6.4 BIOLOGICAL RESOURCES

6.4 BIOLOGICAL RESOURCES

INTRODUCTION

This section addresses potential effects on biological resources caused by implementation of the proposed Regional University Specific Plan (RUSP). Existing site characteristics, such as habitat types and animal and plant species present, are described based on site-specific information developed for the proposed project, and published technical information, as indicated in footnoted references. The primary sources of information referenced in this section regarding biological resources are:

- Foothill Associates' *Biological Resources Assessment, Regional University Site and Off-Site Improvements*, Placer County, dated November 29, 2006;
- California Department of Fish and Game's Natural Diversity Database (CNDDB), Rarefind 3 database program, California Department of Fish and Game, Updated January 2006;
- U.S. Fish and Wildlife Service Website 2005; and
- Sacramento Fish and Wildlife Office.

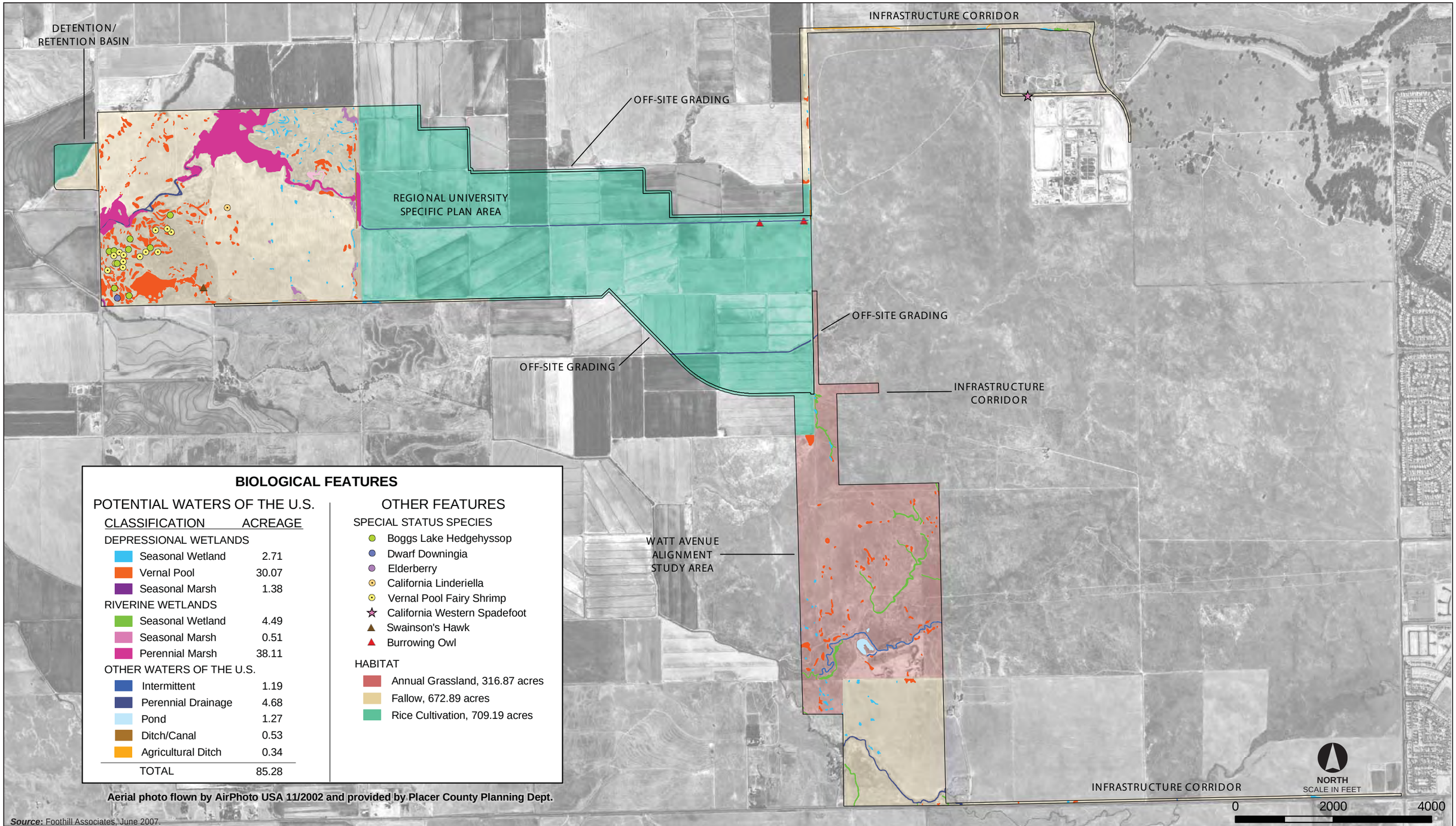
These documents are available for review at the Placer County Planning Department, 3091 County Center Drive, Suite 140, Auburn, California.

Comments raised in response to the Notice of Preparation (see Appendix B) requested that the Draft EIR address direct and indirect project-related impacts on biological resources; identify mitigation measures; identify any offsite infrastructure improvements; evaluate the project's contribution to habitat fragmentation and population isolation; evaluate the proposed project's consistency with the Placer County Conservation Plan effort (e.g. development of a Habitat Conservation Plan and Natural Community Conservation Plan); describe all proposed uses and management strategies and activities associated with all proposed non-urbanized land; develop a detailed monitoring program; and develop alternatives to avoid or substantially lessen the project's impacts to biological resources. The Department of Fish and Game provided minimum requirements for the monitoring program, including the need for specific criteria to measure the effectiveness of mitigation and annual monitoring for a minimum of five years with annual reporting to the DFG. These issues are addressed in this section, except for the alternative discussion, which is addressed in Chapter 7 of this Draft EIR.

ENVIRONMENTAL SETTING

Project Area Habitats

The habitat types present at the project site include agricultural lands, non-native annual grasslands, and wetlands, including vernal pools, depressional seasonal wetlands, marsh and seasonal wetlands, channels and channelized drainages. These resources are shown on Figure 6.4-1 and are described below.



Source: Foothill Associates, June 2007.

PBS&J

FIGURE **6.4-1**

Habitat and Special Status Species

D50840.02

Regional University Specific Plan EIR

11103 | JCS | 07

Agricultural Lands

The eastern portion (roughly two thirds) of the project site are currently in active agriculture. The primary use of the agricultural land is rice farming, but wheat and other small grain crops have been cultivated in portions of the project site agricultural area. Agricultural lands typically do not provide significant breeding habitat for any wildlife species due to the frequency of disturbance related to crop production, but many wildlife species potentially use agricultural lands for foraging and temporary cover when crops are present.

Plant species in agricultural areas are primarily a monoculture of crop plants, though some ruderal species typical of disturbed areas exist along the edges of the crop fields. Ruderal species may include Johnson grass (*Sorghum halepense*) and Dallis grass (*Paspalum dilatatum*) in the wetter areas, and ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), wild oats (*Avena fatua*), Italian ryegrass (*Lolium multiflorum*), yellow star-thistle (*Centaurea solstitialis*), filaree (*Erodium botrys*), wild mustard (*Brassica* spp.), and wild radish (*Raphanus sativa*) in the drier areas.

While wildlife diversity in croplands is typically low, agricultural areas typically support small rodents such as the deer mouse (*Peromyscus maniculatus*), house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), black rat (*Rattus rattus*), and California vole (*Microtus californicus*). These rodents in turn provide prey for a number of raptors and other predator species in the region including American kestrel (*Falco sparverius*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*). Other wildlife species that may utilize croplands include mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhyncos*), Brewer's blackbird (*Euphagus cyanocephalus*), meadowlark (*Sturnella neglecta*), white-crowned sparrow (*Zonotrichia leucophrys*), and house finch (*Carpodacus mexicanus*).

Non-Native Annual Grasslands

The western portion of the project site, the Watt Avenue extension study area, and the off-site infrastructure corridors are composed primarily of non-native annual grassland. These areas include approximately 316.87 acres of annual grasslands, and approximately 672.89 acres of fallow agricultural fields dominated by a non-native annual grassland community (see Figure 6.4-1). This habitat is dominated by non-native grasses and forbs, and has been used primarily for cattle grazing. The most common plants in this community include non-native species such as wild oats, medusahead grass (*Taeniatherum caput-medusae*), ripgut brome, soft chess, Italian rye grass, yellow-star thistle, vetch (*Vicia* spp.), curly dock (*Rumex crispus*), and wild mustard. Annual grasslands provide both foraging and shelter habitat for a wide variety of wildlife species including California vole, California ground squirrel (*Spermophilus beecheyi*), black-tailed hare (*Lepus californicus*), coyote, striped skunk, mourning dove, American crow, Brewer's blackbird, meadowlark, red-tailed hawk, American kestrel, white-crowned sparrow, house finch, savanna sparrow (*Passerculus sandwichensis*), Pacific gopher snake (*Pituophis catenifer catenifer*), California kingsnake (*Lampropeltis getulua californiae*), and western fence lizard (*Sceloporus occidentalis*).

Wetlands and Other Waters of the U.S.

Vernal Pools

Approximately 30.07 acres of vernal pools occur within the annual grassland in various areas throughout the study area (see Figure 6.4-1). Where vernal pools occur, shallow depressions are

underlain by a hardpan, claypan, or other impervious layer such that surface runoff during the rainy season collects and inundates these depressions for varying periods of time, typically weeks to months. Vernal pools become completely dry by summer. Vegetation in vernal pools is specifically adapted to survive the unique, harsh, and widely variable conditions (i.e., inundated in the winter and dry/arid in the summer). Plant species typically found in vernal pools are a mixture of native annual herbs and grasses including annual hairgrass (*Deschampsia danthonioides*), stipitate popcornflower (*Plagiobothrys stipitatus*), wooly marbles (*Psilocarphus brevissimus*), bicornate downingia (*Downingia bicornuta*), white-headed navarretia (*Navarretia leucocephala*), and coyote-thistle (*Eryngium vaseyi*). Vernal pools at the project site are a combination of natural and constructed vernal pools. The constructed pools were created several years ago as mitigation for past impacts unrelated to this project. There are two special-status plant species known from both natural and created vernal pools on the site. These species are Boggs Lake hedge-hyssop (*Gratiola heterosepala*) (state-listed endangered) and dwarf downingia (*Downingia pusilla*) (CNPS 1B status).

Wildlife species associated with vernal pools include Pacific tree frog (*Pseudacris regilla*), western toad (*Bufo boreas*), clam shrimp (*Cyzicus* spp.), water flea (*Daphnia* spp.), predaceous diving beetle (Coleoptera: Dytiscidae), backswimmer (Heteroptera: Notonectidae), water boatman (Heteroptera: Corixidae), and a wide variety of other aquatic invertebrates. Two special-status invertebrates are known to occur in the vernal pools in the project area include California linderiella (*Linderiella occidentalis*) (a California species of concern) and vernal pool fairy shrimp (*Branchinecta lynchi*) (federally listed as threatened).

Depressional Seasonal Wetlands and Depressional Seasonal Marsh

Depressional seasonal wetlands are similar to vernal pools except that periods of inundation are much shorter and soils typically remain moist but not saturated in depressional seasonal wetlands. Approximately 2.71 acres of depressional seasonal wetlands and 1.38 acres of depressional seasonal marsh occur in the annual grasslands and fallow lands throughout the study area (see Figure 6.4-1). Plant species in these depressional seasonal wetlands tolerate limited inundation, but are not adapted to the extended periods of inundation that typically occurs in vernal pools. Plant species that occur in this habitat in the project area includes Italian ryegrass, perennial ryegrass (*Lolium perenne*), annual hairgrass, curly dock, and Mediterranean barley (*Hordeum marinum* var. *gussoneanum*). Plant species associated with depressional seasonal marsh are cattails (*Typha* spp.) and rushes (*Juncus* spp.).

Several wildlife species may utilize these depressional seasonal wetlands for water, feeding, shelter, or breeding habitat including a variety of water dependant insects, Pacific tree frog, western toad, striped skunk, raccoon, coyote, and a variety of resident and migratory birds.

Riverine Marsh and Riverine Seasonal Wetlands

The project area contains both perennial and seasonal freshwater marsh habitats in the western portion of the project site. Approximately 0.51 acres of riverine seasonal marsh and 38.11 acres of riverine perennial marsh occur largely within the annual grassland and agricultural areas of the site itself. Additionally, 4.49 acres of riverine seasonal wetlands occur throughout the study area (see Figure 6.4-1). Vegetation in the perennial marsh habitat is dominated by two species of cattail (*Typha latifolia* and *Typha angustifolia*), bulrush (*Scirpus* spp.), and two species of rush (*Juncus effusus* and *Juncus balticus*). Seasonal wetlands associated with the edges of the marsh areas, shallow tributaries, and other drainages contain plant species such as annual hairgrass,

Mediterranean barley, perennial ryegrass, curly dock, annual bluegrass (*Poa annua*), and annual beard grass (*Polypogon monspeliensis*).

Wildlife species associated with these habitats include beaver (*Castor canadensis*), which currently have a lodge along the North Tributary to Curry Creek in the northwestern portion of the site, raccoon, striped skunk, red-winged blackbird (*Agelaius phoenicus*), bullfrog (*Rana catesbeiana*), Pacific tree frog, western toad, and a variety of other species associated with the surrounding grasslands.

Intermittent and Perennial Drainages

Approximately 1.19 acres of intermittent drainage and 4.68 acres of perennial drainage occur within the Plan Area and portions of the perennial drainage (Curry Creek) have been heavily channelized (see Figure 6.4-1). There are two channelized drainages in the eastern portion of the project site that represent the realignment and channelization of natural drainages for use as water conveyance for rice fields and other agricultural practices on the site. These channels are steep sided and deeply channelized and although they are regularly maintained, support limited amounts of cattail, rush, and Dallis grass. The North Tributary to Curry Creek, on which the aforementioned beaver lodge occurs, is present in the relatively undisturbed western portion of the site. Vegetation and wildlife species that occupy the old creek channel are as described in the marsh and woody vegetation habitat narrative.

