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*Environmental  
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**Biological Resources Assessment  
of the City of Winters' Interstate 505/State Route 128 Land  
Use Modifications Project**

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## **Introduction**

The City of Winters (City), located in southwestern Yolo County along the border of Solano County (Figure 1), intends to modify the land use designations of several contiguous parcels located on the eastern edge of the City. These parcels, totaling 140.1 acres are located on the north and south sides of Grant Avenue (State Route 128) and on the west side of and adjoining Interstate 505. The objectives of the project are to correct inconsistencies between general plan and zoning designations in the area, eliminate a duplicative process that requires master plans for individual project applications, and promote economic development through facilitation of commercial, industrial, and residential development within the project area.

This biological resources assessment describes the biological setting of the proposed project, provides a comprehensive summary of natural communities, habitats, and terrestrial wildlife and plant resources including special-status species, and provides a preliminary assessment of potential impacts and recommendations for project mitigation.

### **Project Location and Setting**

The 140.1 acre project area is located on the eastern edge of the City and is bounded by Interstate 505 on the east, Putah Creek and existing urbanization on the south, the Willow Canal on the north, and existing urbanization on the west (Figure 2). With the exception of an orchard adjacent to the northwest corner, the project area is entirely contiguous with existing urban development on the western boundary and a federal interstate highway on the east. Grant Avenue (State Route 128) extends northeast to southwest through the center of the project area. County Road 90 extends northward from Grant Avenue near Interstate 505 and Timber Crest Road extends north-south between Grant Avenue and the Willow Canal approximately 0.2 miles west of the Interstate 505 right of way. East Main Street extends southwest from Grant Avenue for approximately 0.1 mile through a small portion of the project area until it enters the urbanized area. There are no other paved roads within the project area (Figure 2).

The setting can be generally characterized as agricultural land within an agricultural/urban interface. One commercial operation, a Chevron station, occurs within the project area along Grant Avenue and there are several rural residences within the project area. There is also a 6.3 acres band of designated Open Space along the southern boundary of the area (on the McClish property), adjoining Putah Creek, that serves to permanently protect existing edge habitat. The project area otherwise consists currently of primarily active or idle agricultural land.

### **Objective**

The purpose of this biological resources assessment is to describe and evaluate the biological resources and use of the project area. Based on a reconnaissance-level survey of the project area, the assessment describes the presence and distribution of natural



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**Figure 1**  
**Regional Location Map**



Figure 2  
Project Area Map

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communities and habitats, the occurrence or potential for occurrence of special-status species, and the general wildlife use of the area. This information will help determine the scope of any subsequent environmental review with regard to biological resources and will be used to assess impacts to biological resources from implementation of the proposed project pursuant to CEQA guidance.

## **Methods**

### **Pre-survey Investigation**

Prior to conducting the site visit, available information regarding biological resources on or near the project area was gathered and reviewed. Sources included:

- California Natural Diversity Data Base;
- Yolo County General Plan;
- City of Winters General Plan;
- Draft Initial Study for the project;
- Yolo Natural Heritage Plan species accounts and maps;
- Other environmental documents from the vicinity of the project area; and
- Estep 2008 (Distribution, Abundance, and Habitat Associations of the Swainson's Hawk in Yolo County)

Aerial photographs and land use/vegetation maps of the project area and surrounding area were also reviewed.

### **Field Surveys**

A reconnaissance-level biological resources survey of the project area was conducted on October 26, 2011. The survey was designed for complete coverage of the entire 140.1 acre project area and to record land uses, natural communities and wildlife habitats, occurrences of sensitive wildlife resources or their habitat, and general wildlife use of the area. The survey was conducted by driving all available roads, walking the perimeter of the active agricultural fields, walking transects across inactive agricultural fields, and evaluating ruderal and edge habitats. All vegetation, land uses, and habitat types were noted, mapped, and evaluated. All irrigation channels, fence rows, power line corridors, and other physical and topographic features were inspected and evaluated. Binoculars and spotting scope were used to identify wildlife occurrences. Representative photographs were taken from several vantage points. Locations of significant wildlife occurrences were photographed and recorded using a Garmin Etrex Global Positioning Systems (GPS) unit.

Note that the reconnaissance survey was not conducted during the breeding season and therefore wildlife breeding use of the project area was not confirmed. This is particularly

relevant for certain special-status species, such as Swainson's hawk, white-tailed kite, and burrowing owl, that may require additional mitigation or avoidance measures if they are found breeding on or adjacent to the project area.

## Impact Analysis

Impacts were assessed based on CEQA guidance and definitions pertaining to significance determinations and thresholds of significance, as follows:

During the CEQA review process, environmental impacts are assessed and a significance determination provided based on pre-established thresholds of significance. Thresholds are established using guidance from CEQA, particularly Appendix G of the State CEQA guidelines and CEQA Section 15065 (Mandatory Findings of Significance). CEQA guidance is then refined or defined based on further direction from the lead agency.

Consistent with Appendix G of the State CEQA guidelines, a biological resource impact is considered significant (before considering offsetting mitigation measures) if the lead agency determines that project implementation would result in one or more of the following:

- Substantial adverse effects, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG or USFWS;
  - A substantial adverse effect on a special-status wildlife species is typically defined as one that would:
    - Reduce the known distribution of a species,
    - Reduce the local or regional population of a species,
    - Increase predation of a species leading to population reduction,
    - Reduce habitat availability sufficient to affect potential reproduction, or
    - Reduce habitat availability sufficient to constrain the distribution of a species and not allow for natural changes in distributional patterns over time.
- Substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or interference with the use of native wildlife nursery sites.
  - Substantial interference with resident wildlife movement is typically defined as obstructions that prevent or limit wildlife access to key habitats, such as water sources or foraging habitats, or obstructions that prohibit access through key movement corridors considered important for wildlife to meet needs for food, water, reproduction, and local dispersal.

- Substantial interference with migratory wildlife movement is typically defined as obstructions that prevent or limit regional wildlife movement through the project area to meet requirements for migration, dispersal, and gene flow that exceed the defined baseline condition.

Consistent with CEQA Section 15065 (Mandatory Findings of Significance), a biological resource impact is considered significant if the project has the potential to:

- substantially degrade the quality of the environment;
- substantially reduce the habitat of a fish or wildlife species;
- cause a fish or wildlife population to drop below self-sustaining levels;
- threaten to eliminate a plant or animal community;
- substantially reduce the number or restrict the range of an endangered, rare or threatened species.

## **Results**

### **General Characteristics**

#### **Physiography**

The topography in the project area is entirely flat. There are no discernable topographical features anywhere within the project area. Elevation ranges from approximately 120 to 130 feet above mean sea level with a gradual and indiscernible declining slope eastward. There are no hydrological features including natural drainages, permanent irrigation canals, or wetland features within the boundary of the project area. However, Putah Creek, a perennial stream, borders the southern edge of the project area and the Willow Canal, a permanent water conveyance canal, borders the northern edge of the project area. A permanent drainage feature also occurs along the eastern border of the project area within the Interstate 505 right of way. The climate is mild with average annual maximum temperature of 73.6 degrees Fahrenheit and average annual minimum temperature of 49.0 degrees Fahrenheit, with winter rains and dry summers, and an average annual rainfall of approximately 20 inches.

