grassland habitat in areas of loose soil but also extends into chaparral, riparian and oak woodlands. The majority of the California horned lizard's diet consists of ants, and they are usually found close to abundant ant colonies. Habitat loss, conversion to urban development and agriculture, loss of native ant populations and collecting are threats to this species. There is low potential for the species to occur within the UCP Area because the project site lacks suitable habitat.

***Masticophis flagellum ruddocki* (San Joaquin Coachwhip)**

The San Joaquin coachwhip (whipsnake) is a federal species of concern. This species known range is from the Sacramento Valley south to Kern County, and west to the South Coast Ranges. Little is known about this species, but it is a diurnal snake that maintains a high activity level while on the surface. It prefers open, dry, vegetative associations with little or no tree cover. Mating is thought to occur in May and clutch size probably ranges from 4 to 20 eggs. The San Joaquin coachwhip eats primarily lizards, small mammals, and robs the nests of birds and mammals. This species has a low potential for occurrence because, according to Jennings and Hayes *Amphibian and Reptile Species of Special Concern in California*, the project site is outside this species' known regional distribution. Additionally, this species was not observed during surveys of the project site.

***Anniella pulchra pulchra* (Silvery Legless Lizard)**

The silvery legless lizard is a federal species of concern and a State species of special concern. There are two subspecies of the legless lizard (*Anniella pulchra pulchra* and *A. p. nigra*). For the most part, the California legless lizard is found in the sandy and loose organic soils of the San Joaquin Valley from San Joaquin County south to the southern Sierra Nevada. This lizard is most often found in leaf litter or just beneath the ground surface in coastal dune and coastal scrub habitats but may also be found in chaparral and oak woodlands. High confidence exists that legless lizards cannot survive in urbanized, agricultural or other areas where a loose substrate in which to burrow has been removed or radically altered. This species is unlikely to occur within the UCP Area because, according to CDFG's *California Wildlife, California Wildlife Habitat Relationships System, Version 7.0*, and Jennings and Hayes *Amphibian and Reptile Species of Special Concern in California*, the project site is outside this species' known regional distribution. Additionally, suitable habitat for this species is not present in the project area.

***Clemmys marmorata* (Western Pond Turtle)**

The western pond turtle is a state species of special concern and federal species of concern. There are two subspecies of western pond turtle, northwestern and southwestern pond turtle. The project area is within an intergradation zone between these subspecies. Western pond turtles can be found in ponds and small lakes with abundant vegetation. Also seen in marshes, slow moving streams, reservoirs, and occasionally brackish water. They are associated with permanent or nearly permanent water in a wide variety of habitat types. Pond turtles require basking sites such as partially submerged logs, rocks, mats or floating vegetation, or open mud banks. Breeding takes place April to August. The female makes an earthen chamber in a sunny spot near water's edge or some distance away in a field. Soil must be at least 10 cm deep for nesting. Females lay one clutch of 3-11 eggs, and hatchlings emerge in about 12 weeks. Western pond turtles are omnivorous and feed on pond lilies, beetles and a variety of aquatic invertebrates as well as fishes, frogs, and carrion. Agriculture or activity of livestock, and increased predation by raccoon, red fox, and black bear are the primary threats to this species. There is moderate potential for this species to occur within the UCP Area because the canals, creek, and adjacent grasslands may provide suitable habitat.

Birds

***Branta Canadensis leucopareia* (Aleutian Canada Goose)**

The Aleutian Canada goose was a federally listed as threatened species, however it has been delisted. This species breeds and nests exclusively on islands in the north Pacific Ocean. The Aleutian Canada goose was officially listed as an endangered species in March of 1967. By December 1990, it was reclassified to threatened status, and by July 1999, the Aleutian Canada goose had reached a fully recovered status, and the USFWS proposed to delist the species. Their wintering grounds are primarily the San Joaquin Valley, and frequent agricultural lands such as pastures and grain fields, and roost at night on inland lakes and coastal islands.⁶ Wintering habitat is disappearing due to urbanization and changing agricultural practices, especially in the Central Valley. According to the USFWS, because the Aleutian Canada goose requires lakes and other bodies of water for roosting, this species has a low potential for occurrence within the UCP Area because the project site lacks suitable aquatic roosting habitat.⁷

***Botaurus lentiginosus* (American Bittern)**

The American bittern is a federal species of concern. The American bittern is distributed widely in winter in fresh emergent wetlands, primarily west of the Sierra Nevada. In the Central Valley, fairly common October to April, uncommon to rare rest of year, although breeds there. The American bittern eats mainly insects, amphibians, fish, crayfish, and small mammals; also snakes, miscellaneous invertebrates, and birds. It feeds in tall, fresh or saline, emergent wetlands; less often in adjacent shallow water of lakes, backwaters of rivers, or estuaries; and occasionally along adjacent shores. They usually hide, rest, and roost solitarily amidst tall, dense, emergent vegetation, on ground, or near ground on log, stump, or on emergent plants. Population has declined from draining of marshes, human disturbance, and pesticides;

overgrazing of emergent vegetation also is detrimental. This species is known to occur within the UCP Area.

***Pelecanus erythrorhynchos* (American White Pelican)**

The American white pelican is a state species of special concern. In California, it now nests only at large lakes in Klamath Basin, especially Clear Lake National Wildlife Refuge. From August to December common on salt ponds of San Francisco Bay locally uncommon to common on large lakes and estuaries in Central Valley. It rests in day and roosts at night along edge of water, on beaches, sandbars, or old driftwood, but never in trees. It occurs in the UCP Area only as a migrant. Threats result primarily from human disturbance, degradation of breeding habitat, and pollution of watersheds by pesticides. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife* and *California Wildlife Habitat Relationships System, Version 7.0*, the habitat required for roosting is not present on-site.

***Riparia riparia* (Bank Swallow)**

Bank swallows are a State threatened species that has been eliminated from all but a very small portion of their historical range in California. Loss of habitat is the major contributing factor to a severe decline of bank swallows. Due to the severe population declines in California's bank swallows, the California Fish and Game Commission listed the species as threatened in 1989. Bank swallows breed in northern California, including Yolo County, from April through early August. The majority of bank swallows remaining in California nest along the Sacramento River, representing up to 70 percent of the population.

