

## 3.4 Biological Resources

Table 3.4-1 Biological Resources Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 3.4.1 Setting

The project contains upland vegetation, wetland, and riparian habitat types. Upland vegetation habitat types identified include non-native grassland, valley oak woodland, interior live oak woodland, foothill pine-oak woodland, urban development, urban parks, rural-residential, irrigated pasture, orchard, and row crops. Wetland and riparian habitat types observed were seasonal wetland, northern hardpan vernal pool, vernal swale, valley freshwater marsh, open water, Great Valley willow riparian scrub, Great Valley mixed riparian forest, intermittent stream, irrigation canal, seasonally flooded rice crops, and non-vegetated and vegetated ditches.

### Literature Search and Review

ICF Jones & Stokes completed the Proponent's Environmental Assessment and Biological Assessment for the applicant (ICF Jones & Stokes 2009a, 2009b). Addenda to the PEA were subsequently prepared to account for revised project description activities as outlined by the applicant to provide updated biological

information (ICF International 2010a). All of these documents were reviewed and pertinent biological resources referenced in these documents included the following:

- A California Natural Diversity Database (CNDDDB) records search of the Palermo, Honcut, Yuba City, Olivehurst, Nicolaus, Shippee, Oroville, Oroville Dam, Biggs, Bangor, Gridley, Loma Rica, Sutter, Browns Valley, Gilsizer Slough, Wheatland, Sutter Causeway, Sheridan, Knights Landing, Verona, and Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute quadrangles.
- The California Native Plant Society's (CNPS's) 2010 online *Inventory of Rare and Endangered Plants of California* for Butte, Sutter, and Yuba counties and the Palermo, Honcut, Yuba City, Olivehurst, and Nicolaus USGS 7.5-minute quadrangles.
- A U.S. Fish and Wildlife Service (USFWS) list of endangered, threatened, and proposed species for Butte, Sutter, and Yuba counties and the Palermo, Honcut, Yuba City, Olivehurst, and Nicolaus USGS 7.5-minute quadrangles obtained from the USFWS website.
- The California Department of Fish and Game (DFG) 2009 Special Animals List.

Additional local, regional, and state biological resources were reviewed in order to identify pertinent ordinances or conservation plans. Regarding local and regional biological resources, the Butte, Sutter, and Yuba County General Plans were reviewed.

The CNDDDB was reviewed to determine the potential occurrence of sensitive or special status species and/or habitats within the project and vicinity. Special status species include plants and animals that are either listed as endangered or threatened under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA); listed as rare under the California Native Plant Protection Act; or considered to be rare (but not formally listed) by resource agencies, professional organizations (e.g., Audubon Society, CNPS), and the scientific community. The Palermo, Honcut, Yuba City, Olivehurst, Nicolaus, Shippee, Oroville, Oroville Dam, Biggs, Bangor, Gridley, Loma Rica, Sutter, Browns Valley, Gilsizer Slough, Wheatland, Sutter Causeway, Sheridan, Knights Landing, Verona, and Pleasant Grove USGS 7.5 minute quadrangles were used to conduct the searches.

### Surveys Conducted

In 2005 and 2006, the applicant and ICF Jones & Stokes biologists used aerial photographic interpretation and field verifications to describe and map vegetation and land cover types occurring within 250 feet of the existing transmission line (Appendix B-1). Vegetation communities observed were categorized primarily according to the California Department of Fish and Game's 2003 *List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database* (DFG 2003). Noxious weed surveys were conducted in 2008 by ICF Jones & Stokes (PG&E 2009).

Waters of the United States, including wetlands, were initially delineated by ICF Jones & Stokes biologists in 2007 and 2008 during spring, summer and winter periods by both ICF Jones & Stokes and North State Resources biologists. Further wetland delineation was conducted by ICF Jones & Stokes in April and June of 2009, and in January and March of 2010 (ICF International 2010a). The study area for the delineation consisted of areas within 50 feet of all linear features, e.g., transmission lines, access roads and within 50 feet of all proposed project components/facilities, e.g., towers, substations, staging areas (see Appendix B-4 for a summary map of wetlands and waters found along the project route).

The wetland delineation was initially submitted to the U.S. Army Corps of Engineers (USACE) for verification in February 2009 and was subsequently verified by the Corps on June 23, 2009 (ICF International 2010a). Addenda to the delineation were submitted to the USACE due to project revisions

made after the initial application. As of the preparation of this document, the addendum to the wetland delineation has not been verified by the USACE.

The applicant's biologists conducted various general and focused wildlife habitat assessments of the project route from 2005 to 2009. Field biologists conducted habitat assessments for valley elderberry longhorn beetle (VELB; *Desmocerus californicus dimorphus*), vernal pool wildlife species, i.e., vernal pool fairy shrimp (*Branchinecta lynchi*), conservancy fairy shrimp (*B. conservatio*), vernal pool tadpole shrimp (*Lepidurus packardii*), California tiger salamander (*Ambystoma californiense*), and western spadefoot (*Spea hammondi*), giant garter snake (*Thamnophis couchi gigas*), California black rail (*Laterallus jamaicensis coturniculus*), and western burrowing owl (*Athene cunicularia hypugea*). Surveys for raptor nesting were conducted in 2005, 2006, and 2010. Raptor nesting surveys in 2010 focused on identifying potential Swainson's hawk nests. Special status plant surveys were completed in April of 2005 and April of 2009 by ICF Jones & Stokes botanists. Protocol-level surveys for listed vernal pool invertebrates were conducted in the wet season of 2006 to 2008 and the dry season of 2009 to determine the presence or absence of all listed branchiopods in vernal pools and other potential habitat features.

ICF Jones & Stokes conducted additional biological surveys in the spring and summer of 2009 (ICF Jones & Stokes 2009c) and spring of 2010 (ICF International 2010a, 2010b) to accommodate project revisions, including the addition of new work areas. These studies focused on giant garter snake habitat and vernal pool invertebrate species, and included revised habitat mapping and dry season sampling of vernal pool features. Special status plant surveys were conducted for added work areas during the additional wetland delineation surveys (i.e., January and March 2010) and in April 2010 to survey the newly proposed helicopter landing pad area. Appendices B-1 through B-3 depict habitat and occurrences of select special status species along the project route.

## Regulatory Setting

### ***Federal and State Regulations, Plans, and Standards***

The project was evaluated to determine consistency with the following federal and state regulations, plans, and standards related to the protection of biological resources:

- Federal Endangered Species Act of 1973, which protects plants and animals that are listed by the federal government as “endangered” or “threatened;”
- Section 404 of the Clean Water Act, which regulates the discharge of dredge-and-fill material into waters of the United States including wetlands;
- Section 401 of the Clean Water Act, which requires a State Water Quality Certification (or waiver thereof) for activities requiring a USACE Section 404 permit, to ensure consistency with state water quality standards;
- Migratory Bird Treaty Act for protection of migratory birds, eggs, and nests;
- Bald and Golden Eagle Protection Act for protection of the bald eagle and the golden eagle;
- California Endangered Species Act for protection of state-listed threatened, endangered, and rare species as well as species of special concern (SSC) and fully protected species (FP);
- California Fish and Game Code, including Sections 1600 through 1616, 1802, 1900 et seq., 2050 et seq., 3503, 3503.5, 3511, 3513, 4700, 5050, and 5515, and Title 14, California Code of Regulations, Sections 670.2 and 670.5, for the conservation, protection, and management of the wildlife, native plants, and habitat necessary to maintain biologically sustainable populations;

- California Porter-Cologne Water Quality Control Act, for the fill or alteration of the waters of the state; and
- California Native Plant Society maintains a watch list of plant species that are rare, threatened, or endangered in California. Rare species are those that have elevated conservation concern at the state, regional, or local level. While the CNPS list does not confer legal protection of these species, the DFG utilizes and publishes this information in the California Natural Diversity Database to track these watch list species.

### ***Local Regulations, Plans, and Standards***

#### **Butte County**

Several policies identified in the Butte County General Plan (Butte County 2000) apply to biological resources in the regional area. Policies 6.5a through 6.5d include regulating development to prevent impacts to marshes and significant riparian habitats, and to rare or endangered plants or animals. The plan also encourages the creation and expansion of natural and wilderness areas, including the federally owned Feather Falls Scenic Area and the National Wild and Scenic River (Middle Fork of the Feather River), state owned Grey Lodge Waterfowl Management Area and the borrow area along Feather River, and wilderness areas near the northeast boundary of the county (Butte County 2000, Section 6.6a).

#### **Sutter County**

The Sutter County General Plan states that the county supports areas with significant biological resources and wildlife habitat (Sutter County 2008). Goals and polices in the plan related to biological resources are the general preservation and protection of open space and natural resources, reduction of pollution, and minimizing impacts to wildlife habitats from development.

#### **Yuba County**

The Yuba County General Plan provides goals, objectives, and policies that apply to biological resources in the regional area (Yuba County 1996, Sections 5 and 7). Goal 2 and 5 provide objectives and policies to enhance natural resources and open space lands, and to protect lands of unique value to plants, fisheries, waterfowl, and other forms of animal life. Policies include requiring no-net loss of wetlands and riparian habitats, retention of existing designated wildlife areas and protection from incompatible land uses, protection of waterfowl habitat areas, and connection of wildlife preserves and parklands to wildlife/opens space corridors. Natural vegetation and open space areas along the Yuba, Bear and Feather rivers are specifically targeted for protection as well.

Goal 7-OSCG of the Yuba County General plan is to conserve valley oaks and encourage the protection and regeneration of oak woodlands in foothill areas. Policies to support this goal are:

- **Policy 116-OSCP:** Project proponents shall identify and map the location of all Valley oaks on property proposed for a development project. Identification need not include individual trees where groves of Valley oaks are present, and need not include trees less than 6 inches in diameter at breast height.
- **Policy 117-OSCP:** The following guidelines shall be implemented by the County in order to preserve Valley oaks:
  - During any construction, fill should not be placed within an area which is 1.5 times the distance from the trunk to the dripline (the perimeter of the crown) of Valley oaks and no closer than 10 feet from the trunk. The dripline of the tree should be fenced during grading and construction.

- Soil compaction, which could damage root systems and interfere with vital gas and nutrient exchanges in the roots, should be prevented by not operating or storing heavy equipment within oak driplines.
- Excavations around trees should be minimized. Depth of excavations should be the minimum required. Utility lines should be combined in single trenches whenever possible.
- If roots need to be removed, they should be cut rather than torn and immediately covered with mulch or soil to prevent desiccation.
- Developers shall submit a tree protection plan along with grading and erosion control plans when Valley oaks are present on the site to be developed. The tree protection plan should include a planting replacement program for all Valley oaks removed, including a maintenance and monitoring program, and should also show how any snags present on the site will be retained where feasible when they do not pose a threat to public safety; and
- **Policy 118-OSCP:** All proposed parcel maps, subdivision maps and conditional use permits in areas containing oak woodlands shall show the location of existing oaks by canopy area. Based on the amount of existing canopy area on the project site, the determined amount of canopy must be retained.

