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**Biological Resources Assessment
of the Proposed PG&E Gas Operations Technical Training
Center in the City of Winters**

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Introduction

Pacific Gas & Electric (PG&E) is proposing to construct a Gas Operations Technical Training Center in the City of Winters (City), located in southwestern Yolo County along the border with Solano County (Figure 1). The proposed site, located in the far eastern portion of the City of Winters was included in an earlier and broader assessment conducted pursuant to the California Environmental Quality Act (CEQA) in October 2011 for purposes of correcting inconsistencies in General Plan and Land Use designations, rescission of an outdated master plan, and promotion of economic development (Mitigated Negative Declaration, City of Winters 2012). However, the proposed project is not intended to rely on the earlier CEQA assessment, but instead will undergo a separate and full CEQA review. This report, which references and incorporates information from the earlier 2011 MND, 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. Results from this assessment are intended to be incorporated into the CEQA document for the proposed project.

Project Location and Setting

The approximately 38-acre project site is located on the eastern edge of the City of Winters and is bounded by the Interstate 505 southbound onramp on the east, Putah Creek on the south, and Grant Avenue (State Route 128) on the north. The project site can be generally characterized as agricultural land within an agricultural/urban interface. The site, which is open agricultural land is adjacent to two rural residences and near medium-density residential development on its western boundary. Commercial development and rural residences are present along the north side of Grant Avenue. Putah Creek forms the southern border of the site, which supports mature riparian woodland. Open agricultural land extends north, east, and south of the site (Figure 2).

Project Description

The proposed PG&E Gas Operations Technical Training Center includes a variety of teaching and training functions related to the construction, operation, and maintenance of natural gas facilities. The approximately 38-acre project site includes the following elements:

- Teaching facilities
- Equipment and excavation training facilities
- Construction training facilities
- Gas transmission training facilities
- Field training facilities



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Figure 1
Regional Location Map



Figure 2
Project Site Map

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- Gas flow and welding labs
- Commercial driver training area
- Service yard
- Parking

The project design also includes an approximately 100-foot wide drainage easement along the western border of the project site and a storm water retention pond area along the southeastern boundary near the Putah Creek open space buffer, adjacent to I-505. Primary access to the facility will be a paved access road (Timber Crest Road) extending south from East Grant Avenue. A security fence will be installed around the perimeter of the facility.

Objective

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

Field Surveys

A reconnaissance-level biological resources survey of the project site was conducted on January 7, 2014. A previous survey and assessment was conducted on October 26, 2011 (Estep, City of Winters 2011), and is incorporated to this assessment by this reference. This survey, like the one conducted in October 2011, was designed for complete coverage of the entire approximately 38-acre project site and immediately adjacent land 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 walking the perimeter of the active agricultural field, walking transects across the inactive agricultural field, and evaluating ruderal and edge habitats. All vegetation, land uses, and habitat types were noted, mapped, and evaluated. All irrigation channels, fence rows, 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.

Note that as with the 2011 survey, the January 7, 2014 reconnaissance-level survey was not conducted during the breeding season and therefore, wildlife breeding use of the project site was not confirmed. This is particularly relevant for certain special-status species, such as Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), and burrowing owl (*Athene cunicularia*), that may require additional mitigation or avoidance measures if they are found breeding on or adjacent to the project site.

On January 23, 2014, a survey of elderberry shrubs within the riparian area associated with Putah Creek was conducted. The location of each shrub was recorded using a hand-held global positioning system (GPS) unit. Each shrub was examined to record stem sizes and searched for evidence of VELB presence. (A copy of the January 23, 2014 survey has been submitted to the City.)

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 the California Department of Fish and Wildlife (CDFW) or the U.S. Fish and Wildlife Service (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 on the project site is entirely flat with no discernable topographical features. 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 site. However, Putah Creek, a perennial stream, borders the southern edge of the project site. A permanent drainage feature also occurs along the eastern border of the project site 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 site consists of two fields, the largest of which (approximately 26 acres) is an active agricultural field. This field was unplanted but prepared for spring planting at the time of the survey (Figure 2). To the east and separated by a dirt road is the smaller field (approximately 12 acres), which is an idle agricultural field consisting of annual grasses and ruderal vegetation. The only other feature on the project site is a small, fenced sewer lift station located in the idle field and operated by the City of Winters (Figure 2). Underground water and sewer mains cross the northern portion of the project site.