Woody vegetation occurs sporadically in stands associated with the channels and perennial drainages on the project site. Woody vegetation that occurs in these areas include arroyo willow (*Salix lasiolepis*), narrow-leaved willow (*Salix exigua*), shining willow (*Salix lucida* ssp. *lasiandra*), Fremont cottonwood (*Populus fremontii*), Himalayan blackberry (*Rubus discolor*), willow weed (*Polygonum lapathifolium*), lady's thumb (*Polygonum persicaria*), Dallis grass, and Johnson grass. The woody vegetation that occurs sporadically throughout the project site provides habitat for nesting and cover for a variety of local wildlife species including mourning dove, black phoebe (*Sayornis nigricans*), western wood-pewee (*Contopus sordidulus*), California towhee (*Pipilo crissalis*), song sparrow (*Melospiza melodia*), beaver, opossum (*Didelphis virginiana*), raccoon, deer mouse, broad-footed mole (*Scapanus latimanus*), striped skunk, and gray fox (*Urocyon cinereoargenteus*).

Other Waters of the U.S.

Other waters of the U.S. occurring within the study area include an approximately 1.27-acre pond, approximately 0.53 acre of ditches or canals, and approximately 0.34 acre of agricultural ditches, including one agricultural ditch that occurs on the Phillip Road Extension (see Figure 6.4-1). These features support a similar, but less diverse, assemblage of plant and wildlife species, due to the level of disturbance associated with maintenance of these waters for agricultural purposes.

Special-Status Species

The potential occurrence of special-status plant and animal species within the project site and surrounding area has been determined through habitat information collected through a review of the California Department of Fish and Game's (CDFG) Natural Diversity Data Base (CNDDB, January, 2006) and from the U.S. Fish and Wildlife Service's (USFWS) online species list database.[1] A reconnaissance level field survey was conducted by PBS&J staff on August 18, 2004. Additionally,

1 USFWS, www.fws.gov/sacramento/es/spp_lists/auto_list_form.cfm, accessed September 30, 2005.

PBS&J reviewed previous reports including *Biological Resources Assessment, Regional University Site and Offsite Improvements, Placer County*, by Foothill Associates, November 29, 2006.

For the purposes of this section, special-status species include:

- species listed, proposed, or candidate species for listing as *Threatened* or *Endangered* by the USFWS pursuant to the Federal Endangered Species Act (ESA) of 1973, as amended;
- species designated as *Species of Concern* by the USFWS (note: although this status designation does not itself trigger any ESA requirements, many of the species that have this designation meet the definition of rare, threatened, or endangered under CEQA);
- species listed as *Rare*, *Threatened*, or *Endangered* by the California Fish and Game Commission pursuant to the California Endangered Species Act (CESA) of 1984, as amended;
- species designated as *Fully Protected* under sections 3511 (birds), 4700 (mammals), and 5050 (reptiles and amphibians) of the California Fish and Game Code;
- species designated by the CDFG as California *Species of Concern*;
- plant species listed as Category 1B and 2 by the California Native Plant Society (CNPS); and
- species not currently protected by statute or regulation, but considered rare, threatened or endangered under CEQA (section 15380).

Table 6.4-1 lists special-status species with potential to occur on the project site along with their status and likelihood of occurrence on the site. A rating of "observed" indicates that the species has been observed on the site; "high" indicates that the species has not been observed, but is known to occur in the vicinity, and sufficient information is available to indicate suitable habitat and conditions are present on-site; "moderate" indicates that suitable habitat exists on-site, and the project area is within the known range of the species, but recent records for the species in the vicinity are lacking; and "low" indicates that species was not found during biological surveys conducted to date on the site and may not be expected, given the species' known regional distribution or the quality of habitats located on the site. Species determined to have a low or better potential to occur on the project site and could be affected by implementation of the proposed project are addressed in this section. Descriptions of each of these species follow.

Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*). Status: CNPS 1B. Big-scale balsamroot flowers from March through June. This member of the aster family occurs in the Central Valley and ranges to the San Francisco Bay Area on dry slopes and valley grasslands. Suitable habitat is present on the western portion of the project site (in non-agricultural areas), the Watt Avenue extension study area, and the off-site infrastructure corridors. Big-scale balsamroot has not been observed during field surveys conducted for this project, and focused surveys have not been conducted.

Dwarf downingia (*Downingia pusilla*). Status: CNPS 1B. The dwarf downingia grows in vernal pools and is known to occur in the Central Valley and San Francisco Bay Area. This species flowers from March through May. Dwarf downingia is known to exist from the western portion of the site within the existing conservation easement area. Although potential habitat for this species occurs on the Watt Avenue extension study area and the off-site infrastructure corridors, no dwarf downingia have been observed during field surveys conducted on those properties, though no focused surveys for this species were conducted.

TABLE 6.4-1

SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING WITHIN THE REGIONAL UNIVERSITY PROJECT SITE

Common Name	Scientific Name	Status Fed/CA/other	Habitat and Seasonal Distribution in California	Likelihood of Occurrence Within the Project Site/Possible Mitigation
Plants				
Big-scale balsamroot	*Balsamorhiza macrolepis* var. *macrolepis*	none/none/1B	Dry slopes and valley grasslands	**Low.** Grasslands on the project site provide potential habitat for this species. Not observed during surveys of the site.
Dwarf downingia	*Downingia pusilla*	none/none/2	Vernal pools in open grassland habitat	**Observed.** Vernal pools on the project site provide potential habitat for this species.
Boggs Lake hedge-hyssop	*Gratiola heterosepala*	none/SE/1B	Vernal pools in open grassland habitat	**Observed.** Vernal pools on the project site provide potential habitat for this species. .
Legenere	*Legenere limosa*	none/none/1B	Vernal pools in open grassland habitat	**Low.** Vernal pools on the project site provide potential habitat for this species. Not observed during surveys of the site.
Ahart's dwarf rush	*Juncus leiospermus* var. *ahartii*	none/none/1B	Moist areas in open grassland habitat	**Very Low.**. No records for this species in the project vicinity. Not observed during surveys of the site, though no focused surveys were conducted
Red Bluff dwarf rush	*Juncus leiospermus* var. *leiospermus*	none/none/1B	Cismontane woodland, chaparral, vernal pools in open grassland habitat	**Very Low.**. No records for this species from Placer County. Not observed during surveys of the site, though no focused surveys were conducted
Henderson's bent grass	*Agrostis hendersonii*	none/none/3	Vernal pools in open grassland habitat	**Very Low.**. No records for this species in the project vicinity. Not observed during surveys of the site, though no focused surveys were conducted
Pincushion navarretia	*Navarretia myersii* ssp. *Myersii*	none/none/1B	Vernal pools in open grassland habitat	**Very Low.**. No records for this species in the project vicinity. Not observed during surveys of the site, though no focused surveys were conducted
Sacramento Orcutt grass	*Orcuttia viscida*	FE/SE/1B	Vernal pools in open grassland habitat	**Very Low.** Vernal pools on the project site provide potential habitat for this species. Restricted to a 135 square mile radius in eastern Sacramento County, and study area is not located within this range. Not observed during surveys of the site.
Sanford's arrowhead	*Sagittaria sanfordii*	none/none/1B	Margins of ponds and marshes	**Low.** Marsh habitats on the project site provide potential habitat for this species. Not observed during surveys of the site.
Invertebrates				
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT/none/none	Vernal pools and other seasonal wetlands in open grassland habitat	**Observed.** This species has been observed in vernal pools on the project site.

TABLE 6.4-1

SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING WITHIN THE REGIONAL UNIVERSITY PROJECT SITE

Common Name	Scientific Name	Status Fed/CA/other	Habitat and Seasonal Distribution in California	Likelihood of Occurrence Within the Project Site/Possible Mitigation
Conservancy Fairy Shrimp	*Branchinecta conservatio*	FE/none/none	This species is only known from very large (i.e., deep and long lasting) vernal pools and playa pools. Pools where Conservancy fairy shrimp is known to occur typically have a "milky" turbidity.	**Low.** Vernal pools in the project area are much smaller than pools where this species is typically known to occur.
Vernal pool tadpole shrimp	*Lepidurus packardi*	FE/none/none	Vernal pools and other seasonal wetlands in open grassland habitat. This species is not locally common.	**Low.** Vernal pools on the project site provide potential habitat for this species. Not observed during protocol level surveys of the site.
California linderiella	*Linderiella occidentalis*	none/none/none	Vernal pools and other seasonal wetlands in open grassland habitat	**Observed.** This species has been observed in vernal pools on the project site.
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	FT/none/none	Associated only with elderberry shrubs (*Sambucus* sp.), usually in or near riparian areas	**Low.** Elderberry shrub present west of the project site.
Amphibians				
California tiger salamander	*Ambystoma californiense*	FT/CSC/none	Grasslands and open oak woodlands with large, deep vernal pools, depressional seasonal wetlands or other fishless water bodies for breeding.	**Very Low.** Vernal pools on the project site may provide potential habitat for this species, but the species is not known from the project vicinity, and no records for CTS occur in Placer County.
Western spadefoot	*Spea hammondii*	none/CSC/none	Vernal pools and other seasonal wetlands in open grassland habitat	**Low.** Vernal pools on the project site provide potential habitat for this species. Not observed during surveys of the site.
Reptiles				
Western pond turtle	*Actinemys marmorata*	none/CSC/none	Streams, rivers, ponds, marshes and other aquatic habitats. Requires secure basking area where they can easily escape to water. Upland nesting sites can be as much as 300 feet from aquatic habitat, but are usually closer.	**Moderate.** Perennial streams, marshes and ditches in the project area provide suitable habitat for this species.
California Horned Lizard	*Phrynosoma coronatum frontale*	none/CSC/none	Annual grasslands, chaparral and oak woodlands with open areas, loose and/or sandy soils and abundant colonies of native harvester ants.	**Low.** This species typically disappears from areas where agriculture and urbanization occurs. The historic disturbance in and adjacent to the project area related to rice farming has likely extirpated California horned lizard from the area. Could possibly occur in portions of offsite infrastructure alignments, if these areas are relatively undisturbed.

TABLE 6.4-1

SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING WITHIN THE REGIONAL UNIVERSITY PROJECT SITE

Common Name	Scientific Name	Status Fed/CA/other	Habitat and Seasonal Distribution in California	Likelihood of Occurrence Within the Project Site/Possible Mitigation
Giant garter snake	*Thamnophis gigas*	FT/CSC/none	Historically occurred in tule and cattail marshes on the Valley floor and Sacramento-San Joaquin Delta. Now uses well vegetated marshes, streams and agricultural ditches in low elevation areas.	**Very Low.** The project site is at a higher elevation than where this species is known to occur. No records for this species in Placer County.
Birds				
Tricolored blackbird	*Agelaius tricolor*	FSCnone/CSC/none	Highly colonial species. Most numerous in the Central Valley. Requires open water, cattail or tulle marshes, protected nesting habitat (blackberry thickets), and a foraging area with insect prey within a few miles of the colony.	**Moderate.** Potential habitat is present at the project site, but this species has not been observed there.
Grasshopper sparrow	*Ammodramus savannarum*	none/none/none	Nests on, or near the ground in open grassland habitats.	**Moderate.** Potential habitat is present at the project site, but this species has not been observed there.
Golden eagle	*Aquila chryseatos*	none/CSC/CDFG fully protected	Nests on cliffs, and occasionally in very large trees. Forages in grasslands and open woodland habitats.	**Low.** Grasslands on the site provide potential foraging habitat. No nesting habitat in the vicinity.
Short-eared owl	*Asio flammeus*	none/CSC/none	Nests on or near the ground in sheltered areas of grasslands and marshes.	**Moderate.** Potential habitat is present at the project site, but this species has not been observed there.
Burrowing owl	*Athene cunicularia*	none/CSC/CDFG fully protected	Grasslands, open areas near human habitation; nests in old burrows of ground squirrels or other small mammals.	**Observed.** Grasslands at the site provide potential nesting and foraging habitat for this species.
Rough-legged hawk	*Buteo lagopus*	none/none/none	Winter resident that forages in open grasslands, marshes and agricultural fields.	**Moderate.** Potential habitat is present at the project site, but this species has not been observed there.
Ferruginous hawk	*Buteo regalis*	none/CSC/none	Forages in open grasslands, chaparral and other scrub habitats and deserts.	**Low.** Grasslands at the site provide potential foraging habitat during winter migrations, but this species is not known to nest in California.
Swainson's hawk	*Buteo swainsoni*	none/ST/none	Grasslands and cultivated lands with scattered trees; nests in large trees or open riparian forest.	**Moderate.** Grasslands and non-rice agricultural land on the site could provide suitable foraging habitat for this species.
Northern harrier	*Circus cyaneus*	none/CSC/none	Grasslands, marshes and cultivated fields. Nests on the ground.	**High.** Grasslands at the site provide potential nesting and foraging habitat for this species.

TABLE 6.4-1

SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING WITHIN THE REGIONAL UNIVERSITY PROJECT SITE

Common Name	Scientific Name	Status Fed/CA/other	Habitat and Seasonal Distribution in California	Likelihood of Occurrence Within the Project Site/Possible Mitigation
Yellow warbler	*Dendroica petechia*	none/CSC/none	Riparian habitat, typically with dense stands of willows.	**Low.** Riparian habitat at the site is limited in area, and is unlikely to support this species.
White-tailed kite	*Elanus leucurus*	none/none/CDFG fully protected	Forages in grasslands and croplands. Nests in large trees adjacent to foraging habitat.	**Observed.** Grasslands and non-rice agricultural land on the site could provide suitable foraging habitat for this species.
Horned lark	*Eremophila alpestris actiia*	none/CSC/none	Nests and forages in open grasslands.	**Moderate.** Grasslands at the site provide potential nesting and foraging habitat for this species.
Merlin	*Falco columbarius*	none/CSC/none	Seasonal visitor to our area during winter and migration. Forages in grasslands and open woodlands.	**Moderate.** Potential habitat is present at the project site, but this species has not been observed there.
Prairie falcon	*Falco mexicanus*	none/CSC/none	Typically associated with arid regions. Forages in grasslands and other open habitats. Present year round in our area.	**Moderate.** Potential habitat is present at the project site, but this species has not been observed there.
Greater sandhill crane	*Grus canadensis tabida*	none/ST/ CDFG fully protected	Winter resident in open grasslands.	**Moderate.** Potential habitat is present at the project site, but this species has not been observed there.
Bald eagle	*Haliaeetus leucocephalus*	FPD/SE/CDFG fully protected	Typically found near large water bodies (lakes, rivers, reservoirs).	**Low.** No suitable nesting or foraging habitat in project area..
Yellow-breasted chat	*Icteria virens*	none/CSC/none	Typically inhabits shrubby riparian, and other dense, woody habitats.	**Low.** Riparian habitat at the site is limited in area, and is unlikely to support this species.
Loggerhead shrike	*Lanius ludovicianus*	none/CSC/none	Nests in low, dense shrubs and trees near open grassland and agricultural habitats that are used for foraging.	**High.** Grassland and agricultural habitats on the site provide suitable foraging habitat. Low number of trees and shrubs on site provide limited nesting habitat, however, the species is fairly common in the region.
California black rail	*Laterallus jamaicensis coturniculus*	none/ST/ CDFG fully protected	Inhabit dense marshes and wet grasslands with abundant cover near water.	**Low.** Potential habitat within the project boundaries is very limited.
Modesto song sparrow	*Melospiza melodia mailliardi*	none/none/none	Nests on, or near the ground in open grassland habitats.	**Moderate.** Potential habitat is present at the project site, but this species has not been observed there.
Long-billed curlew	*Numenius americanus*	none/CSC/none	Winter resident in grasslands, agricultural fields and mudflats.	**Moderate.** Potential habitat is present at the project site, but this species has not been observed there.
Purple martin	*Progne subis*	none/CSC/none	Nests in cavities in cliffs, trees and frequently under bridges or similar human made structures.	**Low.** May forage over grasslands and waterbodies on the site. No nesting habitat present..