### City of Marysville

Section 5 of the City of Marysville General Plan applies to open space, conservation, and recreation near the project route within the City of Marysville (City of Marysville 1985). Policies that protect and conserve the natural resources, open space, and recreation lands in the city include: encouraging the preservation of wildlife habitat areas, protecting the fisheries of adjacent waterways; ensuring that existing natural resources areas, scenic areas, open space areas and parks are protected from encroachment or destruction by development; permitting open space and conservation land use within floodplains; and assuring that floodplains and waterways will not be polluted.

### **Applicant Proposed Measures**

The applicant has incorporated the following applicant proposed measures (APMs) into the project to minimize or avoid impacts on biological resources. See Chapter 1.0 for a full description of each APM that the applicant has incorporated into the project to avoid or minimize impacts on all resource areas.

**APM BIO-1:** Conduct a preconstruction tree survey and avoid or compensate for tree removal

**APM BIO-2:** Implement general protection measures for wetlands and other waters

**APM BIO-3:** Conduct mandatory contractor/worker awareness training for construction personnel

**APM BIO-4:** Install construction barrier fencing to protect wetlands and other waters adjacent to the project area

**APM BIO-5:** Restore temporarily impacted wetlands and other waters to pre-construction condition

**APM BIO-6:** Monitor during and after disturbance in wetlands and other waters

**APM BIO-7:** Compensate for permanent impacts on wetlands and other waters caused by new structures

**APM BIO-9:** Avoid impacts on special status plants

**APM BIO-10:** Minimize impacts on special status plants

**APM BIO-11:** Restore habitat for special status plants disturbed during construction

- APM BIO-12:** Implement management practices to control the introduction and spread of invasive plants
- APM BIO-13:** Avoid or minimize effects on valley elderberry longhorn beetle during construction
- APM BIO-14:** Compensate for loss of valley elderberry longhorn beetle habitat and potential loss of individuals
- APM BIO-15:** Avoid or minimize impacts on habitat for vernal pool species during construction
- APM BIO-16:** Compensate for impacts to habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp
- APM BIO-17:** Minimize potential impacts on giant garter snake during construction with suitable habitat
- APM BIO-18:** Compensate for loss of aquatic and upland habitat for giant garter snake
- APM BIO-19:** Conduct a preconstruction survey for western pond turtles and monitor construction activities within suitable aquatic and upland habitat
- APM BIO-20:** Conduct preconstruction surveys for active burrowing owl burrows
- APM BIO-21:** Implement DFG (1995) guidelines for burrowing owl mitigation, if necessary
- APM BIO-22:** Conduct tree trimming, vegetation removal, and if possible, tower removal during the non-breeding season
- APM BIO-23:** Conduct preconstruction surveys for active special status and non-special status raptors and migratory birds
- APM BIO-24:** Avoid disturbance of active nests by helicopter use
- APM HYDRO-1:** Prepare and implement a storm water pollution prevention plan

### 3.4.2 Environmental Impacts and Mitigation Measures

- a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

*LESS THAN SIGNIFICANT WITH MITIGATION.* During 2005 and 2006, biologists used aerial images and field verification to describe and map vegetation and land cover types along the project route that included all lands within 250-feet of all project activities. Results from these initial efforts were used to identify potential locations of sensitive biological resources. To determine a list of sensitive or special status species and/or habitats that may potentially occur along the project route, records were searched from the CNDDDB; the CNPS's 2010 outline *Inventory of Rare and Endangered Plants of California*; USFWS list of endangered, threatened, and proposed species; and the DFG 2009 Special Animal List.

#### Special Status Plants

Initial special status plant early-blooming surveys were conducted in April 2005 along a 150-foot corridor centered along the existing transmission line. Additional early-blooming, special-status plants surveys were conducted during the spring of 2009 and 2010 to complete surveys of the additional work areas and access roads not included in the 2005 project design, but added to the 2008 project design. The 2009 surveys were conducted along meandering transects within a 250-foot wide corridor along the transmission line (ICF Jones & Stokes 2009c). The 2010 survey was focused on covering the small work

areas added along the proposed project route, such as the helicopter landing pad between towers 226 and 227 (ICF International 2010a and b). Botanists determined that the habitats along the project route were not suitable for late-blooming species, and therefore, late-blooming species surveys were not conducted (ICF Jones & Stokes 2009a).

A review of the database has identified 28 special status plants that have the potential to occur along the project route. Out of the 28 special status species, three of the species were determined not to be present along the project route due to altitudinal requirements, 8 species were determined to have a low potential for occurrence, four species were determined to have a moderate potential for occurrence, and thirteen species were determined to have a high potential for occurrence (ICF Jones & Stokes 2009a). Only two of the species, brown fox sedge (*Carex vulpinoidea*) and Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), were identified along the project route. Brown fox sedge was found near the intersection of Ramirez Road and the Western Pacific railroad line in Yuba County (Appendix B-1), while a population of Ahart's dwarf rush was found in a vernal pool west of towers 48 and 49 (ICF International 2010c). Brown fox sedge is not a federal or state-listed species but is designated by CNPS as a List 2.2 species. As defined by CNPS, a List 2.2 species is a species that is fairly endangered in California but is more common elsewhere. Ahart's dwarf rush is also not federally or state listed, but is CNPS List 1B.2, meaning the species is "rare, threatened, or endangered in California and elsewhere" and "fairly endangered in California." Table 3.4-2 contains a complete list of special status plant species, their legal status, their distribution, habitat requirements, and their potential for occurrence.

The occurrences of brown fox sedge and Ahart's dwarf rush are outside the footprint of disturbance for the project, thus no impacts to these occurrences are expected. Should any identified special status plants be found along the project route during implementation, those plants could be directly impacted by new tower installation, vegetation clearing, grading, or access road construction. Impacts may be temporary or permanent, and would be dependent on the type of construction activity. Through the implementation of measures APM BIO-9, APM BIO-10, and APM BIO-11, the potential impacts on special status plant species would be less than significant.

### **Noxious Weeds**

Although noxious weeds and invasive species are not considered to be special status, they are known to result in negative effects on the abundance of native plant and wildlife species and are known to result in modification of habitats. This may create situations which may be unsuitable for special status plant and wildlife species. Through the implementation of APM BIO-12, the impacts created by the spread of noxious weeds would be less than significant.

### **Special Status Wildlife**

During 2005 and 2006, biologists used aerial images and field verification to describe and map vegetation and land cover types within the initial project, which included all lands within 250 feet of all project activities. Results from these initial efforts were used to identify potential locations of sensitive wildlife resources. Biological surveys were then conducted by ICF Jones & Stokes biologists for various special status species, including valley elderberry longhorn beetle, vernal pool wildlife species, giant garter snake, and bird and raptor species. Table 3.4-3 describes the habitat requirements and a determination of the likelihood of occurrence for each special status wildlife species that has the potential to occur along the project route (ICF Jones & Stokes 2009a). Suitable habitat for special status wildlife was located within and adjacent to the project survey area, and several special status species were observed within and near the project route.

Table 3.4-2 Special Status Plant Species Identified as Having the Potential to Occur Along the Project Route

Common and Scientific Name	Legal Status <sup>a</sup>		Geographic Distribution/California Floristic Province <sup>c</sup>	Habitat Requirements <sup>b</sup>	Potential for Occurrence <sup>d</sup>
	Federal/State/CNPS	Blooming Period <sup>b</sup>			
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	-I-/1B.2	Mar–Jun	Merced, Solano, and Yolo Counties; historically more widespread	Alkaline soils in playas, adobe clay in valley and foothill grassland, vernal pools; below 197'	Low; no occurrences within 10 mi. of the project route and suitable microhabitat may not be present
Round-leaved filaree <i>California macrophylla</i> (formerly <i>Erodium macrophyllum</i> )	-I-/1B.1	Mar–May	Sacramento Valley, northern San Joaquin Valley, Central Western California, South Coast, & northern Channel Islands (Santa Cruz Island)	Clay soils in cismontane woodland, valley and foothill grassland; 49–3,937'	Low; no occurrences within 10 mi. of the project route and suitable microhabitat may not be present
Dissected-leaved toothwort <i>Cardamine pachystigma</i> var. <i>dissectifolia</i>	-I-/3	Feb–May	North Coast, Sacramento Valley in Butte, Glenn, Mendocino, Placer, Sonoma, and Tehama Counties	Chaparral, lower montane coniferous forest, typically in serpentine or rocky soils; 837–6,890'	None; project route occurs outside species elevation range
Brown fox sedge <i>Carex vulpinoidea</i>	-I-/2.2	May–Jun	Scattered occurrences from Siskiyou to Los Angeles Counties	Freshwater marshes and swamps, riparian woodland; 98–3,937'	High; Occurs within project area and nearest CNDDDB record is ~3 mi. away
Pink creamsacs <i>Castilleja rubicundula</i> ssp. <i>rubicundula</i>	-I-/1B.2	Apr–Jun	Scattered occurrences in the southern Inner North Coast Ranges from Shasta to Santa Clara Counties	Serpentine soils in chaparral, valley and foothill grassland, cismontane woodland, meadows and seeps; 66–2,953'	Moderate; nearest occurrence is ~3.5 mi. away and suitable microhabitat (i.e., serpentine) may not be present
Hoover's spurge <i>Chamaesyce hooveri</i>	T/-/1B.2	Jul–Sep (uncommonly Oct)	Scattered occurrences in the Central Valley from Tehama to Tulare Counties	Deep playa vernal pools; 82–820'	Low; no occurrences within 10 mi. of project route
Brandegee's clarkia <i>Clarkia biloba</i> ssp. <i>brandegeae</i>	-I-/1B.2	May–Jul	Northern Sierra Nevada foothills from Butte to El Dorado Counties	Chaparral, cismontane woodland, often on roadcuts; 968–2,903'	None; project route occurs outside species elevation range



Table 3.4-2 Special Status Plant Species Identified as Having the Potential to Occur Along the Project Route