#### **Land Use**

The project area is mostly active agricultural land, comprising approximately 71% of the project area. Two farm residences remain in the project area south of Grant Avenue, both accessed along McClish Lane, which extends from Grant Avenue, and one farm residence remains north of Grant Avenue just east of Timber Crest Road. South of Grant Avenue, the active agricultural field was bedded and prepared for spring planting at the time of the survey (Plate 1). North of Grant Avenue, the largest active agricultural field was planted with alfalfa, much of which was being grazed by sheep at the time of the survey (Plate 2). A small orchard also occurs just east of Timber Crest Road. Idle

agricultural land comprised approximately 25% of the project area. Three smaller fields south of Grant Avenue were idle and contained a variety of weeds and annual grasses. North of Grant Avenue, idle land occurs between the orchard east of Timber Crest Road and Interstate 505. Near the intersection of Grant Avenue and County Road 90 is a Chevron station, the only commercial development along Grant Avenue within the project area.



*Plate 1. Agricultural field north of Grant Avenue, looking northwest from southeastern corner of field*



*Plate 2. Agricultural field north of Grant Avenue, looking northwest from southeastern corner of field.*

### **Surrounding Land Uses**

The project area is bordered on the west by high density urban development and elsewhere by active agricultural land (Figure 2). Yolo and Solano counties are primarily agricultural landscapes with a diverse matrix of crop types and agricultural uses. The majority of agricultural land south and east (south of Grant Avenue) of the project area consists of walnut orchards, while most of the agricultural land north and east (north of Grant Avenue) consists of row and field crops. Rural residences and processing facilities also occur across the agricultural landscape.

### **Biological Communities and Wildlife Habitats**

#### **Active Agricultural Land**

For assessment purposes, eight separate agricultural fields were identified within the project area, three of which were under active agricultural production (Figure 2). Field A, the large active agricultural field south of Grant Avenue was bedded and prepared for spring planting at the time of the survey (Plates 1 and 3). It appeared to have been most recently planted with wheat, but at the time of the survey contained no vegetation. Field E, the large field north of Grant Avenue was planted with alfalfa. At the time of the survey, the field was being grazed by sheep and was subdivided with temporary fencing to contain the flock (Plates 2 and 4).



*Plate 3. Field A, looking east toward Interstate 505.*



*Plate 4. Field E, alfalfa field with sheep fencing, looking north from south end of field.*

East of Field E and immediately east of Timber Crest Road is Field F, a small walnut orchard (Figure 2). This orchard appears to be a remnant patch of a larger orchard that previously occupied much of the land around the City. The orchard extends from the north side of the rural residence along Grant Avenue north to the Willow Canal. The orchard appears to be in poor health and not well-maintained (Plate 5).



*Plate 5. Walnut orchard east of Timber Crest Road.*

## Inactive (idle) Agricultural Land

Approximately 25% of the agricultural land in the project area was idle at the time of the survey. Most of these areas appeared to have been idle for at least several years. Field B, an approximately 10-acre field immediately east of Field A and bordering the Interstate 505 right of way on the east (Figure 2), appeared to have been cultivated in the last several years. During the time of the survey, it contained a variety of nonnative weeds dominated by yellow star thistle (*Centaurea solstitialis*), yellow foxtail (*Setaria pumila*), and mustard (*Sisymbrium altissimum*), nonnative annual grasses including wild oat (*Avena fatua*) and hare barley (*Hordeum murinum*), and numerous walnut (*Juglans* sp) saplings, presumably a result of the field previously planted as a walnut orchard (Plate 6).



Plate 6. Field B, ruderal vegetation in idle field. Looking northeast from southwestern edge of field.

Idle fields C and D are the narrow fields west of Field A and south of Grant Avenue (Figure 2). Main Street separates field C from field D. These fields consist of similar ruderal vegetation, but appear to be mowed periodically, presumably to maintain a low vegetation profile near the residential and commercial development immediately west and south of the fields (Plates 7 and 8).



*Plate 7. Field C, looking northeast from Baker Street, which borders the southern boundary of the field. Grant Avenue is in the left background.*



*Plate 8. Field D, looking west from Main Street. Residential development is on the left (south), Grant Avenue is on the right (north), and commercial development in the background (west side of field).*

Fields G and H are north of Grant Avenue and west of the walnut orchard (Figure 2). Field G is west of County Road 90 and adjacent to the Chevron station along Grant Avenue, and Field H is east of County Road 90 and borders the Interstate 505 right of

way. Both consist primarily of ruderal vegetation. Other than several almond trees, suggesting this field may have formerly supported an almond orchard, Field G is almost entirely a dense carpet of yellow star thistle (Plate 9). Field H supports a variety of nonnative weeds and grasses, patches of unvegetated bare ground, several small almond trees, and several larger walnut trees on the southern end near Grant Avenue (Plate 10).



*Plate 9. Field G, looking northwest from County Road 90.*



*Plate 10. Field H, looking south toward Grant Avenue, the several larger walnut trees in the southern portion of the field, and the Chevron gas station.*

Other than remnant trees from old orchards, the active and idle agricultural fields did not support any other trees, shrubs, wetland, or other natural communities or wildlife habitats. However, numerous trees and shrubs were present along the edges of these fields, which are discussed below under edge habitats.

### Edge Habitats

In the project area, edge habitats are found along the perimeter of the project area, occur as linear habitats along roadsides or field borders, or as trees and shrubs around rural residences or farmyards. Because the majority of the project area is agricultural land, edge habitats are generally areas of higher wildlife occurrence and productivity.

**Riparian.** Putah Creek is a perennial watercourse that extends along the southeastern border of the project area (Figure 2). Putah Creek is a large, deeply incised creek approximately 250 feet from bank to bank. It supports a relatively dense, mature riparian community from the top of the bank to the waters edge. Adjacent to the project area, Putah Creek is steeply-sloped and supports a complex riparian forest with an overstory dominated by non-native eucalyptus (*Eucalyptus* sp) trees along with black walnut (*J. hindsii*), valley oak (*Quercus lobata*), and cottonwood (*Populus fremontii*) trees. The understory consists primarily of willow (*Salix* sp.), elderberry (*Sambucus* sp.), and walnut saplings. Much of the understory is open with a grassy herbaceous cover. The top of the slope, dominated by a variety of nonnative grasses and weeds, abuts Field A and is within 10 feet of the cultivated field (Plate 11).



Plate 11. Looking west along Putah Creek on the southern border of Fields A and B. Note the dense riparian, steep slope, and proximity to cultivated area.

**Water Conveyance Canals and Ditches.** The Willow Canal borders the northern edge of Fields E, F, and G. The canal supports only herbaceous vegetation throughout its length (Plate 12); however, mature cottonwood, willow, and walnut trees have developed adjacent to the Willow Canal along the Field E border (Plate 13). While the canal turns northward near the center of Field E, this row of trees continues to the northwestern corner of the project area (Figure 2). Other temporary irrigation ditches are cut along field borders as needed depending on the crop type.