Surrounding Land Uses

Two farm residences, totaling approximately two acres, are adjacent to the western boundary of the site. Medium density residential development begins approximately 300 feet west of the western boundary. Land to the north includes rural residences and commercial development, and elsewhere by open space and active agricultural land (Figure 2). Putah Creek creates the southern boundary of the site. Beyond the creek are orchards and more agricultural land. 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 of the project site consists of walnut orchards, while most of the agricultural land north and east 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

Because the active agricultural field was bedded and prepared for spring planting, it supported no vegetation during the time of the survey (Plates 1 and 2). This field has been farmed in the tomato-wheat rotation typical of Yolo County and appears to have been prepared for spring tomato planting. Providing little wildlife value in its current condition, once the field is planted and the crop matures, it will support small rodents and a variety of insects and provide foraging habitat for raptors and other birds.



Plate 1. Active agricultural field looking east from western boundary of project site.



Plate 2. Looking north along dirt road separating active field (left) and idle field (right). Note commercial development and rural residence along Grant Avenue in background.

Inactive (idle) Agricultural Land

The idle field appeared not to have been cultivated in the last several years. During the time of the survey, it contained nonnative annual grasses including wild oat (*Avena fatua*) and hare barley (*Hordeum murinum*), and a variety of nonnative weeds dominated by yellow star thistle (*Centaurea solstitialis*), yellow foxtail (*Setaria pumila*), and mustard (*Sisymbrium altissimum*) (Plate 3). A 20- to 30-foot swath of the idle field along the eastern fence line had been disked and consisted mostly of bare ground (Plate 4).



Plate 3. Idle field looking northeast from dirt road dividing the idle field and active field. Note the fenced sewer lift station in the foreground and commercial development along Grant Avenue and bridge crossing I-505 in the background.



Plate 4. Idle field looking north from southeast corner of project site. I-505 right-of-way fence line is on the right.

Edge Habitats

Edge habitats are found along the perimeter of the project site. They 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 site 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 southern border of the project site (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 site, 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, is immediately adjacent to the cultivated field (Plate 5).



Plate 5. Putah Creek eucalyptus and valley oak-dominated riparian woodland, looking east from northwest corner of project site. Note the dense vegetation, steep slope, and proximity to cultivated habitats.

Water Conveyance Canals and Ditches. The canal that borders the eastern edge of the project site is within the right-of-way of I-505 (Figure 2). The canal is used mainly to convey storm water runoff and drains into Putah Creek at the southeastern corner of the project site. This canal supports primarily herbaceous vegetation, but also supports

several small valley oak trees and scattered shrubs along its length (Plate 6). A smaller ditch, supporting primarily herbaceous vegetation occurs along the northern edge of the project site and is used to convey storm water runoff along Grant Avenue. This ditch connects with the aforementioned canal near the northeast corner of the project site. Temporary agricultural ditches are also used around the perimeter of agricultural fields for irrigation purposes.



Plate 6. Canal bordering the eastern edge of the project site within the I-505 right-of-way. Looking north from the southeast corner of the project site.

Field Borders. Other trees and shrubs occur around the perimeter of the project site. 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 the project site between the idle field and aforementioned I-505 canal (Plate 7). Several mature cottonwood trees and numerous shrubs that were identified during the 2011 survey were removed along the canal where it turned westward bordering Grant Avenue at the northeast corner of the project site. The canal appears to have been undergrounded at this location. Ornamental trees from the adjacent rural residences and the nearby residential area also near the western edge of the project site (Plate 8).



Plate 7. Small valley oak trees bordering the eastern edge of the project site, looking northeast from the edge of the idle field.



Plate 8. Residential area with ornamental trees near the western boundary of the project site, looking northwest from Putah Creek.

Rural Farm Residences and Farmyards.

Two farm residences occur along the northwestern border of the project site (Figure 2). The northernmost property was occupied (Plate 9) and the southernmost property was abandoned (Plate 10) at the time of the survey. Each is surrounded by mature valley oak, walnut, and ornamental trees.



