

4.3 BIOLOGICAL AND NATURAL RESOURCES

This section describes the natural resources present in the project area and includes a discussion of the special-status species and sensitive habitats potentially occurring in the project area. This section analyzes impacts that could occur to biological resources due to project implementation and appropriate mitigation measures to reduce or avoid these impacts. The analysis of biological resources presented in this section is based on review of previous biological investigations and reports for adjoining properties, as well as maps and available literature from federal, state, and local agencies. Related discussions are found in Section 4.1, Land Use, and Section 4.8, Hydrology and Water Quality.

4.3.1 EXISTING SETTING

The project site is defined as the area that would be directly and indirectly affected by development due to the proposed Sheldon/99 GPA and Rezone project for the northeast quadrant of the Sheldon Road and State Route 99 interchange. The project area includes approximately 45 acres within the north-central section of the City of Elk Grove and is located within Sacramento County. See **Figure 3.0-1** for an illustration of the proposed project area in reference to the City of Elk Grove and surrounding areas.

The proposed project site is located within a rural residential and urbanized area currently under development. Surrounding land uses include: rural residential, agricultural, new residential subdivisions (under construction), commercial, and recreation (golf driving range). Additionally, a cemetery is located northwest of the existing Sheldon Road/State Route 99 intersection.

The project area is located within the United States Geological Service (USGS) 7.5-minute series Florin quadrangle, with elevations ranging from approximately 11 feet to 53 feet above mean sea level. According to technical studies, approximately 22 acres of the current project area were previously assessed as part of the Sheldon Road/ State Route 99 Interchange Reconstruction Project (City of Elk Grove, 2006). Significant topographical features within the nearby vicinity include the modified Whitehouse Creek channel, a seasonal wetland that has been modified into a detention basin, in addition to vernal pools that have been altered by past agricultural activity (City of Elk Grove, 2006).

The Sacramento region follows a modified Mediterranean climate which is defined by warm, dry summers and moist, cool winters. Mean maximum temperature is approximately 74°F and mean minimum temperature is approximately 49°F. Average annual precipitation in the vicinity is 17 inches, most of which falls as rain with few snow events (Western Regional Climate Center, 2007).

BIOLOGICAL COMMUNITIES

Habitat areas within the proposed project area are characterized as non-native grassland, developed/ ruderal vegetation and urban landscaping, as well as seasonal wetland and vernal pool. According to technical studies, approximately 22 acres of the current project area were previously assessed as part of the Sheldon Road/ State Route 99 Interchange Reconstruction Project. Common wildlife and plant species observed or expected to occur in these areas as well as special-status species and plant habitats are described below. **Figure 4.3-1** illustrates the known habitat communities located within the project area as well as the areas that require further assessment.

Annual Grassland

As illustrated in **Figure 4.3-1**, a total of approximately 22.3 acres of annual grassland is known to occur within the proposed project area. Based on review of aerial photographs, 10.6 acres of

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annual grassland habitat within the project area has the potential for additional wetland features. The annual grassland habitat is composed of vegetative species including: wild oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), yellow star-thistle (*Centaurea solstitialis*), soft chess (*Bromus hordeaceus*), Italian ryegrass (*Lolium multiflorum*), burclover (*Medicago polymorpha*), field mustard (*Brassica* sp.), filaree (*Erodium botrys*), and Fitch's tarweed (*Hemizonia fitchii*). Additionally, curly dock (*Rumex crispus*) occurs in the roadside ditches throughout the project area.

Annual grassland habitat supports foraging habitat for numerous wildlife species. Avian species expected to forage and/or nest in this habitat include: the western burrowing owl (*Athene cunicularia hypugea*), Swainson's hawk (*Buteo swainsoni*), American crow (*Corvus brachyrhynchos*), yellow-billed magpie (*Pica nuttalli*), western meadowlark (*Sturnella neglecta*), mourning dove (*Zenaida macroura*), scrub jay (*Aphelocoma coerulescens*), turkey vulture (*Cathartes aura*), house finch (*Carpodacus mexicanus*), European starling (*Sturnus vulgaris*), northern harrier (*Circus cyaneus*), red-tailed hawk (*Buteo jamaicensis*), black-shouldered kite (*Elanus caeruleus*), Cooper's hawk (*Accipiter cooperii*) and barn owl (*Tyto alba*). Mammalian species expected to occur within this habitat include the deer mouse (*Peromyscus maniculatus*) and black-tailed jackrabbit (*Lepus californicus*).

Developed/ Ruderal

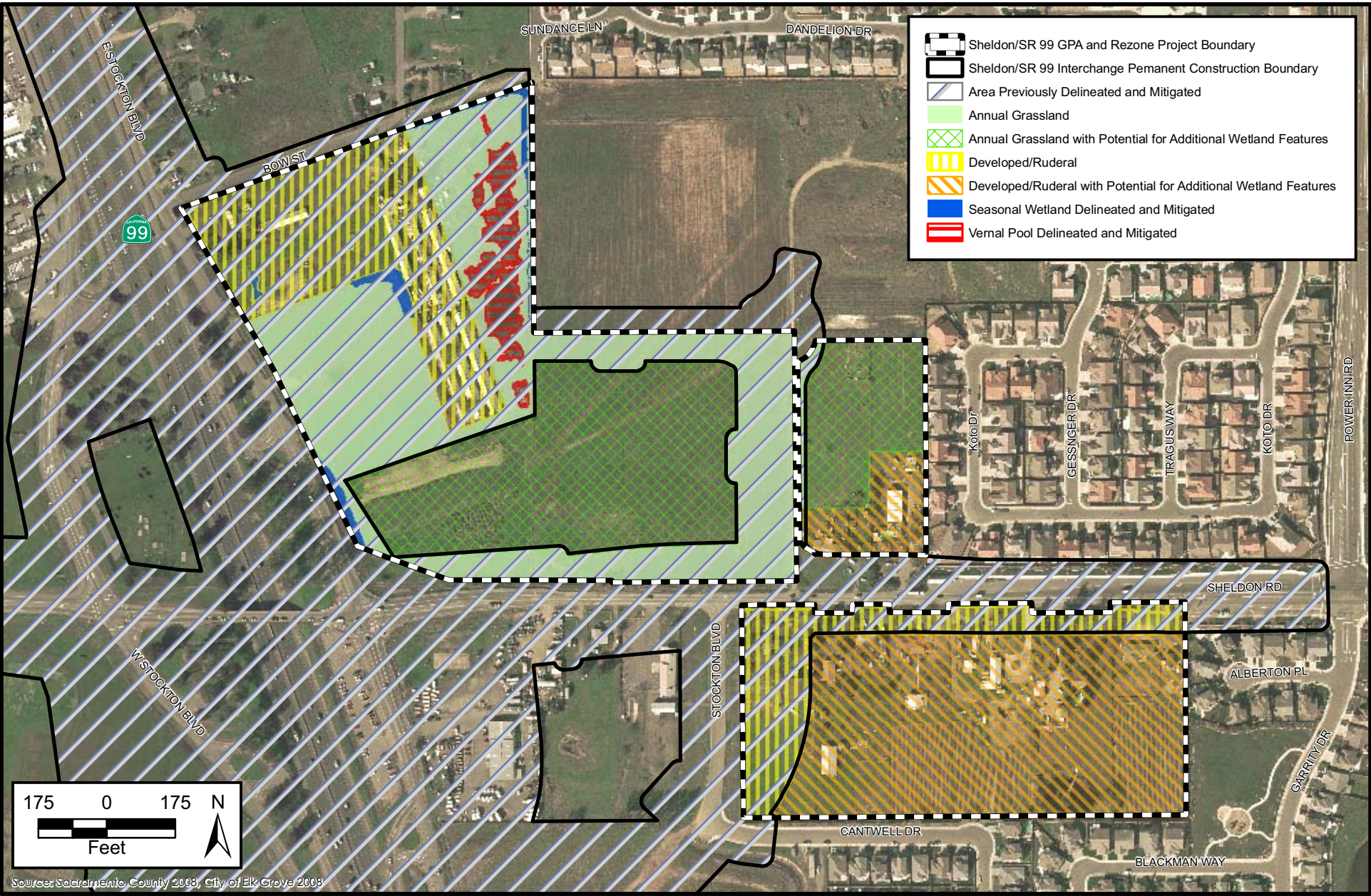
As illustrated in **Figure 4.3-1**, a total of approximately 21 acres of developed/ ruderal vegetation with urban landscaping occurs within the proposed project area. Based on review of aerial photography, 11.9 acres of developed/ ruderal vegetation within the project area has the potential for additional wetland features. Ruderal vegetation is defined as vegetation that survives on disturbed habitat, and is likely composed of multiple non-native species, including non-native grassland. The majority of the trees associated with the rural residential areas are composed primarily of valley oak (*Quercus lobata*), California black walnut (*Juglans hindsii*), bluegum eucalyptus (*Eucalyptus globulus*), red-ironbark eucalyptus (*E. sideroxylon*), black locust (*Robinia pseudo-acacia*), willow (*Salix* sp.), acacia (*Acacia* sp.), ash (*Fraxinus* sp.), beefwood (*Casuarina* sp.), London plane tree (*Platanus acerifolia*), and mulberry (*Morus alba*). Ruderal habitat is likely to support nesting and roosting areas for several avian species, including passerines, hawks, and owls. In addition, outbuildings are likely roosting areas for several species of bats.

Seasonal Wetlands

As illustrated in **Figure 4.3-1**, approximately 0.5 acres of known seasonal wetlands occur within the project area according to the Sheldon Road/ State Route 99 Interchange Reconstruction Project Wetland Delineation verified by the U.S. ACOE on May 3, 2006, (City of Elk Grove, 2006). There is potential for additional wetlands, as the vegetation and soil characteristics of the project site are consistent with the characteristics necessary to support vernal pools.