*Plate 12. Willow Canal, looking east along northern border of Field F.*



*Plate 13. Looking northwest toward Field E, row of trees in background are along the northern border of Field E.*

**Field Borders.** The edges of several fields are bordered by a row of trees or shrubs. Several small valley oak and walnut trees, several cottonwood trees, small patches of Himalayan blackberry bramble, and other shrubs occur within the I-505 right of way along the eastern border of Field B (Plate 14). Ornamental trees from the adjacent residential area border the west sides of Field A and E (Plate 15).



*Plate 14. Looking north along the eastern border of Field B. Cottonwood tree is within the I-505 right of way.*



*Plate 15. Ornamental trees from adjacent residential area along northern edge of Field E.*

**Roadsides.** Rows of roadside trees and shrubs are also present in the project area. Narrow rows of shrubs and several mature valley oak and cottonwood trees occur along Grant Avenue bordering Fields A, B, and E (Plate 16) (Figure 2). A row of mostly almond trees extends the length of Timber Crest Road bordering Fields E and F (Plate 17).



*Plate 16. Small shrubs and several cottonwood trees along Grant Avenue bordering Fields A and B.*



*Plate 17. Looking north along Timber Crest Road showing small almond trees bordering Field E. Trees on the far right are in Field F.*

### **Farm Residences and Farmyards.**

Three farm residences occur within the project area. Each is surrounded by mature valley oak, walnut, or ornamental trees (Plate 18). A farmyard is present along the north side of Grant Avenue along the southern edge of Field E (Figure 2). This farmyard, which is used for staging of harvesting equipment and other farm-related uses, supports several mature cottonwood, valley oak, walnut, ornamental pine, and smaller almond trees around its perimeter (Plate 19).



*Plate 18. Rural residence at northwest corner of Field B.*



*Plate 19. Farmyard trees along Grant Avenue on the southern boundary of Field E.*

## Wetlands

No wetlands, vernal pools, or other sensitive natural communities were identified during the reconnaissance survey.

## Wildlife Occurrence and Use

Most of the project area is characteristic of Yolo County rural agricultural lands. While providing relatively low value habitat, some species are well-adapted to agricultural lands and occur regularly depending on the crop type and the availability of edge habitat. Agricultural lands are used for foraging and cover by a variety of birds and can also be used as nesting habitat by some bird species. During the survey, several common species were observed using the active and idle fields, including rock pigeon (*Columba livia*), American kestrel (*Falco sparverius*), killdeer (*Charadrius vociferous*), red-winged blackbird (*Agelaius phoeniceus*), cliff swallow (*Petrochelidon pyrrhonota*), western scrub jay (*Aphelocoma californica*), yellow-billed magpie (*Pica nuttalli*), mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), and golden-crowned sparrow (*Zonotrichia atricapilla*).

The idle fields and grassy edges also provide nesting habitat for some ground-nesting birds, such as western meadowlark (*Sturnella neglecta*), and are home to several common reptiles such as gopher snake (*Pituophis catenifer*), valley garter snake (*Thamnophis sirtalis fitchi*), and western fence lizard (*Sceloporus occidentalis*).

The agricultural habitats are also essential to several breeding and wintering raptors, particularly as foraging habitat. Several important raptor prey species or their sign were detected during surveys, including pocket gopher (*Thomomys bottae*), meadow vole (*Microtus californicus*), and black-tailed jackrabbit (*Lepus californicus*). Agricultural lands provide essential foraging habitat for locally breeding or wintering raptors such as Swainson's Hawk (*Buteo swainsoni*), red-tailed Hawk (*Buteo jamaicensis*), white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), and American kestrel.

The presence of edge habitats also contributes to the occurrence and abundance of wildlife in agricultural areas. The presence of trees, shrubs, grasses and other herbaceous vegetation in adjacent riparian habitats and along field borders and roadsides attracts birds and small and medium-sized mammals that may also use the agricultural lands for foraging and cover. Because they are less disturbed by cultivation or other management, edge habitat can be fairly productive wildlife habitat depending on the size (length and width) and vegetation composition.

The mature trees and shrubs, and the dense and structurally complex vegetation that occurs in riparian habitats, such as Putah Creek, and the mature roadside trees and shrubs along Grant Avenue and along field borders, particularly the northern border of Field E, support potential nesting habitat for many bird species, including nesting raptors. These habitats also provide denning and cover habitat for coyote (*Canis latrans*), gray fox

(*Urocyon cinereoargenteus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), opossum (*Didephis virginianus*), western gray squirrel (*Sciurus griseus*) and many other small and medium-sized mammals; and important habitat for many reptiles, amphibians, and invertebrates.

As noted above, there are no unique or distinctive topographical features or biologically important habitat features in the project area. Thus, the project area does not support important wildlife movement corridors or habitats, such as wetlands, that would attract larger concentrations of wildlife. The most important wildlife movement corridor in the area is Putah Creek, which is outside of the project area. In general, the project area supports a combination of urban- and agricultural-associated wildlife.

### **Special-status Species**

Special-status species are generally defined as species that are assigned a status designation indicating possible risk to the species. These designations are assigned by state and federal resource agencies (e.g., California Department of Fish and Game [DFG], U.S. Fish and Wildlife Service) or by private research or conservation groups (e.g., National Audubon Society, California Native Plant Society). Assignment to a special-status designation is usually done on the basis of a declining or potentially declining population, either locally, regionally, or nationally. The extent to which a species or population is at risk usually determines the status designation. The factors that determine risk to a species or population generally fall into one of several categories, such as habitat loss or modification affecting the distribution and abundance of a species; environmental contaminants affecting the reproductive potential of a species; or a variety of mortality factors such as hunting or fishing, interference with man-made objects (e.g., collision, electrocution, etc), invasive species, or toxins.

