

November 17, 2010

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**Subject: Update to the 2005 Biological Resource Assessment and Results of a Focused Survey for Special-Status Plants and Wildlife on the Silva Valley Interchange Site, Pre-and Post-Project Habitat Mapping, and Utility Alignment Alternatives Analysis**

Dear Mr. Minnema:

This report serves as an update to the previous Biological Resources Assessment (BRA) completed on April 29, 2005. This document summarizes changes in the general biological resources onsite, reassesses the suitability of the site to support special-status species and sensitive habitat types, and provides recommendations for regulatory permitting or further analysis that may be required. An environmental impact report (EIR) was prepared in 1991 and a supplemental EIR (SEIR) is in the process of being prepared for the proposed Silva Valley Interchange Project. Updated significance criteria are presented in this report and will be presented further in the upcoming supplemental environmental impact report (SEIR) as a supplemental environmental initial checklist is being prepared. The site conditions, analysis of potential for special-status species to occur onsite, conclusions, and recommendations presented in the 2005 BRA continue to apply, with the exception of potential habitat for valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), potential habitat for California red-legged frog (*Rana draytonii*), potential habitat for western pond turtle (*Emys marmorata*), tree mitigation measures, wetland acreages, and purple needlegrass (*Nassella pulchra*) grassland. Additional habitat for valley elderberry longhorn beetle and western pond turtle was observed on the site, while potential habitat for California red-legged frog was identified in a small pond on the site. El Dorado County's Oak Woodland Management Plan mitigation requirements for impacts to oak woodland have changed, as mitigation is determined by assessing the canopy of regulated trees rather than the amount of tree inches impacted. The acreages of wetlands and waters of the U.S. have been updated based on the verified wetland delineation. The area of purple needlegrass grassland occurring in the study area has increased and; consequently, this resource was reassessed in this study. Further information regarding changes from the 2005 BRA is included in the appropriate sections of this report.

No established native resident or migratory wildlife corridors, or corridors that would interfere with the movement of any native resident or migratory fish or wildlife species, or impede the use of native wildlife nursery sites were observed within the study area. The

project is not anticipated to 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 (CDFG) or U.S. Fish and Wildlife Service (USFWS) with appropriate mitigation implemented, as specified in this report and Table 1. No substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS is expected as a result of the project with recommended mitigation implemented, as specified in this report and Table 1. The project is not expected to 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 pools, coastal, etc.) through direct removal, filling, hydrological interruption, or other means with appropriate mitigation implemented, as specified in this report and Table 1. This project is not expected to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, with the appropriate mitigation implemented, as specified in this report and Table 1. This project is not expected to conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state habitat conservation plan with appropriate mitigation implemented, as specified in this report and Table 1.

The second purpose of this report is to summarize the results of focused surveys for a variety of special-status plants and wildlife determined to have a potential to occur on the site. Focused surveys were conducted for the following special-status plant species: legenere (*Legenere limosa*), Bogg's lake hedge-hyssop (*Gratiola heterosepala*), Brandegee's clarkia (*Clarkia brandegeae*), and purple needlegrass. Blue elderberries (*Sambucus mexicanus*) located on or near the site were mapped and inspected for evidence of valley elderberry longhorn beetle. Riparian and marsh habitats were assessed for habitat suitability and the presence of California red-legged frog, western pond turtle, and tri-colored blackbird (*Agelaius tricolor*). The existing underpasses and culverts under Highway 50 were surveyed for the presence of special-status bat species. Additionally, existing vegetation communities were mapped.

The Silva Valley Interchange Project is located in El Dorado County, California. It includes construction of a new interchange connecting U.S. Highway 50 to the existing Silva Valley Road. The study area is  $\pm$  213 acres, bisected by Highway 50 and the Limits of Disturbance for the proposed project encompass  $\pm$  77.5 acres. Additionally, habitat impacts associated with three alternatives for the installation of power lines, dry utilities, and other facilities corridor were assessed. Land uses surrounding the project site include residential and commercial development and areas of grassland and oak woodland. The site is located within Township 9 North, Range 8 East, Sections 1, 2, 11, and 12 of the USGS 7.5-minute Clarksville quadrangle (**Figure 1**).