Seasonal wetlands are defined by a hydrologic regime that is dominated by saturation, rather than inundation. Seasonal wetlands inundate for short periods of time following a storm event but the primary hydrologic regime is one of saturation. Plant species found within seasonal wetlands are adapted to withstand short periods of inundation, but will not withstand long periods of inundation, as is typical in vernal pools. Seasonal wetlands were observed in shallow depressions dominated by perennial ryegrass (*Lolium perenne*), Mediterranean barley (*Hordeum marinum*), and curly dock.

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City of Elk Grove
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FIGURE 4.3-1
Habitat Types

Seasonal wetlands provide foraging habitat for a variety of resident and migratory wildlife species, including many of the wildlife species associated with nearby agricultural land. In addition, the great blue heron (*Ardea herodias*), great egret (*Ardea alba*), and red-winged blackbird (*Agelaius phoeniceus*) are expected to utilize seasonal wetland habitat.

Vernal Pools

As illustrated in **Figure 4.3-1**, there is at least 1.0 acre of vernal pools occurring within the project area according to the Sheldon Road/ State Route 99 Interchange Reconstruction Project Wetland Delineation verified by the U.S. ACOE on May 3, 2006, (City of Elk Grove, 2006). As the final wetlands delineation for the Sheldon Road/ State Route 99 Interchange Reconstruction Project does not delineate areas outside of the Sheldon Road/ State Route 99 Interchange project boundaries, additional seasonal wetlands may occur within the Sheldon Road and State Route 99 General Plan Amendment and Rezone project area. There is potential for additional vernal pools, as the vegetation and soil characteristics of the project site are consistent with the characteristics necessary to support vernal pools.

Vernal pools are seasonally flooded depressions found on ancient soils with an impermeable layer such as a hardpan, claypan, or volcanic basalt. The impermeable layer allows the pools to retain water much longer than the surrounding uplands; nonetheless, the pools are shallow enough to dry up each season. Vernal pools often fill and empty several times during the rainy season. Only plants and animals that are adapted to this cycle of wetting and drying can survive in vernal pools over time. These specialized plants and animals are what make vernal pools unique and, in turn, form a valuable part of the food chain for a wide array of animals, including birds of prey, shorebirds, migratory waterfowl, frogs, toads, salamanders and pollinating insects. Recent studies suggest that the protein-rich invertebrates and crustaceans, as well as the roots and leaves of vernal pool plants, provide an important seasonal food source for the waterfowl as well as other non-migratory bird species (California Wetlands Information System).

Plant species observed in association with the vernal pools include: coyote thistle (*Eryngium vaseyi*), mediterranean barley (*Hordeum marinum*), toad rush (*Juncus bufonius*), slender popcorn flower (*Plagiobothrys stiptitatus*), and curly dock.

SPECIAL-STATUS SPECIES

The following discussion describes the plant and animal species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution in the Sacramento region and may require specialized habitat conditions. Listed and special-status species are defined as:

- Legally protected under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA) or under other regulations;
- Considered sufficiently rare by the scientific community to qualify for such listing; or
- Considered sensitive because they are unique, declining regionally or locally, or at the extent of their natural range.

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Specifically, special-status plant species include:

- Plants listed or proposed for listing as threatened or endangered under the FESA (50 CFR 17.12 for listed plants and various notices in the Federal Register [FR] for proposed species);
- Plants that are candidates for possible future listing as threatened or endangered under the FESA (64 Federal Register [FR] 205:57533–57547, October 25, 1999);
- Plants that meet the definitions of rare or endangered species under the California Environmental Quality Act (CEQA) (State CEQA Guidelines Section 15380);
- Plants considered by CNPS to be “rare, threatened, or endangered” in California (Lists 1B and 2 in Skinner and Pavlik [1994]);
- Plants listed or proposed for listing by the State of California as threatened or endangered under the CESA (14 California Code of Regulations [CCR] 670.5);
- Plants listed under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.);
- Plants considered sensitive by other federal agencies (i.e., USFS, the U.S. Bureau of Land Management [BLM]) or state and local agencies or jurisdictions; and
- Plants considered sensitive or unique by the scientific community or occurring at the limits of their natural range (State CEQA Guidelines Appendix G).

Special-status wildlife species include:

- Animals listed or proposed for listing as threatened or endangered under the FESA (50 CFR 17.11 for listed animals and various notices in the Federal Register for proposed species);
- Animals that are candidates for possible future listing as threatened or endangered under the FESA (54 CFR 554);
- Animals that meet the definitions of rare or endangered species under CEQA (State CEQA Guidelines Section 15380);
- Animals listed or proposed for listing by the State of California as threatened or endangered under the CESA (14 CCR 670.5);
- Animal species of special concern to California Department of Fish and Game (CDFG) (CNDDDB 2007); and
- Animal species that are fully protected in California (California Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

Table 4.3-1 lists the special-status plant species and **Table 4.3-2** lists the special status wildlife species with the potential to occur within the project study area or to be affected by project implementation. Information on the listing status, habitat requirements, and potential occurrence within the project study area is also provided. The list of species included in these tables was compiled based on a review of previous reports and information collected for

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adjoining properties, an updated USFWS species list, as well as a current search of the California Natural Diversity Database (CNDDDB) and California Native Plant Society (CNPS) on-line database in December of 2007. The database search included the Florin 7.5 minute quadrangle and eight surrounding quadrangles, including: Clarksburg, Sacramento West, Sacramento East, Carmichael, Elk Grove, Galt, Bruceville, and Courtland. **Figure 4.3-2** illustrates the CNDDDB occurrences of special-status plant and wildlife species within a one-mile radius of the proposed project.

**TABLE 4.3-1
SPECIAL-STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT VICINITY**

Species	Federal (USFWS)	State (CDFG)	CNPS	Habitat	Potential for Occurrence
Plants					
Ahart's dwarf rush <i>Juncus leiospermus</i> var. <i>ahartii</i>	--	--	1B	Valley and foothill grassland from 30 to 100 meters	No; Unlikely given the disturbed nature of the area. It is known from only six occurrences in the State.
Bogg's Lake hedge-hyssop <i>Gratiola heterosepala</i>	--	SE	1B	Marshes and swamps, lake margins, and vernal pools from 10 to 2375 meters	No; project area lacks suitable habitat.
Bristly sedge <i>Carex comosa</i>	--	--	2	Coastal prairie, marshes and swamps, lake margins, and Valley and foothill grassland from 0 to 625 meters. Threatened by marsh drainage and road maintenance	Yes; project area may include suitable habitat.
Delta mudwort <i>Limosella subulata</i>	--	--	2	Marshes and swamps from 0 - 3 meters	No; project area lacks suitable habitat. Out of range for this species.
Delta tule pea <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	--	--	1B	Freshwater and brackish marshes and swamps from 0 to 4 meters	No; project area lacks suitable habitat. Out of range for this species.
Dwarf downingia <i>Downingia pusilla</i>	--	--	2	Vernal pools, Valley and foothill grassland from 1 to 445 meters	Yes; project area may include suitable habitat.
Legenere <i>Legenere limosa</i>	--	--	1B	Vernal pools from 1 to 880 meters	Yes; project area may include suitable habitat.
Mason's lilaeopsis <i>Lilaeopsis masonii</i>	--	Rare	1B	Brackish or freshwater marshes and swamps and riparian scrub from 0 - 10 meters	No; project area lacks suitable habitat.
Northern California black walnut <i>Juglans hindsii</i>	--	--	1B	Riparian forest and riparian woodland from 0 to 440 meters	No; Unlikely as there is only one confirmed, native occurrence as of 2003 (CNPS). Threatened by hybridization

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Species	Federal (USFWS)	State (CDFG)	CNPS	Habitat	Potential for Occurrence
					with orchard trees, urbanization, and conversion to agriculture.
Rose mallow <i>Hibiscus lasiocarpus</i>	--	--	2	Perennial marshes, ponds, and wet banks from 0 to 120 meters	No ; project area appears to lack perennial water bodies.
Sacramento Orcutt grass <i>Orcuttia viscida</i>	FE	SE	1B	Vernal pools 30 to 100 meters	Yes ; project area may include suitable habitat.
Sanford's arrowhead <i>Sagittaria sanfordii</i>	--	--	1B	Shallow, perennial freshwater marshes and low velocity streams from 0 to 650 meters	No ; Although this species is known to exist within one mile of the project area according to the CNDBB, there is no suitable habitat present within the project area.
Side-flowering skullcap <i>Scutellaria lateriflora</i>	--	--	2	Meadows and seeps, marshes and swamps from 0 to 500 meters	No ; project area lacks suitable habitat.
Slender orcutt grass <i>Orcuttia tenuis</i>	FT	SE	1B	Large, deep vernal pools from 35 to 1760 meters	Yes ; project area may include suitable habitat.
Succulent owl's-clover <i>Castilleja campestris ssp. succulenta</i>	FT	SE	1B	Vernal pools 50 to 750 meters; threatened by urbanization, agriculture, flood control, grazing, and trampling	Yes ; project area may include suitable habitat.