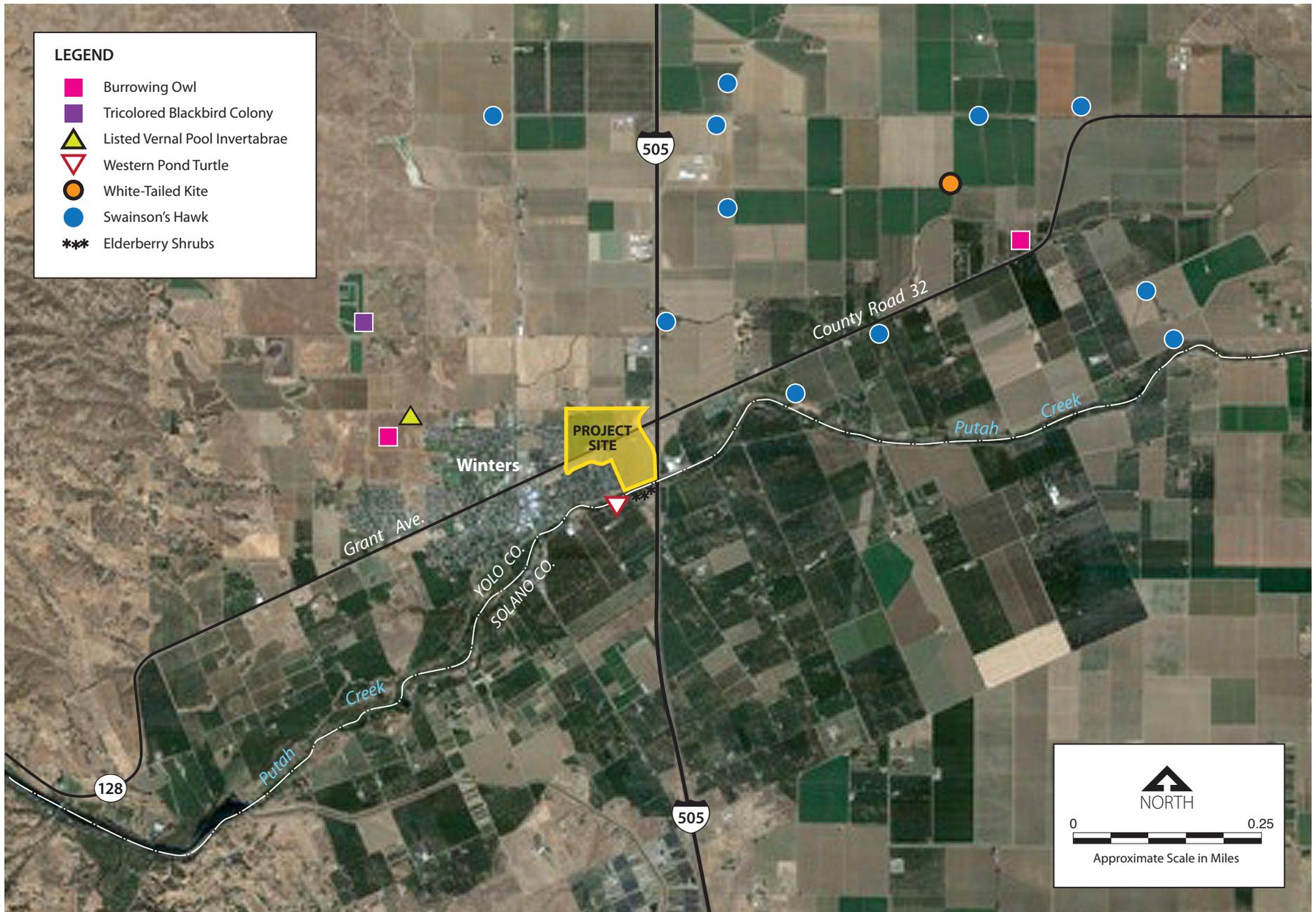
For purposes of CEQA environmental review, special-status species are generally defined as follows:

- Species that are listed, proposed, or candidates for listing under the federal Endangered Species Act (50 CFR 17.11 – listed; 61 FR 7591, February 28, 1996 - candidates);
- Species that are listed or proposed for listing under the California Endangered Species Act (Fish and Game Code 1992 Sections 2050 et seq.; 14 CCR Sections 670.1 et seq.);
- Species that are designated as Species of Special Concern by DFG;
- Species that are designated as Fully Protected by DFG (Fish and Game Code, Section 3511, 4700, 5050, and 5515);
- Species included on Lists 1B or 2 by the California Native Plant Society;
- Species that meet the definition of rare or endangered under CEQA (14 CCR Section 15380).

Table 1 lists the special-status species with potential to occur in the vicinity of the project area based on their local and regional distribution and indicates whether or not they occur or have potential to occur in the project area based on reported observations and/or the availability of suitable habitat. Each of these species is also described in more detail below. Figure 3 illustrates the locations of reported special-status species occurrences in the vicinity of the project area.

**Table 1. Special-status species with potential to occur in the vicinity of the project area.**

Species	Status State/federal/CNPS	Habitat Association	Habitat Availability in the Project Area	Occurrence in the Project Area
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	-/T	Vernal pools and other seasonal wetlands	None	No
Vernal pool tadpole shrimp <i>Lepidurus Packardi</i>	-/E	Vernal pools and other seasonal wetlands	None	No
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	-/	Vernal pools and other seasonal wetlands	None	No
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	-/T	Elderberry shrubs	None in the project area, but elderberry shrubs present along Putah Creek.	No
Western pond turtle <i>Actinemys marmorata</i>	CSC/-	Streams, ponds, water conveyance channels	None	No
White-tailed kite <i>Elanus leucurus</i>	FP/-	Riparian trees, woodlands, roadside trees, grasslands, agricultural lands	Suitable nesting along Putah Creek and edge habitats and suitable agricultural foraging habitat	Potential
Northern harrier <i>Circus cyaneus</i>	CSC/-	Grasslands, seasonal marshes, some agricultural habitats	Marginal nesting habitat and suitable agricultural foraging habitat	Potential
Swainson's hawk <i>Buteo swainsoni</i>	T/-	Riparian trees, woodlands, roadside trees, grasslands, agricultural lands	Suitable nesting along Putah Creek and edge habitats and suitable agricultural foraging habitat.	Potential
Mountain plover <i>Charadrius montanus</i>	CSC/-	Plowed agricultural fields during winter	Agricultural fields could provide suitable habitat during winter	Potential



**Figure 3**  
**Special Status Species Occurrences in the Vicinity of the Project Area**

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Species	Status State/federal/CNPS	Habitat Association	Habitat Availability in the Project Area	Occurrence in the Project Area
Burrowing owl <i>Athene cunicularia</i>	CSC/-	Ruderal habitats, field edges with ground squirrel activity	Low value habitat along field edges and idle field, but minimal ground squirrel activity noted	Potential
Loggerhead shrike <i>Lanius ludovicianus</i>	CSC/-	Grasslands, agricultural lands	Suitable nesting in trees and shrubs, suitable foraging in active and idle fields	Potential
Tricolored blackbird <i>Agelaius tricolor</i>	CSC/-	Emergent marshes, blackberry thickets, silage, pastures, some agricultural habitats	No nesting, marginal foraging.	Potential
Pallid Bat <i>Antrozous pallidus</i>	SSC/-	Shrublands, grasslands, agricultural lands, woodlands; rocky areas, caves, mines, hollow trees, buildings for roosting.	Potential foraging in agricultural fields. Possible roosting along Putah Creek outside of project area.	Potential
Townsend's Big- eared Bat <i>Corynorhinus townsendii townsendii</i>	SSC/-	Most low to mid- elevation habitats; caves, mines, and buildings for roosting.	Potential foraging in agricultural fields; no roosting.	Potential
Rose mallow <i>Hibiscus lasiocarpus</i>	-/-/2	Riparian and marsh habitats	None in the project area, but suitable habitat may occur along Putah Creek	None
Dwarf downingia <i>Downingia pusilla</i>	-/-/2	Grasslands and wetlands	None	None
Round-leaved filaree <i>Erodium macrophyllum</i>	-/-/2	Grasslands	None	None
Fragrant fritillary <i>Fritillaria liliacea</i>	-/-/1B	Grasslands	None	None
Adobe lily <i>Fritillaria pluriflora</i>	-/-/1B	Grasslands	None	None
Brewer's western flax <i>Hesperolinon breweri</i>	-/-/1B	Grasslands	None	None

T=threatened; E=Endangered; CSC=California species of species concern; FP=state fully protected; 1B=CNPS rare, threatened, endangered in California and elsewhere; 2=CNPS rare, threatened, endangered in California but more common elsewhere.