## **Species Accounts:**

### **Plants:**

#### *Legenere*

Legenere is a small annual herb and designated by the California Native Plant Society (CNPS) as a 1B species. A 1B rating indicates that plants of the species are rare, threatened, or endangered in California and elsewhere. Legenere is found in vernal pools and seasonal marsh habitat. The blooming period is April through May. There are no records for this species within five miles of the project site (CNDDDB, 2010).

#### *Bogg's Lake Hedge-hyssop*

Bogg's Lake hedge-hyssop is an annual herb and designated as California endangered and CNPS 1B. It is typically found on the margins of vernal pools or shallow ponds. The blooming period is May through June. There are no records for this species occurring within five miles of the project site (CNDDDB, 2010).

#### *Brandegee's clarkia*

Brandegee's clarkia is an annual herb designated as CNPS 1B. This species is typically found in foothill woodlands, low elevation conifer forests, and chaparral. The blooming period is from May through June. There are two records of this species occurring within five miles of the project site (CNDDDB, 2010).

#### *Purple Needlegrass*

Purple needlegrass is a perennial herb widespread throughout California. This long-lived bunchgrass was established as the California state grass in 2004. Purple needlegrass grassland is listed as a sensitive plant community on the CDFG Natural Communities List and is required to be considered in California Environmental Quality Act (CEQA) documents. There are no CNDDDB records for this species within five miles of the project site (CNDDDB, 2010).

### **Animals:**

#### *Valley Elderberry Longhorn Beetle*

The USFWS has determined the range of the beetle to include the watersheds of the American, San Joaquin, and Sacramento Rivers and their tributaries up to approximately 3,000 feet above mean sea level (USFWS, 1980). This species is federally listed as threatened. Typically, the beetles are found on elderberry shrubs within riparian plant communities. Some studies have found that multiple elderberry shrubs clumped together provide superior habitat for the beetle while isolated elderberry shrubs are less likely to support beetle populations (Collinge et. al. 2001). Typical plant species that co-occur with the elderberry shrubs include California sycamore (*Platanus racemosa*), willows (*Salix* spp.), blackberry (*Rubus* spp.), and poison oak (*Toxicodendron diversilobum*) (USFWS, 1984).

Beetles require elderberry stems with a basal diameter of at least 1 inch at ground level in order for the larvae to utilize the stems (USFWS, 1999).

The valley elderberry longhorn beetle depends on elderberry shrubs for its entire lifecycle. Adults are typically active from March through May during the flowering period of the elderberry shrub. Females of the species lay eggs on the leaves and stems of elderberry shrubs. Larvae emerge within a few days and burrow into elderberry stems, where they feed on the stem pith until they pupate. When the host shrub begins flowering, the pupa emerges from the stem as an adult (Barr, 1991). There are two records of this species occurring within five miles of the project site (CNDDDB, 2010).

#### *California Red-legged Frog*

California red-legged frog is a federally threatened species and a species of special concern by the CDFG. California red-legged frog adults are most often found in deep pools of water, such as ponds, marshes, springs, reservoirs and streams with abundant overhanging vegetation. Juveniles, frog eggs, and adults have also been seen in ephemeral creeks, ponds, and drainages that lack riparian vegetation. This species spends most of the year underground, where members seek refuge from desiccation by constructing and residing in small burrows. These frogs often breed in ponds and drainages between the months of November and March. California red-legged frogs rarely co-exist with bullfrogs (*Rana catesbeiana*). There are no records of this species occurring within five miles of the project site. The nearest documented occurrence of this species is approximately five and one-half miles northeast of the site; however, this occurrence is highly disputed by experts of the species and its credibility is in question (Pers. communication Barry, 2009). The next nearest occurrence of California red-legged frog is approximately 19 miles northeast of the site, near Georgetown (CNDDDB, 2010).