TABLE 6.4-1

SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING WITHIN THE REGIONAL UNIVERSITY PROJECT SITE

Common Name	Scientific Name	Status Fed/CA/other	Habitat and Seasonal Distribution in California	Likelihood of Occurrence Within the Project Site/Possible Mitigation
Mammals				
Pale-Townsend's big-eared bat	*Corynorhinus townsendii pallescens*	none/CSC/none	Roosts in open areas in large limestone caves, lava tubes, mines, buildings and occasionally cavities in very large trees. Very sensitive to roost disturbance.	**Low.** No known roosting caves or mines are present within the study area. Could possibly utilize the study area for foraging.
Small-footed myotis bat	*Myotis ciliolabrum*	none/CSC/none	Roosts in crevices and cavities in cliff-faces, erosion cavities, trees, and beneath rocks on the ground. This species is known to hibernate in caves and mines. Occurs in most of California except the coastal redwood region.	**Low.** Potential roosting (trees) and foraging habitat present on the Study Area.
Long-eared myotis bat	*Myotis evotis*	none/CSC/none	Found predominantly in coniferous forests at higher elevations. This species roosts in tree cavities and beneath exfoliating bark in both living and dead trees.	**Low.** Study Area lacks coniferous forest habitats where this species typically occurs.
Fringed myotis bat	*Myotis thysanodes*	none/CSC/none	Found throughout much of state. Found from coastal region to at least 1,950 meters in Sierra Nevada. Occurs in a wide range of habitats, but typically associated with oak and pinion woodlands. Roosts in crevices in caves, mines or buildings.	**Low.** Potential roosting (building) and foraging habitat present on the Study Area.
Yuma myotis bat	*Myotis yumanensis*	none/CSC/none	Typically roosts in buildings, bridges, large trees with hollows, crevices in cliffs, and occasionally in mines or caves. Forages over water. Distribution is closely tied to bodies of water.	**Low.** Potential roosting and foraging habitat present on the Study Area.

Notes:
Status:
Federal
FE Federally listed as Endangered
FT Federally listed as Threatened
FPD Federally Proposed for Delisting
State
SE State-listed as Endangered
ST State-listed as Threatened
CSC California Department of Fish and Game designated "Species of Special Concern"
CDFG Fully Protected California Department of Fish and Game designated "Fully Protected" or "Protected" – Permit required for "take."
CNPS
1B = Rare or Endangered in California and elsewhere
2 = Rare or Endangered in California, more common elsewhere
Source: California Native Plant Society.

Boggs Lake hedge-hyssop (*Gratiola heterosepala*). Status: State-listed endangered, CNPS 1B. Boggs Lake hedge-hyssop can be found in vernal pools and on lake margins. Boggs Lake hedge-hyssop flowers from April through June. This species occurs in the Sacramento Valley, Sierra Nevada foothills, and ranges to the Modoc Plateau. Boggs lake hedge-hyssop is known to occur on the western portion of the project site, within the existing conservation area. Although potential habitat for this species occurs on the Watt Avenue extension study area and the off-site infrastructure corridors, no Boggs Lake hedge-hyssop have been observed during field surveys conducted on those properties.

Legenere (*Legenere limosa*). Status: CNPS 1B. Legenere typically occurs in deep seasonal wetlands, such as vernal pools, seasonal swales, and ephemeral drainages that contain water for long periods during the spring. Under these wet conditions, legenere forms dense mats. Legenere flowers May to June. Legenere has become restricted in distribution as a result of habitat conversion and associated disturbance (e.g., degradation of wetland hydrology through plowing, grading, or grazing). Legenere is known to occur sporadically in the Central Valley from Red Bluff in the north to Merced County in the south. Although potential habitat for this species occurs on the western portion of the project site, on the Watt Avenue extension study area, and on the off-site infrastructure corridors, no legenere has been observed during field surveys conducted on those properties, though no focused surveys for this species were conducted.

Sanford's arrowhead (*Sagittaria sanfordii*). Status: CNPS 1B. Sanford's arrowhead is a tuberous, perennial herb of fresh emergent wetlands that occurs in marshes and swamps throughout the Central Valley and North Coast Range. This plant blooms from May through August. Although suitable habitat for this species occurs in channels, ditches, and marsh areas throughout the project area, Sanford's arrowhead was not observed during field surveys conducted in the project area, though no focused surveys for this species were conducted.

Vernal pool fairy shrimp *(Branchinecta lynchi*). Status: federally listed as threatened. Fairy shrimp are small (11 to 27 millimeter) crustaceans adapted to survive the annual flooding and drying of vernal pools. They grow for about two weeks, breed, and produce eggs that the females carry in an egg sac until they mature. As the vernal pool dries, the adults die, and the eggs become embedded in the mud at the bottom of the pool. These "resting" eggs are protected by thick outer coverings that resist cold, heat, and desiccation during the summer months. Vernal pool fairy shrimp are known from the existing conservation easement area along the western portion of the project site. Although potential habitat for this species occurs on the Watt Avenue extension study area and on the off-site infrastructure corridors, no protocol-level surveys for vernal pool fairy shrimp have been conducted on those properties.

Vernal pool tadpole shrimp *(Lepidurus packardi*). Status: federally listed as endangered. Vernal pool tadpole shrimp are small to moderate-sized crustaceans adapted to survive in deeper, longer-lasting vernal pools and other seasonal wetlands. Like the vernal pool fairy shrimp, they grow over a period of a few weeks, breed, and produce eggs that the females carry in an egg sac until they mature. As the vernal pool dries, the adults die, and the eggs become embedded in the mud at the bottom of the pool. These "resting" eggs are protected by thick outer coverings that resist cold, heat, and desiccation during the summer months. This species is not locally common. Potential habitat for this species occurs on the western portion of the site, on the Watt Avenue extension study area, and on the offsite infrastructure corridors, although protocol-level surveys have not been performed on these properties.

California linderiella *(Linderiella occidentalis*). Status: federal species of concern. California linderiella are a small fairy shrimp occurring in vernal pools and other seasonal wetlands. Their life

history is very similar to that of the vernal pool fairy shrimp, but this species is more wide-spread. California linderiella are known from the existing conservation easement area along the western portion of the project site. Although potential habitat for this species occurs on the Watt Avenue extension study area and on the off-site infrastructure corridors, no protocol-level surveys for this species have been conducted on those properties.

Valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*). Status: federally listed as threatened. VELB occurs in riparian woodlands and other Central Valley habitats containing elderberry shrubs (*Sambucus* spp.), upon which the VELB are completely dependent for all stages of their life cycle. The females lay their eggs in crevices in the bark. After hatching, the larvae burrow into the stems of the tree where they feed on the interior wood for the next one to two years. The larvae then form pupae from which the adults emerge. The adults then bore their way out of the stems, leaving a distinctive oval shaped hole. As the larvae and adults are rarely seen, these borer holes are often the only evidence of this species' presence. After emergence from the stems, the adults remain in association with the elderberries, where they feed on the elderberry foliage and eventually reproduce. All elderberry shrubs within the known range of the VELB, which have one or more stems with diameters of one inch or greater at ground level, are considered potential habitat for this species.

Western pond turtle (*Actinemys marmorata*). Status: State species of special concern. Western pond turtles occur in ponds and slow streams throughout California, and require a reliable source of water. This species also requires upland areas adjacent to their aquatic habitat for nesting and aestivation. Although suitable habitat for this species occurs in channels, ditches and marsh areas throughout the project area, western pond turtles were not observed during field surveys conducted on the project area, and focused surveys were not completed.

Western spadefoot toad (*Spea hammondii*). Status: State species of special concern. Western spadefoot toads breed and lay eggs in larger vernal pools and seasonal wetlands throughout the Central Valley. After pools dry, the adults burrow into the mud, or move into burrows in adjacent grassland and woodland areas. Although potential habitat for this species occurs on the western portion of the project site, on the Watt Avenue extension study area, and on the off-site infrastructure corridors, no western spadefoot toads have been observed during field surveys conducted on those properties, and focused surveys were not completed.

Tricolored blackbird *(Agelaius tricolor*). Status: federal species of concern, State species of special concern. Tricolored blackbird occurs in suitable habitat throughout much of the Central Valley and along the Coast from approximately Mendocino County to northern Baja California, Mexico. This colonial species is a year round resident in marshes, wet meadows, rice fields, and rangelands. Tricolored blackbirds require large areas of tules (*Scirpus* spp.), cattails (*Typha* spp.), or blackberries (*Rubus* spp.) for their nesting colonies. Much of the historic habitat for this species has been eliminated due to conversion of marshes to agriculture and urban development. No tricolored blackbirds have been observed during field surveys of the project area. However, the stands of cattails associated with Curry Creek and its tributaries could provide suitable nesting habitat for this species.

Burrowing owl (*Athene cunicularia*). Status: federal species of concern, State species of special concern and a State "fully-protected" raptor. It is also federally protected under the Migratory Bird Treaty Act. Burrowing owl feed on rodents, small reptiles, and large insects in annual grasslands, pastures, and ruderal vegetation. They breed between March and August in communal burrow colonies that they have taken over from California ground squirrels (*Spermophilus beecheyi*) and other burrowing mammals. Potential nesting and foraging habitat for this species occurs on the

western portion of the project site, on the Watt Avenue extension study area, and on the off-site infrastructure corridors. Burrowing owl was observed within the project area during the December 2005 surveys of the offsite grading areas.

White-tailed kite (*Elanus leucurus*). Status: State "fully protected" raptor. White-tailed kites feed on rodents, small reptiles, and large insects in fresh emergent wetlands, annual grasslands, pastures, and ruderal vegetation. They breed between February and October. Unlike other raptors, kites often roost, and occasionally nest, communally; therefore, disturbance of a relatively small roost or nesting area could affect a large number of birds. The project area provides potential foraging and nesting habitat for white-tailed kite. White-tailed kite has been observed during field surveys conducted within the project area.

Swainson's hawk *(Buteo swainsoni*). Status: State threatened. The listing of Swainson's hawk as a State threatened species was based on the sharp reduction in riparian woodlands and forests throughout the State over the last 100 years, and the consequent reduction in populations of Swainson's hawks that use riparian woodlands for nesting. Swainson's hawks are open-country birds that forage in grasslands and non-rice agricultural fields, especially after disking or harvest. Swainson's hawks can forage as much as 20 miles from the nest and observations of this species in the project vicinity are not uncommon. Potentially suitable nest trees are present on the project site, and the grasslands on the western portion of the project site, and on the Watt Avenue extension study area site. The off-site infrastructure corridors provide suitable foraging habitat for this species. Although this species has not been observed in the project area, one record for an active Swainson's hawk nest tree occurs between one and five miles from the project boundaries. Grasslands and fallow fields in the project area would therefore be considered potential foraging habitat for this species.

Special-status bats. Status: State Species of Special-Concern (all). Special-status bat species potentially occurring within the project site include pale-Townsend's big-eared bat (*Corynorhinus townsendii pallescens*), small-footed myotis (*Myotis ciliolabrum*), long-eared myotis (*Myotis evotis*), fringed myotis (*Myotis thysanodes*), long-legged myotis (*Myotis volans*), and Yuma myotis (*Myotis yumanensis*). All of these species require caves, cliffs (with crevices), large trees with hollows or a variety of artificial structures, such as buildings or bridges, for roosting. Although roosting habitat at the project site is extremely limited (i.e., housing and barn structures occurring on the Watt Avenue extension site), the area could provide foraging habitat for these species. None of the special-status bat species known to exist in the region have been observed within the project area; however, no focused surveys have been conducted in the Plan Area.

REGULATORY SETTING

Federal Regulations

Endangered Species Act (ESA)

Projects that would result in "take" of federally listed threatened or endangered species are required to comply with ESA, which is administered by the U.S. Fish and Wildlife Service (USFWS) with respect to terrestrial species and freshwater aquatic species. Project-related impacts to federally listed species can be addressed through either a Section 7 consultation, initiated by a federal agency from whom a federal approval is required (e.g., a permit to fill a federally protected wetland), or a Section10 "incidental take permit" initiated by a private party or non-federal agency. The objective of Section 7 consultation is to determine whether the project would result in jeopardy to a

listed species or adversely modify critical habitat of a federally listed species, and if so, to identify measures or alternatives to avoid jeopardy or adverse modification to critical habitat of the species. Section 7 consultation is required when a federal agency is involved in project approval, funding, or permitting. A Section 10 permit is obtained when no federal agencies are involved with the project and "take" of an endangered species is likely. Different standards apply in the two different contexts. For example, under Section 7, the participating federal agencies must consider whether a proposed action could destroy or adversely modify critical habitat. This inquiry is not specifically required under Section 10.

The ESA provides legal protection for plant and animal species in danger of extinction, and requires definitions of critical habitat and development of recovery plans for listed species. Section 7 of the ESA requires federal agencies to make a finding regarding a project's potential to jeopardize the continued existence of any listed species potentially impacted by a proposed federal action, including the approval of a public or private action, such as the issuance of a permit pursuant to Sections 10 and 404 of the Clean Water Act (CWA). Section 9 of the ESA prohibits the "take" of any member of an endangered species, and this prohibition has been extended, through regulations, to threatened species as well.

"Take" is defined by the ESA as:

> "...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The USFWS has further defined the terms harass and harm.

"Harassment" is defined as an act that:

> "…creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering."

"Harm" is defined to include the following:

> "...significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering."