## **Aquatic Invertebrates**

Several special-status invertebrates are known to occur in vernal pool and other seasonal wetland habitats in Yolo County including vernal pool tadpole shrimp (*Lepidurus packardi*) and conservancy fairy shrimp (*Branchinecta conservatio*), both federally listed endangered species, and vernal pool fairy shrimp (*Branchinecta lynchi*), a federally listed threatened species. Collectively, these species occur within a range of specific environmental conditions unique to certain vernal pool communities that include soil type, vegetation characteristics, water depth, water temperature, inundation duration, and water quality (Ericksen and Belk 1999). As a result of the substantial loss of vernal pool habitats in the Central Valley from urbanization and agricultural conversion, populations of these species have declined throughout their range (U.S. Fish and Wildlife Service 1994). There are no vernal pool or other seasonal wetland habitats in the project area and therefore no potential for these species to occur. Nearest reported occurrences are approximately 1 mile west of the project area (Figure 3).

## **Valley Elderberry Longhorn Beetle**

The Valley Elderberry Longhorn Beetle (VELB) (*Desmocerus californicus dimorphus*) is a federally-listed threatened species. VELB is a medium-sized woodboring beetle, about 0.8 inches long. Endemic to California's Central Valley and watersheds that drain into the Central Valley (Barr 1991), this species' presence is entirely dependent on the presence of its host plant, the elderberry shrub.

VELB is a specialized herbivore that feeds exclusively on elderberry shrubs, the adults feeding on leaves and flowers, and the larvae on the stem pith. Habitat for VELB consists of elderberry shrubs with stems greater than 1 inch in basal diameter. Elderberry grows in upland riparian forests or savannas adjacent to riparian vegetation, but also occurs in oak woodlands and savannas and in disturbed areas. It usually co-occurs with other woody riparian plants, including Fremont cottonwood, California sycamore (*Platanus racemosa*), various willows, wild grape (*Vitis californica*), blackberry (*Rubus* spp.), and poison-oak (*Rhus diversiloba*) (U.S. Fish and Wildlife Service 1984, Collinge et al 2001), but can also occur as an isolated shrub in open grasslands or along fence rows or field borders in grassland and agricultural areas.

There are no elderberry shrubs present in the project area and therefore no potential for VELB to occur in the project area. However, several elderberry shrubs were found along Putah Creek during the reconnaissance survey as close as approximately 20 feet from the edge of Field A (Figure 3). These resources fall within the designated Open Space area along the southerly boundary of Field A (McClish).

## **Northern Harrier**

The northern harrier is designated as a state species of special concern (Shuford and Gardali 2008). It is a medium-sized hawk with a slight build and relatively long tail and

wings (3.5 foot wingspan). Adult males are pale gray, while juveniles and females are brown. All plumages show a distinctive white rump patch in flight (Sibley 2000). In California, this species is a permanent resident of the northeastern plateau, coastal areas, and the Central Valley. It is also a widespread winter visitor and migrant in suitable habitat. While declines in the California population have been noted for many years (Grinnell and Miller 1944, Remsen 1978), the species can be locally abundant where suitable habitat remains free of disturbance, especially from intensive agriculture. Breeding populations have declined from destruction of wetland habitats, native grasslands, and moist meadows, and in agricultural areas from burning and plowing of nest sites during early stages of the breeding cycle (Remsen 1978, MacWhirter and Bildstein 1996).

The northern harrier is a ground-nesting raptor, constructing rudimentary nest sites on the ground in marsh, grassland, and some agricultural habitats, particularly grain fields. They forage in seasonal wetland, grassland, and agricultural habitats for voles and other small mammals, birds, frogs, and small reptiles, crustaceans, and insects. They also roost on the ground, using tall grasses and forbs in wetlands, or along wetland/field borders for cover (MacWhirter and Bildstein 1996).

No northern harriers were observed during the field survey and no nests are currently present in the project area; however, the species is relatively common in the agricultural lands of Yolo County and the wheat and idle fields in the project area provide suitable foraging habitat and potential low value nesting habitat.

### **White-tailed Kite**

The white-tailed kite is designated a state fully protected species. The white-tailed kite is a highly specialized and distinctively marked bird of prey; smaller than most hawks with a wingspan of just over three feet, white underneath and light gray above, black shoulder patches, and white tail (Dunk 1995). The species name is derived from its distinctive hunting behavior, kiting, hovering in the air while hunting for prey.

The white-tailed kite is known primarily from the Central Valley and coastal areas of California; however, breeding has also been documented in parts of Oregon and Washington, southern Texas, Florida, and south from northern Mexico to South America.

In the Central Valley, white-tailed kites nest in riparian forests and woodlands, woodlots, and occasionally in isolated trees. They forage in grasslands, seasonal wetlands, and agricultural fields. Like most raptors, its distribution is determined more by prey abundance and vegetation structure than by specific plant associations. They appear to be more sensitive to intensive farming practices and while they are found in agricultural areas, populations have likely declined as a result of conversion from native grassland and seasonal wetland habitats to agriculture. White-tailed kites prey mainly on small rodents, especially California vole, but also take small birds, reptiles, and insects (Dunk 1995, Erichsen 1995).

No white-tailed kites were observed during field surveys. Roadside and field border trees in and adjacent to the project area and riparian habitat along Putah Creek support suitable nesting habitat for kites. Active and idle agricultural fields are suitable foraging habitat. The species is resident in Yolo County and occurs throughout the valley floor and foothill grasslands, but is a relatively uncommon nesting species. The nearest recently reported white-tailed kite nest is approximately 2.5 miles northeast of the project area (Estep 2008) (Figure 3).

### **Swainson's Hawk**

Swainson's hawk is a state-listed threatened species. It is a medium-sized hawk with long (3.5 to 4 feet) narrow wings, dark breast and head, and with several distinctive plumage variations on the underwing coverts and belly (England et al. 1997). Swainson's hawk is an open country species found throughout the plains and deserts of the western United States. Associated primarily with open grassland habitats, throughout much of its range it is currently known to also occur in agricultural habitats, which has displaced much of the grassland habitat throughout North America. Formerly occurring throughout the lowland areas of California, as a result of habitat loss and conversion to agriculture, populations are now restricted mainly to the Central Valley and Great Basin portions of the state.

In the Central Valley, Swainson's hawks nest in riparian forests, remnant oak woodlands, isolated trees, and roadside trees. They forage primarily in agricultural habitats, particularly those that optimize availability of prey (e.g., alfalfa and other hay crops, some row and grain crops), but also use irrigated pastures and annual grasslands (Estep 1989, 2009). The principal prey item of Swainson's hawks in the Central Valley is the California vole, but other small mammals, birds, reptiles, and insects are also taken (Estep 1989, England et al. 1997).

Yolo County is within the core breeding area for Swainson's hawks in the Central Valley. Supporting as many as 300 nesting pairs, the breeding density in Yolo County is the highest reported anywhere within the range of the species (Estep 2008). This species occurs throughout the lowland agricultural region of Yolo County and forages widely in irrigated cropland, pastures, and grassland landscapes.