Bank swallows nest in small to large colonies composed of burrows excavated from the steep sides of riverbanks, borrow pits, road cuts, or sea cliffs. Bank swallows primarily nest in steep earthen riverbanks throughout their present range in California. Bank swallows foraging habitat generally consists of open water, croplands, and grasslands adjacent to nesting colonies. There is low potential for this species to occur on-site because, according to CDFG's *California Wildlife* and *California Wildlife Habitat Relationships System, Version 7.0*, vertical cliffs, banks, or bluffs that are necessary for nesting are not present on-site.

***Amphispiza belli belli* (Bell's Sage Sparrow)**

The Bell's sage sparrow is a federal species of concern and a State species of special concern. In summer, this species is uncommon to common east of Cascade Range and Sierra Nevada, in foothills bounding Central Valley. Frequents low, fairly dense stands of shrubs, sagebrush, alkali desert scrub, desert scrub, and similar habitats. It feeds mostly on insects, spiders, and seeds while breeding, and mostly on seeds in winter; also takes green foliage. Seeks cover in fairly dense stands in chaparral and scrub habitats in breeding season. Uses more arid, open shrub habitats in winter. There is low potential for this species to be found within the UCP Area. According to CDFG's *California Wildlife* and *California Wildlife Habitat Relationships System, Version 7.0*, the project site is outside this species' known range, and the necessary chaparral and sage scrub habitats are not present on-site.

***Thryomanes bewickii* (Bewick's Wren)**

The Bewick's wren is a federal species of concern. The Bewick's wren is a common resident throughout the state except in subalpine conifer habitat in the Sierra Nevada and drier portions of the southeastern deserts. Principally a chaparral species and common in mixed and montane chaparral habitats, there is considerable variation in the habitats occupied by the 9 California subspecies. This bird feeds on insects, spiders, and other small invertebrates; rarely on seeds. It seeks cover in dense shrubs, thickets, slash piles, and fallen trees. They nest in virtually any cavity in ground, snag, rock crevice, human-made structure, or woodpecker hole. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife* and *California Wildlife Habitat Relationships System, Version 7.0*, suitable habitat for Bewick's wren does not exist on-site.

***Nycticorax nycticorax* (Black-crowned Night Heron)**

The black-crowned night heron is a fairly common, yearlong resident in lowlands and foothills throughout most of California, including the Salton Sea and Colorado River areas. This species feeds along the margins of lacustrine, large riverine, and fresh and saline emergent habitats. It nests and roosts in dense-foliaged trees and dense emergent wetlands.

It has a highly variable diet that consists of fishes, crustaceans, aquatic insects and other invertebrates, amphibians, reptiles, and small mammals. This species roosts among dense foliage of trees, not always near water, and in dense, fresh or brackish emergent wetlands. Nest-sites are usually near aquatic or emergent feeding areas, but nonbreeding-season roosts may be farther away. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife* and *California Wildlife Habitat Relationships System, Version 7.0*, suitable habitat to support black-crowned night heron does not exist on-site.

***Chidonias niger* (Black Tern)**

The black tern is a federal species of concern and state species of special concern. The black tern was formerly a very common spring and summer visitor to fresh emergent wetlands of California. Numbers have declined throughout the range, especially in the Central Valley. Despite the presence of apparently suitable habitat in rice farming areas, breeding is questionable in the Central Valley. Although restricted to freshwater habitats while breeding, this species can be fairly common on bays, salt ponds, river mouths, fresh emergent wetlands, lakes, ponds, moist grasslands, agricultural fields, and pelagic waters in spring and fall migration.

The black tern forages by hovering above wet meadows and fresh emergent wetlands. It also hovers above croplands, and drops to capture adult and larval insects from recently plowed soil. Loss of wetlands in the Central Valley has been mitigated in part by rice farming, which provides potential foraging and nesting sites. The black tern is highly vulnerable to destruction of natural wetlands by drainage, or heavy grazing, pesticide pollution of agricultural areas, and campgrounds and marinas on the shorelines of large lakes and wetlands. There is moderate potential for this species to occur on-site because there is suitable habitat present within the UCP Area to support the black tern.

***Spizella breweri* (Brewer's Sparrow)**

The Brewer's sparrow is a federal species of concern. This species is a common summer resident and breeder east of the Cascade-Sierra Nevada crest, in mountains and higher valleys of Mojave Desert, and in those bounding southern end of the San Joaquin Valley. It breeds in treeless shrub habitats with moderate canopy, especially in sagebrush. The Brewer's sparrow occurs as a rare fall transient west of Sierra Nevada. They eat mostly insects and spiders in summer and seeds of grasses and forbs in winter. It breeds in extensive shrub stands with moderate canopy, especially sagebrush, and winters in open desert scrub and similar habitats, plains, and fields. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife and California Wildlife Habitat Relationships System, Version 7.0*, there is no suitable habitat available on-site.

***Eremophila alpestris actia* (California Horned Lark)**

The California horned lark is a state species of special concern. It is a common to abundant resident found in variety of open habitats, usually where trees and large shrubs are absent. Found from grasslands along the coast and deserts near sea level, to alpine dwarf-shrub habitat above the tree line. Grasses, shrubs, forbs, rocks, litter, clods of soil, and other surface irregularities provide cover. The lark breeds from March through July. Little is known about what threatens this species. The California horned lark nests in areas of short, sparse grass and is therefore likely to nest in the annual grasslands. This species is known to occur within the UCP Area.

***Accipiter cooperi* (Cooper's Hawk)**

The Cooper's hawk is a state species of special concern. It is a resident throughout most of the wooded portion of the state. The Cooper's hawk breeds in the southern Sierra Nevada Mountain foothills, New York Mountains, Owens Valley and other local areas in southern California. Dense stands of live oak, riparian deciduous or other forest habitats near water are used most frequently. Cooper's hawk is seldom found in areas without dense tree stands, or patchy woodland habitat. Breeding pairs have been reduced in recent decades, unfortunately little is known about what threatens this species. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife and California Wildlife Habitat Relationships System, Version 7.0*, there are no nesting or roosting trees abundant enough on-site. This species, however, may be seen as a migrant.

***Calypte costae* (Costa's Hummingbird)**

Costa's hummingbird is a federal species of concern. This species is common in southwestern California, but also breeds locally along the western edge of the San Joaquin Valley. Prefers desert wash, edges of desert riparian and valley foothill riparian, coastal scrub, desert scrub, and lower elevation chaparral. It requires shrubs or trees for cover and nesting. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife and California Wildlife Habitat Relationships System, Version 7.0*, the project site is outside this species known range and the suitable habitat associations are not present in the project area.