Plate 9. Occupied Rural farm residence within approximately 250 feet of the northwest corner of project site, looking northwest from interior of active agricultural field.



Plate 10. Abandoned rural farm residence immediately south of the occupied residence (Plate 6). Active agricultural field is on the right.

Wetlands

No wetlands, vernal pools, or other sensitive natural communities were identified within the project site during the reconnaissance-level surveys.

Wildlife Occurrence and Use

The project site 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*), 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, red-tailed hawk (*Buteo jamaicensis*), white-tailed kite, 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 occur in riparian habitats, such as Putah Creek, and the mature trees and shrubs along field borders, 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 (*Didelphis 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 on the project site. The project site 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 borders the southern edge of the project site. In general, the project site 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 CDFW;
- Species that are designated as Fully Protected by CDFW (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 site based on their local and regional distribution and indicates whether or not they occur or have potential to occur on the project site or immediately adjacent lands 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 site.

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

Species	Status State/federal/CNPS	Habitat Association	Habitat Availability on the Project Site	Occurrence on the Project site
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 on the project site, but elderberry shrubs present along Putah Creek.	No
Western pond turtle <i>Actinemys marmorata</i>	CSC/-	Streams, ponds, water conveyance channels	None, but present on Putah Creek.	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
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

Species	Status State/federal/CNPS	Habitat Association	Habitat Availability on the Project Site	Occurrence on the Project site
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>	CSC/-	Shrublands, grasslands, agricultural lands, woodlands; caves, mines, hollow trees, buildings.	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>	CSC/-	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



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Figure 3
Special Status Species Occurrences in the Vicinity of the Project Site

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 pools or other seasonal wetland habitats on the project site and therefore no potential for these species to occur. Nearest reported occurrences are approximately 1 mile west of the project site (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 on the project site and therefore no potential for VELB to occur on the project site. However, several elderberry shrubs were found along Putah Creek during the reconnaissance survey as close as approximately 30 feet from the edge of the active agricultural field (Figure 3). The search of CNDDDB records (CNDDDB 2013) also indicated locations of two reported VELB occurrences, one approximately 1.6 miles southwest of the project site along Dry Creek, and one approximately 3.4 miles southwest of the project site along Putah Creek at Lake Solano (Figure 3).

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 on the project site; however, the species is relatively common in the agricultural lands of Yolo County and the active and idle fields 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. Trees along field borders 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 site; however, the riparian, field border, and rural residential/farmyard trees adjacent to the project site support suitable nesting habitat. The active and idle agricultural fields are suitable Swainson's hawk foraging habitat. The nearest recently reported nest is approximately 0.4 miles west of the project site along Putah Creek (Figure 3). At least 13 reported nest sites occur within 5 miles of the project site. (Estep 2008, CNDDDB 2013).

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 site or surrounding 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 site (Figure 3)

No burrowing owls were detected on or in the immediate vicinity of the project site. No potential burrows were found and relatively little ground squirrel activity was noted during surveys. Burrowing owls do not currently occur on the project site; 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 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 on the project site and none in the immediate vicinity of the project site. The nearest reported breeding colony is from the Winter Wastewater Treatment Facility approximately 1.5 miles northwest of the project site (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 site (Tricolored Blackbird Portal [tricolor.ice.ucdavis.edu/]). The active and

idle agricultural lands on the project site 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 on the project site.

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 on the project site; however the species is known to occur along Putah Creek (Figure 3) (CNDDB 2013). Nesting or overwintering turtles

could occur along the slopes of the creek and could potentially occur immediately adjacent to the active and idle fields.

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 the active and idle fields on the project site.

Special-status Plants

Six special-status plant species have potential to occur in the vicinity of the project site. 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 site and there is no suitable habitat for any of these species within the project site boundary. Rose mallow could potentially occur along Putah Creek.