Common and Scientific Name	Legal Status <sup>a</sup>	Blooming Period <sup>b</sup>	Geographic Distribution/California Floristic Province <sup>c</sup>	Habitat Requirements <sup>b</sup>	Potential for Occurrence <sup>d</sup>
	Federal/State/CNPS				
Mosquin's clarkia <i>Clarkia mosquinii</i>	-I-/1B.1	May-Jul	Northern Sierra Nevada foothills in vicinity of Feather River Canyon near Pulga in northeast Butte County	Rocky, roadside areas in cismontane woodland and lower montane coniferous forest; 607-3,838'	None; project route occurs outside species elevation range
Recurved larkspur <i>Delphinium recurvatum</i>	-I-/1B.2	Mar-May	Central Valley from Colusa* to Kern Counties	Alkaline soils in valley and foothill grassland, saltbush scrub, cismontane woodland; below 2,460'	Low; no occurrences within 10 mi. of project route and suitable microhabitat may not be present
Dwarf downingia <i>Downingia pusilla</i>	-I-/2.2	Mar-May	Inner North Coast Ranges, southern Sacramento Valley, northern and central San Joaquin Valley	Mesic areas in valley and foothill grassland, vernal pools; below 1,460'	High; suitable habitat and microhabitat present and nearest occurrence is ~4mi. away
Butte County fritillary <i>Fritillaria eastwoodiae</i>	-I-/3.2	Mar-May	Sierra Nevada foothills from Shasta to Yuba Counties	Chaparral, cismontane woodland, and openings in lower montane coniferous forest, sometimes on serpentine; 164-4,921'	Moderate; nearest occurrence is ~6mi. away and suitable microhabitat (i.e., serpentine) may not be present
Adobe-lily <i>Fritillaria pluriflora</i>	-I-/1B.2	Feb-Apr	Northern Sierra Nevada foothills, Inner North Coast Ranges, edges of Sacramento Valley	Often adobe soils in chaparral, cismontane woodland, valley and foothill grassland; 197-2,313'	Low; no occurrences within 10 mi. of project route and suitable microhabitat may not be present
Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>	-E/1B.2	Apr-Aug	Inner North Coast Ranges, central Sierra Nevada foothills, Sacramento Valley, Modoc Plateau	Marshes and swamps along lake margins, vernal pools on clay soils; 33-7,792'	Low; no occurrences within 10 mi. of project route
Rose-mallow <i>Hibiscus lasiocarpus</i>	-I-/2.2	Jun-Sep	Central and southern Sacramento Valley, deltaic Central Valley, and elsewhere in the U.S.	Freshwater marshes and swamps; below 394'	High; suitable habitat present and nearest occurrence is ~5.5mi. away

Table 3.4-2 Special Status Plant Species Identified as Having the Potential to Occur Along the Project Route

Common and Scientific Name	Legal Status <sup>a</sup>		Geographic Distribution/California Floristic Province <sup>c</sup>	Habitat Requirements <sup>b</sup>	Potential for Occurrence <sup>d</sup>
	Federal/State/CNPS	Blooming Period <sup>b</sup>			
Ahart's dwarf rush <i>Juncus leiospermus</i> var. <i>ahartii</i>	-I-/1B.2	Mar-May	Eastern Sacramento Valley, northeastern San Joaquin Valley with occurrences in Butte, Calaveras, Placer, Sacramento, and Yuba Counties	Wet areas in valley and foothill grassland, vernal pool margins; 98-328'	High; Occurs within the project area.
Red Bluff dwarf rush <i>Juncus leiospermus</i> var. <i>leiospermus</i>	-I-/1B.1	Mar-May	Scattered occurrences in the northern Sacramento Valley, Cascade Range foothills from Shasta to Placer Counties	Vernally mesic areas in chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools; 115-3,346'	High; suitable habitat present and nearest occurrence is ~8mi. away
Legenere <i>Legenere limosa</i>	-I-/1B.1	May-Jun	Sacramento Valley, North Coast Ranges, northern San Joaquin Valley and Santa Cruz mountains.	Vernal pools; below 2,887'	High; suitable habitat present and nearest occurrence is ~4mi. away
Butte County meadowfoam <i>Limnanthes floccosa</i> ssp. <i>californica</i>	E/E/1B.1	Mar-May	Endemic to Butte County	Wet areas in valley and foothill grassland, vernal pools and swales; 164-3,051'	High; suitable habitat present and nearest occurrence is ~8mi. away
Veiny monardella <i>Monardella douglasii</i> ssp. <i>venosa</i>	-I-/1B.1	Mar-Jul	Occurrences in the northern and central Sierra Nevada foothills; also historically known from the Sacramento Valley	Clay soils in cismontane woodland, valley and foothill grassland; 197-1,345'	Moderate; occurrences within ~7mi. of project route and suitable microhabitat (i.e., clay) may not be present
Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	-I-/1B.1	Apr-Jul	Inner North Coast Ranges, western Sacramento Valley	Mesic areas in cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools; 16-5,709'	High; suitable habitat present and nearest occurrence is ~8.5mi. away

Table 3.4-2 Special Status Plant Species Identified as Having the Potential to Occur Along the Project Route

Common and Scientific Name	Legal Status <sup>a</sup>	Blooming Period <sup>b</sup>	Geographic Distribution/California Floristic Province <sup>c</sup>	Habitat Requirements <sup>b</sup>	Potential for Occurrence <sup>d</sup>
	Federal/State/CNPS				
Hairy Orcutt grass <i>Orcuttia pilosa</i>	E/E/1B.1	May-Sep	Scattered locations along east edge of Central Valley and adjacent foothills from Tehama to Merced Counties	Deep playa vernal pools; 180-656'	Low; no occurrences within 10 mi. of project route
Slender Orcutt grass <i>Orcuttia tenuis</i>	T/E/1B.1	May-Oct	Sierra Nevada and Cascade Range foothills from Siskiyou to Sacramento Counties	Deep playa vernal pools; 115-5,774'	High; suitable habitat present and nearest occurrence is ~2.5mi. away
Ahart's paronychia <i>Paronychia ahartii</i>	-I-/1B.1	Mar-Jun	Northern Central Valley in Butte, Shasta, and Tehama Counties	Cismontane woodland, valley and foothill grassland, vernal pools; 98-1,673'	High; suitable habitat present and nearest occurrence is ~1.5mi. away
Hartweg's golden sunburst <i>Pseudobahia bahiifolia</i>	E/E/1B.1	Mar-Apr	Scattered occurrences in the central Sierra Nevada foothills and eastern San Joaquin Valley from Yuba* to Madera Counties	Clay, often acidic soils in cismontane woodland, valley and foothill grassland; 49-492'	Moderate; nearest occurrence is ~2mi. away but suitable microhabitat (i.e., clay or acidic soils) may not be present
Sanford's arrowhead <i>Sagittaria sanfordii</i>	-I-/1B.2	May-Oct	Scattered locations in Central Valley and Coast Ranges	Freshwater marshes, sloughs, canals, and other slow-moving water habitats; below 2,132'	High; suitable habitat present and nearest occurrence is ~6mi. away
Wright's trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>	-I-/2.1	May-Sep	Scattered locations in the Central Valley and Southern Coast; Texas, northeastern Mexico	Floodplains, moist places, on alkaline soils, below 1,500'	Low; no occurrences within 10 mi. of project route and suitable microhabitat may not be present
Butte County golden clover <i>Trifolium jokerstii</i>	-I-/1B.2	Jun-Aug	Endemic to Butte County	Wet areas in valley and foothills grassland, vernal pools; 164-1,263'	High; suitable habitat present and nearest occurrence is ~7mi. away

Table 3.4-2 Special Status Plant Species Identified as Having the Potential to Occur Along the Project Route

Common and Scientific Name	Legal Status <sup>a</sup>	Blooming Period <sup>b</sup>	Geographic Distribution/California Floristic Province <sup>c</sup>	Habitat Requirements <sup>b</sup>	Potential for Occurrence <sup>d</sup>
	Federal/State/CNPS				
Greene's tuctoria <i>Tuctoria greenei</i>	E/R/1B.1	May-Sep	Scattered distribution along eastern Central Valley and foothills from Shasta to Tulare Counties	Dry deep playa vernal pools; 98-3,510'	High; suitable habitat present and nearest occurrence is ~8mi. away

<sup>a</sup> Status explanations:

**Federal**

- E = listed as endangered under the federal Endangered Species Act.
- T = listed as threatened under the federal Endangered Species Act.
- = no listing.

**State**

- E = listed as endangered under the California Endangered Species Act.
- T = listed as threatened under the California Endangered Species Act.
- R = listed as rare under the California Native Plant Protection Act (this category is no longer used for newly listed plants, but some plants previously listed as rare retain this designation)
- = no listing.

**California Native Plant Society**

- 1B = List 1B species: rare, threatened, or endangered in California and elsewhere.
- 2 = List 2 species: rare, threatened, or endangered in California but more common elsewhere
- 3 = List 3 species: plants about which more information is needed to determine their status.
- 0.1 = seriously endangered in California
- 0.2 = fairly endangered in California
- = no listing.
- \* = known populations believed extirpated from that County

<sup>b</sup> As reported in the 2010 CNPS online *Inventory of Rare and Endangered Plants of California* (CNPS 2010)

<sup>c</sup> As indicated in the Jepson Manual (Hickman 1993) and CNPS 2010 online *Inventory of Rare and Endangered Plants of California* (CNPS 2010)

<sup>d</sup> Potential for Occurrence definitions:

High: Known CNDDDB occurrence of plant in region, or other documents in the project vicinity; or presence of suitable habitat conditions and suitable microhabitat conditions.

Moderate: Known CNDDDB occurrence of plant in region or reported in other documents in the project vicinity; or presence of suitable habitat conditions but not suitable microhabitat conditions.

Low: Plant not known to occur in the region from the CNDDDB, or other documents in the project vicinity; or habitat conditions of poor quality.

None: Plant not known to occur in the region from the CNDDDB, or other documents in the project vicinity; or suitable habitat not present in any condition.

Table 3.4-3 Special Status Wildlife Species Identified as Having the Potential to Occur in the Study Area

Common and Scientific Names	Status Federal/State	Geographic Distribution	Habitat Requirements	Potential Occurrence in Study Area
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	E/--	Northern two-thirds of the Central Valley floor. Disjunct occurrences in Solano, Merced, Stanislaus, Tehama, Butte, and Glenn Counties.	Large, deep vernal pools or playas with relatively long ponding duration. Associated with large areas of annual grasslands supporting vernal pools and swales.	Low; Nearest occurrence located greater than 3.5 miles north of the study area; Species does not occur in two suitable habitat features observed in the study area.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T/--	Central Valley and central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County.	Common in vernal pools and other ephemeral wetlands in annual grassland; also found in sandstone rock outcrop pools.	High; Several occurrences within 5-miles of the study area. Suitable habitat present in study area.
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	E/--	Shasta County south to Merced County	Vernal pools, seasonal wetlands, and ephemeral stock ponds in annual grassland. Also occurs locally in railroad right-of-way pools and roadside ditches.	High; Observed in several pools within the study area. Suitable habitat present in study area.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T/--	Stream side habitats below 3,000 feet throughout the Central Valley. Largest known populations are associated with the Sacramento River, American River, San Joaquin River, and Putah Creek watersheds.	Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant for larvae and primary food source for adults.	High; Several occurrences in or near the Feather River, Bear River, Yuba River, Honcut Creek, and Wilson Creek drainages. Suitable habitat present in the study area.
Green Sturgeon <i>Acipenser medirostris</i>	T/SSC	Marine from British Columbia to the Bering sea; spawns in lower reaches of large rivers from British Columbia to San Francisco Bay. In Central Valley, Sacramento River upstream of Hamilton City to Keswick Dam and possibly lower Feather River.	Adults migrate into large rivers between late February and July and spawn between March and July. Young rear near the spawning ground and appear to remain in the river through the first winter. Food sources are benthic invertebrates and small fish.	High; Known to occur in Feather River although spawning population has not been confirmed. Suitable habitat occurs in the study area at the Feather River crossing only.