No Swainson's hawk nest sites have been reported from or in the immediate vicinity of the project area; however, the riparian, roadside, field border, and rural residential/farmyard trees within and adjacent to the project area support suitable nesting habitat. With the exception of the small orchard (Field F), all active and idle agricultural fields in the project area are suitable Swainson's hawk foraging habitat. The nearest recently reported nest is approximately 0.7 miles north of the project area (Figure 3). At least 13 reported nest sites occur within 5 miles of the project area (Estep 2008).

## **Mountain Plover**

The mountain plover (*Charadrius montanus*) is designated as a state species of special concern. The mountain plover is a small, plainly-plumaged, brown and white plover slightly larger than the snowy plover. Mountain plovers are short to medium-distance migrants that nest primarily in the western Great Plains of the United States and winter in California, Arizona, New Mexico and northern Mexico (Knopf and Wunder 2006). Unlike most other plover species, the mountain plover is an upland species, often found far from water.

The mountain plover does not breed in California, but does occur during the winter. The species arrives on its wintering grounds in California from November through December where it remains through March (Hunting and Edson 2008).

The wintering habitat of mountain plovers in the Central Valley has been described as pastureland nearly devoid of vegetation (Stoner 1942), sparsely vegetated fields (Manolis and Tangren 1975), grazed grasslands and disked agricultural fields (Hunting et al. 2001, Hunting and Edson 2008). The species occurs only in areas either devoid of or with very sparse and short vegetation.

Mountain plovers are regular, but uncommon, winter visitors to Yolo County. Small flocks have been observed in recently-plowed agricultural fields near Woodland and Davis, especially along County Roads 16, 25, 27, and 102, and in unflooded portions of the Yolo Bypass. The species has not been reported from the project area; however, the agricultural fields in the project area may represent potential winter habitat for mountain plovers.

## **Western Burrowing Owl**

The western burrowing owl (*Athene cunicularia*) is designated as a state species of special concern. The burrowing owl is a small ground-dwelling owl with a round head, yellow eyes, and long legs (Haug et al. 1993).

The burrowing owl occurs throughout most of western United States and northern Mexico. They also occur in southern Florida and on some Caribbean islands (Haug et al. 1993). In California, burrowing owls occur in open habitats throughout most of the state with the exception of the northwestern corner. Burrowing owls are found in open, dry grasslands, agricultural and range lands, and desert habitats. In the Central Valley, they are associated with remaining grassland habitats, pasturelands, and edges of agricultural fields. They also occur in vacant lots and remnant grassland or ruderal habitats within urbanizing areas. Historically nesting in larger colonies, due to limited nesting habitat availability most of the more recent occurrences are individual nesting pairs or several loosely associated nesting pairs.

The burrowing owl is a subterranean-nesting species, typically occupying the burrows created by California ground squirrels (*Spermophilus beecheyi*). They also occupy

artificial habitats, such as those created by rock piles and occasionally in open pipes and small culverts. They forage for small rodents and insects in grassland and agricultural habitats with low vegetative height.

In Yolo County, the largest concentrations of burrowing owls occur in the grassland and pasture habitats of the southern panhandle and in the Davis area. Additional occurrences have been reported from the Dunnigan Hills, the agricultural lands between Davis and Woodland, and the grasslands northwest of Winters. The nearest recently reported occurrence is approximately 1 mile west of the project area (Figure 3)

No burrowing owls were detected on or in the immediate vicinity of the project area. No potential burrows were found and relatively little ground squirrel activity was noted during surveys. The only recent ground squirrel activity that was noted during the survey was from the farmyard along the north side of Grant Avenue (Figure 2). Burrowing owls do not currently occur in the project area; however, the agricultural fields represent potentially suitable foraging habitat, and the species could potentially nest or winter along field borders, edges, or in idle fields.

### **Tricolored Blackbird**

The tricolored blackbird (*Agelaius tricolor*) is a state species of special concern. Tricolored blackbirds are small blackbirds, very similar in appearance to the closely related red-winged blackbird (*Agelaius phoeniceus*). They differ from species by the slightly thinner bill, darker red shoulder patches, and broad white (not yellow) median coverts (Sibley 2000).

Tricolored blackbirds are largely endemic to California, and more than 99% of the global population occurs in the state. In any given year, more than 75% of the breeding population can be found in the Central Valley. Small breeding populations also exist at scattered sites in Oregon, Washington, Nevada, and western coastal Baja California (Beedy and Hamilton 1999). This species has suffered dramatic population declines throughout its range due to the loss of protected wetland nesting habitats.

Tricolored blackbirds breed in colonies from several dozen to several thousand breeding pairs. They have three basic requirements for selecting their breeding colony sites: open accessible water; a protected nesting substrate, including either flooded or thorny or spiny vegetation; and a suitable foraging space providing adequate insect prey within a few miles of the nesting colony (Beedy and Hamilton 1999).

Nesting colonies have been reported in freshwater marshes dominated by cattails and bulrushes, or in willows, blackberry bramble, thistles, or nettles. While freshwater marsh was once considered the primary breeding habitat type for tricolored blackbirds, an increasing percentage of tricolored blackbird colonies in the 1980s and 1990s were reported in Himalayan blackberries, and some of the largest recent colonies have been in silage and grain fields (Beedy and Hamilton 1999).

Foraging habitats in all seasons include annual grasslands; wet and dry vernal pools and other seasonal wetlands; agricultural fields (e.g., large tracts of alfalfa with continuous mowing schedules and recently tilled fields); cattle feedlots; and dairies. Tricolored blackbirds also forage occasionally in riparian scrub habitats and along marsh borders (Beedy and Hamilton 1999).

There is no potential breeding habitat for tricolored blackbirds in the project area and none in the immediate vicinity of the project area. The nearest reported breeding colony is from the Winter Wastewater Treatment Facility approximately 1.5 miles northwest of the project area (Figure 3); however, this colony has not been reported as active since the 1990s. The nearest recently reported breeding colony is approximately 6 miles north of the project area (Tricolored Blackbird Portal [[tricolor.ice.ucdavis.edu/](http://tricolor.ice.ucdavis.edu/)]). The active and idle agricultural lands in the project area are considered suitable foraging habitat for this species.

### **Loggerhead Shrike**

The loggerhead shrike (*Lanius ludovicianus*) is designated as a state species of special concern. Loggerhead shrike is a permanent resident and winter visitor in foothills and lowlands throughout California, where it is considered a fairly common resident (Small 1994). It is a medium-sized (9 inches), stout, short-winged passerine that is often seen perched on barbed wire fences. The underparts and back are grey, with black tail, wings and facemask (Sibley 2000).

Shrikes prefer open habitats with scattered trees, shrubs, posts, fences, utility lines, or other perches. It nests in small trees and shrubs and forages for small rodents and insects in pastures and agricultural lands.

No shrikes were observed during the reconnaissance survey. The species occurs throughout lowland Yolo County and could potentially nest in the trees and shrubs along field borders and forage in the agricultural fields within the project area.