Section 10(a) of the ESA, through Habitat Conservation Plans (HCPs), permits the *incidental take* of listed species if the take is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

Section 3 of the ESA defines an endangered species as "any species, including subspecies, in danger of extinction throughout all or a significant portion of its range." This section defines threatened species as any species "likely to become endangered within the foreseeable future throughout all or a significant portion of its range." Federally listed or "listed" indicates that a species has been designated as endangered or threatened through publication of a final rule in the *Federal Register*. Designated endangered and threatened species, listed under Section 4 of the ESA, receive the full protection of the ESA. Proposed species (i.e., those species for which a proposed regulation, but not a final rule, has been published in the *Federal Register*), are granted limited protection, while candidate species (those species for which the USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened under the ESA, but for which development of a listing regulation is precluded by other higher priority listing activities) and species of special concern are afforded no protection under the ESA.

Federal Clean Water Act

Section 404

The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Section 301 prohibits the discharge of any pollutant into the Nation's waters without a permit, and Section 402 establishes the permit program. Section 404 of the CWA regulates activities that result in discharge of dredged or fill material into waters of the United States. The United States Army Corps of Engineers (Corps) is responsible for permitting certain types of activities affecting wetlands and "other" waters of the United States. Under Section 404 of the CWA, the Corps has the authority to regulate activity that discharges fill or dredge material into wetlands or other waters of the U.S. The Corps implements the federal policy embodied in Executive Order 11990, which is intended to result in no-net-loss of wetland values or acres.

Section 401

The State Water Resources Control Board (SWRCB) has authority over wetlands through Section 401 of the CWA, which requires that an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the SWRCB to the nine regional boards. The Central Valley Regional Water Quality Control Board (CVRWQCB) is the appointed authority for Section 401 compliance in the proposed project area. A request for certification or waiver is submitted to the regional board at the same time that an application is filed with the Corps. The regional board has 60 days to review the application and act on it. Because no Corps permit is valid under the CWA unless "certified" by the state, these boards may effectively veto or add conditions to any Corps permit.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) (16 USC, Sec. 703, Supp. I, 1989) regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50 Code of Federal Regulations (CFR) Section 10.13. This international treaty for the conservation and management of bird species that migrate through more than one country is enforced in the United States by the USFWS. Hunting of specific migratory game birds is permitted under the regulations listed in Title 50 CFR 20. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors).

State Regulations

California Endangered Species Act (CESA)

The California Department of Fish and Game (CDFG) administers a number of laws and programs designed to protect fish and wildlife resources. A principal statute is the California Endangered Species Act of 1984 (Fish and Game Code Section 2050 et seq.), which regulates the listing and take of State-endangered and State-threatened species. CESA declares that deserving species will be given protection by the State because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the state. CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats.

Species listed under CESA cannot be taken without adequate mitigation and compensation. Take under CESA does not include indirect harm by way of habitat modification. Typically, the CDFG implements endangered species protection and take determinations by issuing Incidental Take Permits or entering into Natural Community Conservation Plans (NCCP) with project applicants.

The CDFG maintains lists for *Candidate-Endangered Species* and *Candidate-Threatened Species*. California candidate species are given equal protection of the law as listed species have. The CDFG also lists *Species of Special Concern* based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Species of special concern do not receive protection under the CESA or any section of the California Fish and Game Code, and do not necessarily meet California Environmental Quality Act (CEQA) Guidelines Section 15380 criteria as rare, threatened, endangered, or of other public concern. Like federal species of concern, the determination of significance for California species of special concern must be made on a case-by-case basis. Designation of Species of Special Concern is intended by the CDFG to be used as a management tool for consideration in future land use decisions.

Fish and Game Code - Sections 3503, 3503.5, and 3513

Fish and Game Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Fish and Game Code Section 3503.5 protects all birds-of-prey (raptors) and their eggs and nests. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act. These regulations could require that elements of the proposed project (particularly vegetation removal or construction near nest trees) be reduced or eliminated during critical periods of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, subject to approval by the CDFG and/or the USFWS.

Fish and Game Code - Sections 3511, 4700, 5050, and 5515

Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code designate certain species as “fully protected.” Fully protected species, or parts thereof, may not be taken or possessed at any time, and no provision of the California Fish and Game Code or any other law may be construed to authorize the issuance of permits or licenses to take any fully protected species. No such permits or licenses heretofore issued may have any force or effect for any such purpose, except that the California Fish and Game Commission may authorize the collecting of such species for necessary scientific research. Legally imported and fully protected species or parts thereof may be possessed under a permit issued by the CDFG.

Porter-Cologne Water Quality Control Act (Porter-Cologne)

In addition to the CWA, waters of the state (defined in Section 13050(e) of the California Water Code as any surface water or groundwater, including saline waters within the boundary of the state) are protected under the Porter-Cologne Water Quality Control Act (Sections 13000 – 14958 of the California Water Code). Waste discharge requirements under Porter-Cologne were typically waived for projects that required certification under CWA Section 401. However, in light of the United States Supreme Court’s January 9, 2001 ruling in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers et al.,* (2001) 531 U.S. 159 (*SWANCC*), which limited federal jurisdiction of isolated waters, the SWRCB is re-examining its jurisdiction under Porter-Cologne.

Section 13260(a) of the California Water Code (Water Code) requires that any person discharging waste or proposing to discharge waste, including the discharge of dredged or fill material, which could affect the quality of the waters of the state file a *report of waste discharge* (ROWD). Further, Water Code section 13263(a) requires that *waste discharge requirements* (WDRs) be prescribed as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge. The WDRs must implement any relevant water quality control plans, taking into consideration beneficial uses to be protected, the water quality objectives reasonably required for those purposes, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241 of the Water Code.

In addition, Water Code Section 13263(i) authorizes the SWRCB to prescribe general WDRs for a category of discharges if the discharges are produced by the same or similar operations; the discharges involve the same or similar types of waste; the discharges require the same or similar treatment standards; and the discharges are more appropriately regulated under general discharge requirements than individual discharge requirements. Partially in response to the *SWANCC* ruling, the SWRCB issued Water Quality Order No. 2004-0004-DWQ (Isolated Waters WDR), which provides a general WDR for dredged or fill discharges of not more than 0.2 acre and 400 linear feet for fill and excavation discharges, and of not more than 50 cubic yards for dredging discharges. It is the intent of these isolated waters WDRs to regulate a subset of the discharges that have been determined not to fall within federal jurisdiction, particularly those projects involving impacts to small acreage or linear feet and those involving a small volume of dredged material. Although a discharge may be eligible for coverage under general WDRs, the RWQCB may elect to regulate the discharge under other WDRs or waivers thereof.

Discharges that are not covered under the Isolated Waters WDR, but deemed "isolated" by the Corps, are still covered under Porter-Cologne and require individual WDRs. On June 25, 2004, the SWRCB issued guidance for regulation of discharges to isolated waters.[2] This guidance letter to the RWQCBs directs the RWQCBs to request a ROWD from all recipients of Corps jurisdictional disclaimers using a form letter supplied with the guidance letter. In addition, the guidance letter informed the RWQCBs to take appropriate regulatory action on the isolated waters WDRs, other individual, or general WDRs. These other individual and general WDRs could cover those isolated waters that do not meet the size requirements of the Isolated Waters WDR (i.e., are larger than 0.2 acres and 400 feet long).

CDFG Streambed Alteration Agreements

Under sections 1600-1616 of the California Fish and Game Code, the CDFG prohibits activities that would "substantially divert or obstruct the natural flow of, or substantially change or use any material of the bed, channel, or bank of any river, stream and lake, or deposit or dispose of debris, waste or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream or lake" without consulting with CDFG. Notification is required prior to any such activities and CDFG will issue an Agreement with any necessary mitigation to ensure protection of the State's fish and wildlife resources. The lack of any precise definitions of river, stream, or lake allows CDFG, as a practical matter, some latitude in determining what physical features qualify.

2. State Water Resources Control Board, "Guidance for Regulation of Discharges to 'Isolated' Waters," June 25, 2004.

California Environmental Quality Act (CEQA)

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. Whether a species is rare, threatened, or endangered can be legally significant, because, under CEQA Guidelines section 15065, an agency must find an impact to be significant if a project would "substantially reduce the number or restrict the range of an endangered, rare or threatened species." These criteria have been modeled after definitions in the ESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals.

Local Regulations

Placer County General Plan

In addition to state and federal regulations, the Placer County General Plan defines certain goals, objectives, and policies protecting natural resources, which also include open space and agriculture:

Open Space, Habitat, and Wildlife Resources:

Goal 1.1 **To establish and maintain interconnected greenbelts and open spaces for the protection of native vegetation and wildlife and for the community's enjoyment.**

Policies

1.I.1. The County shall require that significant natural, open space, and cultural resources be identified in advance of development and incorporated into site-specific development project design. The Planned Residential Developments (PDs) and the Commercial Planned Developments (CPD) provisions of the Zoning Ordinance can be used to allow flexibility for this integration with valuable site features.

1.I.2. The County shall require that development be planned and designed to avoid areas rich in wildlife or of a fragile ecological nature (e.g. areas of rare or endangered plant species, riparian areas). Alternatively, where avoidance is infeasible or where equal or greater ecological benefits can be obtained through off-site mitigation, the County shall allow project proponents to contribute to off-site mitigation efforts in lieu of on-site mitigation.

Water Resources:

Goal 6.A **To protect and enhance the natural qualities of Placer County's streams, creeks and groundwater.**

Policies

6.A.1. The County shall require the provision of sensitive habitat buffers which shall, at a minimum, be measured as follows: 100 feet from the centerline of perennial streams, 50 feet from the centerline of intermittent streams, and 50 feet from the edge of sensitive habitats to be protected including riparian zones, wetlands, old growth woodlands, and the habitat of rare, threatened or endangered species. Based on more detailed data, which is supplied as a part of the review for a specific project, the County may determine that such setback is not applicable in a particular instance or should be modified based on the new information provided. The County may, however, allow exceptions, such as in the following cases:

a. Reasonable use of the property would otherwise be denied;

b. The location is necessary to avoid or mitigate hazards to the public;

c. The location is necessary for the repair of roads, bridges, trails, or similar infrastructure; or

d. The location is necessary for the construction of new roads, bridges, trails, or similar infrastructure where the County determines there is no feasible alternative and the project has minimized environmental impacts through project design and infrastructure placement.

6.A.3. The County shall require development projects proposing to encroach into a creek corridor or creek setback to do one or more of the following, in descending order of desirability:

a. Avoid the disturbance of riparian vegetation;

b. Replace riparian vegetation (on-site, in-kind);

c. Restore another section of creek (in-kind); and/or

d. Pay a mitigation fee for restoration elsewhere (e.g., wetland mitigation banking program).

6.A.4. Where creek protection is required or proposed, the County should require public and private development to:

a. Preserve creek corridors and creek setback areas through easements or dedications. Parcel lines (in the case of a subdivision) or easements (in the case of a subdivision or other development) shall be located to optimize resource protections. If a creek is proposed to be included within an open space parcel or easement, allowed uses and maintenance responsibilities within that parcel or easement should be clearly defined and conditioned prior to map or project approval;

b. Designate such easement or dedication areas (as described in a. above) as open space;

c. Protect creek corridors and their habitat value by actions such as: 1) providing an adequate creek setback, 2) maintaining creek corridors in an essentially natural state, 3) employing creek restoration techniques where restoration is needed to achieve a natural creek corridor, 4) utilizing riparian vegetation within creek corridors, and where possible, within creek setback areas, 5) prohibiting the planting of invasive, non-native plants (such as vinca major and eucalyptus) within creek corridors or creek setbacks, and 6) avoiding tree removal within creek corridors;

d. Provide recreation and public access near creeks consistent with other General Plan policies;

e. Use design, construction, and maintenance techniques that ensure development near a creek will not cause or worsen natural hazards (such as erosion, sedimentation, flooding, or water pollution) and will include erosion and sediment control practices such as: 1) turbidity screens and other management practices, *which* shall be used as necessary to minimize siltation, sedimentation and erosion, and shall be left in place until disturbed areas; and/or are stabilized with permanent vegetation that will prevent the transport of sediment off-site; and 2) temporary vegetation sufficient to stabilize disturbed areas.

f. Provide for long-term creek corridor maintenance by providing a guaranteed financial commitment to the County which accounts for all anticipated maintenance activities.

6.A.9. The County shall require that newly-created parcels include adequate space outside of watercourses' setback areas to ensure that property owners will not place improvements (e.g., pools, patios, and appurtenant structures), within areas that require protection.

6.A.11. Open space located in watersheds which serve reservoirs is important to the adequate performance of those reservoirs for their intended purposes and should be preserved and protected.

The watershed is defined as those lands draining into a reservoir and having an immediate effect upon the quality of water within that reservoir. Those lands located within the watershed and within 5,000 feet of the reservoir shall be considered as having an immediate effect.

Wetland and Riparian Areas:

Goal 6.B To protect wetland communities and related riparian areas throughout Placer County as valuable resources.

Policies

6.B.1. The County shall adopt the "no-net-loss" policy for wetland areas regulated by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.

6.B.2. The County shall require new development to mitigate wetland loss in both regulated and non-regulated wetlands to achieve "no-net-loss" through any combination of the following, in descending order of desirability: (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation, including use of a mitigation banking program that provides the - opportunity to mitigate impacts to rare, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas.

6.B.3. The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of the wetlands.

6.B.4. The County shall strive to identify and conserve remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and nesting of wetland and riparian species.

6.B.5. The County shall require development that may affect a wetland to employ avoidance, minimization, and/or compensatory mitigation techniques. In evaluating the level of compensation to be required with respect to any given project, (a) on-site mitigation shall be preferred to off-site, and in-kind mitigation shall be preferred to out-of-kind; (b) functional replacement ratios may vary to the extent necessary to incorporate a margin of safety reflecting the expected degree of success associated with the mitigation plan; and (c) acreage replacement ratios may vary depending on the relative functions and values of those wetlands being lost and those being supplied, including compensation for temporal losses. The County shall continue to implement and refine criteria for determining when an alteration to a wetland is considered a less-than-significant impact under CEQA.

Fish and Wildlife Habitat:

Goal 6.C To protect, restore, and enhance habitats that support fish and wildlife species so as to maintain populations at viable levels.

Policies

6.C.1. The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following:

a. Wetland areas including vernal pools.

b. Stream environment zones.

c. Any habitat for rare, threatened or endangered animals or plants.

d. Critical deer winter ranges (winter and summer), migratory routes and fawning habitats.

e. Large areas of non-fragmented natural habitat, including Blue Oak Woodlands, Valley Foothill Riparian, vernal pool habitat.

f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.

g. Important spawning areas for anadromous fish.