***Phalacrocorax auritus* (Double-crested Cormorant)**

The double-crested cormorant is a state species of special concern and yearlong resident along the entire coast of California, and on inland lakes in fresh, salt, and estuarine waters. It rests in the daytime and roosts overnight beside the water of offshore rocks, islands, steep cliffs, and dead branches of trees, wharfs, jetties, or even transmission lines. Perching sites must be barren of vegetation. Double crested cormorants require considerable length of water or an elevated perch for labored take-off. Numbers of the double crested cormorant are declining throughout North America. The double-crested cormorant is susceptible to pesticides in water, human disturbance, and habitat destruction. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife and California Wildlife Habitat Relationships System, Version 7.0*, the lakes and rivers required for suitable habitat are not present on-site.

***Buteo regalis* (Ferruginous Hawk)**

The ferruginous hawk is a federal species of concern and state species of special concern. This hawk is found seasonally over most of the western United States and is a winter visitor to California. This species is a fairly common winter visitor in grasslands and agricultural in the San Joaquin Valley. The ferruginous hawk frequents open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats. The ferruginous hawk roosts in open areas, usually in a lone tree or utility pole. Nesting requires large, open tracts of grassland, sparse shrub, or desert habitats with elevated structures for nesting. Little is known about what threatens this species. There is moderate potential for this species to occur within the UCP Area. There is potential foraging habitat on-site, and this species has been observed within the grassland habitats on the existing SUDP site.

***Aquila chrysaetos* (Golden Eagle)**

The golden eagle is a state species of special concern and California fully protected species (Cal Fish and Game Code, Section 3511), and protected under the federal Bald Eagle Protection Act (16 U.S.C. 668-668c) and the Migratory Bird Treaty Act (16 U.S.C. 703-711). Golden eagles do not nest in the Central Valley but are found there as winter migrants. Habitat consists of rolling foothills, mountain areas, sage-juniper flats, and/or desert. The golden eagle nests on cliffs of all heights and in large trees in open areas but most frequently, rugged open habitats with canyons and escarpments are used for nesting. Golden eagles forage on a variety of prey, but show a preference for rabbits and rodents. Little is known about what threatens this species. Golden eagles nest in the Sierra Nevada foothills east of the UCP Area, have a high potential for occurrence within the UCP Area. This species has been observed foraging in the existing SUDP.

***Ammodramus savannarum* (Grasshopper Sparrow)**

The grasshopper sparrow is a federal species of concern. This species is an uncommon and local, summer resident and breeder in foothills and lowlands west of the Cascade-Sierra Nevada crest. It occurs in dry, dense grasslands, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches. The grasshopper sparrow feeds primarily on insects, but also eats other invertebrates and grass

and forb seeds. Apparently, a thick cover of grasses and forbs is essential for concealment. It builds nests of grasses and forbs in a slight depression in ground, hidden at the base of an overhanging clump of grasses or forbs. Frequents dense, dry or well-drained grassland, especially native grassland with a mix of grasses and forbs for foraging and nesting. There is moderate potential for this species to occur within the UCP Area because there is suitable habitat available on-site, and the project site is on the western border of this species' known regional distribution.

***Dendroica occidentalis* (Hermit Warbler)**

The hermit warbler is a federal species of concern. It is a fairly common summer visitor and migrant and rare but regular in winter. This species breeds in major mountain ranges from San Gabriel and San Bernardino Mts. northward. It is uncommon to fairly common in lowlands in spring, rare to uncommon in fall. The hermit warbler breeds in mature ponderosa pine, montane hardwood-conifer, mixed conifer, Douglas fir, redwood, red fir, and Jeffrey pine habitats. During migration and winter, they also occur in valley foothill hardwood habitat and in stands of planted pines. This warbler frequents mature stands of conifers with open to dense canopy for breeding, and uses mature conifers, woodlands, and plantations with similar canopy in other seasons. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife* and *California Wildlife Habitat Relationships System, Version 7.0*, the project site is outside the known range for this species, and the appropriate associated habitat is not present in the UCP Area.

***Chondestes grammacus* (Lark Sparrow)**

The lark sparrow is a federal species of concern. It is a common to fairly common resident in lowlands and foothills throughout much of California. This species frequents sparse valley foothill hardwood, valley foothill hardwood-conifer, open mixed chaparral and similar brushy habitats, and grasslands with scattered trees or shrubs. It is most common around the margins of the Central Valley, in bordering foothills, and inner coastal ranges. The lark sparrow eats seeds, grains, and insects, especially grasshoppers, and scattered trees or shrubs, fence posts, large rocks, other elevated sites, and ground herbage are used for lookouts, song perches, and other cover. There is moderate potential for this species to occur within the UCP Area because suitable habitat does exist on-site.

***Carduelis lawrencei* (Lawrence's Goldfinch)**

The Lawrence's goldfinch is a federal species of concern. This species is rather common along western edge of southern deserts and uncommon in foothills surrounding Central Valley. The Lawrence's goldfinch breeds in open oak or other arid woodland and chaparral near water. Typical habitats include valley foothill hardwood and valley foothill hardwood-conifer. Nearby herbaceous habitats often used for feeding. This bird eats mostly seeds and a few insects. They use trees and shrubs for nesting, resting, escape, and other cover. Habitat requirements include open woodland or shrubland, a nearby source of water, and forb and shrub seeds. There is a low potential for occurrence within the UCP Area because, according to CDFG's *California Wildlife* and *California Wildlife Habitat Relationships System, Version 7.0*, the project site is outside this species' known regional distribution and suitable habitat does not exist on-site.

***Melanerpes lewis* (Lewis' Woodpecker)**

The Lewis' woodpecker is a federal species of concern. This is an uncommon, local winter resident occurring in open oak savannahs, broken deciduous, and coniferous habitats. This species winters in the Central Valley, Modoc Plateau, and the Transverse and other Ranges in southern California. It forages primarily on insects in spring and summer, and in late summer and fall, fruits and berries are eaten frequently. Winter food consists of mostly cached acorns, other nuts and seeds, and emerging insects. Suitable habitat includes open, deciduous and conifer habitats with brushy understory, and scattered snags and live trees for nesting and perching. There is low potential for this species to occur within the UCP Area because suitable habitat, according to CDFG's *California Wildlife and California Wildlife Habitat Relationships System, Version 7.0*, is not present on-site.