*Legal Status Codes:

-- No listing status

Federal:

FE = Listed as endangered under the Endangered Species Act

FT = Listed as threatened under the Endangered Species Act

FC = Candidate for listing (threatened or endangered) under the Endangered Species Act

State:

SE = Listed as endangered under the California Endangered Species Act

ST = Listed as threatened under the California Endangered Species Act

CSC = Species of concern as identified by the California Department of Fish and Game

Rare = Species identified as rare by the California Department of Fish and Game

California Native Plant Society:

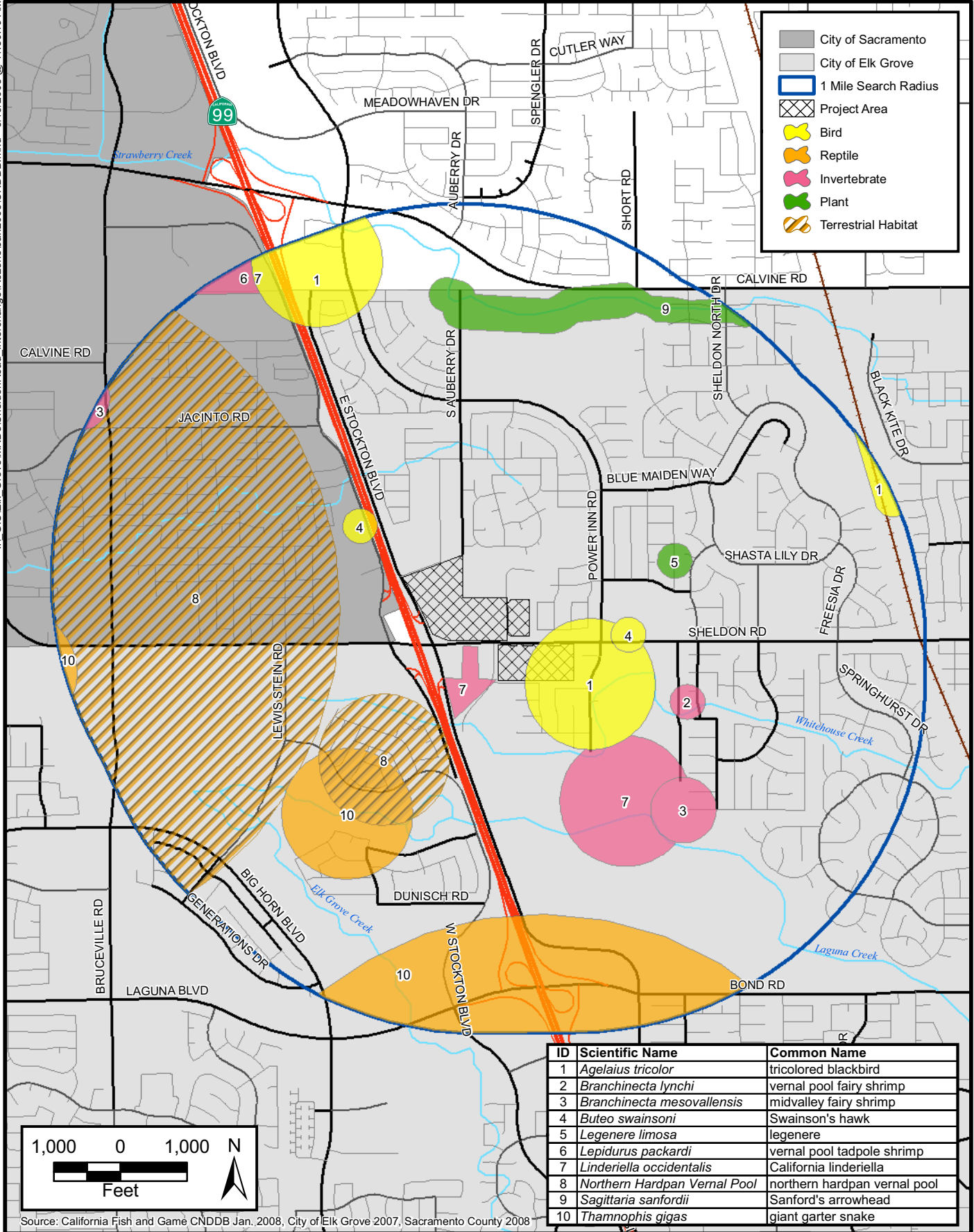
1A = Plant species that are presumed extinct in California

1B = Plant species that are rare, threatened, or endangered in California and elsewhere

2 = Plant species that are rare, threatened, or endangered in California, but more common elsewhere

Sources: USFWS 2007; CNDBB 2007; California Native Plant Society 2007

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Figure 4.3-2
CNDDDB Occurrences Within
One Mile of Project Area

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TABLE 4.3-2
SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT VICINITY

Scientific and Common Name	Legal Status*		Habitat	Potential for Occurrence
	Federal	State		
Invertebrates				
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	FE, X	--	Large, cool-water vernal pools with moderately turbid water	No ; unlikely given the disturbed nature of the area. Currently, the USFWS is only aware of eight populations of Conservancy fairy shrimp from Tehama County to Ventura County. Limited distribution is due to habitat loss, habitat alteration, and fragmentation.
Delta green ground beetle <i>Elaphrus viridis</i>	FT	--	Associated with vernal pool habitats, seasonally wet pools. Beetles emerge in January, breed in February and March, and then enter a period of dormancy in May as the vernal pools dry up. Both larvae and adults are active predators, which seek out small soft-bodied arthropods.	No ; unlikely as it is presently known to occur only in Solano County northeast of the San Francisco Bay Area. Poorly managed grazing and urbanization has eliminated much of this species' habitat.
Midvalley fairy shrimp <i>Branchinecta mesovallensis</i>	--	SE	Endemic to California Central Valley grassland vernal pools. Usually found in smaller pools.	Yes ; vernal pools within the project area may provide suitable habitat for this species. According to the CNDBB, this species does exist within one mile of the project area. Known occurrences include scattered populations from the Mather Field area of Sacramento south through Galt from Sacramento County.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT	--	Habitat includes elderberry shrubs throughout the Central Valley	No ; One elderberry shrub was identified on an adjacent property during site surveys for the Sheldon Road/ State Route 99 Interchange Reconstruction Project. However, the tree was transplanted as a result of the Sheldon Road/ State Route 99 Interchange Reconstruction Project. No other elderberry shrubs are known to occur within the proposed project area.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	--	Limited to vernal pools and valley grassland swales	Yes ; vernal pools within the project area may provide suitable habitat for this species. According to the CNDBB, this species does exist within one mile of the project area.

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Scientific and Common Name	Legal Status*		Habitat	Potential for Occurrence
	Federal	State		
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	FE	--	Limited to vernal pools and swales in the Sacramento Valley	Yes ; vernal pools within the project area may provide suitable habitat for this species. According to the CNDBB, this species does exist within one mile of the project area.
Fish				
Central Valley Spring-run chinook salmon <i>Oncorhynchus tshawytscha</i>	FT, X	ST	Sacramento River and its perennial tributaries	No ; no streams are located within the project parcels so the project is not anticipated to interfere with migratory fish species.
Central Valley Winter-run chinook salmon <i>Oncorhynchus tshawytscha</i>	FE, X	SE	Sacramento River and its perennial tributaries	No ; no streams are located within the project parcels so the project is not anticipated to interfere with migratory fish species.
Central Valley steelhead <i>Oncorhynchus mykiss</i>	FT, X	--	Sacramento River and its perennial tributaries	No ; no streams are located within the project parcels so the project is not anticipated to interfere with migratory fish species.
Green sturgeon <i>Acipenser medirostris</i>	FT	--	Observations are concentrated at San Francisco Bay and Sacramento-San Joaquin and delta sites	No ; no streams are located within the project parcels so the project is not anticipated to interfere with migratory fish species. Furthermore, no current use by sturgeon of Sacramento River tributaries, other than the Feather River system, has been reported within recent time.
Amphibians				
California red-legged frog <i>Rana aurora draytonii</i>	FT	CSC	Still or slow-moving perennial water with dense riparian vegetation. Largely extirpated from the Central Valley	No ; project area appears to lack perennial water bodies and riparian vegetation.
California tiger salamander, central population <i>Ambystoma californiense</i>	FT	ST	Annual grasslands with temporary pools or ponds	No ; unlikely to occur as the proposed project is outside of the species' known range.
Reptiles				
Giant garter snake <i>Thamnophis gigas</i>	FT	ST	Sloughs, canals, and other small waterways hydrologically connected to areas of known occurrences. Prey base of small fish and amphibians; grassy banks and emergent vegetation for basking and high ground protected from winter flooding	No ; Although this species is known to occur within one mile of the project area according to the CNDBB, no suitable habitat is present within the project area.

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Scientific and Common Name	Legal Status*		Habitat	Potential for Occurrence
	Federal	State		
Birds				
Egrets and Herons	MBTA	** for rookeries	Marshlands and ponds	No; Although these birds have the potential to periodically forage in nearby Whitehouse Creek, there are no known rookeries within the proposed project area.
Swainson's hawk <i>Buteo swainsoni</i>	MBTA	ST	Riparian woodland for nesting and adjacent grasslands for foraging	Yes; This species is known to occur within one mile of the project area, according to the CNDBB. Nearby mature trees are likely to provide potential nesting or roosting habitat.
Tricolored blackbird <i>Agelaius tricolor</i>	MBTA	CSC	Freshwater marsh with stands of cattails, and tules; also blackberry brambles for nesting.	No; Listed as a species observed within one mile of the project area according to the CNDBB. However, this species is highly colonial and nesting areas must be large enough to support a minimum colony of about 50 pairs. Typically located near fresh emergent wetlands.
Western burrowing owl <i>Athene cunicularia hypugea</i>	MBTA	CSC	Open low-growing grasslands with suitable burrow sites	Yes; Potential habitat occurs in fields within the project area.
Mammals				
Hoary bat <i>Lasiurus cinereus</i>	--	CSC	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Generally roost in dense foliage of medium to large trees. Preferred sites are hidden from above, with few branches below, and have ground cover of low reflectivity.	Yes; Although there are no previously recorded occurrences for this species within the Elk Grove area, suitable habitat is present within the project area.
Small-footed myotis <i>Myotis ciliolabrum</i>	--	CSC	Found in rock outcrops on open grasslands, canyons, and yellow pine woodlands. Day roosts are variable, and include cracks and crevices in cliffs, beneath tree bark, in mines and caves, and occasionally in dwellings of humans. Night roosts are under a variety of natural and human-induced structures. Hibernacula include caves, mines, and tunnels, where the animals usually hang singly, often exposed.	Yes; Abandoned outbuildings throughout the project area provide potential habitat for maternity roosts.