6.C.2 The County shall require development in areas known to have particular value for wildlife to be carefully planned and, where possible, located so that the reasonable value of the habitat for wildlife is maintained.

6.C.4. The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by California Department of Fish and Game officials, the U.S. Fish and Wildlife Service, and Placer County Resource Conservation District.

6.C.5. The County shall require mitigation for development projects where isolated segments of stream habitat are unavoidably altered. Such impacts should be mitigated on-site with in-kind habitat replacement or elsewhere in the stream system through stream or riparian habitat restoration work.

6.C.6. The County shall support preservation of the habitats of rare, threatened, endangered, and/or other special-status species. Federal and state agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats.

6.C.7 The County shall support the maintenance of suitable habitats for all indigenous species of wildlife, without preference to game or non-game species, through maintenance of habitat diversity.

6.C.9. The County shall require new private or public developments to preserve and enhance existing native riparian habitat unless public safety concerns require removal of habitat for flood control or other public purposes. In cases where new private or public development results in modification or destruction of riparian habitat for purposes of flood control, the developers shall be responsible for acquiring, restoring, and enhancing at least an equivalent amount of like habitat within or near the project area.

Vegetation:

Goal 6.D To preserve and protect the valuable vegetation resources of Placer County.

Policies

6.D.3. The County shall support the preservation of outstanding areas of natural vegetation, including, but not limited to, oak woodlands, riparian areas, and vernal pools.

6.D.4. The County shall ensure that landmark trees and major groves of native trees are preserved and protected. In order to maintain these areas in perpetuity, protected areas shall also include younger vegetation with suitable space for growth and reproduction.

6.D.5. The County shall establish procedures for identifying and preserving rare, threatened, and endangered plant species that may be adversely affected by public or private development projects.

6.D.6. The County shall ensure the conservation of sufficiently large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife.

6.D.7. The County shall support the management of wetland and riparian plant communities for passive recreation, groundwater recharge, nutrient catchment, and wildlife habitats. Such communities shall be restored or expanded, where possible.

6.D.8. The County shall require that new development preserve natural woodlands to the maximum extent possible.

6.D.12. The County shall support the retention of heavily vegetated corridors along circulation corridors to preserve their rural character.

6.D.13. The County shall support the preservation of native trees and the use of native, drought-tolerant plant materials in all revegetation/landscaping projects.

6.D.14. The County shall require that new development avoid, as much as possible, ecologically-fragile areas (e.g., areas of rare or endangered species of plants, riparian areas). Where feasible, these areas should be protected through public acquisition of fee title or conservation easements to ensure protection.

Open Space for the Preservation of Natural Resources:

Goal 6.E To preserve and enhance open space lands to maintain the natural resources of the county.

Policies

6.E.1. The County shall support the preservation and enhancement of natural land forms, natural vegetation, and natural resources as open space to the maximum extent feasible. The County shall permanently protect, as open space, areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains.

6.E.2. The County shall require that new development be designed and constructed to preserve the following types of areas and features as open space to the maximum extent feasible:

a. High erosion hazard areas;

b. Scenic and trail corridors;

c. Streams, streamside vegetation;

d. Wetlands;

e. Other significant stands of vegetation;

f. Wildlife corridors; and

g. Any areas of special ecological significance.

6.E.3. The County shall support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.

6.E.5. The County shall coordinate with local, state, and federal agencies and private organizations to establish visual and physical links among open space areas to form a system that, where appropriate, includes trails. Dedication of easements shall be encouraged, and in many cases, required as lands are developed and built.

Implementation Programs

6.14 The County shall develop and maintain a detailed inventory of significant ecological resource areas for use during environmental review to determine potential impacts and monitor cumulative impacts on these resources.

Responsibility: Planning Department

Time Frame: FY 94-95; ongoing

Funding: General Fund

Agricultural Land Use:

Goal 1.H To designate adequate agricultural land and promote development of agricultural uses to support the continued viability of Placer County's agricultural economy.

Policies

1.H.1. The County shall maintain agriculturally-designated areas for agricultural uses and direct urban uses to designated urban growth areas and/or cities.

1.H.2. The County shall seek to ensure that new development and public works projects do not encourage expansion of urban uses into designated agricultural areas.

1.H.4. The County shall allow the conversion of existing agricultural land to urban uses only within community plan areas and within city spheres of influence where designated for urban development on the General Plan Land Use Diagram.

Goal 7.A To provide for the long-term conservation and use of agriculturally-designated lands.

Policies

7.A.1. The County shall protect agriculturally-designated areas from conversion to non-agricultural uses.

7.A.3. The County shall encourage continued and, where possible, increased agricultural activities on lands suited to agricultural uses.

7.A.7. The County shall maintain agricultural lands in large parcel sizes to retain viable farming units.

7.A.8. The County shall encourage infill development in urban areas as an alternative to expanding urban boundaries into agricultural areas.

Economic Development

Goal 1.N To maintain a healthy and diverse local economy that meets the present and future employment, shopping, recreational, public safety, and service needs of Placer County residents and to expand the economic base to better serve the needs of residents.

Countywide Policies

1.N.1. The County shall promote economic expansion based on Placer County's unique recreational opportunities and natural resources.

1.N.3. The County shall endeavor to protect the natural resources upon which the County's basic economy (e.g., recreation, forestry, agriculture, mining, and tourism) is dependent.

Placer County Conservation Plan

Placer County is currently preparing a Natural Community Conservation Plan and Habitat Conservation Plan (NCCP/HCP) to address the conservation of natural communities, endangered species, and other less sensitive species of native wildlife. The County is also in the process of applying for a Clean Water Act Section 404 Programmatic General Permit (PGP), CDFG Master

Streambed Alteration Agreement (MSAA), and Clean Water Act Section 401 Water Quality Certification. Collectively, the NCCP, HCP, PGP, MSAA, and Water Quality Certification application have been termed the Placer County Conservation Plan (PCCP). The County has divided up this planning process into 3 geographical regions. At this time, the County is focusing on Phase 1, which will address conservation and development of lands within western Placer County (land west of Auburn to the County line). The purpose of the PCCP will be to encourage and simplify the process of conserving sensitive habitats for special-status species. Once the Plan is approved, it will likely allow for incidental take of covered species with the requirement of mitigation of lost habitat at approved ratios. Listed species that are presumed to be covered by such a plan include Swainson's hawk (*Buteo swainsoni*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), and several listed fish species. As a result of preparing the PCCP, Placer County, the CDFG, the USFWS, and the National Marine Fisheries Service entered into a Natural Community Conservation planning Agreement on September 10, 2001. The agreement concerns the development of joint conservation plans under the California Natural Community Conservation Planning Act (NCCPA) and the FESA.

The Planning Agreement requires all projects designed during the preparation of the Phase I NCCP/HCP to be consistent with the principles and objectives of the conservation process. In April 2004, the County published a Conservation Strategy Overview that outlined key conservation planning principles directing the preparation of the NCCP/HCP. In addition, science advisors to the county have prepared the *Report of the Science Advisors* (January 2004), which provides the County with sound principles for conservation, species protection, and adaptive management. Both of these documents, in combination with past mitigation recommendations from state and federal resource agencies, provide the County with the necessary direction to apply towards interim project mitigation analysis and determine a mitigation strategy consistent with the conservation planning process.

Since activities related to this project may commence prior to the approval of the Phase 1 PCCP, mitigation measures in this EIR are designed to be implemented absent the approved conservation plan.

The parties agreed that projects, actions, and activities proposed or implemented within areas covered by the Agreement during preparation of the corresponding NCCP/HCP should not compromise its successful development or implementation. The parties further agreed that interim projects should not be delayed solely due to preparation of the NCCP/HCP. The agreement established interim project review guidelines. The proposed project is subject to the guidelines included in the Agreement, which are summarized below.

7.1 Permitting by the Wildlife Agencies. The Wildlife Agencies will issue or deny permits or approvals for and complete regulatory reviews of Interim Projects in accordance with CESA and FESA and other applicable State or Federal law. Consistent with their respective legal authorities, the Wildlife Agencies may request or require project design features or mitigation measures that complement a proposed NCCP/HCP. But the Wildlife Agencies will not delay or suspend issuance of a permit or approval for an interim project due solely to the preparation of the NCCP/HCP.

7.2 Identification of areas with high, long-term conservation value. The Wildlife Agencies may provide maps, as data and time allow, that identify areas with high long-term conservation value that are potentially crucial elements of a regional preserve system designed to adequately conserve habitat for Target Species and proposed Covered Species. The purpose of the maps would be to assist the County in making land use decisions that do not compromise the successful development or implementation of the NCCP/HCPs. The County will specifically identify for the Wildlife Agencies

the Interim Projects within the areas identified as having high long-term conservation value on the Wildlife Agencies' maps.

7.3 Discretionary approvals by the County. The County will approve or disapprove Interim Projects in accordance with the County's established standards and processes. However, to ensure that Interim Projects will not compromise the successful development or implementation of the NCCP/HCP, and to facilitate CESA and FESA compliance for Interim Projects that require it, the County agrees to confer with the Wildlife Agencies about certain projects that will require a discretionary approval from the County or will be carried out by the County.

7.4 Informal conference. The Parties agree to meet and confer at the request of any Party to discuss any Interim Project that has been identified by the County in accordance with this Section 7.4. The Parties will meet and confer at least once a month for this purpose, unless otherwise agreed by the Wildlife Agencies and the County. The purpose of the conference will be to evaluate whether an Interim Project identified by the County, together with any proposed mitigation measures, would compromise the successful development or implementation of the NCCP/HCP being prepared for the Planning Subarea in which the project would occur and, if so, what feasible actions would make the project compatible with the successful development and implementation of the NCCP/HCP. This Section 7.4 does not restrict the County's discretionary authority with regard to Interim Projects; nor does it give the Wildlife Agencies the authority to approve or disapprove Interim Projects. The Parties recognize that the Wildlife Agencies will retain their authority and responsibility for implementation and enforcement of CESA, FESA and other State and Federal wildlife protection laws. However, by agreeing to confer about Interim Projects when they are initially proposed, the Parties intend to create an opportunity to address the projects' potential impacts to species listed in Exhibit 2 or natural communities identified in Section 6.3.4 expeditiously and in coordination with the County's project review process.

Placer Legacy Open Space and Agricultural Conservation Program

The Placer Legacy Open Space and Agricultural Conservation Program (Placer Legacy Program) is an innovative and nationally significant endeavor initiated by the County as a basis to realize its objective of comprehensive planning for preservation of biological resources, agricultural lands, and open space, and to serve as a model for future endeavors by similar communities in the United States.

The *Placer County General Plan,* adopted in 1994, contains policies to preserve open space and agricultural and natural resources, some of which are listed in this section. In December 1997, the Placer County Board of Supervisors directed the Planning Director to initiate a program to provide for long-term preservation of open space in Placer County. In April 1998, the Board of Supervisors formed a citizen advisory committee and initiated an open space implementation program in accordance with specified goals, elements, and measures of success. This program became the Placer Legacy Program. The specific objectives of the Placer Legacy Program are to:

- Maintain a viable agricultural segment of the economy
- Conserve natural features necessary for access to a variety of outdoor recreation opportunities
- Retain important and historic areas
- Preserve the diversity of plant and animal communities

- Protect endangered and other special-status plant and animal species
- Separate urban areas into distinct communities
- Ensure public safety

A core interest of the Placer Legacy Program is to enable the County to make itself a willing buyer to persons wishing to sell interest in lands having value for conservation purposes.

Based on input and analysis from the Scientific Working Group, the Citizens Advisory Committee and the public, the County identified guidelines for preparation of joint natural community conservation plans/habitat conservation plans. These guidelines have been incorporated into the Placer Legacy Program's implementation documents, the Placer Legacy Program Summary Report (June 2000), and the Placer Legacy Program Implementation Report (June 2000). These guidelines may be modified during development of the NCCP/HCP to fulfill the requirements of State and federal law.

The parties listed above and other public agencies have entered into the "Framework Agreement regarding the Planning, Development and Implementation of the Placer Legacy Program", which established a framework for cooperation and collaboration among State and federal agencies and local governments in the development and implementation of the Placer Legacy Program. The Framework Agreement describes opportunities for partnership and collaboration among the County, cities in Placer County, the Placer County Water Agency, and State and federal regulatory and land management agencies in the development of the Placer Legacy Program.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

During the preparation of this section, a review was conducted of the CNDDB for the Pleasant Grove, Roseville, Nicolaus, Sheridan, Lincoln, Rio Linda, Citrus Heights, Taylor Monument, and Verona U.S. Geological Survey's (USGS) 7.5 minute topographic map quadrangles. This review included records from within a radius of approximately 10 miles to identify special-status plant and animal species as well as sensitive habitats that could occur on or in the vicinity of the project site. This search range encompasses a sufficient distance to accommodate for regional habitat diversity and to overcome the limitation of the CNDDB. The CNDDB is based on reports of actual occurrences and does not constitute an exhaustive inventory of every resource. In addition, a species list was obtained from the USFWS's online database[3] for the Pleasant Grove USGS 7.5 minute quadrangle and Placer County to identify any other special-status species that may have been missed through the search of the CNDDB. Species identified by these sources as potentially occurring in the area, but for which there is either no suitable habitat, or the project site is outside the known range of the species are not addressed further.

Standards of Significance

The following Standards were derived from Appendix G of the CEQA Guidelines and the policies contained in the *Placer County General Plan*. For the purposes of this EIR, impacts to biological resources are considered significant if the proposed project would:

3 USFWS, www.fws.gov/sacramento/es/spp_lists/auto_list_form.cfm.

- Have a substantial adverse effect, either directly or through habitat modifications on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Substantially reduce the habitat of a fish or wildlife species;
- Cause a fish or wildlife population to drop below self-sustaining levels;
- Threaten to eliminate a plant or animal community;
- Substantially reduce the number or restrict the range of an endangered, threatened, or rare species;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or by other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with the provisions of an approved local, regional or State policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State habitat conservation plan.

Project-Specific Impacts and Mitigation Measures

6.4-1 Development of the proposed project, including off-site infrastructure, could result in the conversion of the project site to another use, which could affect the availability of habitat and biological function.