***Empidonax traillii brewsteri* (Little Willow Flycatcher)**

The little willow flycatcher is a federal species of concern and a State Endangered species. This species' range runs through the Sierra Nevada. Little willow flycatchers prefer broad open river valleys or large mountain meadows with lush growth of shrubby willows, wet meadow and montane riparian habitats between 2,000 to 8,000 feet elevation. Dense willow thickets are required for nesting and roosting. Little willow flycatchers are monogamous; June is peak egg laying season with clutch averages 3 to 4 eggs. Numbers have declined because of cowbird parasitism and habitat destruction. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife and California Wildlife Habitat Relationships System, Version 7.0*, the project area is outside this species' known range and the riparian and meadow habitat this species needs for nesting is not present in the UCP Area.

***Lanius ludovicianus* (Loggerhead Shrike)**

The loggerhead shrike or "butcher bird" is a state species of special concern. The common name comes from the species' habit of impaling its prey on thorns or barbed wire. The loggerhead shrike is a common resident and winter visitor in the lowlands and foothills throughout California. It prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Highest densities of Loggerhead shrikes occur in open-canopied foothill hardwood, foothill hardwood-conifer, riparian, pinyon-juniper, juniper, desert riparian and Joshua tree habitats. Breeding season runs from March into May. Several theories exist as to what has caused the decline of loggerhead shrike, however no absolute results have been determined. The loggerhead shrike has moderate potential to occur within the UCP Area, and would occur primarily as a winter resident, although individuals have been observed in the vicinity of the UCP Area during late summer. Given the lack of dense shrubs or trees within which to nest, it is unlikely that loggerhead shrike would nest in the UCP Area, despite observed occurrences in the vicinity.

***Numenius americanus* (Long-billed Curlew)**

The long-billed curlew is a state species of special concern. It is a fairly uncommon to common breeder from April to September in wet meadow habitat in Siskiyou, Modoc, and Lassen Counties. The long-billed curlew is an uncommon to locally very common winter visitor from early July to early April along most of the California Coast and in the Central and Imperial Valleys. Preferred winter habitats include

large coastal estuaries, upland herbaceous areas and croplands. The curlew feeds mostly on insects and small crustaceans. Declining numbers are probably caused by agricultural practices. This species has moderate potential for occurrence within the UCP Area because suitable habitat exists on-site, and has been observed in the vicinity.

***Asio otus* (Long-eared Owl)**

The long-eared owl is a state species of special concern. It is an uncommon resident or winter migrant throughout most of the northern part of the state, excluding the North Coast Range, Cascade Range, and higher elevations of the Sierra Nevada Mountains. Riparian habitat is required for the long-eared owl, and also uses live oak thickets and other dense stands of trees. Resident populations in the state have been declining since the 1940s, especially in southern California. Reasons for decline are not known, but destruction and fragmentation of riparian habitat and live oak groves have been major factors. There is low potential for this species to occur within the UCP Area because, according to CDFG's California Wildlife and California Wildlife Habitat Relationships System, Version 7.0, suitable roosting and nesting habitat is not present on-site.

***Falco columbarius* (Merlin)**

The merlin is a state species of special concern. It is an uncommon winter migrant from September to May in California. Merlins frequent coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, edges, and early successional stage habitats. Bodies of water with dense tree stands are needed for cover. Merlins feed mostly on other birds, and pesticides have reduced numbers of this raptor. There is moderate potential for this species to occur within the UCP Area because suitable habitat does exist for foraging.

***Charadrius montanus* (Mountain Plover)**

The mountain plover is a state species of special concern and a species that is federally proposed as threatened. The mountain plover is found in the short grasslands and plowed fields of the Central Valley from Sutter and Yuba Counties southward. It is also found in the foothill valleys west of San Joaquin Valley, and Imperial Valley. The mountain plover avoids high and dense cover and uses open shortgrass plains, plowed fields with little vegetation, and open sagebrush areas. Little is known about what threatens this species. This species has moderate potential to occur within the UCP Area. It has been observed on the existing SUDP site, and the grasslands in the UCP Area may provide suitable nesting habitat.

***Circus cyaneus* (Northern Harrier)**

The northern harrier is a State Species of Special Concern. Habitat ranges from annual grassland to lodgepole pine and alpine meadow habitats as high as 10,000 feet in elevation. The northern harrier is a permanent resident of the northeastern plateau and coastal areas, and a less common resident of the Central Valley. California populations have decreased recently, but can be locally abundant where suitable habitat remains free of disturbance. Destruction of wetland habitat, native grassland, meadows, and burning and plowing of nesting areas during early stages of breeding cycle are the major reasons for

their decline. There is moderate potential for the northern harrier to occur on the project site because habitat in the UCP Area exists for nesting northern harrier. Additionally, this species has been observed in the vicinity of the project area.

***Contopus cooperi* (Olive-sided Flycatcher)**

The olive-sided flycatcher is a federal species of concern. It is an uncommon to common summer resident in a wide variety of forest and woodland habitats 9000 ft throughout the Central Valley, and other lowland valleys and basins. Preferred nesting habitats include mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir, and lodgepole pine. Eats flying insects over forest canopy or adjacent meadows, clearings, or shrub-covered slopes in wide-ranging flights from high, conspicuous perches. This species requires large, tall trees, usually conifers, for nesting and roosting sites and also lofty perches, typically the dead tips or uppermost branches of the tallest trees in vicinity, for singing posts and hunting perches. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife* and *California Wildlife Habitat Relationships System, Version 7.0*, the project site is outside this species known range and appropriate associate habitat is not present in the project area.

***Empidonax difficilis* (Pacific-slope Flycatcher)**

The pacific-slope flycatcher is a federal species of concern. The former western flycatcher recently split into Pacific-slope flycatcher, which occurs in cismontane California and cordilleran flycatcher (*E. difficilis*), which breeds in transmontane California chiefly in the Warner Mts. area. Pacific-slope flycatcher is a widespread, fairly common summer resident in warm moist woodlands, including valley foothill and montane riparian, coastal and blue oak woodlands, and montane hardwood-conifer habitats. Also uses closed-cone pine-cypress, ponderosa pine, Douglas-fir, Sierra mixed conifer, and redwood habitats, and others. This species frequents woodlands and forests with dense canopy near water during breeding season. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife* and *California Wildlife Habitat Relationships System, Version 7.0*, the project site is outside the known range for this species and the appropriate habitat associations are not present on-site.