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	Federal	State		
Western red bat <i>Lasiurus blossevillii</i>	--	CSC	Often found near streams and roost in broad leaved trees, including cottonwoods and willows, as well as fruit and nut orchards.	No; there are no previously recorded occurrences for this species within the Elk Grove area and no suitable habitat is present.
Yuma myotis <i>Myotis yumanensis</i>	--	CSC	Found in a wide variety of habitats, though optimal habitats include open forests and woodlands with sources of water over which to feed.	No; there are no previously recorded occurrences for this species within the Elk Grove area and no suitable habitat is present.
<p>-- = No listing status</p> <p>*Legal Status Codes:</p> <p>Federal:</p> <p>FE = Listed as endangered under the Endangered Species Act</p> <p>FT = Listed as threatened under the Endangered Species Act</p> <p>FC = Candidate for listing (threatened or endangered) under the Endangered Species Act</p> <p>FPT = Proposed as threatened under the Endangered Species Act</p> <p>X = Critical habitat is designated for this species</p> <p>State:</p> <p>SE = Listed as endangered under the California Endangered Species Act</p> <p>ST = Listed as threatened under the California Endangered Species Act</p> <p>CSC = Species of Special Concern as identified by the California Department of Fish and Game</p> <p>CFP = Listed as fully protected under CDFG Code</p>				

Sources: USFWS 2007; CNDDDB 2007

Special-status Species with Potential to Occur

The following is a brief description of the special-status plant and wildlife species identified as having a potential for occurrence, based on nearby occurrences and/or the presence of suitable habitat.

Plants

Bristly sedge

Bristly sedge (*Carex comosa*) is a rhizomatous herb listed on the CNPS List 2. This sedge can be found in Coastal prairie, marshes and swamps, lake margins, and Valley and foothill grassland from 0 to 625 meters and blooms May through September. As vernal pool and grassland habitat occurs within the project area, this species may be present. This species is threatened by marsh drainage and road maintenance (CNPS, 2007).

Dwarf downingia

Dwarf downingia (*Downingia pusilla*) is an annual herb listed on the CNPS List 2. This plant can be found in Valley and foothill grassland as well as vernal pools from 1 to 445 meters and blooms from March through May. As vernal pool and grassland habitat occurs within the project area, this species may be present. This species is threatened by urbanization, development, agriculture, grazing, vehicles, and industrial forestry (CNPS, 2007).

Legenere

Legenere (*Legenere limosa*) is an annual herb listed on the CNPS List 1B. This plant can be found in vernal pools from 1 to 880 meters and blooms from April through June. As vernal pool habitat occurs within the project area, this species may be present. This species is threatened by grazing, road widening, non-native plants, and development (CNPS, 2007).

Sacramento Orcutt grass

Sacramento Orcutt grass (*Orcuttia viscida*) is an annual herb that is endemic to Sacramento County, known from seven occurrences. It is listed as a state and federally endangered species, and is also listed on the CNPS List 1B. This plant can be found in vernal pools from 30 to 100 meters and blooms from April through July. As vernal pool habitat occurs within the project area, this species may be present. This species is seriously threatened by agriculture, urbanization, overgrazing, vehicles, and non-native plants (CNPS, 2007).

Slender Orcutt Grass

Slender Orcutt grass (*Orcuttia tenuis*) is an annual herb that is endemic to California. It is listed as a state endangered and federally threatened species, and is also listed on the CNPS List 1B. This plant can be found in vernal pools from 35 to 1760 meters and blooms May through September. As vernal pool habitat occurs within the project area, this species may be present. This species is seriously threatened by agriculture, residential development, grazing, vehicles, logging, fire, trampling, and non-native plants (CNPS, 2007).

Succulent owl's clover

Succulent Owl's Clover (*Castilleja campestris ssp. succulenta*) is an annual herb that is listed as a state endangered and federally threatened species, and is also listed on the CNPS List 1B. This plant can be found in often acidic vernal pools from 50 - 750 meters meters and blooms April through May. As vernal pool habitat occurs within the project area, this species may be present. This species is seriously threatened by urbanization, agriculture, flood control, grazing, and trampling (CNPS, 2007).

Animals

Midvalley fairy shrimp

The Midvalley Fairy Shrimp (*Branchinecta mesovallensis*) is a small, soft-bodied crustacean that lives in vernal pools. The Midvalley Fairy Shrimp is a newly-described species that inhabits pools in only a handful of counties within the Great Central Valley, including: Sacramento, Solano, Merced, Madera, San Joaquin, Fresno, and Contra Costa Counties. According to the CNDDB, this species does exist within one mile of the project area. Known occurrences in the area include scattered populations from the Mather Field area of Sacramento south through Galt from Sacramento County. As vernal pool habitat occurs within the project area, this species may be present.

The Midvalley Fairy Shrimp is closely related to three other federally listed species: the Vernal Pool Fairy Shrimp, Conservancy Fairy Shrimp, and Longhorn Fairy Shrimp. These three species were listed under the Endangered Species Act in 1994, primarily due to the threats posed by destruction of their vernal pool habitat. Listed as a State endangered species, the Midvalley Fairy Shrimp is at an even greater risk of extinction than these species as it has a more restricted range and inhabits the most shallow, ephemeral vernal pools (California Department of Fish and Game, 2006.)

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Vernal pool fairy shrimp

The vernal pool fairy shrimp (*Branchinecta lynchi*) ranges in size from 10.9 to 25.0 mm. Vernal pool fairy shrimp are almost translucent, but can be whitish or have some orange body parts. Fairy shrimp have delicate elongate bodies, large stalked compound eyes, no carapace, and eleven pairs of swimming legs. They swim or glide gracefully upside down by means of complex beating movements of the legs that pass in a wave-like anterior to posterior direction. Nearly all fairy shrimp feed on algae, bacteria, protozoa, rotifers, and bits of detritus. Fairy shrimp play an important role in the community ecology of ephemeral water bodies and are fed upon by migratory waterfowl and other vertebrates, such as spadefoot toad tadpoles. According to the CNDBB, this species does exist within one mile of the project area. As vernal pool habitat occurs within the project area, this species may be present.

Vernal pool tadpole shrimp

Vernal pool tadpole shrimp (*Lepidurus packardii*) is a small freshwater crustacean that ranges in size with maturity and nutrition. Mature adults range between 15 and 86mm. Its body can be characterized as a smooth protective concave shell or carapace which protects the head and thorax. A pair of eyes is centered atop at the anterior end of its shell. Vernal pool tadpole shrimp from the genus *Lepidurus* distinguish themselves with a single leaf shaped paddle. At full maturity, *Lepidurus packardii* has 30-35 pairs of appendages called phyllopods (leaf-feet) which propel the creature through the water and through which it exchanges oxygen. These aquatic creatures have evolved and adapted to a very specific environment as they inhabit vernal pools. The tadpole shrimp swim will swim upside down just under the surface when oxygen deficient. *Lepidurus packardii* is black, brown or green or a mottled combination, so as to assist in camouflage, when found in murky water, or is transparent to beige with mottled brown and green variations when found in clear water (San Francisco State University, 2003). According to the CNDBB, this species does exist within one mile of the project area. As vernal pool habitat occurs within the project area, this species may be present.

Swainson's Hawk

Swainson's hawks (*Buteo swainsoni*) are listed in the CNDBB as occurring within one mile of the project area. Swainson's hawks are state listed as threatened. This species migrates into California in the spring to establish breeding territories for the summer and typically migrates out of California by the end of September. Swainson's hawks require isolated trees or riparian woodlands for nesting and nests are typically built within close proximity to suitable foraging habitat, including agricultural fields and annual grasslands. According to the Elk Grove General Plan Final Environmental Impact Report, Swainson's hawks are known to occur within the City and Planning Area, with nests occurring in the East Franklin Specific Plan area and the Laguna Ridge Specific Plan area (City of Elk Grove, 2003). Large mature trees within the project area have the potential to support nesting Swainson's hawks. The annual grassland habitat within the project area also provides suitable foraging habitat for this species.

Western Burrowing Owl

Listed as a California Species of Special Concern, western burrowing owls (*Athene cunicularia hypugea*) nest in burrows in the ground, often in old ground squirrel burrows or badger dens. They can dig their own burrows, but prefer deserted excavations of other animals. They are also known to use artificial burrows. Burrowing owls in northern California are thought to migrate, whereas burrowing owls within central and southern California are predominantly non-migratory. Burrowing owls are found in open, dry grasslands, agricultural and range lands, and desert

habitats often associated with burrowing animals. They can also inhabit grass, forb, and shrub stages of pinyon and ponderosa pine habitats. Burrowing owls can be found at elevations ranging from 200 feet below sea level to 9,000 feet above sea level. In California, the highest elevation where this species is found is 5,300 feet in Lassen County. The burrowing owl commonly perches on fence posts or on top of mounds outside its burrow. Burrowing owls tend to be opportunistic feeders, feeding primarily on large arthropods, mainly beetles and grasshoppers, as well as small mammals, especially mice, rats, gophers, and ground squirrels. The burrowing owl hovers while hunting, and after catching its prey, returns to a perch on a fence post or the ground. Burrowing owls are primarily crepuscular (active at dusk and dawn), but will hunt throughout a 24-hour period. Nesting season begins in late March or April (CDFG). Burrowing owls are known to occur in the vicinity of the project area. Therefore, it is considered that the project area has potential for this species to occur.

Special-Status Bat Species

Hoary Bat

The Hoary bat (*Lasiurus cinereus*) is widely distributed throughout California though considered a California species of special concern due to recent population declines. This species is basically solitary, except for mother-young association. However, during migration, groups of up to hundreds of individuals may form. Those migrating through the western U.S. in the autumn go south into Mexico. Habitat for bat species consists of foraging habitat, night roosting cover, maternity roost sites, and winter hibernacula. This species prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding and they generally roost in dense foliage of medium to large trees. Preferred sites are hidden from above, with few branches below, and have ground cover of low reflectivity. In general, the CDFG is most concerned about the loss of maternity roosting sites. Potential maternity and night roosting sites occur in snags, under bark, and in human structures.

Small-Footed Myotis

The Small-footed myotis (*Myotis ciliolabrum*) is also widely distributed throughout California though considered a California species of special concern due to recent population declines. This species can be found in rock outcrops on open grasslands, canyons, and yellow pine woodlands. Day roosts are variable, and include cracks and crevices in cliffs, beneath tree bark, in mines and caves, and occasionally in dwellings of humans. Night roosts are under a variety of natural and human-induced structures. Hibernacula include caves, mines, and tunnels, where the animals usually hang singly, often exposed.