Table 3.4-3 Special Status Wildlife Species Identified as Having the Potential to Occur in the Study Area

Common and Scientific Names	Status Federal/State	Geographic Distribution	Habitat Requirements	Potential Occurrence in Study Area
Steelhead, Central Valley <i>Oncorhynchus mykiss irideus</i>	T/SSC	California coastal and Central Valley drainages; recent declines in the tributaries of the Sacramento River.	Occurs in well-oxygenated, cool, riverine habitat. Adults typically spawn on gravel bars from December through April. Young spend at least 1-year in fresh water, migrate to marine habitats, and return to the natal stream at 3- or 4-years-old. Young feed primarily on benthic invertebrates.	High; Known to occur in lower Feather River, Yuba River, Bear River, Honcut Creek, and Wyandotte Creek from July through March; suitable habitat occurs in the study area at these drainage crossings.
Spring-run Chinook salmon, Central Valley <i>Oncorhynchus tshawytscha</i>	T/SSC	Wild populations in the Sacramento River and its tributaries, including the Yuba River, Mill Creek, Deer Creek, and Butte Creek. Feather River spring-run salmon are primarily hatchery fish. Critical habitat is designated in the Feather River up to Lake Oroville, the lower Yuba River, and the lower Bear River.	Adults migrate into the Sacramento River from April through June, remaining in deep water habitats until eggs develop. Spawning occurs upstream from mid-August through early October.	Moderate; Known to occur in the lower Yuba River. Suitable migration habitat in the study area located within the Yuba River.
Winter-run Chinook salmon, Sacramento River <i>Oncorhynchus tshawytscha</i>	E/E	Mainstem Sacramento River below Keswick Dam.	Occurs in well-oxygenated, cool, riverine habitat with water temperatures from 8.0 to 12.5°C. Habitat types are riffles, runs, and pools.	Low; Not known to occur in rivers spanned by the project; Potentially suitable habitat is present in Yuba River.
California tiger salamander <i>Ambystoma californiense</i> (= <i>A. tigrinum c.</i> )	T/SSC	Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from Butte County south to northeastern San Luis Obispo County.	Small ponds, lakes, or vernal pools in grass-lands and oak woodlands for larvae; rodent burrows, rock crevices, or fallen logs for cover for adults and for summer dormancy	Low; No known occurrences within 10-miles of study area. Suitable habitat is present.
Western spadefoot <i>Scaphiopus hammondi</i>	--/SSC	Sierra Nevada foothills, Central Valley, Coast Ranges, coastal counties in southern California	Shallow streams with riffles and seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands.	Moderate; Known occurrence within 3-miles of study area near Wyandotte Creek. Suitable habitat is present.

Table 3.4-3 Special Status Wildlife Species Identified as Having the Potential to Occur in the Study Area

Common and Scientific Names	Status Federal/State	Geographic Distribution	Habitat Requirements	Potential Occurrence in Study Area
Foothill yellow-legged frog <i>Rana boylei</i>	--/SSC	Occurs in the Klamath, Cascade, north Coast, south Coast, Transverse, and Sierra Nevada Ranges up to approximately 6,000 feet	Creeks or rivers in woodland, forest, mixed chaparral, and wet meadow habitats with rock and gravel substrate and low overhanging vegetation along the edge. Usually found near riffles with rocks and sunny banks nearby.	Low; No known occurrences within 10-miles of study area. Suitable habitat present along Wyman Ravine near Palermo.
California red-legged frog <i>Rana aurora draytoni</i>	T/SSC	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County.	Permanent and semipermanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation. May estivate in rodent burrows or cracks during dry periods.	Low; No known occurrences within 10-miles of study area. Suitable habitat present in study area. Possibly extirpated from Central Valley floor.
Western pond turtle <i>Actinemmys marmorata</i>	--/SSC	Occurs from the Oregon border of Del Norte and Siskiyou Counties south along the coast to San Francisco Bay, inland through the Sacramento Valley, and on the western slope of Sierra Nevada	Occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests	High; Several known occurrences in Yuba River, Feather River, Dry Creek, and Wyandotte Creek drainages within 10-miles of the study area. Suitable habitat is present in the study area near the Yuba and Bear Rivers, Honcut and Wyandotte Creeks, and Wyman Ravine.
California horned lizard <i>Phrynosoma coronatum frontale</i>	--/SSC	Sacramento Valley, including foothills, south to southern California; Coast Ranges south of Sonoma County; below 4,000 feet in northern California	Grasslands, brushlands, woodlands, and open coniferous forest with sandy or loose soil; requires abundant ant colonies for foraging	Moderate; Nearest known occurrence located greater than 10-miles north of project. Suitable habitat present in the study area.
Giant garter snake <i>Thamnophis couchi gigas</i>	T/T	Central Valley from the vicinity of Burrel in Fresno County north to near Chico in Butte County; has been extirpated from areas south of Fresno	Sloughs, canals, low gradient streams and freshwater marsh habitats where there is a prey base of small fish and amphibians; also found in irrigation ditches and rice fields; requires grassy banks and emergent vegetation for basking and areas of high ground protected from flooding during winter	High; Several known occurrences located within 5-miles of the study area. A significant population associated with Feather River and Cross Canal occurs south of the project. Suitable aquatic habitat is present in several sloughs and rice fields in the study area.

Table 3.4-3 Special Status Wildlife Species Identified as Having the Potential to Occur in the Study Area

Common and Scientific Names	Status Federal/State	Geographic Distribution	Habitat Requirements	Potential Occurrence in Study Area
Least bittern <i>Lxobrychus exilis (nesting)</i>	--/SSC	Permanent resident along the Colorado River and Salton Sea and in isolated areas of Imperial, San Diego, and Los Angeles Counties; summers in marshlands of Yolo and Sutter Counties, at Tulare Lake, and in parts of Fresno, Merced, Madera, Siskiyou, and Modoc Counties	Marshes and along pond edges where tule and rushes provide cover; nests are built over water and low in thick tule.	Low; No record of nesting within 10-miles of study area. Freshwater marsh and small stands of tule in the study area provide low quality nesting habitat.
White-faced ibis <i>Plegadis chihi (rookery site)</i>	--/SSC	Both resident and winter populations on the Salton Sea and in isolated areas in Imperial, San Diego, Ventura, and Fresno Counties; breeds at Honey Lake, Lassen County, at Mendota Wildlife Management Area, Fresno County, and near Woodland, Yolo County; win	Prefers freshwater marshes with tules, cattails, and rushes, but may nest in trees and forage in flooded agricultural fields, especially flooded rice fields	Low; Adult birds observed in project region; no record of rookery site reported within 10-miles of the study area. Freshwater marsh and stands of tule in the study area provide low quality habitat for rookeries.
White-tailed kite <i>Elanus leucurus</i>	--/FP	Lowland areas west of Sierra Nevada from the head of the Sacramento Valley south, including coastal valleys and foothills to western San Diego County at the Mexico border	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging	High; Observed foraging in study area. Suitable nesting habitat present in the study area; potential nests observed within 0.5-mile of the project.
Northern harrier <i>Circus cyaneus</i>	--/SSC	Occurs throughout lowland California. Has been recorded in fall at high elevations	Grasslands, meadows, marshes, and seasonal and agricultural wetlands	High; Observed foraging in study area. Suitable nesting and foraging habitat is present.
Swainson's hawk <i>Buteo swainsoni</i>	--/T	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley. Highest nesting densities occur near Davis and Woodland, Yolo County	Nests in oaks or cottonwoods in or near riparian habitats. Forages in grasslands, irrigated pastures, and grain fields	High; Known to occur in the study area; over 100 records of nesting activity and additional records of foraging reported within 10-miles of the project route since 1979. Suitable nesting and foraging habitat is present.
Golden eagle <i>Aquila chrysaetos</i>	--/FP	Foothills and mountains throughout California. Uncommon nonbreeding visitor to lowlands such as the Central Valley	Nest on cliffs and escarpments or in tall trees overlooking open country. Forages in annual grasslands, chaparral, and oak woodlands with plentiful medium and large-sized mammals	Low; No records of occurrence reported from within 10-miles of the study area. Suitable foraging habitat in study area.



Table 3.4-3 Special Status Wildlife Species Identified as Having the Potential to Occur in the Study Area

Common and Scientific Names	Status Federal/State	Geographic Distribution	Habitat Requirements	Potential Occurrence in Study Area
Bald eagle <i>Haliaeetus leucocephalus</i>	--/E, FP	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and in the Lake Tahoe Basin. Reintroduced into central coast. Winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County	In western North America, nests and roosts in coniferous forests within 1 mile of a lake, reservoir, stream, or the ocean	Moderate; Reported to nest at Lake Oroville, approximately 8-miles north of the study area. Low quality foraging habitat is present at river crossings within the study area.
California black rail <i>Laterallus jamaicensis coturniculus</i>	--/T, FP	Permanent resident in the San Francisco Bay and east-ward through the Delta into Sacramento and San Joaquin Counties; small populations in Marin, Santa Cruz, San Luis Obispo, Orange, Riverside, and Imperial Counties	Tidal salt marshes associated with heavy growth of pickleweed; also occurs in brackish marshes or freshwater marshes at low elevations	High; Numerous records of occurrence within 2mi. of project route. Suitable nesting and foraging habitat is present.
Greater sandhill crane <i>Grus canadensis tabida</i>	--/T, FP	Breeds in Siskiyou, Modoc, Lassen, Plumas, and Sierra Counties. Winters in the Central Valley, southern Imperial County, Lake Havasu National Wildlife Refuge, and the Colorado River Indian Reserve	Summers in open terrain near shallow lakes or freshwater marshes. Winters in plains and valleys near bodies of fresh water	Low; Not observed in study area. Suitable wintering habitat present in fields and marshes located in and adjacent to the study area. Three female specimens were collected from near Gridley in 1924.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	C/E	Nests along the upper Sacramento, lower Feather, south fork of the Kern, Amargosa, Santa Ana, and Colorado Rivers	Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstory are preferred for foraging; may avoid valley-oak riparian habitats where scrub jays are abundant	Moderate; Historic records of occurrence reported from the Feather River near Marysville; most recent observation in this vicinity was reported in 1986. Suitable habitat may be present in riparian forest along the Bear River, Yuba river, and Honcut Creeks.
Western burrowing owl <i>Athene cunicularia hypugea</i>	--/SSC	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas. Rare along south coast.	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows.	High; CNDDB reports 4 records of burrowing owl observations within 10-miles of the study area. Active burrows not observed in study; Suitable foraging, wintering, and breeding habitat are present in annual grasslands.