***Falco mexicanus* (Prairie Falcon)**

The prairie falcon is a state species of special concern. It is an uncommon permanent resident and migrant that ranges from the southeastern deserts to northwest along the inner Coast Ranges and Sierra Nevada Mountains. Distributed from annual grasslands to alpine meadows, but associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields and desert scrub areas, the prairie falcon requires sheltered cliff ledges for cover and reproduction. The prairie falcon uses open terrain with canyons, cliffs, escarpments, and rock outcrops for foraging. DDT poisoning has reduced the numbers of this raptor. There is moderate potential for this species to occur within the UCP Area because suitable foraging habitat exists on-site.

***Selasphorus rufus* (Rufous Hummingbird)**

The rufous hummingbird is a federal species of concern. It is a common migrant and uncommon summer resident of California that is found in a wide variety of habitats that provide nectar-producing flowers; uses valley foothill hardwood, valley foothill hardwood-conifer, riparian, and various chaparral habitats in both northward and southward migration; montane riparian, aspen, and high mountain meadows (to tree-line and above) used in southward migration. This hummingbird uses riparian areas, open woodlands, chaparral, mountain meadows, and other habitats rich in nectar-producing flowers, including gardens and orchards. This species has a low potential for occurrence within the UCP Area because, according to CDFG's *California Wildlife* and *California Wildlife Habitat Relationships System, Version 7.0*, the project area is outside this species' known regional distribution and suitable habitat is not present on-site.

***Accipiter striatus* (Sharp-shinned Hawk)**

The sharp-shinned hawk is a state species of special concern. This hawk is a fairly common migrant and winter resident throughout California, except in areas with deep snow. The sharp-shinned hawk breeds in ponderosa pine, oak woodland, riparian, and mixed conifer habitats. They roost in high canopy forests and nest in dense, even aged, single layered forest canopies. Little is known about what threatens this species. There is low potential for this species to occur within the UCP Area because, although suitable foraging habitat is present, suitable nesting habitat does not exist nearby.

***Asio flammeus* (Short-eared Owl)**

The short-eared owl is a state species of special concern and formerly a resident over the entire length of California, excluding the higher mountains. It is a widespread winter migrant, found primarily in the Central Valley, the western Sierra Nevada Mountain foothills, and locally in the southern desert region. It prefers habitats in open areas with few trees, such as annual and perennial grasslands, prairies, dunes, meadows, irrigated lands, and saline and fresh emergent wetlands. The short-eared owl feeds primarily on voles and other small mammals but also eats reptiles and amphibians. The species requires dense vegetation; tall grasses, brush, ditches, and wetlands for resting and roosting cover. It nests on dry ground in a depression concealed with vegetation and will occasionally nest in a burrow. Numbers have declined over most of its range in recent decades because of grazing and destruction and fragmentation of grassland and wetland habitats. There is high potential for this species to occur within the UCP Area because suitable habitat does exist on-site.

***Agelaius tricolor* (Tricolored Blackbird)**

The tricolored blackbird is a federal species of concern and state species of special concern. It is common locally throughout the Central Valley and in coastal districts from Sonoma County southward. The tricolored blackbird roosts in large flocks and breeds near fresh water, preferably in emergent wetland, with tall, dense cattails or tules, thickets of willow, blackberry, wild rose, and tall herbs. They forage on the ground in croplands, grassy fields, flooded land, and along edges of ponds looking for insects. Little is known about what threatens this species. There is moderate potential for this species to occur within the UCP Area. There is suitable foraging habitat within the agricultural areas on-site, but the emergent or dense riparian understory needed for nesting is not present within the project area.

***Chaetura vauxi* (Vaux's Swift)**

The Vaux's swift is a State species of special concern. It is a summer resident of northern California that breeds fairly commonly in the Coast Ranges, the Sierra Nevada, and possibly in the Cascade Range. Vaux's Swift's prefer redwood and Douglas-fir habitats with nest sites in large hollow trees and snags, especially tall, burned-out stubs. Roosts in hollow trees and snags, and occasionally in chimneys and buildings. The most important habitat requirement appears to be an appropriate nest-site in a large, hollow tree. Little is known about what threatens this species. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife and California Wildlife Habitat Relationships System, Version 7.0*, the project area is outside this species' known regional distribution and suitable habitat does not exist on-site to support this species.

***Athene cunicularia hypugea* (Western Burrowing Owl)**

Western burrowing owl may nest in the UCP Area or immediate vicinity. The burrowing owl is a federal species of concern and state species of special concern. Their habitat consists of open, dry grassland, desert habitats, and in open shrub stages of pinyon juniper and ponderosa pine habitats. The western burrowing owl uses rodent or other burrows for roosting and nesting. Breeding occurs March through August with the peak in April and May. The western burrowing owl feeds mostly on insects, small mammals, reptiles, birds, and carrion. Conversion of grassland to agriculture, development, and poisoning of ground squirrels have contributed to the reduction in numbers. Predators include prairie falcons, red-tailed hawks, northern harriers, golden eagles, foxes, coyotes, and domestic dogs and cats. This species is known to occur within the UCP Area.

***Ixobrychus exilis hesperis* (Western Least Bittern)**

The western least bittern is a federal species of concern and a State species of special concern. Rare to uncommon species in April to September in large, fresh emergent wetlands of cattails and tules in Central Valley, where it nests. Distributional data are scant because of extremely secretive behavior. More studies are needed. The western least bittern uses dense, emergent vegetation for cover and nesting, and often feeds along the edge of emergent vegetation, on the open-water side. This species has a moderate potential for occurrence within the UCP Area because there is some emergent vegetation available on-site that would provide for foraging habitat.

***Plegadis chihi* (White-faced Ibis)**

The white-faced ibis is a federal species of concern and a state species of special concern. This species was formerly more common, especially in the San Joaquin Valley, but no longer breeds regularly anywhere in California. The white-faced ibis is currently rare in San Joaquin Valley, occurring mainly near Los Banos. Extensive marshes are required for nesting near foraging areas in shallow water or muddy fields. The ibis winters mainly in the San Joaquin and Imperial valleys, but is recorded widely as a transient. Threats to this species are probably from destruction of extensive marshes that are required for nesting. There is low potential for this species to occur within the UCP Area because, according to

CDFG's *California Wildlife and California Wildlife Habitat Relationships System, Version 7.0*, suitable habitat for this species does not exist on-site.

***Elanus leucurus* (White-tailed Kite)**

The white-tailed kite is a California fully protected species. It is a common to uncommon, yearlong resident in coastal and valley lowlands, rarely found away from agricultural areas. The kite inhabits herbaceous and open stages of most habitats in cismontane California. The white-tailed kite uses groves of dense, broad-leafed deciduous trees for nesting and roosting. The white-tailed kite has been able to extend its range and increase its numbers over the past few years, however, little is known about what threatens this species. There is moderate potential for this species to occur within the UCP Area because suitable foraging habitat exists on-site.