SENSITIVE HABITATS

Sensitive habitats include those that are of special concern to resource agencies and those that are protected under CEQA, Section 1600 of the CDFG Code, or Section 404 of the Clean Water Act (CWA). Additionally, habitats are protected under the City of Elk Grove General Plan. Sensitive habitats on-site include seasonal wetland and vernal pool habitat, as well as native trees.

Jurisdictional Waters of the United States

According to technical studies, approximately 22 acres of the current project area were previously assessed as part of the Sheldon Road/ State Route 99 Interchange Reconstruction Project. As the final wetlands delineation for the Sheldon Road/ State Route 99 Interchange

4.3 BIOLOGICAL AND NATURAL RESOURCES

Reconstruction Project does not delineate areas outside of the Sheldon Road/ State Route 99 Interchange project boundaries, additional wetland features, including waters of the U.S., may be present within the Sheldon Road and State Route 99 General Plan Amendment and Rezone project area.

As discussed in the Regulatory Framework section below, jurisdictional waters of the U.S. are subject to Section 404 of the Clean Water Act and are regulated by the U.S. Army Corps of Engineers (ACOE).

Trees

Although native trees such as oaks and California black walnuts are not afforded special protection under state or federal law, loss of these species is a concern of the CDFG and CNPS because of their continued depletion throughout California. In addition, the City of Elk Grove is committed to protecting urban trees, and specifically to preserve and protect remaining native oak trees as significant, integral, and outstanding examples of the historical heritage of Sacramento County.

4.3.2 REGULATORY FRAMEWORK

This section lists specific environmental review and consultation requirements and identifies permits and approvals that must be obtained from local, state, and federal agencies before implementation of the proposed project.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process. Procedures for addressing impacts to federally listed species follow two principal pathways, both of which require consultation with the United States Fish and Wildlife Service (USFWS), which administers the FESA for all terrestrial species. The first pathway, Section 10(a) incidental take permit, applies to situations where a non-federal government entity must resolve potential adverse impacts to species protected under the FESA. The second pathway, Section 7 consultation, applies to projects directly undertaken by a federal agency or private projects requiring a federal permit or approval.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the Fish and Game Code (FGC).

All raptors and their nests are protected from take or disturbance under the MBTA (16 United States Code [USC], § 703 et seq.) and California statute (FGC § 3503.5). The golden eagle and bald eagle are also afforded additional protection under the Eagle Protection Act, amended in 1973 (16 USC, § 669 et seq.).

Clean Water Act

Section 401 of the Federal Clean Water Act (CWA) requires any applicant for a federal license or permit that is conducting any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The appropriate Regional Water Quality Control Board (RWQCB) regulates section 401 requirements.

Section 404 of the CWA prohibits the discharge of dredged or fill material into "waters of the United States" without a permit from the U.S. ACOE. The U.S. ACOE and the U.S. Environmental Protection Agency administer the Act. In addition to streams with a defined bed and bank, the definition of waters of the U.S. includes wetland areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 California Federal Regulations [CFR] 328.3 7b). The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 C.F.R. §328.4(c)(1)].

If adjacent wetlands occur, the limits of jurisdiction extend beyond the ordinary high water mark to the outer edge of the wetlands. The presence and extent of wetland areas are normally determined by examination of the vegetation, soils, and hydrology of a site. The majority of jurisdictional wetlands exhibit three wetland criteria, including: hydrophytic vegetation, wetland hydrology, and hydric soils.

Substantial impacts to jurisdictional wetlands may require an individual permit. Small-scale projects may require a nationwide permit, which typically has an expedited process compared to the individual permit process. Mitigation of wetland impacts is required as a condition of the 404 permit and may include on-site preservation, restoration, or enhancement and/or off-site restoration or enhancement. The characteristics of the restored or enhanced wetlands must be equal to or better than those of the affected wetlands to achieve no net loss of wetlands.

Executive Order 13112 - Invasive Species

Executive Order 13112 - Invasive Species directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. As part of the proposed action, USFWS and USACE issue permits and are responsible for ensuring that the proposed action complies with Executive Order 13112 and does not contribute to the spread of invasive species.

STATE

California Endangered Species Act

Under the California Endangered Species Act (CESA), CDFG has the responsibility for maintaining a list of endangered and threatened species (Fish and Game Code - FGC 2070). Sections 2050 through 2098 of the FGC outline the protection provided to California's rare, endangered, and threatened species. Section 2080 of the FGC prohibits the taking of plants and animals listed under the CESA. Section 2081 established an incidental take permit program for state-listed species. CDFG maintains a list of "candidate species" which are species that

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CDFG formally notices as being under review for addition to the list of endangered or threatened species.

Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project study area and determine whether the proposed project will have a potentially significant impact on such species. In addition, CDFG encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of the CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from CDFG would be in the form of an Incidental Take Permit.

Native Plant Protection Act

In addition, the Native Plant Protection Act of 1977 (California Fish and Game Code Section 1900 et seq.) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered (as defined by CDFG). An exception to this prohibition in the Act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify CDFG and give that state agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed. FGC, Section 1913 exempts from "take" prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way". Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

CDFG also maintains lists of "species of special concern" which serve as species "watch lists." The CDFG has also identified many "Species of Special Concern." Species with this status have limited distribution or the extent of their habitats has been reduced substantially, such that their populations may be threatened. Thus, their populations are monitored, and they may receive special attention during environmental review. While they do not have statutory protection, they may be considered rare under CEQA and thereby warrant specific protection measures.

Sensitive species that would qualify for listing but are not currently listed are afforded protection under CEQA. The CEQA Guidelines Section 15065 ("Mandatory Findings of Significance") requires that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines Section 15380 ("Rare or Endangered Species") provides for assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Unlisted plant species on the California Native Plant Society's (CNPS) Lists 1A, 1B, and 2 would typically be considered under CEQA.

California Native Plant Society

The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings:

List 1A: Plants Believed Extinct.

List 1B: Plants Rare, Threatened, or Endangered in California and elsewhere.

List 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere.

List 3: Plants about Which We Need More Information - A Review List.

List 4: Plants of Limited Distribution - A Watch List.

Raptor Regulations in the California Fish and Game Code

Sections 3500 to 5500 of the California Fish and Game Code outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these Sections may not be taken or possessed at any time. The CDFG cannot issue permits or licenses that authorize the “take” of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock.

Under Section 3503.5 of the California Fish and Game Code, it is unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

LOCAL

City of Elk Grove General Plan

The City of Elk Grove General Plan serves as the overall guiding policy document for land use, development, and environmental quality for the City of Elk Grove. The Conservation and Air Quality Element of the Elk Grove General Plan includes goals and policies to preserve, protect, enhance and promote the City’s valuable natural resources. The City of Elk Grove General Plan identifies specific goals and policies regarding biological and natural resources. **Table 4.3-3** analyzes the project’s consistency with applicable City of Elk Grove General Plan policies. While this EIR analyzes the project’s consistency with the City of Elk Grove General Plan pursuant to CEQA Section 15125(d), the City of Elk Grove would ultimately make the determination of the project’s consistency with the General Plan.

**TABLE 4.3-3
PROJECT CONSISTENCY WITH THE CITY OF ELK GROVE POLICIES AND REGULATIONS FOR THE PROTECTION AND CONSERVATION OF NATURAL RESOURCES**

General Plan Objectives and Policies	Consistency with General Plan	Analysis
<p>Policy CAQ-8 Large trees (both native and non-native) are an important aesthetic (and, in some cases, biological) resource. Trees which function as an important part of the City’s or a neighborhood’s aesthetic character or as natural habitat should be retained to the extent possible during the development</p>	<p>Yes, with mitigation</p>	<p>Mitigation measures identified in this section would require new development to retain trees to the extent feasible and, if retention is not feasible, require off-site mitigation consistent with this policy.</p>

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General Plan Objectives and Policies	Consistency with General Plan	Analysis
<p>of new structures, roadways (public and private, including roadway widening), parks, drainage channels, and other uses and structures. If trees cannot be preserved onsite, offsite mitigation or payment of an in-lieu fee may be required by the City. Where possible, trees planted for mitigation should be located in the same watershed as the trees which were removed. Trees that cannot be protected shall be replaced either on-site or off-site as required by the City.</p>		
<p>Policy CAQ-9 Wetlands, vernal pools, marshland and riparian (streamside) areas are considered to be important resources. Impacts to these resources shall be avoided unless shown to be technically infeasible. The City shall seek to ensure that no net loss of wetland areas occurs, which may be accomplished by avoidance, re-vegetation and restoration onsite or creation of riparian habitat corridors.</p>	<p>Yes, with mitigation</p>	<p>Implementation of mitigation measures identified in this section would ensure that no net loss of wetland areas or vernal pools occurs.</p>
<p>Policy CAQ 11 The City shall seek to preserve areas, where feasible, where special-status plant and animal species and critical habitat areas are known to be present or potentially occurring based on City biological resource mapping and data provided in the General Plan EIR or other technical material that may be adversely affected by public or private development projects. Where preservation is not possible, appropriate mitigation shall be included in the public or private project. "Special-status" species are generally defined as species considered to be rare, threatened, endangered, or otherwise protected under local, state, and/or federal policies, regulations or laws.</p>	<p>Yes, with mitigation</p>	<p>The proposed project would be required by mitigation measures in this section to ensure that special-status plant and animal species and critical habitat areas are preserved or appropriate project mitigation implemented.</p>
<p>Policy CAQ-19 Encourage the retention of natural stream corridors, and the creation of natural stream channels where improvements to drainage capacity are required.</p>	<p>Yes</p>	<p>There are no known natural streams within the project area.</p>
<p>Policy CAQ-21 Development adjacent to a natural stream(s) shall provide a "stream buffer zone" along the stream.</p>	<p>Yes</p>	<p>There are no known natural streams within the project area.</p>

City of Elk Grove Tree Preservation and Protection Ordinance

General Plan Policy CAQ-8, and associated action items, as well as the City of Elk Grove Tree Protection and Preservation Ordinance (Chapter 19.12) require that on-site trees be protected to the fullest extent feasible or mitigated for in the event that they cannot be retained on-site. The Tree Preservation and Protection Ordinance defines protected trees as any living native oak tree having at least one trunk of six inches or more in diameter measured four and one-half (4 1/2) feet above the ground, or a multi-trunked native oak tree having an aggregate diameter of ten inches or more, measured four and one-half (4 1/2) feet above the ground (dbh). The current Tree Ordinance furthermore states that no person shall trench, grade or fill within the drip

line of any tree or destroy, kill or remove any tree as defined in the designated urban area of the City, on any property, public or private, without a tree permit, or unless authorized as a condition of a discretionary project approval (City of Elk Grove, 2007). The ordinance requires mitigation for the removal of all oak trees that are six inches dbh or larger as well as other trees that have been selected for preservation. Current policies require that every inch lost will be mitigated by an inch planted or money placed in a tree mitigation bank.