### **Western Pond Turtle**

The western pond turtle (*Clemmys marmorata*) is designated as a state species of special concern. The western pond turtle is a moderate sized turtle with drab brown coloring. The carapace lacks any prominent markings (Holland 1991). In California, the western pond turtle is distributed throughout the state from sea level to mid-elevation Sierra Nevada (Jennings and Hayes 1994).

Western pond turtles are closely associated with permanent water bodies, such as lakes, ponds, slow moving streams, and irrigation canals that include basking sites as down logs or rocks, and that support sufficient aquatic prey. Western pond turtles also require upland habitat that is suitable for building nests and to overwinter. Suitable upland habitat must have the proper thermal and hydric conditions in which to build nests (Jennings and Hayes 1994). Nests are constructed in sandy banks immediately adjacent

to aquatic habitat or if necessary, females will climb hillsides and sometimes move considerable distances to find suitable nest sites. Females deposit their eggs in the nest from March to August depending on local conditions.

Western pond turtles are omnivorous and opportunistic feeders. Their diet includes slow-moving aquatic invertebrates and carrion. Aquatic vegetation may also be consumed, especially by females who have recently laid eggs. Hatchlings and juveniles feed primarily on zooplankton (Jennings and Hayes 1994).

There is no aquatic habitat present in the project area; however the species is known to occur along Putah Creek (Figure 3). Nesting or overwintering turtles could occur along the slopes of the creek and could potentially occur immediately adjacent to Fields A and B. These resources would fall within the designated Open Space area along the southerly boundary of Field A (McClish).

### **Special-status Bats**

Two special status bats potentially occur in the project area, including pallid bat (*Antrozous pallidus*) and Townsend's big-eared bat (*Corynorhinus townsendii townsendii*), both state species of special concern. Pallid bat occurs primarily in shrublands, woodlands, and forested habitats, but also can occur in grasslands and agricultural areas (Pierson and Rainey 1998). Townsends's big-eared bat occurs in a variety of woodland and open habitats, including agricultural areas (Fellers and Pierson 2002). Both species roost in mines, caves, rocky crevices, large hollow trees, and occasionally in large open buildings that are usually abandoned or infrequently inhabited.

Potential roosting habitat for these bat species occurs in the riparian habitat along Putah Creek. They could also forage above the creek and all agricultural habitats in the project area.

### **Special-status Plants**

Six special-status plant species have potential to occur in the vicinity of the project area. Rose mallow (*Hibiscus lasiocarpus*) occurs in marshes and riparian habitats. Dwarf downingia (*Downingia pusilla*) potentially occurs in the grassland and wetland habitats; round-leaved filaree (*Erodium macrophyllum*), fragrant fritillary (*Fritillaria liliacea*), Adobe lily (*Fritillaria pluriflora*), and Brewer's western flax (*Hesperolinon breweri*) potentially occur in annual grassland habitats. None of these species has been reported from the project area and there is no suitable habitat for any of these species within the project area. Rose mallow could potentially occur in the designated open space along Putah Creek.

## **Impacts of the Proposed Project**

### **Natural Communities, Vegetation, and General Wildlife**

The project area supports active and idle agricultural fields and edge habitats that consist of roadside and field border trees and shrubs, and trees around rural residences and farmyards. The project area does not support any unique or otherwise protected biological communities such as wetlands, riparian corridors, or vernal pools. However, Putah Creek, which is contiguous with the southeastern border of the project area supports a dense and diverse riparian forest and other edge habitats also support substantial trees and shrubs that provide nesting and cover habitat for a variety of wildlife species.

The presence of these edge habitats attracts wildlife species that also use the adjacent agricultural fields. The removal of trees and shrubs along roadsides and field borders within the project area will reduce opportunities for wildlife occurrence and the removal of the agricultural fields will reduce open foraging habitat and thereby reduce the value of remaining edge habitats on and adjacent to the project area.

Of the 140.1 acre project area, 35.9 acres are designated Open Space areas, have already been assessed and mitigation previously applied, or do not represent suitable wildlife habitat. Designated Open Space areas include a 6.3 acre band along Putah Creek along the southern edge of Field A (McClish) and 14.0 acres in the northeast corner of Field E (Skreedon), neither of which are proposed for development of any kind at this time. Field H (Ghai) totaling 2.3 acres was documented in a July 2010 Mitigated Negative Declaration (Burger King/AMPM Gas Station Minimart/Truck Fueling Facility CUP Project) as containing no significant biological resources and was approved for development in September 2010. Field B (Jordan) totaling 10.9 acres was documented in a May 2010 Initial Study as containing biological resources for which mitigation had already been applied. Field G (Ali) totaling 6.6 acres contains the 0.9 acre Chevron gas station and Field F (Manas) totaling 7.7 acres, includes approximately 1.5 acres of rural residential buildings and landscaped areas. In summary, of the 140.1 acre total project area, and excluding lands that are not considered wildlife habitat, are designated as Open Space areas, or have already been subject to mitigation, the project will result in conversion of 104.2 acres of land in agricultural use.

The eventual removal of 104.2 acres of land in agricultural use will eliminate wildlife habitat and reduce the value of adjacent edge habitat. While this will negatively affect the wildlife use of the project area, because of the extent of this habitat in the vicinity of the project area and throughout Yolo County, it is not expected to substantially affect the distribution and abundance of general wildlife. Because the project is contiguous with existing development within the City of Winters and because there are no important movement corridors or use areas within the project area, it is also not expected to have a substantial affect on wildlife movement. Therefore, while removal of agricultural habitats will affect use of the area by local wildlife, this impact is not considered significant according to CEQA guidance.

## **Special-Status Species**

Based on the examination of habitat availability, nine of the wildlife species listed on Table 1 have potential to occur within the project area, and two additional special-status species have potential to occur in adjacent riparian habitat along Putah Creek.

**Tricolored Blackbird and Mountain Plover.** While they do not nest in the project area, the agricultural lands represent suitable foraging habitat for mountain plover and tricolored blackbird. However, the agricultural lands in the project area are not considered high value foraging habitat for tricolored blackbirds, and while they could and likely occasionally do forage in the project area, this habitat is abundant throughout Yolo County. While none have been reported and thus there is no reported traditional use of the project area, mountain plovers could potentially use the agricultural fields during the winter; however, the site does not support any unique characteristics that distinguish it from surrounding agricultural lands. If there is occasional winter use of the site by mountain plovers, it is expected that use would shift to similar adjacent agricultural fields. Therefore, the loss of 104.2 acres of land in agricultural use is not considered a significant impact to these species.

**Northern Harrier and White-tailed Kite.** These species potentially nest on or adjacent to the project area and use the agricultural lands for foraging. Northern harrier is a ground-nesting species and could also use the active and idle lands for nesting. Destruction of active nests or occupied nesting habitat of these species during construction activities would violate Fish and Game Code and because they are uncommon species, would also represent a significant impact.

Because these species occur throughout lowland Yolo County and because agricultural habitats are abundant and edge habitats that provide nesting opportunities are relatively common in Yolo County, the loss of unoccupied nesting habitat through removal of trees and shrubs along field borders in the project area and the removal of 104.2 acres of agricultural foraging habitat is unlikely to affect the distribution or abundance of these species in Yolo County, and thus this impact is considered less than significant for these species.