Table 3.4-3 Special Status Wildlife Species Identified as Having the Potential to Occur in the Study Area

Common and Scientific Names	Status Federal/State	Geographic Distribution	Habitat Requirements	Potential Occurrence in Study Area
Long-eared owl <i>Asio otus</i>	--/SSC	Permanent resident east of the Cascade Range from Placer County north to the Oregon border, east of the Sierra Nevada from Alpine County to Inyo County. Scattered breeding populations along the coast and in southeastern California. Winters throughout the Central Valley and southeastern California	Nests in abandoned crow, hawk, or magpie nests, usually in dense riparian stands of willows, cottonwoods, live oaks, or conifers	Low; No records of observation reported within 10-miles of study area. Low quality wintering habitat present.
Loggerhead shrike <i>Lanius ludovicianus</i>	--/SSC	Resident and winter visitor in lowlands and foothills throughout California. Rare on coastal slope north of Mendocino County, occurring only in winter.	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches.	High; One observation of a breeding pair reported from along Gold Run Creek, approximately 10-miles northwest of the study area. Suitable habitat is present.
Bank swallow <i>Riparia riparia</i>	--/T	Occurs along the Sacramento River from Tehama County to Sacramento County, along the Feather and lower American Rivers, in the Owens Valley; and in the plains east of the Cascade Range in Modoc, Lassen, and northern Siskiyou Counties. Small populations near the coast from San Francisco County to Monterey County	Nests in bluffs or banks, usually adjacent to water, where the soil consists of sand or sandy loam	Moderate; CNDDDB reports 34 records of observations within 10-miles of the study area. Low quality suitable habitat may be present at river crossings.
Yellow warbler <i>Dendroica petechia</i>	--/SSC	Nests over all of California except the Central Valley, the Mojave Desert region, and high altitudes in the Sierra Nevada. Winters along the Colorado River and in parts of Imperial and Riverside Counties	Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral; may also use oaks, conifers, and urban areas near stream courses	Moderate; One record of observation reported from approximately 10-miles northwest of the study area. Low quality suitable habitat may be present in riparian forest along river crossings.
Grasshopper Sparrow <i>Ammodramus savannarum</i>	--/SSC	Breeds locally from Del Norte, Trinity, and Tehama counties south, west of the Cascade-Sierra Nevada axis and southeastern deserts to Sand Diego County; from sea level to 4900 feet. Rare breeder in the Shasta Valley, Siskiyou County and on the valley floor in the Central Valley.	Prefer large tracts of short to middle height, moderately open grasslands with scattered shrubs.	Low; No records of observation within 10-miles of study area. Suitable habitat is present.

Table 3.4-3 Special Status Wildlife Species Identified as Having the Potential to Occur in the Study Area

Common and Scientific Names	Status Federal/State	Geographic Distribution	Habitat Requirements	Potential Occurrence in Study Area
Tricolored blackbird <i>Agelaius tricolor</i>	--/SSC	Permanent resident in the Central Valley from Butte County to Kern County. Breeds at scattered coastal locations from Marin County south to San Diego County; and at scattered locations in Lake, Sonoma, and Solano Counties. Rare nester in Siskiyou, Modoc, and Lassen Counties	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grain fields. Habitat must be large enough to support 50 pairs. Probably requires water at or near the nesting colony	High; CNDDDB reports 20 records of occurrence within 10-miles of the study area, of which only 7 are presumed extant. Habitat suitable for relatively small colonies is present.
Pallid bat <i>Antrozous pallidus</i>	--/SSC	Occurs throughout California except the high Sierra from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts	Low; no records of occurrence reported within 10-miles of study area. Low quality suitable habitat may be present.
Western red bat <i>Lasiurus blossevillii</i>	--/SSC	Scattered throughout much of California at lower elevations	Found primarily in riparian and wooded habitats. Occurs at least seasonally in urban areas. Day roosts in trees within the foliage. Found in fruit orchards and sycamore riparian habitats in the central valley	Moderate; One record of observation reported from the Sacramento River approximately 10-miles southwest of the study area. Low quality suitable habitat may be present.

Table 3.4-3 Special Status Wildlife Species Identified as Having the Potential to Occur in the Study Area

Common and Scientific Names	Status Federal/State	Geographic Distribution	Habitat Requirements	Potential Occurrence in Study Area
Western mastiff bat <i>Eumops perotis californicus</i>	--/SSC	Southwestern United States and central Mexico. In California, the species has been observed roosting up to 1,300 feet and foraging at > 8,800 feet. The distribution of <i>E. perotis</i> is likely geomorphically determined, with the species being present only where there are significant rock features offering suitable roosting habitat.	Although most frequently encountered in broad open areas, the species occurs in a variety of habitats: dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, montane meadows, and agricultural areas.	Moderate; CNDDDB reports three records of occurrence from near Oroville, approximately 6 miles north of the study area. Low quality suitable habitat may be present.

Status explanations:

Federal

- E = listed as endangered under the federal Endangered Species Act.
- T = listed as threatened under the federal Endangered Species Act.
- PT = proposed for federal listing as threatened under the federal Endangered Species Act.
- C = species for which USFWS has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposed rule to list, but issuance of the proposed rule is precluded.
- = no listing.

State

- E = listed as endangered under the California Endangered Species Act.
- T = listed as threatened under the California Endangered Species Act.
- FP = fully protected under the California Fish and Game Code.
- SSC = species of special concern in California.
- = no listing.

Potential Occurrence in the Study Area

- High: Known occurrences of the species within the study area; or California Natural Diversity Database, or other documents, reports occurrence of the species within a 10-mile radius of the study area. Suitable habitat is present within the study area.
- Moderate: California Natural Diversity Database, or other documents, reports known occurrence of the species within a 10-mile radius of the study area. Poor quality suitable habitat is present within the study area.
- Low: California Natural Diversity Database, or other documents, does not record the occurrence of the species within a 10-mile radius of the study area. Suitable habitat is present within the study area.

Impacts on these species may occur from construction activities associated with reconductoring of the transmission line, replacement and installation of tower poles, temporary access road construction, and temporary work staging areas. Although the majority of construction staging activities, including onsite and offsite vehicle movement, would occur during daytime hours, the applicant also proposes to conduct night lighting activity during the summer work window (June 1<sup>st</sup> to October 1<sup>st</sup>) for raising towers along the transmission line. Night lighting would occur for approximately 12-hour periods (i.e., 7 pm to 7 am), at a maximum of three tower locations at a time along the project route. Nighttime construction lighting would be shielded at the sides and/or back with cutoffs or shades. The applicant would consult with onsite biological experts and monitors to position and direct lights to minimize intrusion on adjacent sensitive habitats to the extent feasible with regard to workplace safety.

Specific impacts are discussed below for each species.

### **Valley Elderberry Longhorn Beetle**

The VELB is a federally listed threatened species under the ESA. It is dependent upon the host plant, which can be either red or blue elderberry (*Sambucus* spp.), throughout its life cycle. Elderberry that support VELB have been observed in both riparian habitat and savannah habitat associated with riparian vegetation (Collinge et al. 2001). The combined 2006 and 2008 biological field surveys identified 26 shrubs or clusters of shrubs located within 20 feet of the project route and an additional 58 shrubs or clusters located within 100 feet of the project route (Appendix B-2). Observations made during the surveys did not find any evidence indicating the presence of VELB along the project route (ICF Jones & Stokes 2009b). The project area does not contain any formally designated critical habitat for VELB. However, review of the CNDDDB (2010) identified 22 occurrences of VELB within 3 miles of the project route, located primarily along riparian habitat associated with the Yuba and Sacramento rivers.

Eight shrubs or clusters of shrubs with at least 200 stems were located by ICF Jones & Stokes within 20 feet of the project route that would be directly impacted by being either removed or trimmed for construction or for maintenance of the existing utility corridor. The remaining 18 shrubs or clusters of shrubs within 20 feet of the project route may potentially be indirectly impacted. There are 12 of these elderberry shrubs that are located directly beneath or inside of existing tower structures, though one of the identified shrubs (under tower 26) may possibly be dead (ICF Jones & Stokes 2009b).

Additionally, the drip lines of 44 elderberry shrubs or clusters are located within 100 feet but not within 20 feet of the project route. There is the potential for indirect impacts to shrubs and clusters of shrubs located within 100 feet through the possibility of altered hydrology or water table, increased air-borne dust or disease, and herbicide application (ICF Jones & Stokes 2009b).

There is the potential for a significant impact on VELB due to the permanent loss of eight elderberry shrubs or clusters of shrubs and temporary disturbance of additional potential habitat. However, none of the elderberry shrubs or clusters of shrubs identified along the project route had evidence of VELB occupation, and several of the identified shrubs are isolated and not associated with the riparian habitat. The loss of habitat is not likely to significantly reduce the availability of suitable VELB habitat, but there is potential for significant impact if an occupied shrub is affected. With the incorporation of APM BIO-13 and APM BIO-14, however, impacts to VELB would be less than significant.

### **Vernal Pool Species**

The vernal pool fairy shrimp (*Branchinecta lynchi*), federally listed as threatened under the ESA, and the vernal pool tadpole shrimp (*Lepidurus packardii*), federally listed as endangered under the ESA, are both dependent upon vernal pool habitats for their life cycle. Approximately 45.07 acres of potential habitat

for vernal pool fairy and tadpole shrimp occurs within 250 feet of proposed work areas or access roads (Appendix B-2). The vernal pool fairy shrimp was not observed during the wet season biological surveys conducted 2006 through 2008 by ICF Jones & Stokes (2009b), but occurrences have been documented within 4 miles of the project in pools located south of the project near Catlett Road in Sutter County, east of the project near Sheridan in Sutter County and on Beale Air Force base in Yuba County, and northwest of the project near the cities of Thermalito and Shippee in Butte County. The vernal tadpole shrimp was documented as occurring along the project route. Three populations were identified during the 2005 habitat assessment surveys and during the 2006 through 2008 protocol-level surveys by ICF Jones & Stokes (2009b) (Appendix B-2). Adult tadpole shrimp were observed in eight potential habitat features along the project route. Additional dry season sampling was conducted in vernal pools in 2009 along the project route (ICF Jones & Stokes 2009c). Dry season sampling was conducted in those pools that were surveyed in 2007 and 2008 and found not to support vernal pool species during surveys.

For all potential habitats along the project route that were not surveyed during the 2005 through 2009 biological surveys, vernal pool fairy shrimp and vernal pool tadpole shrimp are assumed to be present (Appendix B-2). Construction activities, such as staging, grading, and excavation, would result in temporary or permanent impacts to suitable habitat. The construction of new structures and poles would permanently impact 0.0026 acres of suitable vernal pool habitat (ICF International 2010a). Construction activities in staging areas, pull sites, and temporary access roads would have temporarily direct impacts on approximately 0.38 acres of suitable vernal pool habitat (ICF Jones & Stokes 2009c). The project would indirectly affect 7.10 acres of suitable habitat within 250 feet of work areas and temporary access roads where work may be conducted during the wet season.

Artificial night lighting may affect aquatic invertebrates through modification of photoperiodic behaviors such as mating and foraging. Aquatic zooplankton have exhibited different behaviors in wetlands that had a natural photoperiod and those that were subject to artificial lighting (Longcore & Rich 2001). This could lead to increased algae levels and possible deterioration of water quality if zooplankton do not migrate to the water surface to forage on algae due to changed lighting levels. These changes could also lead to alteration in the abundance and diversity of the special status invertebrate species (Longcore & Rich 2001). However, changes in night lighting are not expected to significantly affect vernal pool invertebrates due to the overall short-term nature of the activity (5 months), the limited activity at any one location, and the directional shielding of lights away from aquatic habitats.

The direct removal, filling, and hydrological interruption of vernal pools, seasonal wetlands, and other suitable habitat or the surrounding uplands would constitute a potentially significant impact on vernal pool invertebrate species. Through the implementation of measures APM BIO-15 and APM BIO-16, the potential impact on the vernal pool fairy shrimp and the vernal pool tadpole shrimp would be less than significant.