Swainson's Hawk Ordinance

Chapter 16.130 of the City of Elk Grove Code requires mitigation for the loss of Swainson's hawk habitat. The mitigation is fee-based and is calculated at ratio dependent upon the proximity of the Project area to known Swainson's hawk nests, up to a maximum of ten miles. The fees are used to purchase easements or fee title on property to be held in perpetuity for Swainson's Hawk foraging habitat. Where a project is located within one mile of known hawk nest sites, the impacts are not considered adequately mitigated by the payment of fees, and additional mitigation measures are required. These measures typically consist of providing protected habitat management land elsewhere in the region at a ratio of 1 acre per acre developed, if a portion of the land would be managed for agriculture; one-half acre per acre developed if all the habitat management land would be managed specifically for hawk habitat; or alternative mitigation of equal or greater protection as approved by the CDFG.

Habitat Plan

The City of Elk Grove is partnering with Sacramento County, the Cities of Rancho Cordova and Galt, and Regional County Sanitation District and County Water Agency in drafting The South Sacramento Habitat Conservation Plan (SSHCP), which is a regional approach to addressing issues related to urban development, habitat conservation and agricultural protection. The SSHCP will consolidate environmental efforts to protect and enhance wetlands (primarily vernal pools) and upland habitats to provide ecologically viable conservation areas. It will also minimize regulatory hurdles and streamline the permitting process for development projects. The SSHCP will cover 41 different species of plants and wildlife including 11 that are state or federally listed as threatened or endangered. The SSHCP will be an agreement between state/federal wildlife and wetland regulators and local jurisdictions, which will allow land owners to engage in the "incidental take" of listed species (i.e., to destroy or degrade habitat) in return for conservation commitments from local jurisdictions. The options for securing these commitments are currently being developed and will be identified prior to the adoption of the SSHCP. The habitat plan has not been adopted and thus does not provide any regulatory requirements.

4.3.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

Based on the following State CEQA Guidelines Appendix G thresholds of significance, impacts to biological resources would be considered significant if the project would:

- 1) 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 CDFG or USFWS.
- 2) 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 CDFG or USFWS.

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- 3) Have a substantial adverse effect on federally protected wetlands as 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 other means.
- 4) 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.
- 5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- 6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

As stated in the Notice of Preparation, the proposed Sheldon/99 GPA and Rezone project will have no impact to migratory wildlife corridors and native wildlife nursery sites or on an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, these issues will not be addressed further in the EIR.

METHODOLOGY

Available information pertaining to the natural resources of the region was reviewed, including biological resource documentation from other recent projects within the vicinity of the proposed project area as well as aerial photographs of the project area and Geographical Information Systems (GIS) data. A review of pertinent documents included:

- California Department of Fish and Game (CDFG) California Natural Diversity Database Record Search for Special-Status Species: Florin, Elk Grove, Clarksburg, Sacramento West, Sacramento East, Carmichael, Elk Grove, Galt, Bruceville, and Courtland Quadrangles, 2007;
- California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California, 2007;
- The City of Elk Grove General Plan, adopted in 2003 with amendments through May 1, 2007;
- The City of Elk Grove's Final Environmental Impact Report for the Elk Grove General Plan, October 2003;
- The City of Elk Grove's Sheldon Road/SR 99 Interchange Improvement Project Final Environmental Impact Report/Environmental Assessment, 2005;
- The City of Elk Grove's Sheldon Road/SR 99 Interchange Improvement Project Final Wetland Delineation, 2006
- South Sacramento Draft Habitat Conservation Plan, County of Sacramento, 2008
- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service's (NRCS) Soil Survey of Sacramento County; and

- U.S. Fish and Wildlife Service (USFWS) Special-Status Species List for the Florin, Elk Grove, Clarksburg, Sacramento West, Sacramento East, Carmichael, Elk Grove, Galt, Bruceville, and Courtland Quadrangles, 2007

According to technical studies, approximately 22 acres of the current project area were previously assessed as part of the Sheldon Road/ State Route 99 Interchange Reconstruction Project. As the final wetlands delineation for the Sheldon Road/ State Route 99 Interchange Reconstruction Project does not delineate areas outside of the Sheldon Road/ State Route 99 Interchange project boundaries, additional wetland features may be present within the Sheldon Road and State Route 99 General Plan Amendment and Rezone project area. Consequently, additional surveys are needed in order to determine the entirety of wetland features that may occur within the proposed project area.

IMPACTS AND MITIGATION MEASURES

Potential Impacts to Common Plant and Wildlife Species

Impact 4.3.1 Full build out of the proposed project would result in the loss or disturbance of common plant and wildlife species and impact up to 22.3 acres of annual grassland habitat and approximately 21 acres of ruderal habitat. These impacts are considered **less than significant**.

A total of approximately 22.3 acres of annual grassland and 21 acres of developed/ ruderal vegetation with urban landscaping occur within the proposed project area. The existing 45 acres within the project area provide habitat for common plant and animal species. Several common resident and migratory wildlife species, described in Section 4.3.1 above, may use habitats within the project vicinity for foraging, shelter, and breeding. California annual grassland provides foraging and breeding habitat for many wildlife species. Grasslands are important foraging grounds for insect eaters and seed collecting mammals including squirrels, moles, voles, gophers, mice, and rabbits and their predators, coyotes and raptors such as hawks and owls. Annual grasslands also have the potential to provide suitable shelter, basking sites, and foraging habitat for snakes and lizards. Several bat species utilize large tree snags as habitat for roosting. Adjacent wetlands areas provide foraging, migration, dispersal, and breeding habitat for many wildlife species, including several amphibians and reptiles.

Regionally and locally common wildlife species would be lost or disturbed during construction within the project area, both directly (through take of individuals or loss of habitat) and indirectly (through increased human presence associated with construction and operation of commercial and high density uses). While some resident wildlife species would adapt to or not be disturbed by project activities, some species would be displaced and would have to compete with existing resident populations in adjoining areas for resources.

Listed species of wildlife are protected by federal and state regulations and impacts to these species are discussed under Impacts 4.3.2 and 4.3.3. However, common wildlife species that are relatively abundant currently receive no protection from federal, state, or local resource agencies. As implementation of the proposed project would not result in any of these species dropping below self-sustaining levels, the potential disturbance of 45 acres of habitat are considered to have a negligible effect on common wildlife populations. Therefore, the potential loss or disturbance of common plant and wildlife species and their habitat is considered to have a **less than significant** impact.

4.3 BIOLOGICAL AND NATURAL RESOURCES

Mitigation Measures

None required

Potential Loss or Disturbance of Special-Status Plant Species

Impact 4.3.2 According to the project description, full build out of the proposed project would result in the loss or disturbance of approximately 45 acres of land, in addition to individual mature trees. Project implementation may remove special-status plant species, which could be **potentially significant**.

Suitable habitat within the project area, including wetlands and vernal pools, provides conditions suitable for special-status plant species, including: Bristly sedge (*Carex comosa*), Dwarf downingia (*Downingia pusilla*), Legenere (*Legenere limosa*), Sacramento Orcutt grass (*Orcuttia viscida*), Slender Orcutt grass (*Orcuttia tenuis*), and Succulent owl's clover (*Castilleja campestris* ssp. *succulenta*). Subsequent development under the proposed Sheldon/99 GPA and Rezone project could result in direct loss of special-status plant species. In addition to direct impacts associated with habitat loss, indirect effects of development, including impacts to water quality and hydrology, introduction of non-native species, and increased human presence, could impact these species. This impact is **potentially significant**.

Mitigation Measures

MM 4.3.2a Prior to approval of development plans associated with any subsequent entitlement requests for the project site, focused surveys shall be conducted to determine the presence of special-status plant species with potential to occur in the project area. Surveys shall be conducted in accordance with CDFG *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (CDFG 2000). These guidelines require rare plant surveys to be conducted at the proper time of year when rare or endangered species are both "evident" and identifiable. Field surveys shall be scheduled to coincide with known blooming periods, and/or during periods of physiological development that are necessary to identify the plant species of concern. If no special-status plant species are found, no additional mitigation measures per direct impacts are necessary.

If special-status plant species are found within the project site, the site plans shall be revised, if determined feasible by the City, to avoid the special-status plant species and provide an adequate buffer suitable to the long-term retention and maintenance of these species on the project site.

If any special-status plant species are found within the project site and cannot be avoided, the applicant shall consult with the USFWS and/or CDFG, as applicable, to determine appropriate mitigation measures, including off-site transplanting or replacement planting.

Timing/Implementation: Prior to development plan review approval.

Enforcement/Monitoring: City of Elk Grove Development Services, Planning.

Implementation of mitigation measure **MM 4.3.2a** would reduce impacts to special-status plant species to a level that is considered **less than significant** by either avoidance on-site or off-site transplanting or replacement planting.

Potential Loss or Disturbance of Special-Status Wildlife Species

Impact 4.3.3 According to the project description, full build out of the proposed project would result in the loss or disturbance of approximately 45 acres of wildlife habitat. Project implementation could result in direct and indirect impacts on special-status wildlife species and their associated habitats. This is considered a **significant** impact.