For the purposes of the following discussion, development impacts refer to impacts resulting from the development of the proposed project, which includes the Community, the University, and off-site improvements (see Figure 2-5 in Chapter 2, Project Description). The site is dominated by agricultural and other disturbed and undisturbed open land, which provides habitat for a variety of common and special-status species. Only a limited amount of development exists on the site, mostly in the form of access roads. Development of the University and Community would displace all of the agricultural resources, although some resources would remain intact in the form of 247.3 acres of dedicated open space (63.8 acres within the Community and 183.5 acres within the University).

Both special-status, and more common plant and wildlife species are found throughout the project area. Some of these species use more than one habitat (e.g., migratory waterfowl forage in aquatic habitats and may nest in agricultural land), or can use these undeveloped areas, including agricultural land, to move from one habitat area to another. A component of the proposed project is the preservation and enhancement of the existing drainage corridor that traverses the project site. Additionally, the project area currently provides foraging and resting habitat for migratory waterfowl

and raptors that use the Pacific Flyway. Urbanization of the area would reduce the amount of agricultural and other open land, and thus available habitat, that occurs on-site and in the surrounding area. Although preservation of open space and drainage corridors would prevent isolation of habitat areas from each other, urbanization could still affect the range of some species and reduce the value of preserved habitat (e.g., by removing foraging habitat from the vicinity of nesting habitat). The Placer County General Plan supports the preservation and enhancement of natural vegetation and resources as open space, particularly open space that is interconnected and of sufficient size to protect biodiversity, accommodates wildlife, and sustains ecosystems, (General Plan Goal 6E and Policies 6.D.6, 6.E.1 and 6.E.3).

The Watt Avenue extension area (approximately 35 impacted acres) provides foraging habitat for a variety of raptors, including the State-listed Swainson's hawk. Development of the University campus and off-site detention/retention basin would impact another approximately 324 acres of raptor foraging habitat. The balance of the project site is in active rice production and, therefore, does not constitute Swainson's hawk foraging habitat.

Development of the proposed project, which includes the University, the Community, and offsite improvements (i.e., the Watt Avenue extension, utility corridors, off-site grading, and the off-site retention/detention basin), would occur on or result in the disturbance of approximately 1,282 acres of currently undeveloped land. Of this total, approximately 247.3 acres (63.8 acres within the Community and 183.5 acres within the University) would be retained as dedicated open space. The remaining portion of the University site (416.5 developed acres, which excludes the 183.5 acres of dedicated open space) may include other campus open space elements, including the arboretum, turf areas, and gardens, but these areas would not retain biological values consistent with current uses. Approximately 54.86 acres would be temporarily disturbed for the development of utility corridors and for off-site grading; all but approximately 16.5 acres of these areas would return to their current agricultural use once construction is completed. The 20-acre offsite detention/retention basin, if it is used for an agricultural purpose, such as grazing, would not be permanently converted to a developed use and would retain its current habitat value. The Watt Avenue extension could result in the conversion of up to 35 acres (with a total temporary impact of approximately 49.5 acres). Excluding the 247.3 acres of dedicated open space, the 38.36 acres of the project site temporarily disturbed for the development of utility corridors and for off-site grading, and the 20-acre offsite detention/retention basin, the current estimated acreage that would be permanently developed within the study area would be 1,025.5 acres. This development acreage total includes 557.5 acres for the Community, 416.5 acres for the University, 35 acres for the extension of Watt Avenue from the project site to Base Line Road, and 16.5 acres in the off-site grading areas. The loss of habitat and biological function described above that would result from development of the proposed project is considered a *significant impact.*

Mitigation Measure

Implementation of Mitigation Measure 6.4-1 would substantially lessen the significant impacts on a range of biological resources due to the conversion of agricultural land and other currently undeveloped land. The mitigation measure would also preserve habitat for a variety of special-status species, but would not mitigate the impact to a less-than-significant level. Although this measure seeks to ensure that similar habitat is preserved elsewhere in the County, the project site itself would still be converted to urban uses, so there would be a net reduction in habitat. It would not be feasible to create new habitat to offset development of the Plan Area. Therefore, while the loss of habitat would be substantially lessened by the following mitigation measure, the impact would still remain ***significant and unavoidable***.

6.4-1 a) *<u>Habitat Mitigation:</u> Applicants for development entitlements within the Regional University Specific Plan area shall comply with the mitigation standards set forth in this Mitigation Measure 6.4-1 and shall also obtain applicable permits from the State and Federal resource agencies as may be required by law. Preservation of mitigation land shall occur, in order of preference, by acquisition in fee, through permanent conservation easements, or by purchase of mitigation credits, as deemed acceptable to and approved by Placer County.*

b) *<u>No Net Loss of Wetlands:</u> Applicants for development entitlements or approvals associated with the Regional University Specific Plan are required to comply with Placer County's policy of "no-net-loss of wetlands" in connection with proposed development activity that will impact this resource. To satisfy this County "no-net-loss of wetlands" standard, the applicant shall satisfy a preservation component and an enhancement, restoration, and creation component. Table 6.4-2 that follows sets forth the County's mitigation ratios to be achieved to provide for preservation and for restoration, creation, and enhancement to offset wetlands impacts.*

TABLE 6.4-2

COUNTY MITIGATION RATIOS FOR IMPACTS ON WETLANDS

	Preservation	Creation/Restoration
Vernal Pool Wetlands	2:1	1:1
Non-Vernal Pool Wetlands[1]	N/A	1:1

Notes:
1. Final mitigation ratio will be derived through implementation of Mitigation Measure 6.4-2

Since all potential jurisdictional waters of the U.S. will not be avoided in the proposed Specific Plan, the wetland delineation shall be finalized and mapped, and then submitted to the Corps for verification through the Section 404 permit process. Completion of the delineation will be used to identify the precise final acreage of various wetland types impacted within properties surveyed.

The project applicant shall preserve and replace, re-create, or restore wetland habitat lost, as determined by the County, to comply with the above no-net-loss standards. Assuming that the project will result in the direct loss of approximately 18 acres of non-vernal pool complex habitat-type wetlands, the preservation and replacement, re-creation or restoration of similar wetlands is required. The total required acreage shall be determined by the County prior to issuance of any permit or entitlement that could result in ground disturbance, such as a grading permit or improvement plans, based upon the verified wetland delineation.

Additionally, the applicant shall comply with Placer County General Plan Policy 6.A.1, which requires sensitive habitat buffers as follows: a minimum of 100 feet from the centerline of perennial streams, a minimum of 50 feet from the centerline of intermittent streams, and a minimum of 50 feet from the edge of sensitive habitats to be protected including riparian zones, wetlands, old growth woodlands, and the habitat of rare, threatened or endangered species. If development is proposed within these buffers, prior to approval of the project by the County the project applicant shall be required to ensure that no wetlands, sensitive habitats or threatened or

endangered species are present in these areas, or would be affected by project activities.

c) *(Non-Vernal Pool) Wetland Impacts: Impacts on "waters of the United States" (not including vernal pools) and other non-jurisdictional wetlands identified in the Placer County General Plan shall be mitigated to provide "no-net-loss" through avoidance, minimization and/or compensatory mitigation techniques. Both the wetland and upland components of all wetland mitigation lands may be creditable towards agricultural land mitigation requirements of Mitigation Measure 6.2-1 and uplands shall count as wetland buffers when appropriate. To minimize indirect effects to the preserve site, the County may impose measures such as controlling and redirecting runoff from adjoining properties or the construction or removal of fences.*

Buffers of such off-site mitigation lands shall be consistent with requirements of the PCCP as ultimately adopted by the County to the extent that the PCCP is adopted prior to the acquisition of preserve sites and to the extent feasible.

d) *Vernal Pool Impacts: Impacts on vernal pool (fairy shrimp and tadpole shrimp) habitat shall be mitigated through preservation and restoration of acreage based on each acre directly impacted. Required ratios are set forth in Table 6.4-2. Both the wetland and the upland components of all wetland mitigation lands may be creditable towards agricultural land mitigation requirements of Mitigation Measure 6.2-1 and uplands shall count as wetland buffers when appropriate. To minimize indirect effects to a preserve site, the County may impose measures such as controlling and redirecting runoff from adjoining properties or the construction or removal of fences.*

Additional acreage may be required to address impacts on non-vernal pool type wetlands that function as habitat for state or federally-listed species, and indirect impacts on similar avoided habitat. The total required acreage shall be the greater of 1) the amount determined by the County to compensate for the loss of habitat function and value including temporal loss, or 2) the amount determined by the federal agencies working with project applicants. As an alternative, once the Placer County Conservation Plan (PCCP) is adopted, project applicants may participate in the PCCP which is intended to provide for adequate mitigation of vernal pool habitat.

Buffers of such off-site mitigation lands shall be consistent with requirements of the PCCP as ultimately adopted by the County to the extent that the PCCP is adopted prior to the acquisition of preserve sites and to the extent feasible.

e) *Swainson's Hawk Foraging Impacts: Swainson's hawk foraging habitat shall be mitigated according to California Department of Fish and Game Guidelines: one acre for each acre lost within one mile of a nest, 0.75 acre for each acre lost within one to five miles of a nest, and 0.5 acre lost within five to ten miles of a nest, unless otherwise addressed through the PCCP. Mitigation for impacts on Swainson's hawk habitat may occur within the land required for agricultural mitigation provided that the lands acquired provide suitable foraging habitat for Swainson's hawks. (For example, according to DFG, rice is not a compatible foraging type.) Additionally, the Applicant shall be required to obtain a CESA take permit for any active Swainson's hawk nest that may be removed as part of any proposed construction under the Specific Plan. Additional mitigation measures for the loss of active nest trees shall include planting of suitable nest trees (e.g., valley oak, California black walnut, California sycamore,*

or Fremont's cottonwood) at a 15:1 ratio (tree per tree) on suitable foraging habitat areas within west Placer County.

f) *Out-of-County Habitat Mitigation: Use of out-of-County lands for habitat mitigation shall only be allowed when such lands are of equal or of higher resource value than those in the Specific Plan area. Use of any such lands may be allowed by the County after an evaluation of the resource value of the lands proposed for such use.*

g) *"Out-of-Kind" Habitat Mitigation: "Out-of-kind" habitat mitigation shall only be allowed as mitigation for loss of a particular habitat type after approval by the County. "Out-of-kind" mitigation may be appropriate where the mitigation lands include areas with a mosaic of riparian habitat, creek corridors, flood plains and upland areas, where an assemblage of vernal pool complexes in fallow or grazed lands is in close proximity to such riparian habitat, or where the County deems that the "out-of-kind" mitigation lands contain other unique or desirable characteristics that provide a comparable level of habitat mitigation.*

h) *Funding for Mitigation Land Acquisition (Fee Title or Conservation Easement) and Monitoring and Maintenance: Funding for land acquisition, adaptive management and monitoring and maintenance may be financed, if acceptable to the County, through a Mello-Roos Community Facilities District (CFD) or other funding mechanism similar to the funding mechanism used to fund Specific Plan infrastructure construction. The specific funding plan, including a method for preserve acquisitions and for in-perpetuity preserve management must be approved by Placer County prior to the first preserve acquisition and prior to any ground disturbance associated with the project.*

i) *Excess Habitat: Excess habitat within mitigation lands acquired for the mitigation of impacts associated with an approved development project within the Specific Plan area may be used to mitigate for subsequent approved development projects within the Specific Plan area. Transfer of excess habitat shall be accomplished through a private cost sharing agreement. The project applicant shall provide Placer County with copies of such agreements for review and for tracking purpose (e.g., debits and credits).*

j) *Mitigation and Management Plans: Implementation of the "no-net–loss of wetlands" standard of this Mitigation Measure 6.4-1 shall occur through the implementation of Mitigation and Management Plans for mitigation sites. Such Plans shall accompany each proposed development project, or group of projects, within the Specific Plan area. The applicant shall demonstrate to the County compliance with an approved Mitigation and Management Plan prior to recordation of a final small lot map. For non-residential uses that do not require a tentative subdivision map, as well as development of any off-site infrastructure project associated with the Regional University Specific Plan, a condition of approval shall be placed that requires the approval of a Mitigation and Management Plan prior to issuance of improvement plans, grading permits, or a building permit, whichever comes first.*

Each Mitigation and Management Plan shall identify the specific mitigation lands that will be necessary to fully mitigate impacts on habitat and special-status species. The plan shall demonstrate capacity to control said property by fee title, permanent conservation easement, or mitigation credits to the satisfaction of the County and

State and federal agencies to the extent required by applicable state or federal permits. Recordation or purchase of said property shall take place after approval of the plan by the County. The Plan shall also identify the necessary funding mechanism for the long-term maintenance and management of the mitigation lands along with provisions for adaptive management. Purchase of required habitat credits shall be identified in the Mitigation and Management Plan when such credits are proposed for all or part of a mitigation requirement.

k) *Dedication of Mitigation Lands for Regional University Specific Plan Projects: The mitigation lands necessary to mitigate for the impacts of developing a project within the Regional University Specific Plan area, as well as developing any off-site infrastructure project associated with the Regional University Specific Plan, shall be dedicated to the County (or other County approved entity) prior to recordation of a final small lot map, or as a condition of issuance of a project-level discretionary approval for non-residential land uses that do not require a tentative subdivision map.*

l) *Placer County Conservation Plan: At the time of the release of this Draft EIR, Placer County was preparing a Natural Community Conservation Plan, a Habitat Conservation Plan Programmatic Section 404/401 Compliance and a Master Streambed Alteration Agreement to comply with the State and Federal Endangered Species Acts and the Federal Clean Water Act. Collectively, this planning effort is known as the Placer County Conservation Plan (PCCP). If the approved PCCP is in place before the Regional University Specific Plan (RUSP) EIR is certified and the RUSP is approved, biological resource mitigation measures shall be implemented in such a manner as to be consistent with the PCCP. If the RUSP EIR is certified and the RUSP is approved before the PCCP is approved, biological mitigation for the Regional University project as set forth in this Measure 6.4-1 shall not be subject to the requirements of the PCCP, except at the applicant's discretion. In lieu of the above described measures, the Specific Plan or subsequent phases of the Specific Plan may, at the applicant's discretion, fulfill mitigation requirements by compliance with the terms of the adopted PCCP. Such compliance, as determined by Placer County, shall constitute sufficient mitigation that will obviate the need to comply with this Mitigation Measure.*

m) *Joint Mitigation: Provided that the mitigation land satisfies the criteria set forth in both Mitigation Measure 6.2-1 and this Mitigation Measure, land acquired to meet the habitat mitigation requirements of this Mitigation Measure, and/or any additional habitat mitigation that is required by any governmental agency for any development project undertaken pursuant to the Regional University Specific Plan, may occur within and also be counted towards the required agricultural land mitigation obligation set forth in Mitigation Measure 6.2-1.*

6.4-2 The proposed project could result in the filling or adverse modification of jurisdictional wetlands, non-jurisdictional wetlands, and other "waters of the U.S."