The conservancy fairy shrimp (*Branchinecta conservatio*), federally listed as an endangered species, is dependent on vernal pools or seasonal wetlands during its life cycle. Though there is the potential for suitable habitat along the project route, no individuals were observed during protocol level surveys (ICF Jones & Stokes 2009b). Additionally, the CNDDDB (2010) does not have any records for conservancy fairy shrimp from within 10 miles of the project route, and there is a lack of historical presence in the region. Impacts on conservancy fairy shrimp would be less than significant.

### **Giant Garter Snake**

The giant garter snake (*Thamnophis couchi gigas*) is federally listed as a threatened species under the ESA. Suitable giant garter snake habitat must have adequate water present from early-spring through mid-

fall and may include marshes and agricultural wetlands or waterways such as rice fields, irrigation and drainage canals, sloughs, ponds, small lakes, and low gradient streams.

ICF Jones & Stokes (2009b) conducted reconnaissance-level surveys for giant garter snakes and suitable habitat, and no individuals were observed along the project route during any of the biological surveys conducted between 2005 through 2009 (Appendix B-3). However, the CNDDDB (2010) identified 47 records of giant garter snake occurrence within 10 miles of the project route, with a significant population identified approximately five miles to the south within the aquatic habitats along Cross Canal, between Feather River and Eastside Canal. Along the project route, there is suitable giant garter snake habitat in the form of rice fields, sloughs, agricultural ditches, canals, and surrounding upland areas (within 200 feet of aquatic habitats) (Appendix B-3).

According to biological surveys, approximately 0.08 acres (0.006 acres aquatic, 0.074 acres upland) of giant garter snake habitat would be permanently impacted due to the installation of new structures and poles. A total of approximately 37.2 acres (2.87 acres aquatic, 17.35 acres rice field, and 16.96 acres upland) would be temporarily (one season) impacted by construction activities within temporary work areas and access roads (ICF International 2010a). Additionally, potential suitable habitat for the giant garter snake would be temporarily lost due to the fallowing of 298.40 acres of rice fields for one season due to project related activities (ICF Jones & Stokes 2009b). Portions of fallow rice fields would be directly impacted by project activities which would include the construction of temporary barrier berms to limit giant garter snake access to construction areas. These berms would be removed once construction is completed. Artificial night lighting may also affect the behavior of the giant garter snake in its aquatic habitat, particularly during the summer months when this diurnal species can be active on warm evenings (California Herps 2010).

Temporary and permanent loss of aquatic and upland habitat, potential loss of individuals, and disruption of movement during the breeding season would be considered a significant impact because it would result in a substantial adverse effect on this federally listed species. However, through the implementation of APM BIO-2, APM BIO-17, APM BIO-18, and MM-BIO-1, the potential impact on giant garter snake would be reduced to less than significant. Additionally, the applicant would reduce potential impacts from night lighting by the limited nature of the activity at any one location and through directional shielding of lights away from aquatic habitats. These combined measures are expected to reduce effects on the giant garter snake through habitat impact avoidance and minimization, and through compensating for unavoidable impacts. As such, the project would not appreciably reduce the reproduction, numbers, or distribution of the giant garter snake, and would result in less than significant impacts on the species.

**MM BIO-1: Rice Field Fallowing Activities, Berm Construction and Removal, and Habitat Restoration.** The applicant will implement measures to insure the restoration of fallowed fields. Prior to, during, and/or after berm construction and dewatering of potential giant garter snake rice field habitat, the applicant will adhere to measures within the Biological Opinion issued by the US Fish and Wildlife Service and any Incidental Take Permit/Consistency Determination issued by the California Department of Fish and Game.

### ***California horned lizard***

The California horned lizard (*Phrynosoma coronatum frontale*) is a California Species of Special Concern and occurs in a variety of habitats, such as clearing in riparian woodlands, chamise chaparral, and grasslands with loose, friable soils. Though the project area contains potential suitable habitat, none were observed during the general field surveys (ICF Jones & Stokes 2009b) and CNDDDB (2010) has no records of California horned lizard within 10 miles of the project route. The likelihood of occurrence for this species is moderate due to the presence of potential suitable habitat in the form of sandy soils

associated with several seasonal washes located within the Yuba River floodplain (ICF Jones & Stokes 2009b). No project activities would be conducted within the Yuba floodplain; therefore habitat for the California horned lizard would not be affected. The impact on this species would be less than significant.

### **Western Pond Turtle**

The western pond turtle (*Actinemmys marmorata*) is designated by DFG as a California Species of Special Concern. The western pond turtle commonly inhabits slow-water aquatic habitat in rivers, streams, and ponds. Suitable habitat for this species occurs in the slow-water aquatic habitats crossed by the project route (ICF Jones & Stokes 2009b) (Appendix B-4). The CNDDDB (2010) reports 11 records of western pond turtle occurrences within 10 miles of the project route. In the vicinity of the project, the western pond turtle has been observed in the Feather River, Yuba River, Dry Creek, and Wyandotte drainages.

Construction activities in annual grassland within 1,300 feet of suitable aquatic habitat could crush western pond turtles or pond turtle nests containing eggs or young. Furthermore, indirect impacts could occur if sediments or hazardous materials enter suitable pond turtle aquatic habitat or alteration in behavior from artificial night lighting. Like the giant garter snake, the western pond turtle may be nocturnal during warm summer nights (California Herps 2010). Through the implementation of APM BIO-19, the potential impacts to the western pond turtle would be less than significant. Additionally, the applicant would reduce impacts from night lighting by limiting activity at any one location and through directional shielding of lights away from aquatic habitats.

### **Western Spadefoot**

The western spadefoot (*Scaphiopus hammondi*) is an amphibian designated by DFG as a California Species of Special Concern. The western spadefoot can be found in dry grassland habitat located in close proximity to wetlands, such as vernal pool complexes, typically near areas of friable (but usually not sandy) soils. There is the occurrence of 81.2 acres of potential suitable breeding habitat for the western spadefoot along the project route, including 75 acres of seasonal wetlands and 6.06 acres of vernal pools. Additionally, grasslands adjacent to the project route may serve as aestivating habitat for the western spadefoot (ICF Jones & Stokes 2009b). CNDDDB (2010) reports two records of western spadefoot within 10 miles of the project route. One of these occurrences, reported in 1953, was located approximately three miles from the project near Palermo, while the other occurrence was reported approximately 10 miles southeast of the project, near Pleasant Grove.

Temporary and permanent loss of aquatic and upland habitat and the potential loss of individuals and disruption of movement during the breeding season would be considered a significant impact because it would result in a substantial adverse effect on this amphibian species. Additionally, construction night lighting activity could significantly affect the behavior of this nocturnal species. Artificial night lighting has been shown to affect the behavior of nocturnal frogs and toads by reducing their visual acuity and ability to consume prey (Saleh 2007). Amphibians which are particular about the light levels in which they forage may either avoid lighted areas initially, or may become attracted to lighted areas after a period of adjusting to the light (Longcore & Rich 2004). Increased night lighting adjacent to both wetlands and upland habitats can therefore affect the abundance of this species or affect its ability to forage.

Through the implementation of APM BIO-2, APM BIO-3, APM BIO-4, APM BIO-5, APM BIO-6, APM BIO-7, APM BIO-15, and APM BIO-16, the potential impacts to the western spadefoot would be less than significant. Impacts on the species from short-term night lighting would be significant, and thus MM BIO-2 is required, in addition to the APMs, to reduce impacts to less than significant levels.



**MM BIO-2: Reduce Construction Night Lighting Impacts on Sensitive Habitats.** The applicant will implement measures to insure the reduction of construction night lighting impacts on sensitive habitats and special status wildlife. Exterior night lighting along the project route adjacent to aquatic and riparian habitat will be the lowest illumination allowed for human safety and selectively placed a minimum of 50 feet from those habitats except where workplace safety prevents this minimum distance. All construction night lighting will be shielded with cutoffs and/or shades. Vehicle traffic associated with nighttime project activities will be kept to a minimum volume and 15 mph on all non-public roads to prevent mortality of nocturnal wildlife species.

### **Other Amphibians**

There are three additional amphibian species of special status that have the potential to occur along the project route: the California red-legged frog (*Rana aurora draytoni*) and the California tiger salamander (*Ambystoma californiense* [*A. tigrinum* c.]), both ESA-listed Threatened species; and the foothill yellow-legged frog (*Rana boylei*), designated by DFG as a California Species of Special Concern. All three species are dependent upon aquatic habitat during their life cycle, and while there is potential suitable habitat along the project route, the likelihood of occurrence of these species is low (ICF Jones & Stokes 2009a) due to the CNDDDB (2010) not having any records of either species within 10 miles of the project route. The impacts to these amphibian species would, therefore, be less than significant.

### **Green Sturgeon, Chinook Salmon, and Central Valley Steelhead**

The southern distinct population segment (DPS) of the green sturgeon (*Acipenser medirostris*) has been designated as federally threatened by National Oceanic and Atmospheric Administration's (NOAA's) National Marine Fisheries Service (NMFS) and is known to occur in the lower reaches of the Yuba River, which transects the project route. In 2008, NMFS proposed critical habitat for the southern DPS of the green sturgeon that includes the lower reaches of the Yuba River, but a final decision has not been determined (NOAA 2009). The Central Valley DPS of steelhead (*Oncorhynchus mykiss irideus*) is designated as a federally threatened species and is known to occur in the lower reaches of the Yuba and Bear rivers, which are both located along the project route. Additionally, the lower reaches of the Yuba and Bear River have been designated as critical habitat for the Central Valley steelhead. The Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha*) Evolutionary Significant Unit is designated as federally threatened species and is known to occur in the lower reaches of the Yuba River. The lower reaches of the Yuba River have also been designated as critical habitat for Central Valley spring-run Chinook salmon.

There is the potential for temporary disturbance of habitat for special status fish species that occur in the Yuba River, Bear River, Honcut Creek, and Wyandotte Creek because both the existing and proposed transmission lines span these waterways. However, project construction activities would not occur within 50 feet of existing banks. Through the implementation of best management practices (BMPs), which would be included as part of the applicant's Stormwater Pollution Prevention Plan (SWPPP; APM HYDRO-1), and the implementation of APM BIO-2, APM BIO-3, APM BIO-4, and MM BIO-2, the potential impact on these special status fish species would be less than significant.

### **Swainson's Hawk**

The Swainson's hawk (*Buteo swainsoni*) is listed as threatened under CESA and protected under the Migratory Bird Treaty Act (MBTA). No Swainson's hawk were observed directly along the project route but were observed adjacent (ICF Jones & Stokes 2009a). Suitable nesting habitat was observed along the project route near Bear River, Upper and Lower Honcut Creek, Yankee Slough, and Ping Slough. One active Swainson's hawk nest was observed 0.5 miles adjacent to the project route. Other large-stick raptor nests were also observed within 0.5 miles of the project route during the 2005, 2006, and 2010 surveys

that could serve as Swainson's hawk nests (Appendix B-5; ICF Jones & Stokes 2009a). The CNDDDB (2010) reports 112 records of occurrences within 10 miles of the project route.