#### *Western Pond Turtle*

Western pond turtle is listed as a species of special concern by CDFG. Western pond turtles require slow moving perennial aquatic habitats with suitable basking sites. Pond turtles have sometimes adapted to using irrigation ditches. Suitable aquatic habitat typically has a muddy or rock bottom and has emergent aquatic vegetation for cover (Stebbins, 2003). There are three CNDDDB records for this species within five miles of the site (CNDDDB, 2010).

#### *Tricolored blackbird*

The tricolored blackbird, a federal species of concern and a California species of special concern, is a colonial species that occurs in pastures, dry seasonal pools, and agricultural fields in the Central Valley and the foothills surrounding the valley. This species usually nests with dense cattails (*Typha* spp.) or tules (*Scirpus* spp.) in emergent wetlands. Tricolored blackbird also nests in thickets of blackberry (*Rubus* sp.), wild rose (*Rosa* sp.), willows, and tall herbs (Zeiner *et. al.*, 1990). Nesting locations typically must be large enough to support a minimum colony of approximately fifty pairs (Zeiner *et. al.*, 1990). There are three CNDDDB records for this species within five miles of the project site (CNDDDB, 2010).

### *Greater western mastiff bat*

The greater western mastiff bat (*Eumops perotis*), a federal species of concern and a California species of special concern, is found in grasslands and open woodlands. They typically roost in colonies of up to 100 individuals in cliff faces, buildings, tunnels, and caves. The culverts and underpasses under Highway 50 provide potential roosting habitat. There are no records of this species occurring within 5 miles of the site (CNBBD, 2010).

### *Pacific western big-eared bat*

Pacific western big-eared bat (*Corynorhinus townsendii*), a federal species of concern and a California species of special concern, roost in abandoned houses, buildings, and bridges. The culverts and underpasses under Highway 50 provide potential roosting habitat. There are no records of this species occurring within 5 miles of the site (CNBBD, 2010).

### *Spotted Bat*

Spotted bats (*Euderma maculatum*), a federal species of concern and a California species of special concern, roost in rock crevices and, occasionally, in buildings. It is most commonly found in arid areas. The culverts and underpasses under Highway 50 provide potential roosting habitat. There are no records of this species occurring within 5 miles of the site (CNBBD, 2010).

### *Small-footed myotis*

Small-footed myotis (*Myotis ciliolabrum*), a federal species of concern, roost in or near forested areas in a wide variety of habitats including abandoned buildings and bridges. They forage among tree tops or low over brush. The culverts and underpasses under Highway 50 provide potential roosting habitat. There are no records of this species occurring within 5 miles of the site (CNBBD, 2010).

### *Yuma myotis*

Yuma myotis (*Myotis yumanensis*), a federal species of concern and a California species of special concern, live near water in open forest and woodland habitats. They roost in buildings, caves, mines, and crevices. They feed on a wide variety of insects, often foraging over open water. The culverts and underpasses under Highway 50 provide potential roosting habitat and Carson Creek provides potential favored foraging habitat. There are no records of this species occurring within 5 miles of the site (CNBBD, 2010).

## **Methods**

Prior to performing targeted surveys existing biological reports and data were reviewed. The California Natural Diversity Database (CNDDDB) was queried for all records of the species of interest occurring within 5 miles of the site in appropriate portions of *Folsom SE, Latrobe, Buffalo Creek, Folsom, Clarksville, and Shingle Springs* U.S. Geological Survey (USGS) 7.5-minute quadrants (**Figure 2**). New CNDDDB records were identified for several species identified in the Biological Assessment prepared in 2005 by Foothill Associates during the

preparation of this study. The USFWS species quad list was queried for federally listed species potentially occurring in the Clarksville USGS 7.5-minute quadrants. No new USFWS species were identified that were not already taken into account during the 2005 Biological Resource Assessment. The site was surveyed on foot to provide total search coverage with special attention given to areas that represent potential habitat for the species of interest. Areas of potential habitat special-status species potentially occurring on the site were noted during field surveys. Locations of special-status populations were mapped using a handheld Trimble GeoXT GPS unit, capable of sub-meter accuracy.