Wetlands, vernal pools, and annual grassland provide suitable habitat for several special-status wildlife species, including: Midvalley fairy shrimp (*Branchinecta mesovallensis*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), Swainson's hawk (*Buteo swainsoni*), western burrowing owl (*Athene cunicularia hypugea*), as well as two species of bats, including the Hoary bat (*Lasiurus cinereus*) and the small-footed myotis (*Myotis ciliolabrum*). Furthermore, the large, mature trees within the project vicinity support potential habitat for nesting resident and migratory birds, including raptors, egrets, and owls.

Subsequent development under the proposed Sheldon/99 GPA and Rezone project could result in direct impact to these species as well as loss of habitat areas and obstruct movement associated with these special-status wildlife species. Of special concern is the loss of Swainson's hawk foraging habitat as well as vernal pool crustaceans. In addition to direct impacts associated with habitat loss, indirect effects of development, including impacts to water quality and hydrology, introduction of non-native species, and increased human presence, could result in a significant impact to these species.

Mitigation Measures

MM 4.3.3a USFWS protocol-level surveys (USFWS 1996b) for special-status vernal pool species within suitable habitat areas are recommended prior to commencement of any activities that could impact vernal pool species. Otherwise, if suitable habitat is located within 250-feet of the proposed project, the applicant may assume presence of special-status species and mitigate accordingly.

- 1) Prior to construction, the applicant shall obtain authorization from the USFWS for incidental take of listed vernal pool branchiopod species that have suitable habitat affected by the proposed project. The authorization for incidental take would be initiated by formal consultation under Section 7 or Section 10 of the federal ESA.
- 2) If impacts to vernal pool habitat as a result of the proposed project cannot be avoided, the applicant shall compensate for direct and/or indirect effects to listed vernal pool species through consultation with the USFWS. The applicant shall implement all measures included in the Biological Opinion issued as a result of this consultation. For every acre of habitat directly or indirectly affected, at least two vernal pool credits would be dedicated within a USFWS approved preservation bank, or based on USFWS evaluation of site specific conservation values, three acres of vernal pool habitat may be preserved within the proposed

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project site or on another non-bank site as approved by USFWS. Final determinations of the amount of mitigation acreage to be provided, and if mitigation will be accomplished through on-site replacement or compensatory mitigation, shall be determined during consultation with USFWS. Mitigation shall occur so as to achieve no net loss of vernal pool habitat, as determined by the USFWS. A comprehensive plan for avoidance, on-site mitigation, off-site mitigation, or other compensation will be developed in cooperation with relevant state and federal agencies.

Timing/Implementation: Prior to construction and site grading activities.

Enforcement/Monitoring: City of Elk Grove Development Services, Planning.

MM 4.3.3b In order to mitigate for the loss of Swainson's hawk foraging habitat, the applicant shall implement one of the following City of Elk Grove's approved mitigation alternatives.

Monitoring Action

Prior to any site disturbance, such as clearing or grubbing, or the issuance of any permits for grading, building, or other site improvements, whichever occurs first, the project applicant shall:

- Preserve 1.0 acre of similar habitat for each acre lost. This land shall be protected through a fee title or conservation easement acceptable to the CDFG and the City of Elk Grove as set forth in Chapter 16.130.040 of the City of Elk Grove Municipal Code as such may be amended from time to time and to the extent that said Chapter remains in effect, OR
- Submit payment of Swainson's hawk impact mitigation fee per acre of habitat impacted (payment shall be at a 1:1 ratio) to the City of Elk Grove in the amount set forth in Chapter 16.130 of the City of Elk Grove Code as such may be amended from time to time and to the extent that said chapter remains in effect, OR
- Submit proof that Swainson's hawk foraging mitigation credits have been purchased at a California Department of Fish and Game approved mitigation bank.

Timing/Implementation: Prior to any site disturbance, such as clearing or grubbing, or the issuance of any permits for grading, building, or other site improvements, whichever occurs first.

Enforcement/Monitoring: City of Elk Grove Development Services-Planning in consultation with CDFG.

MM 4.3.3c The applicant shall conduct construction activities and vegetation clearing (including shrubs and bushes) to avoid raptor nesting activities, where feasible. No action is necessary if construction will occur during the non-breeding season (September 1st through February 28th).

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- 3) If proposed construction activities (including earthmoving or vegetation removal) are planned to occur during the nesting seasons for raptors and migratory birds (typically March 1st through August 31st), the applicant shall retain a qualified biologist to conduct a focused survey for active nests of raptors and migratory birds within and in the vicinity of no less than 500 feet outside project boundaries, where possible.
- 4) Surveys shall occur no more than two weeks prior to ground disturbance or tree removal.
- 5) If active nests are located during preconstruction surveys, USFWS and/or CDFG shall be notified regarding the status of the nests.
- 6) Furthermore, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or a qualified biologist deems disturbance potential to be minimal (in consultation with USFWS and/or CDFG).
- 7) Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment) at a minimum radius of 100-feet around any raptors nest, and 50-feet around the nest for other migratory birds.
- 8) Restrictions may also include the alteration of the construction schedule.
- 9) In addition, a qualified wildlife biologist shall monitor the nest(s) to determine when the young have fledged and submit bi-weekly reports to the City Planning Department throughout the nesting season. The biological monitor shall have the authority to cease construction if there is any sign of distress to the raptor or migratory bird.
- 10) Reference to this requirement and the MBTA shall be included in the construction specifications.

Timing/Implementation: *Prior to construction and site grading activities.*

Enforcement/Monitoring: *City of Elk Grove Development Services, Planning.*

MM 4.3.3d

Within 30 days prior to the start of any construction activity, outside of the western burrowing owl breeding season (September–January), a qualified biologist shall conduct a burrow survey to determine if burrowing owls are present within the project area.

- 1) If burrowing owls are observed on the site, measures such as flagging the burrow and avoiding disturbance, passive relocation, or active relocation to move owls from the site, shall be implemented to ensure that no owls or active burrows are inadvertently buried during construction. All measures shall be determined by a qualified biologist and approved by the CDFG.
- 2) All burrowing owl surveys shall be conducted according to CDFG protocol. The protocol requires, at a minimum, four field surveys of the entire site and areas within 500 feet of the site by walking transects close enough that the entire site is visible. The survey should be at least three

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hours in length, either from one hour before sunrise to two hours after or two hours before sunset to one hour after. Surveys shall not be conducted during inclement weather, when burrowing owls are typically less active and visible.

Timing/Implementation: Prior to construction and site grading activities.

Enforcement/Monitoring: City of Elk Grove Development Services, Planning.

MM 4.3.3e

If the project site contains suitable bat roosting habitat (e.g. abandoned buildings, rock crevices, under tree bark, hollow trees, culverts, under bridges, or other dark crevices), prior to initiation of construction activity, a pre-construction bat survey shall be performed by a wildlife biologist or other qualified professional.

- 1) If bat roosts are identified on site, the City shall require that the bats be safely flushed from the sites where roosting habitat is planned to be removed prior to maternity roosting season (typically May to August) of each construction phase prior to the onset of construction activities.
- 2) If a female or maternity colony of bats are found on the project site, the project can be constructed without the elimination or disturbance of the roosting colony (e.g., if the colony roosts in an area not planned for removal), a wildlife biologist shall determine what physical and timed buffer zones shall be employed to ensure the continued success of the colony.
- 3) Such buffer zones may include a construction-free barrier of 250 feet from the roost and/or the timing of the construction activities outside of the maternity roost season (typically May to August).
- 4) If an active nursery roost is known to occur on site and the project cannot be conducted outside of the maternity roosting season, bats shall be excluded from the site after August and before May to prevent the formation of maternity colonies. Non-breeding bats shall be safely evicted, under the direction of a bat specialist.

Timing/Implementation: Prior to construction and site grading activities.

Enforcement/Monitoring: City of Elk Grove Development Services, Planning.

Implementation of the above mitigation measures would reduce impacts to special-status wildlife species to a less than significant level by conducting site-specific surveys for special-status species, ensuring that if the species is present they must either be avoided or mitigated for in accordance with state and federal guidance, and ensuring that sensitive areas are protected from construction activities. Implementation of mitigation measures **MM 4.3.3a**, **MM 4.3.3b**, **MM 4.3.3c**, **MM 4.3.3d**, and **MM 4.3.3e**, and subsequent avoidance and protection measures, would reduce potential impacts to special-status wildlife species and their foraging and nesting habitat to a level that is considered **less than significant**.

Potential Impacts to Jurisdictional Waters and Sensitive Habitats

Impact 4.3.4 Development of the proposed project could result in direct and indirect impacts to jurisdictional waters of the United States as well as the loss of sensitive habitat areas. This is considered a **potentially significant** impact.

As previously described, sensitive habitats and locally important resources consist of seasonal wetlands, vernal pools, riparian habitat, and native and some non-native trees. These resources are considered important and sensitive by the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the City of Elk Grove. Subsequent development under the proposed General Plan Amendment and Rezone could result in direct loss of these habitat types and resources.

The City of Elk Grove General Plan requires no net loss of wetland and vernal pool features. According to the Sheldon Road/ State Route 99 Interchange Reconstruction Project Wetland Delineation verified by the U.S. ACOE on May 3, 2006, approximately 0.5 acres of seasonal wetlands and approximately 1.0 acre of vernal pools occur within the project area (City of Elk Grove, 2006). As the final wetlands delineation for the Sheldon Road/ State Route 99 Interchange Reconstruction Project does not delineate areas outside of the Sheldon Road/ State Route 99 Interchange project boundaries, additional jurisdictional features may occur within the Sheldon Road and State Route 99 General Plan Amendment and Rezone project area. Consequently, additional surveys are needed in order to determine the entirety of jurisdictional features that may occur within the proposed project area.