## **Burrowing Owl**

The burrowing owl does not currently occur in the project area, but there is limited potential for the species to inhabit field borders, fence rows, or roadside edges. However, the general lack of burrowing activity from ground squirrels and regular farming activities further limits this potential. While the removal of agricultural foraging habitat would not be considered a significant impact to burrowing owls, disturbance to or destruction of occupied nesting or wintering burrows would be considered significant.

### **Pallid Bat and Townsend's Big-eared Bat**

The 104.2 acres of land in agricultural use found in the project area are abundant throughout the region and its removal would not constitute a significant loss of habitat for pallid bat or Townsend's big-eared bat. Project activities are not expected to affect adjacent riparian habitats along Putah Creek, where these species could potentially roost.

### **Valley Elderberry Longhorn Beetle**

At least 6 elderberry shrubs were identified along Putah Creek adjacent to Field A. Because they are outside of the project area boundary, these shrubs are not expected to be directly affected from future construction activity. However, if ground disturbances occur within 100 feet of the shrubs, they could potentially be subject to indirect disturbances as per the U.S. Fish and Wildlife Service Conservation Guidelines (USFWS 1999). Disturbances resulting in destruction or damage to potentially occupied elderberry shrubs would be considered a significant impact.

### **Swainson's Hawk**

Swainson's hawks could nest in trees within the project area that occur along field borders, roadsides, and rural residences and farmyards. The species could also nest in trees that are adjacent to the project area, such as along Putah Creek. The removal of occupied or recently occupied nest trees would affect the local distribution and abundance of the species and would be considered a significant impact.

Of the 104.2 acres of land in agricultural use, approximately 98 acres (excluding the approximately 6.2 acre orchard in Field F) are considered suitable Swainson's hawk foraging habitat. The loss of approximately 98 acres of Swainson's hawk agricultural foraging habitat is not a substantial amount given the extent of foraging habitat throughout Yolo County and within the core Swainson's hawk breeding area (e.g., Yolo, Sacramento, Solano, and San Joaquin Counties). The cumulative loss of agricultural foraging habitat throughout this region was previously addressed in the City's General Plan EIR and this project does not affect or change that analysis or conclusions.

## **Recommended Mitigation**

### **Contribute to the Yolo County Swainson's Hawk Interim Mitigation Program.**

The loss of approximately 98 acres of land in agricultural use will remove foraging habitat for the state-threatened Swainson's hawk and other agriculture-associated species. To address this loss of Swainson's hawk foraging habitat, development projects that occur within this region are generally subject to mitigation due to their contribution to a broader cumulative loss of agricultural foraging habitat. To address this impact in a more comprehensive and consistent manner, the Yolo County Swainson's Hawk Interim Mitigation Program has been established to offset this cumulative loss of habitat. This

program, managed through the Joint Powers Authority of the Yolo County Natural Heritage Program, of which the City of Winters is a member, is available to this project for purposes of mitigating impacts on Swainson's hawk foraging habitat. The standard mitigation procedure for projects that impact more than 40 acres includes providing mitigation lands at a 1:1 replacement ratio to offset loss of foraging habitat. A conservation easement would be placed on the conservation land that would allow for continued farming under restrictions that would also maintain Swainson's hawk foraging habitat.

### **Avoid Disturbance to Occupied Raptor Nests**

Conduct preconstruction breeding season surveys to determine presence of nesting Swainson's hawks, white-tailed kites, and northern harriers. These surveys should be conducted between approximately April and August and within 30 days of planned construction activity. If active nests are found, they should be protected by establishing the following no-disturbance set-backs until young have fledged.

- Swainson's hawk – 1,300 feet
- White-tailed kite – 1,300 feet
- Northern harrier – 500 feet
- Loggerhead shrike – 250 feet

### **Avoid Disturbance to or Compensate for Impacts to Active Burrowing Owl Burrows**

Surveys should be conducted prior to construction to ensure avoidance of occupied burrowing owl burrows that may occupy the site in subsequent years but prior to development. If active burrowing owl burrows are found, standard avoidance and mitigation measures recommended by DFG are available to offset impacts (California Department of Fish and Game 2012). They include the following:

- Conduct preconstruction survey within 14 days prior to the start of construction activity to determine presence or absence of occupied burrows. If no burrowing owls are found, no further mitigation is required.
- If active burrows are found, do not disturb active site by establishing a 50 to 500 meter no-disturbance buffer around occupied burrows during the non-breeding season (September 1 to January 31) and a 200 to 500 meter buffer around occupied burrows during the nesting season (February 1 through August 31). Buffer size is determined through a review of site-specific conditions including the type and extent of the impact, the timing and duration of the impact, visibility to the impact, and other environmental factors.
- During the non-breeding season (September 1 through January 31), passive relocation (e.g., one-way doors) can be used to exclude owls from active winter burrows and potential burrows within the project area when no other avoidance alternatives are available. This will also require the installation of artificial

burrows preferably within 100 meters of the impacted site and the preparation of a Burrowing Owl Exclusion Plan.

- Compensate for loss of active burrows and associated foraging habitat. The extent of occupied habitat removed and subject to compensation is determined through a site-specific assessment of burrowing owl use. Compensation can be accomplished through an approved mitigation bank.

### **Avoid Disturbance to Elderberry Shrubs**

Avoidance of VELB is accomplished through avoidance of elderberry shrubs according to standard USFWS guidelines (USFWS 1999). To completely avoid elderberry shrubs, maintain an undisturbed buffer of at least 100 feet. Reducing this distance to a minimum of 20 feet is possible through coordination with the USFWS.

### **Summary and Conclusion**

The project area consists primarily of agricultural land contiguous with dense urbanization on the western boundary and open agricultural land on the north, east, and southeast boundaries. Thus, the project area can be characterized as agricultural/urban interface. Biological resources on the project site are similar to that found throughout the agricultural landscape of Yolo County. The project area includes active and idle agricultural fields with narrow edges of trees, shrubs, or herbaceous communities and is in close proximity to riparian habitat along Putah Creek. Wildlife use of the site consists of agriculture-associated species and species that use riparian or edge habitats for breeding and agricultural lands for foraging. Many urban-tolerant species are also present. No biological important or unique communities or habitats occur within the project area and the area is not within an important wildlife movement corridor or wildlife concentration area; however, several special-status species could potentially occur within or otherwise use the project area.

The removal of agricultural lands within the project area would affect the use of the project area by many wildlife species and would effect wildlife populations that require the adjacent edge habitats by removing adjacent open space foraging habitat. Development of the project area would also create additional disturbances to edge habitats and likely further reduce their use by local wildlife. While these impacts are not considered significant to general wildlife populations, development of the project area could result in significant impacts to several special-status species. Recommended mitigation measures are designed to avoid or offset these impacts to less than significant levels. They are also consistent with the City of Winters Habitat Mitigation Program and the county-wide Swainson's Hawk Mitigation Program administered by the Joint Powers Authority of the Yolo County Natural Heritage Program.

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