As shown on Figure 6.4-1, the areas studied for the proposed project include approximately 85.28 acres of potential waters of the U.S., including those within the project site, those within the Watt Avenue extension study area, and those along the off-site infrastructure corridors to the north and east of the project site. These wetlands include seasonal wetlands, vernal pools, channels (including Curry Creek and its tributaries) and channelized drainages, marsh and woody vegetation. Although some of these wetlands would be included as a part of designated open space areas within the

project site, wetland impacts would occur on approximately 18 acres within the project site. The precise extent to which wetlands in the off-site infrastructure areas could be impacted, including impacts in the Watt Avenue extension area, cannot be determined until final alignments are determined. However, it is unlikely that the off-site infrastructure can be designed such that wetlands are completely avoided. Although the proposed project includes an alignment for the Watt Avenue extension, the ultimate alignment could differ, thus resulting in different impacts on the resources within the study area. Based on the distribution of resources within the Watt Avenue study area, impacts from any alignment within the study area, however, would be similar to that identified for the proposed alignment and would be substantially less that the total resources identified in the study area.

The U.S. Army Corps of Engineers protects jurisdictional wetlands under the Clean Water Act. Federal policy calls for "no-net-loss" of jurisdictional wetlands. Wetlands that are not considered "jurisdictional" by the Corps could provide habitat for special-status species and/or meet the *Placer County General Plan* definition of "wetland." The General Plan has identified wetland communities and related riparian areas as resources that should be protected (See, for example, Policies 6.B.1 and 6.B.2, which call for "no-net-loss" of jurisdictional and non-jurisdictional wetlands, 6.B.4, supporting preservation of upland areas, and 6.B.5, requiring development to avoid, minimize and/or compensate for impacts on wetlands). Therefore, because fill of jurisdictional wetlands, non-jurisdictional wetlands, and other waters of the United States is prohibited without prior approval from the Corps, this is considered a *significant impact*.

Mitigation Measures

Implementation of the following mitigation measures would substantially lessen potential impacts on wetlands through preservation of wetlands on-site and at an approved mitigation bank, thereby compensating for the unavoidable loss of wetland habitat. To the extent that replacement, re-creation or restoration of wetlands may be approved, this impact would be reduced; however, because the mitigation measure does not guarantee preservation on-site within the project area, this impact would remain ***significant and unavoidable***.

A wetland mitigation plan will be prepared as part of the Section 404-permit process.

6.4-2 a) *Implement Mitigation Measures 6.4-1 as they pertain to wetland resources.*

The mitigation acreage required by these measures may be partially or entirely included within Mitigation Measure 6.4-1, to the extent that the mitigation area includes wetlands similar in type and equal or greater in habitat value to those pools lost to development. Once it is adopted, the PCCP will provide an alternate means of mitigating the impacts on wetlands by contributing to the preservation and restoration of wetlands in western Placer County.

Additional steps shall be taken for properties that require more detailed resource identification prior to development. These steps shall include: wetland delineations, habitat mapping, and where appropriate, protocol level presence/absence surveys for special-status species within the Plan Area.

6.4-3 Development of the proposed project could result in the loss of special-status vernal pool crustacean and amphibian species and degradation and/or loss of their habitat.

Surveys have determined that the federally listed (threatened) vernal pool fairy shrimp occurs on the western portion of the site. Other special-status vernal pool crustaceans, including vernal pool tadpole shrimp and California linderiella, and one special-status amphibian, the western spadefoot, may also occur in pools within the Watt Avenue extension study area and along the off-site infrastructure corridors. While many of the pools within the project site would be preserved in designated open space areas, habitat for these species occurring within other portions of the site and off-site infrastructure areas could be lost during development of the proposed project. Loss of potential habitat for federally listed vernal pool crustaceans is prohibited under the ESA without prior permission from the USFWS. Therefore, this is considered a *significant impact*.

Mitigation Measure

The following measure would substantially lessen the loss or disturbance of habitat for listed vernal pool invertebrates by ensuring no-net-loss of vernal pool crustacean habitat through a combination of preservation of existing habitat, and the replacement of any habitat lost at an approved mitigation-site. Placer County can and will require this measure of on-site or off-site Specific Plan-related infrastructure within Placer County. Because the mitigation does not guarantee preservation of habitat within Placer County, the potential impact on habitat for vernal pool invertebrates would be considered ***significant and unavoidable***.

6.4-3 *The project applicant shall preserve, replace, re-create, or restore vernal pool crustacean habitat lost, at a ratio determined by the County in consultation with the Corps, to comply with established no-net-loss standards. Potential compensation ratios for loss of vernal pool crustacean habitat could be 3:1 for direct impacts (i.e., direct loss of a pool, or a portion of a pool) and 2:1 for indirect impacts (i.e., ground disturbance within 250 feet of a pool). This may be accomplished through implementation of Mitigation Measure 6.4-1 as it pertains to vernal pools. Additional steps may be required through the State and federal permitting process for properties requiring more detailed resource identification prior to development. Steps the project applicant shall implement, if required, include mapping of habitat types, delineation of wetlands (followed by submission of delineation report to the Corps for verification), special-status species habitat assessments, and possibly protocol-level special-status species surveys.*

6.4-4 The proposed project could result in the loss and/or degradation of rare plant populations.

The proposed project area contains potential habitat for a variety of special-status plant species known to occur in the region. The project site contains known locations for Boggs Lake hedge-hyssop and dwarf downingia in the western portion of the property, south of the perennial drainage on the site. Potential habitat for these and other special-status plant species, including big-scale balsamroot, legenere, and Sanford's arrowhead also occurs within the Watt Avenue extension study area and along the off-site infrastructure corridors. Although the known locations of Boggs Lake hedge-hyssop and dwarf downingia will be avoided through the designated open space areas on the project site, potential habitat for these, and the other species mentioned above would be lost during development of the project site, the Watt Avenue extension study area, and the off-site infrastructure. Development within the grassland portions of the project site, the Watt Avenue extension study area, and the off-site infrastructure corridors would result in the removal of habitats

that could support some or all of the special-status plant species listed previously. Such habitat removal would constitute a *significant impact.*

Mitigation Measures

Implementation of the following mitigation measures would reduce the magnitude of this impact to a ***less-than-significant level*** by replacing the amount, type, and value of habitat lost to project construction through an accredited mitigation bank.

6.4-4 a) *Known populations of Boggs Lake hedge-hyssop and dwarf downingia shall be preserved in designated on-site open space preserves. Such preserve areas shall be developed in coordination with the CDFG and the USFWS, and preserved and managed in perpetuity. Additionally, potential habitat occurs in the remainder of the project site for these species as well as Ahart's dwarf rush, big-scale balsamroot, legenere, Henderson's bent grass, pincushion navarretia, Red Bluff dwarf rush, Sacramento Orcutt grass and Sanford's arrowhead. Therefore, focused botanical surveys shall be performed for these species within suitable habitat areas. The project applicant shall retain a qualified biologist to conduct focused surveys within the project site during the appropriate flowering period for these species. If any of these species are found, locations of these occurrences shall be mapped. A detailed mitigation/conservation plan that includes long-term strategies for the conservation of the species shall be developed in coordination with CNPS and/or USFWS. The conservation plan shall provide for preservation and restoration at ratios that would ensure "no-net-loss" of the affected plant habitat. If none of these species are located during surveys, no mitigation would be necessary.*

The mitigation acreage required by this measure could be partially or entirely included within Mitigation Measure 6.4-1.

b) *The project applicant shall replace, re-create, or restore special-status plant habitat lost, at a ratio determined by the County. This may be accomplished through implementation of Mitigation Measure 6.4-1 as it pertains to vernal pool habitat. If any other special-status vernal pool plant species are located during the surveys, implementation of Mitigation Measure 6.4-1 for avoidance of vernal pool crustacean habitat will concurrently protect vernal pool plant species occurring in those pools.*

c) *If any other special-status upland plant species are located during the surveys, locations of these occurrences shall be mapped. A detailed mitigation/conservation plan that includes long-term strategies for the conservation of the species shall be developed confirming the presence of these species. The plan shall provide for preservation and restoration at ratios that would ensure "no-net-loss" of the affected plant habitat.*

The mitigation acreage required by this measure could be partially or entirely included within Mitigation Measure 6.4-1, to the extent that the mitigation area includes upland habitat, such as annual grasslands, that provide equal or greater habitat value for the affected special-status species plants.

6.4-5 Construction of the proposed project could result in loss of valley elderberry longhorn beetles and their habitat.

During the biological assessment of the project area, one elderberry shrub was observed along the south side of Curry Creek west of Brewer Road. No VELB exit holes were observed on this shrub during the biological assessment survey, and no other elderberry shrubs were observed elsewhere within the project boundaries or off-site infrastructure alignments. VELB is listed as threatened under the ESA and take of this species or its habitat, including any ground disturbance within 100 feet of the dripline of an elderberry shrub, is prohibited under the ESA.

The proposed project includes the construction of an approximately 20-acre off-site storm water retention/detention basin along Brewer Road. Due to the location of the elderberry shrub, the proposed location of the storm water detention basin would have no effect on the elderberry shrub. Therefore, this would be considered a ***less-than-significant impact***.

Mitigation Measures

None required.

6.4-6 The proposed project could result in the loss and/or degradation of western pond turtles and their habitat.

Potential habitat for the western pond turtle is present within the project boundaries along the perennial drainages on the project site. Although this species was not observed during the biological resource assessment for this project, western pond turtles are known to occur along waterways downstream from Curry Creek and its tributaries. It is therefore possible that the species is present within the project area, but was simply not detected during the survey. Construction of the proposed project, including crossings and other alterations to on-site drainages, including Curry Creek and its tributaries, as well as jurisdictional drainage ditches (see Impact 6.4-8), could result in loss of individuals or degradation of habitat for this species. This is considered a *potentially significant impact*.

Mitigation Measures

Implementation of the following mitigation measures would reduce the magnitude of this impact by ensuring that any western pond turtle habitat affected by the proposed project is preserved off-site at a 1:1 ratio. Loss of potential habitat could be partially or entirely included within Mitigation Measure 6.4-1, to the extent that the mitigation area includes marsh habitat areas appropriate for the western pond turtle. By monitoring for, and moving any western pond turtles out of harm's way, these measures would ensure that no individual western pond turtles are lost during construction. This mitigation measure would reduce impacts on the western pond turtle and its habitat to a ***less-than-significant level***.

6.4-6 *Prior to project construction, the project applicant shall retain a qualified biologist to conduct pre-construction surveys of suitable marsh habitat within the project site within 30 days prior to project construction to ensure no western pond turtles have established territories. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction survey, the site shall be resurveyed. If western pond turtle are identified during the pre-construction survey, it shall be moved out of the construction zone to a comparably*

suitable marsh habitat not proposed for construction activities. If this species is not observed during the pre-construction survey, no further mitigation would be required.

6.4-7 The proposed project could result in the direct loss or disturbance of nesting birds, including burrowing owls and raptors (birds-of-prey).

Although relatively low in number, trees present in the project area could provide nesting habitat for nesting birds, including Swainson's hawk, white-tailed kite and other raptors, as well as other migratory bird species. Trees occur along the perennial drainage on the project site (unnamed tributary to Curry Creek). Additionally, ground squirrel burrows present in the grassland portions of the project site and along the Watt Avenue extension study area, and the off-site infrastructure corridors are considered potential nesting habitat for burrowing owls. Nesting birds are protected under the Migratory Bird Treaty Act (MBTA) and nesting raptors are further protected under Section 3503.5 of the Fish and Game Code of California. Burrowing owls are a CDFG species of concern and nest on the ground. Construction activities in close proximity to trees or burrows could disturb nesting birds, if present. Active nests could also be lost to tree removal and grading activities. Disruption of nesting birds, resulting in the abandonment of active nests or the loss of active nests through structure removal, would be a *potentially significant impact*.

Mitigation Measures

For tree nesting species, implementation of the following mitigation measures would reduce this impact to a ***less-than-significant level***. If any nesting birds are identified, compliance with this mitigation measure would ensure that the birds would not be disturbed during the nesting season and a qualified biologist would monitor the site to verify that the area is not disturbed.

6.4-7 a) *When construction is proposed during the raptor breeding season (February to early September), a focused survey for raptor nests shall be conducted within 30 days prior to the beginning of construction activities by a qualified biologist in order to identify active nests on-site. If active nests are found, no construction activities shall take place within 500 feet of the nest until the young have fledged. To the extent possible, tree removal should be conducted outside of the active raptor nesting season (late September to January). If no active nests are found during the focused survey, no further mitigation will be required. This measure will ensure that active nests are not moved or substantially disturbed during the breeding season, so that raptor eggs and young are not destroyed or abandoned as a result of construction.*

For burrowing owls, implementation of the following mitigation measures would reduce this impact to a ***less-than-significant level***. If any burrowing owls are identified, compliance with this mitigation measure would ensure that the birds would not be disturbed during the nesting season and a qualified biologist would monitor the site to verify that the area is not disturbed.

b) *When construction is proposed during the burrowing owl breeding season (February 1 - August 31), a focused survey for burrows shall be conducted within 30 days prior to the beginning of construction activities by a qualified biologist in order to identify any active burrows. Because burrowing owls can be present year-round, a pre-construction survey shall be conducted regardless of the time of year. If active nests are found, no construction activities shall take place within 160 feet of the burrow during the non-breeding season of September 1 through January 31, or 250 feet of*

the nest during the breeding season, until the young have fledged. If no active nests are found during the focused survey, no further mitigation will be required.

Where possible, active burrowing owl burrows shall be avoided by incorporating them into open space areas and protecting the burrows in perpetuity. If these burrows, along with 6 acres of adjacent foraging habitat per pair, are avoided, no further mitigation would be required.

If burrows are removed as a result of implementation and there is suitable habitat on-site, CDFG shall be consulted on current passive relocation methodology before relocation of owls is attempted. Relocation of owls should only be implemented during the non-breeding season. On-site habitat shall be preserved in a conservation easement and managed to promote burrowing owl use of the site.