Jurisdictional waters of the U.S. are subject to Section 404 of the Clean Water Act and are regulated by the U.S. Army Corps of Engineers (ACOE). Discharge of material into wetlands or other waters of the United States requires a Section 404 permit from the USACE and a Section 401 water quality certification from the RWQCB. In addition, work within streambeds, including ephemeral and intermittent drainages, requires a Streambed Alteration Agreement with the California Department of Fish and Game (CDFG) pursuant to Sections 1600-1607 of the State Fish and Game Code.

In addition to wetland features, there are several trees of various species located within the project area. Elk Grove General Plan Policy CAQ-8 and associated action items as well as the City's Tree Preservation and Protection Ordinance require that on-site trees be protected to the fullest extent feasible or mitigated for in the event that they cannot be retained onsite. Subsequent development of the project site could result in the loss of trees in conflict with City requirements.

In addition to direct impacts associated with habitat loss, indirect effects of development, including impacts to water quality and hydrology, introduction of non-native species, and increased human presence, could impact sensitive habitat areas within the project area. This impact is considered **potentially significant**.

Mitigation Measures

MM 4.3.4a Prior to approval of development plans for subsequent projects, the project applicant shall conduct a wetlands delineation to determine wetland and vernal pool features, including jurisdictional and non-jurisdictional features, located within the project area. The wetland delineation shall be submitted to the Army Corps of Engineers for verification.

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If the Army Corps of Engineers does determine that there are jurisdictional waters on the Project site, the applicant shall ensure that the Project will result in no-net-loss of waters of the US by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation for the impact. Compensatory mitigation may consist of: (a) obtaining credits from a mitigation bank; (b) making a payment to an in-lieu fee program that will conduct wetland, stream or other aquatic resource restoration, creation, enhancement, or preservation activities; these programs are generally administered by government agencies or non-profit organizations that have established an agreement with the regulatory agencies to use in-lieu fee payments collected from permit applicants; and/or (c) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement and/or preservation activity. This last type of compensatory mitigation may be provided at or adjacent the impact site (i.e., on-site mitigation) or at another location, usually within the same watershed as the permitted impact (i.e., off-site mitigation). The Project proponent/permit applicant retains responsibility for the implementation and success of the mitigation project.

If the Army Corps of Engineers determines that the water features on the site are not subject to their regulatory jurisdiction, the applicant shall ensure no-net-loss of wetland and vernal pool habitat. Acre-for-acre in-kind wetland habitat shall be created, restored, or preserved on either existing agricultural or otherwise undeveloped property within the Elk Grove Creek watershed through the purchase of such property and the establishment of a contingent in-perpetuity conservation easement. Alternatively, if no such property is available or the particular arrangements prove impracticable, then the City may allow the option of offsite wetland mitigation credit purchases from a local or regional mitigation bank.

If wetlands and vernal pools are retained on the project site and avoided by development activities, the wetlands and other waters shall be protected from disturbance during project construction by 50-foot buffer zones. Each zone will begin from the outer bank edge of the seasonal drainages. Wetlands shall be marked with orange construction barrier fencing or stakes and flags. Buffer zones shall be demarcated in the field by an environmental monitor. Construction activities such as road or pipeline installation that must occur within the buffer zone shall be supervised by the monitor to ensure that construction equipment/personnel do not enter the wetland and/or waters boundary within the buffer. The monitor shall also verify that barrier fencing and flagging are properly located and installed. The monitor shall have the authority to halt all construction activities in the vicinity of wetlands if these guidelines are violated. The locations of wetlands and other waters shall be clearly identified on the construction drawings. Fencing or other barriers shall remain in place until all construction and restoration work that involves heavy equipment is complete. Construction vehicles, equipment, or materials shall not be parked or stored within the fenced area.

Timing/Implementation: *Prior to submittal of site plans.*

Enforcement/Monitoring: *City of Elk Grove Development Services,
Planning.*

MM 4.3.4b Prior to working near sensitive areas (i.e., riparian habitat, wetlands, vernal pools), all heavy equipment shall be closely examined for oil and fuel discharges. All equipment operated adjacent to these areas shall be checked and maintained daily, to prevent leaks of materials that, if introduced to water, could be deleterious to aquatic or plant life. Petroleum from project-related activities shall be prevented from contaminating the soil and or/entering sensitive areas. Any of these materials placed within or where they may enter the sensitive areas shall be removed immediately. Regulatory agencies shall be notified immediately if a spill occurs, and shall provide consultation regarding clean-up procedures.

Timing/Implementation: During construction activities.

Enforcement/Monitoring: City of Elk Grove Development Services, Planning.

MM 4.3.4c Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic or plant life, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering the sensitive areas. Any of these materials placed within or where they may enter these areas shall be removed immediately.

Timing/Implementation: During construction activities.

Enforcement/Monitoring: City of Elk Grove Development Services, Planning.

MM 4.3.4d Adequate erosion control and water pollution control measures shall be adopted and maintained in order to prevent deleterious materials from entering any sensitive areas including vernal pools, wetlands, waterways or other aquatic habitat. The siltation curtain shall be of effective design to limit and abate heavily silted material from impacting these sensitive areas.

Timing/Implementation: During construction activities.

Enforcement/Monitoring: City of Elk Grove Development Services, Planning.

MM 4.3.4e A tree survey shall be conducted by an arborist certified by the International Society of Arboriculture (ISA) to enumerate and evaluate all trees on the site that meet the standards in the City of Elk Grove Tree Protection Ordinance. All tree locations shall be mapped on construction plans of the proposed project.

All trees that meet the criteria contained in the City's Tree Preservation Ordinance shall be avoided by construction and protected during all construction activity, if feasible. Trees to be retained shall be protected by implementation of the following measures:

- 1) Before initiating any construction activity near protected trees, install barrier fencing or a similar protective barrier at least one foot outside the drip line of each tree or as far as possible from the tree trunk where

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the existing road is within the tree drip line. The barrier fencing will remain in place for the duration of construction activity.

- 2) No vehicles, construction equipment, mobile home/office, supplies, materials, or facilities shall be driven, parked, stockpiled, or located within the drip lines of trees.
- 3) Conduct any work necessary within the drip lines by hand.
- 4) Paving within the drip lines of trees shall be stringently minimized. When paving is absolutely necessary, porous material shall be used or a piped aeration system shall be installed under the supervision of a certified arborist.

The above requirements shall be implemented prior to and during construction activities. Improvement and construction plans shall specifically note this measure.

For trees that meet the criteria contained in the City's Tree Preservation and Protection Ordinance that are planned to be removed, a tree mitigation plan shall be developed. Protected trees shall be replaced on an inch-per-inch ratio of trees lost. Tree mapping will delineate all protected trees planned to be removed. Mitigation areas, if needed, shall be within the project area limits if feasible. However, if on-site mitigation is not feasible, off-site mitigation within the city limits will be acceptable. The mitigation project shall include the following components:

- 1) Number, location, size, and species of the replacement trees to be planted;
- 2) Methods of irrigation for planted trees;
- 3) Planting and maintenance schedule; and
- 4) Plan for care of planted trees for a three-year establishment period and replacement of any planted trees that do not survive.

Timing/Implementation: *Prior to grading activities.*

Enforcement/Monitoring: *City of Elk Grove Development Services, Planning.*

Implementation of the above mitigation measures and associated regulations would reduce impacts to sensitive resources to a less than significant level and ensure that sensitive areas are protected from construction activities. Implementation of mitigation measures **MM 4.3.4a**, **MM 4.3.4b**, **MM 4.3.4c**, **MM 4.3.4d**, and **MM 4.3.4e** as well as adherence to federal, state, and local laws governing jurisdictional waters and sensitive resources, would reduce the impacts to jurisdictional waters and other sensitive habitats to a level that is considered **less than significant**.

4.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The cumulative setting for biological resources includes Sacramento County and the surrounding region. The region was once predominately characterized by agricultural uses, including farming and orchards. Irrigation canals traverse the area, providing water for the agricultural uses. Fremont cottonwood, arroyo willow, valley oak, poison oak, shrubs and Himalayan blackberry are commonly found around the irrigation canals. Perennial marshes and farmed wetlands are also prevalent in the region, supporting cattails, tule, Himalayan blackberry, willow, and grasses. Several species of oak, California black walnut, sycamore, and other native and ornamental tree species grow in the area. The neighboring agricultural lands, marshes, canals and trees provide habitat for endangered and protected species as well as species of concern. The character and landscape of the region has been gradually changing from agricultural to residential and commercial uses since the 1970s. This change will continue to occur with development anticipated by the City of Elk Grove General Plan, City of Sacramento General Plan, other relevant planning documents, and development of planned, proposed, approved, and reasonably foreseeable projects.

IMPACTS AND MITIGATION MEASURES

Cumulative Biological Resource Impacts

Impact 4.3.5 The development of this project would contribute cumulatively to the loss of biological resources in the region and the ongoing urbanization in southern Sacramento County. This would result in a **cumulatively considerable** impact.

In addition to the Sheldon Road/ State Route 99 General Plan Amendment and Rezone project, a number of developments in southern Sacramento County are currently anticipated or under construction, as described in Section 4.0, all of which have the potential to adversely affect the biological resources in the region. Biological resources of concern in southern Sacramento County include impacts to Swainson's hawk nesting and foraging habitat, impacts to vernal pool habitat, as well as impacts to other jurisdictional waters of the U.S.

Although the Sheldon Road/State Route 99 General Plan Amendment and Rezone project area is considered disturbed, it does provide habitat for a variety of common and some special-status species; namely Swainson's hawk foraging habitat and vernal pool crustaceans. Individually, the elimination of these biological resources associated with the proposed intensification of land uses would not represent a considerable loss. However, when considering the cumulative loss from other local developments, the loss of these biological resources would be considered a **cumulatively considerable** impact.

Mitigation Measures

Through the implementation of the mitigation measures recommended in this section, as well as the project's consistency with the City of Elk Grove General Plan goals and policies, and adherence to all federal and state laws, the project's contribution impacts to biological resources would be reduced to **less than cumulatively considerable** levels as described under Impacts 4.3.2 through 4.3.4.

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