Impacts of the Proposed Project

Natural Communities, Vegetation, and General Wildlife

The project site supports active and idle agricultural fields. Surrounding edge habitats consist of riparian woodland along Putah Creek, trees and shrubs along adjacent canals and field borders, native and ornamental trees around two adjacent rural residences, and ornamental trees within nearby residential developments. The project site does not support any unique or otherwise protected biological communities such as wetlands, riparian woodland, or vernal pools. However, Putah Creek, which is contiguous with the southern border of the project site, supports a dense and diverse riparian forest and other edge habitats also support 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 field borders within and

adjacent to the project site 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 site. The removal of trees and shrubs occupied by nesting birds would potentially be a violation of the federal Migratory Bird Treaty Act (MBTA) (Title 16, United States Code [USC], Part 703, 50 CFR 21, 50 CFR 10). The MBTA sets seasons and bag limits for hunted species and protects migratory birds, their occupied nests and their eggs.

The City's General Plan requires a 100-foot development setback along the north side of Putah Creek from Railroad Avenue to Interstate 505 in order to protect the resources along Putah Creek (City of Winters General Plan 1992). This designated open space area, which extends 100 feet from the top of the slope of the drainage, has been incorporated into the design plans for the proposed project. This area, which currently consists of the active agricultural field and to a lesser extent the idle agricultural field, will be planted with native trees and other shrubs and herbaceous vegetation. Therefore, riparian habitat along Putah Creek is not expected to be negatively affected, and may be enhanced through the restoration of native vegetation within the designated buffer area.

Other trees adjacent to but outside of the project site boundary, such as those within the I-505 right-of-way and those in adjacent rural residential areas, would not be removed by project activities.

The project will remove approximately 38 acres of agricultural land, approximately 8 acres of which will be retained and restored as habitat within the Putah Creek buffer/drainage corridor. While this loss of agricultural land will negatively affect the wildlife use of the project site, because of the extent of this habitat in the vicinity of the project site 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 site, 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 applicable CEQA guidelines.

Construction and Operational Disturbances

Construction-related disturbances and post-construction operational disturbances, including noise, presence and operation of construction equipment, and presence of workers, could affect nesting success of birds that nest in the adjacent riparian habitat along Putah Creek and in trees and shrubs along the eastern and western borders of the project site. The 100-foot-wide open space buffer noted above will minimize this potential impact to a level of less-than-significant for non-listed bird species that nest along Putah Creek. There will, however, be temporary construction (30 to 60 days) disturbances within the buffer for purposes of constructing the storm drainage channel. If this construction occurs during the breeding season (February 15 through August 30), recommended avoidance measures described below will apply. This open space buffer,

along with those established for potentially occurring special-status species (see discussion below) are also consistent with PG&E's internal nesting bird protection guidance (Draft Avian Conservation Strategy for Bird Protection and Mitigation [ICF and HT Harvey 2013]).

Special-Status Species

Based on the examination of habitat availability, nine of the wildlife species listed on Table 1 have potential to occur on the project site, 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 on the project site, the agricultural lands represent suitable foraging habitat for mountain plover and tricolored blackbird. However, the agricultural lands on the project site are not considered high value foraging habitat for tricolored blackbirds, and while they could and likely occasionally do forage on the project site, this habitat is abundant throughout Yolo County. While none have been reported and thus there is no reported traditional use of the project site, 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 approximately 38 acres of land in agricultural use (or approximately 0.01% of the agricultural land in Yolo County) is not considered a significant impact to these species.

Northern Harrier, White-tailed Kite, Northern Shrike

These species potentially nest on or adjacent to the project site. Northern harrier is a ground-nesting species and could use the active and idle lands for nesting. White-tailed kite and northern shrike could nest in adjacent riparian or other edge habitats that support suitable trees. All three species use agricultural habitats for foraging.

The removal of approximately 38 acres of agricultural land will also remove foraging habitat for northern harrier, white-tailed kite, and northern shrike. Because agricultural habitats are abundant in Yolo County, the removal of approximately 38 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.

Disturbances potentially resulting in nest abandonment of these species during construction activities would violate Fish and Game Code and would be inconsistent with PG&E's internal guidance for protection of nesting birds (ICF and HT Harvey 2013). In the event an active white-tailed kite or loggerhead shrike establishes a nest in one of the trees on site prior to removal, or a northern harrier establishes a nest in the cultivated

habitats prior to grading, active nests will be protected and disturbances to active nests will be avoided (See Mitigation below).