If there is not suitable habitat on-site, off-site passive relocation shall be required. Off-site habitat must provide suitable burrowing owl habitat. Land shall be purchased and/or placed in a conservation easement in perpetuity and managed to maintain suitable habitat. Off-site mitigation shall use one of the following ratios:

1. *Replacement of occupied habitat with occupied habitat: 1.5 times 6.6 (for a total of 9.9 acres) acres per pair or single bird.*

2. *Replacement of occupied habitat with habitat contiguous to currently occupied habitat: 2 times 6.5 (for a total of 13 acres) acres per pair or single bird.*

3. *Replacement of occupied habitat with suitable unoccupied habitat: 3 times 6.5 (for a total of 19.5 acres) acres per pair or single bird.*

The replacement of burrowing owl habitat required by this measure could be partially or entirely included within Mitigation Measure 6.4-1, to the extent that the mitigation area includes areas appropriate for burrowing owl.

6.4-8 The proposed project could result in the loss of foraging habitat for Swainson's hawk, white tailed kite, burrowing owl, and other raptors.

Swainson's hawk, white tailed kite, burrowing owl, and other raptors forage (search for food) over annual grasslands and agricultural habitats, which are present on a majority of the project site. While the suitability of agricultural habitat is variable, depending on the season and rice farming schedules, approximately 1,382 acres of agricultural land and 316.87 acres of annual grassland is available within the study area (which includes the project site and study areas for off-site infrastructure).

The CDFG considers grasslands and some agricultural lands occurring within 10 miles of an active Swainson's hawk nest site[4] to be suitable foraging habitat. At least one active nest has been documented within five miles of the project site. Implementation of the proposed project would result in the loss of up to 940.22 acres on the project site and the off-site infrastructure corridors of foraging habitat for these species through conversion to urban land uses (this acreage is generated by

4 An active nest is defined as a Swainson's hawk nest that has been documented to be active within the last two years.

subtracting the total wetland acres [85.28] from the total impacted acreage of 557.5 acres for the Community, 416.5 acres for the University, 35 acres for the extension of Watt Avenue from the project site to Base Line Road, and 16.5 acres in the off-site grading areas). The loss of Swainson's hawk foraging habitat would also affect other raptors and migratory birds that utilize the same annual grasslands for foraging. Swainson's hawk is State-listed as threatened, and removal of their habitat is prohibited without prior approval from the CDFG. Therefore, the impact to Swainson's hawk habitat is considered *significant*.

Mitigation Measure

Implementation of the following mitigation measure would substantially lessen the significant impacts on Swainson's hawk, white tailed kite, burrowing owl, and other raptor foraging habitat due to the conversion of open space and agricultural land, and would preserve habitat for these and other wildlife species, but will not mitigate the impact to a less than significant level. Although this measure will ensure that similar habitat is preserved elsewhere in the County, the Plan Area itself would still be converted to urban uses, so there would be a net reduction in open space. It would not be feasible to create new open space to offset development of the Plan Area.

Mitigation Measure 6.4-1, above, requires preservation of off-site foraging habitat at ratios recommended by the CDFG: 1:1 for each acre lost within one mile of a nest, 0.75:1 for each acre lost within one to five miles of a nest, and 0.5:1 for each acre lost within five to ten miles of a nest. Because new nests could be established in closer proximity to surveyed properties, which would affect the amount of acreage that must be preserved, Mitigation Measure 6.4-1 would also require new nesting surveys as development proposals within surveyed properties are implemented.

Because Mitigation Measure 6.4-1 calls for preservation of open space at a 1:1 ratio, the highest ratio required for Swainson's hawk mitigation, CDFG recommendations would likely be met entirely by Mitigation Measure 6.4-1.

Mitigation Measure 6.4-1 also requires that any Swainson's hawk nesting trees that are removed be replaced with suitable tree species (valley oak, California black walnut, California sycamore, or Fremont's cottonwood), at a 15:1 ratio (tree per tree) in areas suitable for Swainson's hawk foraging and nesting. This measure would ensure that there is "no-net-loss" of nesting trees over time, and would offset the impact due to loss of foraging habitat for other raptor species. While the impact to nests would be less than significant, the impact due to loss of foraging habitat would remain ***significant and unavoidable*.**

6.4-8 *The project applicant shall replace, re-create, or restore Swainson's hawk nesting and foraging habitat lost, at a ratio of up to 1:1 for each acre lost, as determined appropriate by the County. This may be accomplished through implementation of Mitigation Measure 6.4-1 as it pertains to Swainson's hawk foraging habitat and nesting trees.*

6.4-9 The proposed project could result in loss of nesting habitat for non-raptor special-status bird species.

Non-raptor special-status bird species, such as Tricolored blackbirds and California black rails, are known to nest in dense colonies in thick stands of emergent wetland vegetation (e.g., cattails, tules, blackberries) where there is a permanent water source. They have also been observed nesting in riparian vegetation such as willows (*Salix* spp.), thistles (*Cirsium* spp.), wild rose (*Rosa* spp.) when freshwater emergent vegetation is not available. They nest from April through August and nesting

sites are generally in close proximity to foraging areas (i.e., rice fields, pond margins, and grasslands). The project site supports small areas of sparse, woody vegetation and marsh habitats with cattails along drainages that could provide nesting habitat for tricolored blackbirds and black rails. These areas occur primarily in the western portion of the project site. Alterations to other drainages that would occur as part of the proposed project could remove nesting habitat and/or disrupt active nesting/breeding activities resulting in nest abandonment if the birds occur on-site.

Tricolored blackbirds are protected under the MBTA and are a California species of concern, and destruction of active nests is considered a violation of the MBTA. The California black rail is State listed as well as protected under the MBTA. Destruction of active nests is considered a violation of the MBTA, and, consequently, impacts to nesting special-status birds would be considered a *potentially significant impact*.

Mitigation Measure

Implementation of the following mitigation measure would reduce this impact to a ***less-than-significant level*** by ensuring that nests and other colonies are avoided when active, so that eggs and young would be protected. Once the young have fledged their nests, the nests can be removed without harm to the birds. The loss of potential tricolored blackbird habitat could be partially or entirely included within MM 6.4-1, to the extent that the mitigation area includes marsh habitat areas appropriate for the tricolored blackbird.

6.4-9 *Prior to construction, a focused survey for non-raptor special-status bird species and nesting colonies shall be conducted by a qualified biologist within 30 days prior to the beginning of construction activities in order to identify active nests within the construction area. If active nests are found, no construction activities shall take place within five hundred feet of the nest and/or nesting colony until the young have fledged. The biologist shall consult with CDFG, particularly with respect to vegetation removal as a result of project construction. If no active nests and/or nesting colonies are found during the focused survey, no further mitigation will be required.*

6.4-10 The proposed project could result in the modification of on-site drainages, disrupting the associated habitat.

On-site drainages traverse the project site, and could provide habitat for special-status species as described in Impacts 6.4-3, 6.4-4, and 6.4-8. In addition, these drainages could provide habitat for other wildlife species, such as ducks, egrets, and other waterfowl.

Construction contractors would be required to obtain and comply with the conditions of a State General Construction Activity Storm Water Permit adopted by the California State Water Resources Control Board (see Section 6.8, Hydrology and Water Quality). The general permit is intended to ensure compliance with State water quality objectives and water protection laws and regulations, including those related to waste discharges. Permit applicants are required to prepare and retain at the construction-site a Storm Water Pollution Prevention Plan (SWPPP). The storm water quality management program would address project construction and would specify control measures and best management practices (BMPs) designed to minimize sedimentation and release of products used during construction (e.g., petroleum products, paint, cement, etc.) into on-site drainages.

The proposed project would implement a restoration program along on-site drainages that would involve deepening and widening the channel, followed by revegetation with selected native

vegetation and construction of additional wetland features. While this restoration program would ultimately improve both the vegetative quality of the wetland and water quality, temporary disturbances related to the in-channel restoration activities could disrupt existing plant and wildlife resources, through removal of existing vegetation, and excavation within the bank and streambed.

The CDFG, pursuant to Section 1600 et seq. of the Fish and Game Code, has authority over work consisting of, but not limited to, the diversion or obstruction of natural flow or changes in the channel, bed, or bank of any river, stream, or lake. Any construction activities within the stream would require a Streambed Alteration Agreement. In addition, the Corps has jurisdiction over any construction activities that occur within waters of the United States (see impact 6.4-1). On-site drainages would be considered a water of the United States and any work within the channel would require approval from the Corps. The California Regional Water Quality Control Board would also have jurisdiction under Section 401 of the Clean Water Act and would require a water quality waiver or water quality certification. Alteration of on-site drainages could be considered a *potentially significant impact*, as it could prevent use of this habitat by special-status and other wildlife species.

Mitigation Measures

Implementation of the Specific Plan would ensure that drainages and woody vegetation areas that are to be retained (such as streams) would be protected from damage or disturbance by construction and that there would be "no-net-loss" of woody vegetation within these areas. Implementation of the following mitigation measures would reduce potential impacts on streams and woody vegetation to a ***less-than-significant level***.

6.4-10 *Prior to the issuance of a grading permit, a Streambed Alteration Agreement shall be obtained from CDFG, pursuant to Section 1600 et seq. of the California Fish and Game Code, for each stream crossing and any other activities affecting the bed, bank, or associated woody vegetation of the stream. If required, the project applicant shall coordinate with CDFG in developing appropriate mitigation, and shall abide by the conditions of any executed agreements. Streambed Alteration Agreement measures to protect the channel bank of a stream from erosion and related effects of construction shall be included in all related construction contracts. Impacts to woody vegetation or removed trees adjacent to creeks would be addressed through the issued Streambed Alteration Agreement.*

6.4-11 Development of the proposed project could result in the loss of bat roosting habitat.

Housing and barn structures occurring on the Watt Avenue extension site could provide roosting habitat for special-status bats, and other bats protected through Section 4700 of the Fish and Game Code. Removal of these structures to accommodate project construction could result in the loss of individual bats or their roosting habitat. Because the loss of individual bats or their roosting habitat is prohibited through Section 4700 of the Fish and Game Code, this would be a *potentially significant impact.*

Mitigation Measures

Implementation of the Specific Plan would ensure that bat roosting sites would be protected from damage or disturbance by construction. Implementation of the following mitigation measures would reduce potential impacts on bat roosting sites to a ***less-than-significant level***.

6.4-11 *Prior to removal of existing structures on these properties, the project applicant shall retain a qualified biologist to conduct a pre-construction survey for roosting bats in the buildings to be removed. If no roosting bats are found, then no further mitigation would be required. If a bat roost is found, CDFG or the USFWS shall be consulted on measures to avoid impacts to roosting bats.*

6.4-12 Development of the proposed project could result in habitat fragmentation and wildlife population isolation.

The proposed project area provides potential habitat for a variety of native resident and migratory wildlife species. These species may use habitats within the project boundaries for foraging, cover, breeding, or nesting. Although the development of the proposed project would result in the development of natural and agricultural habitat, the proposed project area does not represent a major migration corridor. Open space corridors, including buffer areas, along natural and modified drainages would be preserved as a part of the project design. Development of the proposed project would remove some habitat from the site. However, with the inclusion of the open space corridor along the natural drainages, wildlife movement through the project area could continue, and the introduction of genetic diversity from adjacent sites would not be disrupted. Furthermore, wildlife would be able to use on-site drainages and the open space corridor for movement. Although preservation of open space and drainage corridors would prevent isolation of habitat areas from one another, urbanization could still affect the range of some species and reduce the value of preserved habitat (e.g., by removing foraging habitat from the vicinity of nesting habitat). Therefore, this impact is considered *significant*.

Mitigation Measure

Implementation of the mitigation measure below would reduce the severity of the impact. However, this impact would remain ***significant and unavoidable***.

6.4-12 *Implement Mitigation Measure 6.4-1.*

Cumulative Impacts and Mitigation Measures

The cumulative context is development assumed to occur throughout western Placer County. As discussed in Chapter 5 – Demographics, Placer County is the most rapidly growing county in California. Substantial growth is projected to occur is the vicinity of the proposed project. Projected growth will include a combination of residential and commercial development, along with infrastructure improvements to support that growth.

6.4-13 Construction of the proposed project, in combination with other development in the county, could contribute to the loss of native plant communities, wildlife habitat values, special-status species and their potential habitat, and wetland resources in the region.

As development in western Placer County in general continues, habitat for plant and wildlife species native to the region will be lost through conversion to urban development. Although more mobile species may be able to survive these changes in their environment by moving to new areas, less mobile species would simply be extirpated. With continued conversion of natural habitat to human use, the availability and accessibility of remaining natural habitats in this ecosystem would dwindle. Those remaining natural areas would not be able to support additional plant or animal populations

above their current carrying capacities. The conversion of plant and wildlife habitat on a regional level would therefore result in a cumulatively significant impact on biological resources.

The project area supports annual grassland and jurisdictional waters of the United States, including suitable habitat for vernal pool crustaceans, amphibians, and plants, as well as nesting and foraging habitat for the Swainson's hawk and other raptors. The project site also includes on-site drainages and tributaries which could provide habitat for special-status reptiles and birds. As discussed in project Impacts 6.4-1 through 6.4-11, construction of the proposed project could result in the loss and/or degradation of potential waters of the U.S., loss or degradation of special-status species and their habitat, and loss of foraging and nesting habitat for the Swainson's hawk and other raptors. Construction of the proposed project, in combination with other development projects in the immediate vicinity could, therefore, contribute to a fragmentation and loss of regional biodiversity through the incremental conversion of natural habitat for special-status species to human uses, and thereby limit the availability and accessibility of remaining natural habitats to regional wildlife. The loss of land supporting areas of natural habitat will overcome any one project's ability to compensate for lost habitat values. Therefore, the loss of plant and wildlife habitat as a result of implementation of the proposed project is cumulatively considerable, resulting in a *significant impact*.

Mitigation Measure

Mitigation Measure 6.4-1 would reduce the magnitude of the Specific Plan contribution to the cumulative loss of biological habitat by requiring the off-site preservation of habitat, most of which is likely to provide a mosaic of habitats similar to the Plan Area. The other measures identified above would further protect special-status plants and wildlife from harm by requiring appropriate habitat and/or nesting surveys, avoidance of habitat and/or nests, and compensation for loss of habitat. While individual members of special-status species would be protected from harm, and required off-site open space would not be developed, there would still be a net loss in land available for plant and wildlife habitat as a result of the Specific Plan. Therefore, this mitigation would reduce, but would not fully offset, the project's incremental contribution to the significant cumulative loss of biological habitat. Therefore, the loss of habitat on the project site, in combination with loss due to other development in the county would remain a ***significant and unavoidable cumulative impact****.*

6.4-13 *Implement Mitigation Measures 6.4-1 through 6.4-11.*