***Mycteria americana* (Wood Stork)**

The wood stork is a state species of special concern. The wood stork is a rare to locally common post-breeding visitor from late May to October and occur from the Mexican border north. It also occurs in the lower Colorado River Valley as far north as Needles, and in Death Valley. The wood stork is an inhabitant of shallow, relatively warm waters with fish for prey. There are scattered records as far north as Siskiyou and Modoc Counties. The wood stork appears in California after the breeding season, May through October. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife and California Wildlife Habitat Relationships System, Version 7.0*, the project area is outside this species' known regional distribution and suitable habitat for this species does not exist on-site.

Fish

***Oncorhynchus tshawytscha* (Central Valley Fall/Late Fall-Run Chinook Salmon)**

The Central Valley fall/late fall-run Chinook salmon is a federal candidate species and State species of special concern. This species resides in the Pacific Ocean and spawn in large, permanent coastal streams and rivers, over gravel beds. This species has no potential for occurrence within the UCP Area because, according to Moyle, Yoshiyama, Williams, and Wikramanayake's *Fish Species of Special Concern in California*, the project site is outside this species' known regional distribution, diversion dams downstream prevent access to the project area, and there is no suitable habitat present on-site.⁸

***Oncorhynchus mykiss* (Central Valley Steelhead)**

The Central Valley steelhead is a federally listed as threatened species. This species resides in the Pacific Ocean and spawn in large, coastal streams and rivers over gravel beds. This species has no potential for occurrence within the UCP Area because, according to Moyle, Yoshiyama, Williams, and Wikramanayake's *Fish Species of Special Concern in California*, the project site is outside this species' known regional distribution, diversion dams downstream prevent access to the project area, and there is no suitable habitat present on-site.

***Hypomesus transpacificus* (Delta Smelt)**

The Delta smelt is a federally and State threatened species. It prefers the habitat of the low-mid reaches of the San Joaquin-Sacramento Delta region. This species has no potential for occurrence within the UCP Area because diversion dams downstream prevent access to the project area and there is no suitable habitat present on-site.

***Acipenser medirostris* (Green Sturgeon)**

The green sturgeon is a federal species of concern and a State species of special concern. This species inhabits the Pacific Ocean, but seldom migrates inland beyond the estuaries of large rivers. There is no potential for this species to occur within the UCP Area because, according to Moyle, Yoshiyama, Williams, and Wikramanayake's *Fish Species of Special Concern in California*, the project site is outside this species' known regional distribution and there is no suitable habitat present on-site.

***Mylopharodon conocephalus* (Hardhead)**

The hardhead is a State species of special concern. It inhabits clear, deep pools with sand-gravel-boulder bottoms and slow water velocity. It is typically not found where exotic centrarchids dominate. There is no potential for this species to occur within the UCP Area because there is no suitable habitat present on-site.

***Lampetra hubbsi* (Kern Brook Lamprey)**

This species resides in the Pacific Ocean and spawn in large, coastal streams and rivers over gravel beds. The Kern Brook lamprey is a federal species of concern and a State species of special concern. It inhabits the San Joaquin rivers and waterways. There is no potential for this species to occur within the UCP Area because there is no suitable habitat present on-site.

***Spirinchus thaleichthys* (Longfin Smelt)**

The longfin smelt is a federal species of concern and a State species of special concern. It prefers moderately saline water in bays and estuaries. This species has no potential for occurrence within the UCP Area because, according to Moyle, Yoshiyama, Williams, and Wikramanayake's *Fish Species of Special Concern in California*, the project site is outside this species' known regional distribution, diversion dams downstream prevent access to the project area, and there is no suitable habitat present on-site.

***Lampetra tridentata* (Pacific Lamprey)**

The Pacific lamprey is a federal species of concern. This species resides in the Pacific Ocean and spawn in large, coastal streams and rivers over gravel beds. This species has no potential for occurrence within the UCP Area because, according to Moyle, Yoshiyama, Williams, and Wikramanayake's *Fish Species of Special Concern in California*, the project site is outside this species' known regional distribution,

diversion dams downstream prevent access to the project area, and there is no suitable habitat present on-site.

***Lampetra ayresi* (River Lamprey)**

The river lamprey is a federal species of concern and a State species of special concern. It is found in the San Joaquin-Sacramento Delta and northward, including the Sacramento River. This species has no potential for occurrence within the UCP Area because, according to Moyle, Yoshiyama, Williams, and Wikramanayake's *Fish Species of Special Concern in California*, the project site is outside this species' known regional distribution and there is no suitable habitat present on-site.

***Pogonichthys macrolepidotus* (Sacramento Splittail)**

The Sacramento splittail is federally listed as threatened and State species of special concern. This species prefers the backwater sloughs of major rivers. This species has no potential for occurrence within the UCP Area because, according to Moyle, Yoshiyama, Williams, and Wikramanayake's *Fish Species of Special Concern in California*, the project site is outside this species' known regional distribution and diversion dams downstream prevent access to the project area, and there is no suitable habitat present on-site.

***Lavinia symmetricus* ssp. (San Joaquin Valley Roach)**

The San Joaquin Valley roach is a State species of special concern. It inhabits the streams of a variety of types, including intermittent, perennial, and human modified. There is no potential for this species to occur within the UCP Area because there is no suitable habitat present on-site.

Mammals

***Taxidea taxus* (American Badger)**

The American badger is an uncommon resident throughout much of the state. This species, like the coyote, has been the target of predator control programs throughout much of the state. However, sightings of this species are relatively common in eastern Merced County, and mammal surveys conducted in 1999 for the existing SUDP area revealed the presence of American badger (EIP Associates, 1999c). Again, the large tracts of relatively undisturbed grassland and large prey base (particularly California ground squirrels) probably account for the population of this species in the vicinity of the UCP Area. There is moderate potential for this species to occur within the UCP Area because there is suitable habitat on-site. This species is also known to be present within the existing SUDP area.

***Myotis thysanodes* (Fringed Myotis Bat)**

The fringed myotis bat is a federal species of concern. The fringed myotis is widespread in California, occurring in all but the Central Valley and Colorado and Mojave deserts. Optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer, generally at 1300-2200 m (4000-7000 ft). This

species uses open habitats, early successional stages, streams, lakes, and ponds as foraging areas. There is no potential for this species to occur within the UCP Area because there is no roost habitat on-site and, according to Lloyd Ingles' *Mammals of the Pacific States* the project area is outside this species' known regional distribution.