Burrowing Owl

The burrowing owl does not currently occur on the project site, 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 approximately 38 acres agricultural foraging habitat would not be considered a significant impact to burrowing owls, destruction of occupied nesting or wintering burrows or disturbances that potentially result in nest abandonment could violate Fish and Game Code and could be inconsistent with PG&E's internal guidance for protection of nesting birds (ICF and HT Harvey 2013).

Pallid Bat and Townsend's Big-eared Bat

Because similar agricultural lands are abundant throughout the region, the removal of approximately 38 acres would not constitute a significant loss of foraging 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

On January 23, 2014 a survey of elderberry shrubs in the Putah Creek riparian area was conducted. Nine elderberry shrubs, or clusters of shrubs, were identified within the Putah Creek greenway at a distance greater than 100 feet from the project site's southern boundary. None of these shrubs showed evidence of VELB occurrence. Because these shrubs are located outside of the project site boundary, they will not be directly affected by 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 may be considered a take pursuant to the federal endangered species act and is a potentially significant impact.

Avoidance of VELB is accomplished by avoiding elderberry shrubs according to standard USFWS guidelines (USFWS 1999). To completely avoid elderberry shrubs, the guidelines recommend maintaining an undisturbed buffer of at least 100 feet. Reducing this distance to a minimum of 20 feet is possible based on site-specific conditions, project design, and the type of construction activities.

While none of the elderberry shrubs showed evidence of VELB occurrence, they will be further protected due to the project design, which incorporates the 100-foot-wide open space area extending from the upper slope of Putah Creek, and a minimum 30-foot distance to the nearest elderberry shrub from ground disturbing activities within the open space area. Further, ground disturbances within the open space area are not associated

with construction of facilities, but rather with the restoration of native vegetation and use for stormwater retention. Ground disturbances will include initial grading of the existing agricultural field, tree and shrub planting, and excavation of ponds. These activities are not expected to result in indirect impacts to elderberry shrubs or potential take of VELB given that surveys indicate there is no evidence that the shrubs are currently occupied and because impacts associated with construction and restoration activities (e.g., dust) are not expected to exceed that caused by the on-going farming operations on the site. As a result, while additional dust control measures will be implemented as needed (see Mitigation below), protection of the elderberry shrubs will be enhanced and they will no longer be affected by routine agricultural activities currently conducted on the parcel. Therefore, impacts to VELB are considered less than significant.

Western Pond Turtle

Western pond turtle may occur outside of the project site boundary primarily in aquatic habitats associated with Putah Creek. However, the species nests in adjacent upland habitat, sometimes up to several hundred feet from the water. Because the adjacent active field comprising the majority of the project site is regularly cultivated, it is unlikely that pond turtles would attempt to nest there; however, there is some limited potential for upland nesting in the smaller idle field.

Because aquatic and riparian habitats will not be disturbed and because the restoration of the 100-foot open space area to include storm water retention features and native vegetation will enhance the integrity of Putah Creek and upland habitat for the western pond turtle, impacts to this species are considered less than significant.

Swainson's Hawk

Swainson's hawks could nest in trees that are adjacent to the project site, such as along Putah Creek and around the adjacent rural residences. However, these trees will not be removed by the project.

The approximately 38 acres of agricultural land on the project site are considered suitable Swainson's hawk foraging habitat. Approximately 8 of these acres will be retained and restored within the Putah Creek buffer and will continue to provide habitat value for the Swainson's hawk and other wildlife. Loss of the remaining 30 acres of 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 of Yolo, Sacramento, Solano, and San Joaquin Counties. However, the loss does contribute to a significant cumulative regional loss of agricultural foraging habitat as addressed in the Yolo County General Plan EIR (LSA 2009). This project does not affect or change that analysis or conclusion.

In addition, construction-related disturbances potentially resulting in nest abandonment may be considered take pursuant to the California Endangered Species Act, could violate

Fish and Game Code, and could be inconsistent with PG&E's internal guidance for protection of nesting birds (ICF and HT Harvey 2013).