Construction activities such as tree and shrub removal and trimming, modification to or removal of existing towers, excavation and grading, and the use of helicopters within or directly adjacent to the project route could result in direct impacts to the nesting of this species. These activities have the potential to cause nesting birds to flush from their nests, possibly resulting in loss of eggs and fledglings. However, through the implementation of APM BIO-22, APM BIO-23, and APM BIO-24 the potential impacts to the Swainson's hawk would be less than significant.

### **Bald Eagle**

The bald eagle (*Haliaeetus leucocephalus*) is listed as Endangered under CESA and is a fully protected species under California Fish and Game (CFG) Code Section 3511 and protected under the MBTA and Bald and Golden Eagle Protection Act. Bald eagles are commonly associated with large bodies of water and have been documented to nest approximately eight miles to the north of the project route at Lake Oroville. However, due to the lack of documented occurrences and lack of suitable nesting habitat along the project route, impacts to bald eagles would be less than significant.

### **White-tailed Kite**

The white-tailed kite (*Elanus leaucurus*) is a Fully Protected Species under CFG Code Section 3511 and is protected under the MBTA. The riparian areas (approximately 30.5 acres) present along the project route contain suitable nesting habitat, and there is foraging habitat present in the form of annual grasslands and agricultural croplands. Individuals were observed foraging along the project route during wildlife surveys conducted in 2005 through 2009 (ICF Jones & Stokes 2009a), and CNDDDB (2010) reports one record of white-tailed kite occurrence approximately 0.5 mile west of the project route. Construction activities such as tree and shrub removal and trimming, modification to or removal of existing towers, excavation and grading, and the use of helicopters within or directly adjacent to the project route could result in direct impacts to the nesting of this species. These activities have the potential to cause nesting birds to flush from their nests, possibly resulting in loss of eggs and fledglings. However, with the implementation of APM BIO-22, APM BIO-23, and APM BIO-24, impacts on the white-tailed kite would be less than significant.

### **Northern Harrier**

The Northern harrier (*Circus cyaneus*) is designated by DFG as a California Species of Special Concern and is protected under the MBTA. The project area contains suitable nesting and foraging habitat for the Northern harrier in the form of wetlands, grasslands, and agricultural croplands. Individuals were not observed along the project route but were observed foraging in adjacent fields during focused wildlife studies (ICF Jones & Stokes 2009a). Additionally, CNDDDB (2010) reports five records of Northern harrier occurrences within 10 miles of the project route. Construction activities such as tree and shrub removal and trimming, modification to or removal of existing towers, excavation and grading, and the use of helicopters within or directly adjacent to the project route could result in direct impacts to the nesting of this species. These activities have the potential to cause nesting birds to flush from their nests, possibly resulting in loss of eggs and fledglings. With the implementation of APM BIO-22, APM BIO-23, and APM BIO-24, impacts on the Northern harrier would be less than significant.

### **Western Burrowing Owl**

The western burrowing owl (*Athene cunicularia hypugea*) is designated by DFG as a California Species of Special Concern and is protected under the MBTA. The preferred habitat of the western burrowing owl is open, dry, and short grassland habitats. This species is frequently found in association with burrowing

mammals that may provide burrows for nesting. Common suitable nesting habitat includes roadside embankments, levees, and along riparian corridors. Suitable habitat to support western burrowing owl exists in several portions of the project route. The species was observed in the northern portion (near Tower 61) of the project route during 2005, and there were signs of burrowing owls observed in the same location during the 2006 survey (ICF Jones & Stokes 2009a). Additionally, CNDDDB (2010) reports four observations of western burrowing owl within 10 miles of the project route, with the closest occurrence located approximately 5 miles to the west, near Thermalito Afterbay.

Construction activities (e.g., staging, grading, and excavation) associated with the project could result in temporary and permanent impacts on burrowing owl nesting and foraging habitat. If burrowing owls are using burrows within 250 feet of the construction right-of-way, grading and excavation activities could result in removal of an occupied breeding or wintering burrow site and loss of adults, young, or eggs. This impact would be significant because construction could have an adverse effect on this species and violate the MBTA and CFG Code Section 3503.5. Construction night lighting could also significantly affect the behavior of this crepuscular bird species, as changes in lighting may affect foraging times, prey availability, and site movements (Longcore & Rich 2001). Implementation of APM BIO-20, APM BIO-21, and MM BIO-2 would reduce impacts to less than significant levels.

### ***Tri-Colored Blackbird***

The tri-colored blackbird (*Agelaius tricolor*) is designated by DFG as a California Species of Special Concern and is protected under the MBTA. The tri-colored blackbird is a colonial nester that requires the presence of accessible water; a suitable nesting substrate; and open-range foraging habitat of natural grassland, woodland, or agricultural cropland. The project area contains both suitable nesting and foraging habitat, and individuals were observed during the habitat survey in 2006. CNDDDB (2010) also reports 20 observations of tri-colored blackbird within 10 miles of the project route, though many of the observations are historical recordings of nesting sites that no longer support suitable nesting habitat due to the development of the land for agricultural and residential use.

There is the potential for tri-colored blackbird nesting habitat to be disturbed by increased traffic, human activity, and noise associated with project construction activities; however, there would be no removal of suitable nesting habitat for this species. Disturbance could be both temporary, as suitable nesting habitat is abundant along the project route and adjacent areas, or permanent, if large nesting colonies in the area are abandoned due to construction disturbances (ICF Jones & Stokes 2009a). This potential impact would likely not result in a substantial reduction of the tri-colored blackbird in the region. However, to minimize disturbance impacts to any tri-colored blackbird colonies, the timing of certain construction activities during the non-breeding season (APM BIO-22) and the use of buffers as noted in APM BIO-23 would be implemented to reduce impacts to less than significant levels.

### ***California Black Rail***

California black rail (*Laterallus jamaicensis coturniculus*) is listed as threatened under CESA and is a Fully Protected Species under CFG Code Section 3511. The freshwater marsh habitats present along the project route contain suitable forage and nesting habitat. The CNDDDB (2010) also reports numerous records of California black rail within 5 miles of the project route. Construction activities such as tree and shrub removal and trimming, modification to or removal of existing towers, excavation and grading, and the use of helicopters within or directly adjacent to the project route could result in direct impacts to the nesting of this species. These activities have the potential to cause nesting birds to flush from their nests, possibly resulting in loss of eggs and fledglings. However, through the implementation of APM BIO-22, APM BIO-23, and APM BIO-24, impacts on the California black rail would be less than significant.

### **Greater Sandhill Crane**

Greater sandhill crane (*Grus Canadensis tabida*) is listed as threatened under CESA and is a Fully Protected Species under CFG Code Section 3511. While the project area is not within the breeding range of the greater sandhill crane, it is within its wintering range and contains suitable wintering habitat, grasslands, wetlands, and agricultural croplands. The Greater sandhill crane was not observed along the project route during the field surveys and the likelihood of occurrence is low (ICF Jones & Stokes 2009a). The impact on this species would be less than significant.

### **Western Yellow-Billed Cuckoo**

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is a candidate species for listing under the ESA, but is listed as endangered under the CESA. The project area contains potential suitable nesting habitat for this species in the riparian forest along the Bear River, Yuba River, and Honcut Creek; however, this habitat is considered low in quality (ICF Jones & Stokes 2009a). Therefore, the likelihood of occurrence is low, and impacts on the Western yellow-billed cuckoo would be less than significant.

### **Bank Swallow**

The bank swallow (*Riparia riparia*) is listed as Threatened under CESA. Habitat for this species includes bluffs or banks with soft sand, sandy loam, or clay soil, often overlooking water for its nesting habitat. No bank swallows or bank swallow nests were observed during the 2005 and 2009 biological surveys. However, there is potential suitable nesting habitat at river crossings along the project route (ICF Jones & Stokes 2009a). Furthermore, CNDDDB (2010) reports occurrences of nesting bank swallows along the Feather River to the west of the project route.

Most impacts to the bank swallow from the project would be minimized by avoidance of potential nesting habitat by work areas and the spanning of these areas by the transmission line. However, construction night lighting could significantly affect the behavior of this bird species. The bank swallow can be active at night and changes in lighting may affect foraging and site movements (Longcore & Rich 2001). Artificial lighting may also attract night migrating birds to tall, lighted structures where they can become disoriented (Longcore & Rich 2004). Within the sphere of lights, birds may collide with each other or a structure, become exhausted, or may be taken by predators such as owls (Longcore & Rich 2004). Implementation of APM BIO-20, APM BIO-21, and MM BIO-2 would reduce impacts to less than significant levels.

### **Golden Eagle**

The golden eagle (*Aquila chrysaetos*) is designated as a Fully Protected Species under CFG Code Section 3511 and protected under the MBTA and Bald and Golden Eagle Protection Act. The project area does not contain any suitable golden eagle nesting habitat, although the agricultural fields and grasslands do provide suitable foraging habitat (ICF Jones & Stokes 2009a). Due to the lack of documented occurrences and lack of suitable nesting habitat along the project route, impacts to golden eagles would be less than significant.

### **Least Bittern**

The least bittern (*Lxobrychus exilis*) is designated by DFG as a California Species of Special Concern and is protected under the MBTA. The CNDDDB (2010) did not identify any occurrences within 10 miles of the project route; therefore, impacts to this species would be less than significant.

### **White-faced Ibis**

The white-faced ibis (*Plegadis chihi*) is designated by DFG as a California Species of Special Concern and is protected under the MBTA. Although adults have been observed in the region, the CNDDDB (2010) did not identify any rookery occurrences within 10 miles of the project route; therefore, impacts to this species would be less than significant.

### **Long-Eared Owl**

The long-eared owl (*Asio otus*) is designated by DFG as a California Species of Special Concern and is protected under the MBTA. The CNDDDB (2010) did not identify any occurrences within 10 miles of the project route; therefore, the impacts to this species would be less than significant.

### **Loggerhead Shrike**

The loggerhead shrike (*Lanius ludovicianus*) is designated by DFG as a California Species of Special Concern and is protected under the MBTA. The CNDDDB (2010) did not identify any occurrences within 10 miles of the project route; therefore, the impacts to this species would be less than significant.

### **Yellow Warbler**

The yellow warbler (*Dendroica petechia*) is designated by DFG as a California Species of Special Concern and is protected under the MBTA. The CNDDDB (2010) did not identify any occurrences within 10 miles of the project route; therefore, the impacts to this species would be less than significant.

### **Grasshopper Sparrow**

The grasshopper sparrow (*Ammodramus savannarum*) is designated by DFG as a California Species of Special Concern and is protected under the MBTA. The CNDDDB (2010) did not identify any occurrences within 10 miles of the project route; therefore, the impacts to this species would be less than significant.