***Eumops perotis californicus* (Greater Western Mastiff Bat)**

The greater western mastiff bat is a federal species of concern and a State species of special concern. It is an uncommon resident in southeastern San Joaquin Valley, but occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. This species requires crevices in cliff faces, high buildings, trees, and tunnels for roosting, and extensive open areas for foraging. This species has no potential for occurrence within the UCP Area because, according to Lloyd Ingles' *Mammals of the Pacific States*, the project site is outside this species' known regional distribution.

***Myotis evotis* (Long-eared Myotis Bat)**

The long-eared myotis bat is a federal species of concern. It is widespread in California, but generally is believed to be uncommon in most of its range. It avoids the arid Central Valley and hot deserts, occurring along the entire coast and in the Sierra Nevada, Cascades, and Great Basin. This species has been found in nearly all brush, woodland, and forest habitats, from sea level to at least 9000 ft, but coniferous woodlands and forests seem to be preferred.

This species roosts in buildings, crevices, spaces under bark, and snags. Caves are used primarily as night roosts. It feeds along habitat edges, in open habitats, and over water. This species has no potential for occurrence within the UCP Area because, according to Lloyd Ingles' *Mammals of the Pacific States*, there the project site is outside this species' known regional distribution and suitable habitat for this species does not exist on-site.

***Myotis volans* (Long-legged Myotis Bat)**

The long-legged myotis bat is a federal species of concern. The long-legged myotis bat is common in California, but absent from the Central Valley. It is common in woodland and forest habitats above 4,000 feet in elevation. It also can be found in chaparral and scrub habitats. The long-legged myotis roosts in caves, rock crevices, buildings, mines, under tree bark, and snags. It feeds over water and open habitats, using denser woodlands for cover and roosting. This species has no potential for occurrence within the UCP Area because, according to Lloyd Ingles' *Mammals of the Pacific States*, the project site is outside this species' known regional distribution.

***Dipodomys heermanni dixonii* (Merced Kangaroo Rat)**

The Merced kangaroo rat, a subspecies of Heerman's kangaroo rat, is a federal species of concern. This species is distributed in the foothills of the Sierra Nevada Mountains from Fresno to El Dorado Counties, in the San Joaquin Valley, and in the Coast Ranges south of San Francisco Bay to Point Conception. It is common in annual grassland, coastal scrub, chaparral, and hardwood habitats with partly open, friable

soil. Although biologists familiar with the region have reported sightings of Merced kangaroo rat, the only documented occurrences of this subspecies in eastern Merced County are north of the UCP Area along Merced Falls Road and within the existing SUDP.⁹ Merced kangaroo rat is considered to be a species for which more information is required to assess the current degree of threat. There is high potential for this species to occur within the UCP Area because the grasslands in the project area may provide supporting habitat.

***Corynorhinus townsendii townsendii* (Townsend's Western Big-eared Bat)**

The Townsend's western big-eared bat is a federal species of concern and state species of special concern. Once considered common, Townsend's big-eared bat now is considered uncommon in California. It is most abundant in mesic habitats. They range throughout California, and require caves, mines, tunnels, buildings or other human-made structures for roosting. Roosting sites are the most important limiting resource. Small moths are the principal food of this species. They capture their prey in flight using echolocation or by gleaning from foliage. This species of bat is extremely sensitive to disturbance of roosting sites, and one visit may result in roost abandonment. This species has a low potential for occurrence because the UCP Area does not provide suitable habitat for this species.

***Corynorhinus townsendii pallescens* (Pale Big-eared Bat)**

The pale big-eared bat is a subspecies of the *Corynorhinus townsendii* and a federal species of concern and a State species of special concern. This species roosts in open areas within mines, caves, large trees, and occasionally buildings. This species is very sensitive to disturbance of roosting sites. This species has a low potential for occurrence within the UCP Area because suitable roosting and nesting habitat is not present on, or in the vicinity of, the project site.

***Antrozous pallidus* (Pallid Bat)**

The pallid bat is a state species of special concern. It is a locally common species in the lower elevations, and occur in a wide variety of habitats including grasslands, shrublands, woodlands, and forests. They can also be found in open dry habitats with rocky areas for roosting. Day roosts are caves, crevices, mines, and occasionally hollow trees. Pallid bats are very sensitive to disturbance of roosting sites. Mating occurs from October to February and young are born April to July. Pallid bats feed on large, hard-shelled prey on the ground or in foliage. This species has a moderate potential for occurrence within the UCP Area because the grassland and vernal pool habitats may provide for suitable foraging habitat.

***Sylvilagus bachmani riparius* (Riparian Brush Rabbit)**

The riparian brush rabbit is federally listed as endangered, and State endangered species. This rabbit inhabits the length of the state west of the Sierra Nevada, excluding the dry Central Valley and southern arid regions. They graze on a wide variety of grasses and forbs (e.g., clovers, foxtails, bromes, thistles) in grasslands, meadows, and riparian areas, always within, or very close to, dense brushy cover. Brush rabbits also browse, especially in fall and winter, on tender leaves, twigs, buds, and bark of blackberry, wild rose, and other species. A dense brush cover of thickets, vines, brambles, or dense riparian species

forms the center of the riparian brush rabbit life. Blackberry and willow patches are favored coverts. There is low potential for this species to occur within the UCP Area because, according to CDFG's *California Wildlife and California Wildlife Habitat Relationships System, Version 7.0*, the dense riparian vegetation required for this species is not present on-site. Additionally, according to the USFWS *Draft Recovery Plan for Upland Species of the San Joaquin Valley, California*, no occurrences of this species have been documented in eastern Merced County.

***Neotoma fuscipes riparia* (Riparian (San Joaquin Valley) Woodrat)**

This species is federally listed as endangered and California species of special concern. The dusky-footed woodrat is common in California, found throughout the Coast Ranges, and also widespread along entire western slope of the Sierra Nevada, mostly below 7000 ft. However, it is generally absent from cultivated land and open grasslands of Central Valley. It inhabits forest habitats of moderate canopy and moderate to dense understory, and may be abundant in chaparral habitats. This species eats mainly woody plants, especially live oak, maple, coffeeberry, alder, elderberry, and also eats fungi, flowers, grasses, and acorns. The riparian woodrat prefers forest habitats with moderate canopy, year-round greenery, a brushy understory, and suitable nest building materials. There is low potential for this species to occur on-site because, according to CDFG's *California Wildlife and California Wildlife Habitat Relationships System, Version 7.0*, the UCP Area lacks the appropriate habitat required for this species. Additionally, according to the USFWS *Draft Recovery Plan for Upland Species of the San Joaquin Valley, California*, no occurrences of this species have been documented in eastern Merced County.