Recommended Mitigation

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

The loss of approximately 38 acres of land in agricultural use will remove foraging habitat for the state-threatened Swainson's hawk and other agriculture-associated species. Approximately 8 of these acres will be retained and restored within the Putah Creek buffer and will continue to provide habitat value. To address the loss of the remaining 30 acres 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 approved by the CDFW would be placed on one or more offsite parcels within Yolo County and would require the land be maintained in agriculture under restrictions that would also maintain Swainson's hawk foraging habitat. Similarly, the applicant could purchase Swainson's hawk foraging habitat credits in a CDFW-approved mitigation bank. For projects impacting less than 40 acres, an applicant may alternatively elect to pay the applicable Swainson's Hawk mitigation fee.

Avoid Disturbance to Nesting Special-Status Birds

Removal of vegetation (i.e. trees and shrubs) should occur outside of the nesting season (September 1 to February 14) to reduce the potential of impacting nesting special-status birds on or adjacent to the project site. If vegetation removal must occur during the nesting season, conduct preconstruction nesting season surveys to determine presence of nesting Swainson's hawks, white-tailed kites, northern harriers, and loggerhead shrikes. These surveys should be conducted between approximately March 15 and August 31 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 – 300 feet
- Loggerhead shrike – 100 feet

Avoid Disturbance to Nesting Birds

Removal of vegetation (i.e. trees and shrubs) should occur outside of the nesting season (September 1 to February 14) to reduce the potential of impacting nesting birds on or adjacent to the project site. If vegetation removal must occur during the nesting season, conduct preconstruction nesting season surveys to determine the presence or absence of nesting birds. These surveys should be conducted between approximately March 15 to August 31 and within two weeks of planned construction activity. If nesting birds are found in locations within or adjacent to the project site, primarily in trees and shrubs along the southern, western, or eastern borders, no-disturbance set-backs will be established and vegetation removal will be postponed in accordance with PG&E's Avian Conservation Plan (ICF and HT Harvey 2013) guidance.

Avoid Disturbance to or Compensate for Impacts to Active Burrowing Owl Nesting and Wintering Burrows

Surveys should be conducted prior to construction to ensure avoidance of occupied burrowing owl burrows that may occupy the site prior to development. If active burrowing owl burrows are found, standard avoidance and mitigation measures recommended by CDFW shall be employed to offset impacts (California Burrowing Owl Consortium 1993). They include the following:

- Conduct preconstruction surveys within 30 days prior to ground disturbing 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 meter (approximately 160 feet) no-disturbance buffer around occupied burrows during the non-nesting season (September 1 to January 31) and a 75 meter (approximately 250 feet) 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-nesting 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 that are beyond 50 meters of the impact zone and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls. Relocation of owls should only be implemented during the non-nesting season.
- 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

As noted above, the establishment of a 100-foot-wide open space greenway area extending from the upper slope of Putah Creek into the active agricultural field will avoid direct and indirect disturbance and provide additional protection for the elderberry shrubs along the creek and facilitate the establishment of new elderberry shrubs. The restored greenway area, which is incorporated into the construction design, will include native trees, shrubs, and retention ponds. During these ground disturbing activities, additional precautions will be implemented, including dust control, temporary fencing, and if necessary temporary covering of the shrubs to further reduce the effects of dust.

Summary and Conclusion

The project site consists of agricultural land near medium density residential uses on the western boundary, Putah Creek riparian corridor and agriculture on the southern boundary, Interstate 505 on the eastern boundary, East Grant Avenue on the northern boundary, and beyond East Grant Avenue, a mix of rural residential, commercial and open agricultural land to the north. Thus, the project area can be largely 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 site 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 biologically important or unique communities or habitats occur within the project site boundary 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 approximately 38 acres of agricultural land within the project site would affect the use of the project site by many wildlife species and would affect wildlife populations that require the adjacent edge habitats by removing adjacent open space foraging habitat. Protection and restoration of nearly 8 of these acres within the Putah Creek buffer will retain and enhance habitat value along the creek corridor. Development of the project site 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 site could result in significant impacts to several special-status species as described above. 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 Interim Mitigation Fee Program administered by the Joint Powers Authority of the Yolo County Natural Heritage Program.

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