### **Bats**

The Pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillii*), and western mastiff bat (*Eumops perotis californicus*) are all designated by DFG as California Species of Special Concern, and all have the potential to occur along the project route. All three bats may utilize bridges and buildings for day roosts and maternity roosts. Additionally, the Pallid bat and western red bat would also use tree cavities within close proximity to riparian corridors as roost sites. Though suitable roost sites are available along the project route in the form of bridges, railroad crossings, railroad trestles, and trees, the project is not expected to directly affect any of these potential roost sites. The potential noise and vibration disturbance associated with project construction would be temporary and less than the level of existing disturbances associated with highway overpass structures, railroad corridor structures, or residential buildings that provide potential roosting habitat. This impact would be expected to not result in substantial impacts on bat species.

The use of construction night lighting within the project would be expected to affect the behavior of special status bat species both through attraction and avoidance. Artificial lighting may attract prey, such as moths, for species of bats that feed on insects while in flight, such as the western red bat (TPW 2010). Conversely, larger, slower-flying species of bats such as the western mastiff bat may avoid artificially lighted areas due to increased risk of predation by owls (Longcore & Rich 2001). The western mastiff bat is the largest of American bat species and relative to the western red bat, is a slow-flying bat species and would be expected to avoid heavily lit areas (Best 1996). The pallid bat feeds by gleaning sedentary prey, does not feed while in flight, and would be expected to not be attracted to lighted areas to forage

(Hermanson 1983). These impacts on bat species from construction night lighting would be short-term but significant, and MM BIO-2 is required to reduce impacts to less than significant levels.

- b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?*

*LESS THAN SIGNIFICANT WITH MITIGATION.* The project contains 30.49 acres of riparian habitats comprised of both Great Valley willow riparian scrub and Great Valley mixed riparian forest (ICF Jones & Stokes 2009a) (Appendix B-1). Great Valley willow riparian scrub encompasses 22.44 acres within the project area and is associated with agricultural canals. Great Valley mixed riparian forest occurs along the project route, primarily along Honcut Creek and various intermittent streams. This mixed riparian community encompasses 8.05 acres and consists of a well-developed overstory of mature trees, shrub layer, and herbaceous understory.

The upland and riparian vegetation types along the project route are considered common in both the area and the surrounding region (ICF Jones & Stokes 2009a). Where riparian areas would be crossed, new towers would be set back from riparian areas and stream crossings and power lines would be spanned over such crossings. Staging areas would be set back at least 50 feet from streams, creeks, or other water bodies to avoid impacts to riparian habitat. Where portions of the existing access road may be impassible for larger/heavier construction vehicles, portable bridges (that would span top of bank to top of bank) are proposed in areas without expansive riparian vegetation. In addition, the majority of vehicular traffic and heavy equipment use would be scheduled for the dry/low flow season, except where indicated in Appendix B-2. If bridging is not possible, construction would utilize sky crane helicopters to transport materials to job sites, and riparian areas would be avoided. A SWPPP, incorporating BMPs, would also be prepared as part of the general construction permit that would include erosion and sediment control measures (APM HYDRO-1).

Spanning streams with portable plates and/or bridges would still involve the temporary compaction and crushing of vegetation and soil along the banks and within the riparian buffer zone. This short-term impact would be significant, but MM BIO-3 would reduce impacts to less than significant levels.

**MM BIO-3: Riparian Habitat Impact Minimization Measures.** The applicant will implement measures to insure the reduction of construction impacts on riparian habitats. No riparian trees or shrubs will be removed during construction outside of the existing ROW in PG&E maintained areas unless required by CPUC General Order 95 and applicable safety codes. Herbaceous riparian vegetation will be restored to pre-construction conditions within 30 days of the end of construction. The applicant will contact the DFG prior to construction to determine whether a 1600 Streambed Alteration Agreement is necessary for the project.

- c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

*LESS THAN SIGNIFICANT.* Waters of the United States, including wetlands, were delineated in 2007, 2008, 2009, and 2010 (Appendix B-4). The extent of non-wetland waters was identified by ICF Jones & Stokes and North State Resources biologists using the ordinary high-water mark following guidance issued by the U.S. Army Corps of Engineers (USACE 2005). Although a majority of the wetlands may be considered jurisdictional by the USACE, some isolated wetlands may not be considered jurisdictional under Section 404 of the Clean Water Act (Environmental Laboratory 1987). For the purposes of this

assessment and determining effects on potential waters of the U.S., all waters and wetlands along the project route were assumed to be jurisdictional.

There were 184.28 acres of potential waters of the U.S., including wetlands, identified within 50 feet of all proposed work areas (ICF International 2010a). A total of nine wetland habitat types were identified, including northern hardpan vernal pool (5.53 acres), vernal swale (0.17 acre), seasonal wetland (29.25 acres), Valley freshwater marsh (20.83 acres), open water (2.47 acres located within 50 feet of proposed work areas), intermittent stream (0.55 acre), vegetated ditch (17.62 acres), irrigation canal (0.04 acre), and agricultural wetlands (107.82 acres).

A total of 0.054 acres of permanent fill would occur where 56 new structure footings are proposed for placement in wetlands or other waters. These placements include seven tower footings in seasonal wetlands, two footings in vernal pools, one in a vegetated ditch, 41 in rice fields, and five towers in freshwater marsh. The maximum impact acreage per tower footing is estimated by the applicant to be a 7.5 feet diameter circle of 0.001 acres per permanent tower footing. Permanent impacts would be significant and compensation plans to mitigate permanent impacts to less than significant are detailed in APM BIO-7.

Direct temporary impacts totaling 26.84 acres would occur from ground disturbance near waters and wetlands located within designated work area boundaries, temporary project roadways, or where existing tower footings already located in wetlands or other waters are to be removed. Indirect temporary impacts resulting from erosion runoff, dust generation, or the propagation of invasive species could occur to wetlands or other waters located outside work area boundaries or roads, but within 50 feet of any project features or work areas. The total acreage of temporary indirect impacts to wetlands and other waters was not calculated. However, APM BIO-5 and APM BIO-6 would minimize direct temporary impacts, and all indirect temporary impacts would be avoidable with the implementation of APM BIO-2 through APM BIO-4 and APM BIO-12. In addition, a SWPPP would be implemented in order to prevent construction-related erosion and sediments from entering nearby waterways (APM HYDRO-1). With implementation of the APMs, impacts on wetlands or other waters would be less than significant.

***d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?***

***LESS THAN SIGNIFICANT.*** Project construction activities could temporarily disturb habitat for special status fish species that occur in the Yuba River, Bear River, Honcut Creek, and Wyandotte Creek. Both the existing and proposed transmission lines span the aforementioned waterways. Special status fish species identified in these waterways include green sturgeon, Central Valley steelhead, spring-run Chinook salmon, and fall-/late-fall-run Chinook salmon. In addition, critical habitat has been identified along the project route for both Central Valley steelhead and Central Valley spring-run Chinook salmon, as well as proposed critical habitat for green sturgeon. CFG Code Sections 1600–1616 require a Streambed Alteration Agreement Permit if activities were to interfere, in any way, with the flow of these waterways. However, project construction activities would not occur within 50 feet of the existing banks of these rivers, streams, or creeks. Implementation of APM BIO-2, APM BIO-3, and APM BIO-4 would reduce impacts on special status species to less than significant levels.

***e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

***LESS THAN SIGNIFICANT WITH MITIGATION.*** The project spans Butte, Sutter, and Yuba counties. All three counties, as well as the City of Marysville have policies that apply to biological resources along the

project route, which aim to protect lands of unique value to plants, fisheries, waterfowl, and other forms of animal life. These policies include requiring no-net loss of wetlands and riparian habitats; retention of existing designated wildlife areas; protection from incompatible land uses; protection of waterfowl habitat areas; identification of areas containing habitat suitable for threatened, endangered, or special status species; connection of wildlife preserves and parklands to wildlife/open space corridors conservation; identification of land use within floodplains; and assurance that floodplains and waterways will not be polluted (ICF Jones & Stokes 2009a).

Goal 7-OSCG of the Yuba County General Plan is to conserve Valley oaks and encourage the protection and regeneration of oak woodlands in foothill areas (Yuba County 1996). Relevant policies that apply to the project are exemplified in Policy 116-OSCP through Policy 118-OSCP under Goal 7-OSCG of the Yuba County General Plan. These policies provide guidelines for the identification and mapping of all Valley oaks, placement of fill near trees, soil compaction, type and depth of nearby excavation, root removal, required protective perimeter and fencing, tree removal, maintenance, and the assessment of snags on properties proposed for a development project. Butte and Sutter Counties do not have any policies that address any specific tree species.

Valley oaks are known to occur in Yuba County, and can occur at elevations up to approximately 5,600 feet (Yuba County Resource Conservation District 2009). A preconstruction survey would be needed to identify any Valley oaks located along the project route. APM BIO-1 would be implemented to ensure that impacts on trees protected by county ordinances would be less than significant. Additionally, MM BIO-4 would ensure that impacts on Valley oak, specifically, would be less than significant should the presence of Valley oak along the project route be identified during the preconstruction tree survey.

**MM BIO-4: Adherence to Policy 116-OSCP Through Policy 118-OSCP Under Goal 7-OSCG of the Yuba County General Plan, Provisions for Valley Oak.** Yuba County policies concerning Valley oak, if these species would be impacted by project activities, shall be followed. Specific mitigation measures should be designated and implemented by the applicant regarding Valley oak to adhere to the following Yuba County policies:

- **Policy 116-OSCP:** Project proponent shall identify and map the location of all Valley oaks within the project area. Identification need not include individual trees where groves of Valley oaks are present, and need not include trees less than 6 inches in diameter at breast height.
- **Policy 117-OSCP:** The following guidelines shall be implemented by the project proponent:
  - During any construction, fill should not be placed within an area which is 1.5 times the distance from the trunk to the dripline (the perimeter of the crown) of Valley oaks and no closer than 10 feet from the trunk. The dripline of the tree should be fenced during grading and construction.
  - Soil compaction, which could damage root systems and interfere with vital gas and nutrient exchanges in the roots, should be prevented by not operating or storing heavy equipment within oak driplines.
  - Excavations around trees should be minimized. Depth of excavations should be the minimum required. Utility lines should be combined in single trenches whenever possible.
  - If roots need to be removed, they should be cut rather than torn and immediately covered with mulch or soil to prevent desiccation.



- Submit a tree protection plan to Yuba County along with grading and erosion control plans when Valley oaks are present [within construction work areas]. The tree protection plan should include a planting replacement program for all Valley oaks removed, including maintenance and monitoring program, and should also show how any snags present on the site would be retained where feasible when they do not pose a threat to public safety.
- **Policy 118-OSCP:** Based on the amount of existing Valley oak canopy area on the project site, the determined amount of canopy must be retained [unless required by CPUC General Order 95 and applicable safety codes].

*f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

*NO IMPACT.* The project is not located within the boundaries of a current Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP). A HCP/NCCP is proposed for Butte County but has not been completed or implemented (Butte County Association of Governments 2008). According to the Butte County Association of Governments, this plan would not go into effect until 2012 at the earliest. A joint HCP/NCCP is proposed for Sutter and Yuba Counties (Sutter County Public Works 2009). According to the Sutter County Public Works, Community Services-Environmental Health Department, this plan would not be finalized and/or implemented until 2010 or later (Sutter County Public Works 2009). Therefore, the project would result in no impact under this criterion.

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