***Ammospermophilus nelsoni* (San Joaquin (Nelson's) Antelope Squirrel)**

The San Joaquin antelope squirrel is a federal species of concern and a State threatened species. This is a permanent resident of the western San Joaquin Valley from 200-1200 feet in elevation on dry, sparsely vegetated, loam soils. Suitable habitat has widely scattered shrubs, annual forbs and grasses, and is distributed over broken terrain with small gullies and washes. This species is found from southern Merced County, south to Kern, Kings, and Tulare Counties. San Joaquin antelope squirrels feed primarily on insects, green vegetation, seeds, and occasionally on small vertebrates. These squirrels dig burrows, or use kangaroo rat burrows. They also use cover provided by rocks and other topographic features. They frequent areas with sandy loam soils, widely spaced alkali scrub vegetation, and dry washes. Loss of habitat to cultivation and the effects of rodenticides have contributed to the decline of this species. This species has a low potential for occurrence within the UCP Area because, according to Lloyd Ingles' *Mammals of the Pacific States* and the USFWS *Draft Recovery Plan for Upland Species of the San Joaquin Valley, California*, the project site is outside of this species known regional distribution.

***Perognathus inornatus inornatus* (San Joaquin Pocket Mouse)**

The San Joaquin pocket mouse is a federal species of concern that occurs in dry, open grasslands or scrub areas on fine-textured soils between 1,100 and 2,000 feet in elevation in the Central and Salinas valleys. Badgers, owls, weasels, skunks, kit foxes, and domestic cats probably prey on San Joaquin pocket mice. There is moderate potential for this species to occur within the UCP Area because there are supporting grasslands on-site. This species has been observed in the vicinity of, the project area.

***Dipodomys nitratoides brevinasus* (Short-nosed Kangaroo Rat)**

The short-nosed kangaroo rat is a federal species of concern and a State species of special concern. It inhabits grasslands, chenopod scrub, scrubland, and alkali sink habitats. There is no potential for this species to occur within the UCP Area because, according to Sameson, Jr. and Peeters' *California Mammals* and Lloyd Ingles' *Mammals of the Pacific States* and the USFWS *Draft Recovery Plan for Upland Species of the San Joaquin Valley, California*, the project site is outside this species' known regional distribution.¹⁰

***Myotis ciliolabrum* (Small-footed Myotis Bat)**

The small-footed myotis bat is a federal species of concern. This species has a no potential for occurrence within the UCP Area because the project site is outside this species' known regional distribution, and because, according to CDFG's *California Wildlife Habitat Relationships System, Version 7.0* and Lloyd Ingles' *Mammals of the Pacific States*, suitable roosting and nesting habitat is not present on, or in the vicinity of, the project site.

***Euderma maculatum* (Spotted Bat)**

The spotted bat is a federal species of concern and a State species of special concern. It is considered to be one of North America's rarest mammals, and has been found at a small number of localities, mostly in foothills and mountains and desert regions of southern California. Little is known about the species in California. Habitats occupied range from arid deserts and grasslands through mixed conifer forests. Moths are the principal food, but there is some evidence of beetle consumption. The spotted bat feeds in flight, over water and near the ground, using echolocation to find prey. They apparently prefer to roost in rock crevices, but are occasionally found in caves and buildings. Cliffs provide optimal roosting habitat. This species has a low potential for occurrence within the UCP Area because, according to CDFG's *California Wildlife* and *California Wildlife Habitat Relationships System, Version 7.0*, the project site is outside this species known range and suitable roosting and nesting habitat is not present on, or in the vicinity of, the project site.

***Myotis yumanensis* (Yuma Myotis)**

The Yuma myotis is a federal species of concern and state species of special concern. They are common and widespread in California and can be found along the mountain ranges bordering the Colorado River. Roosts are in buildings, mines, caves, or crevices. The Yuma myotis usually feeds on ants, termites, and midges as well as flying insects such as moths and flies, typically over water sources such as ponds or streams. Habitat loss due to development and agriculture, and disturbance of roosting sites are the primary threats to this species. This species has a moderate potential for occurrence within the UCP Area because the grassland and vernal pool habitats within the project site may provide foraging habitat.

ENDNOTES

1. U.S. Fish and Wildlife Service. 1997. *Draft Recovery Plan for Upland Species of the San Joaquin Valley, California*. U.S. Fish and Wildlife Service, Portland, Oregon. 1997.
2. Merced County. Merced County University Community Plan Draft Background Report. March, 2000.
3. URS. 2000. *Special Status Branchiopod 1999-2000 Wet Season Survey Report. Campus Parkway Project*, Merced, California. November 2000.

California Natural Diversity Data Base (CNDDB). 2000. Occurrence Records for the Special-Status Species in Merced County.
4. URS. 2000. *Special Status Branchiopod 1999-2000 Wet Season Survey Report. Campus Parkway Project*, Merced, California. November 2000.
5. Jennings, M.R. and M.P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. Prepared for California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova.
California Department of Fish and Game. California's Wildlife. Volume I, Amphibians and Reptiles. May 1988.
California Wildlife Habitat Relationships System. Version 7.0. California Department of Fish and Game.
6. United States Fish and Wildlife Service. 2001. Threatened and Endangered Species, Aleutian Canada Goose. www.r7.fws.gov/es/acg/alcg.html. May 2001.

San Francisco Chronicle. 2001. This Goose Not Cooked – Valley Ranchers Help Migratory Bird Off Endangered Species List. www.sfgate.com/cgi-bin/article/archive/2001/03/19/MN201405.DTL. March 19, 2001.
7. United States Fish and Wildlife Service. 2001. Threatened and Endangered Species, Aleutian Canada Goose. www.r7.fws.gov/es/acg/alcg.html. May 2001.
8. Moyle, P., Yoshiyama, R., Williams, J., and Wikramanayake, E. *Fish Species of Special Concern in California*. Davis, California. June 1995.
9. California Department of Fish and Game. 2001. California Natural Diversity Data Base (CNDDB). Occurrence Records for the Special-Status Species in Merced County.
10. Sameson Jr., E.W., and Peeters, H. 1988. *California Mammals*. University of California Press. 1988.