### *Special-Status Plant Surveys*

Foothill Associates' biologists conducted focused plant surveys on April 14, April 30, and June 9, 2010 for the following special-status plants species: legenere, Bogg's lake hedge-hyssop, Brandegees' clarkia, and purple needlegrass. In accordance with the CNPS Botanical Survey Guidelines, the survey was conducted by personnel with the following qualifications: experience conducting floristic surveys; intimate knowledge of plant taxonomy and extensive plant community ecology and classification; familiarity with the plants of the area, including special-status and locally significant plants; familiarity with the appropriate state and federal statutes related to plants and plant collecting; and experience in analyzing impacts of project activities on native plants and plant communities.

### *Special-Status Wildlife Surveys*

Foothill Associates' biologists conducted habitat assessment surveys on April 14 and April 30, and June 9, 2010 for valley elderberry longhorn beetle, California red-legged frog, western pond turtle, tri-colored blackbird, and special-status bat species. Riparian and marsh habitats were assessed for their suitability as habitat for California red-legged frogs, western pond turtle, and tri-colored blackbird and inspected for evidence of each species. Elderberry shrubs located on or near the project site were mapped and inspected for valley elderberry longhorn beetle exit holes. The number of stems larger than 1" in diameter at ground level was noted for each shrub. Each culvert and overpass on the project site was inspected for potential bat roosts or evidence of bats (i.e. guano).

The surveys were conducted by personnel with the following qualifications: experience conducting botanical and wildlife surveys, in-depth knowledge of amphibian, avian, and reptilian taxonomy, ecology, and classification; thorough experience differentiating between native and non-native (invasive) herpetofauna; and expertise in the appropriate state and federal statutes pertaining to multiple special-status wildlife species.

### *Habitat Mapping*

Existing habitats on the project site were mapped using a combination of aerial photo interpretation and field mapping using a GPS unit. The proposed project was overlaid on the existing habitat map to determine post-project habitat conditions using ArcGIS Version 9.

## **Results**

### **Special-Status Plants:**

No populations of legenera, or Bogg's lake hedgehyssop were found on the site. The seasonal wetlands on the site, which are potential habitat for legenera and Bogg's lake hedge-hyssop, are heavily degraded and overrun by Bermuda grass (*Cynodon dactylon*) and other weedy species.

Brandege's clarkia was not observed on the site. Foothill woodlands on the site, which represent potential habitat for this species, primarily support many competitive non-native, weedy species. Additionally, Brandege's clarkia is known to occur at elevations between approximately 965 to 2905 feet above mean sea level and the highest elevation of the site is approximately 800 feet, about 165 feet below the lower extent of this species' range.

Populations of purple needlegrass covering approximately 1.67 acres located within the limits of disturbance, near the western and southern tributaries to Carson Creek were identified and mapped (**Figure 3**). Approximately 0.09-acres of purple needlegrass is expected to be disturbed under the proposed project. A species list of plants observed on site during the survey was recorded and is provided as **Appendix A**.

### **Special-Status Wildlife:**

No valley elderberry longhorn beetles, California red-legged frog, western pond turtle, tri-colored blackbird or special-status bats were identified on the site.

Four elderberry shrubs (*Sambucus mexicana*) were identified in the south-central region of the site immediately south of Highway 50. One elderberry shrub is located at the northeast corner of the study area, but is not expected to be impacted by the project. Six elderberry shrubs are located immediately outside the project boundary along Joerger Cut Off Road. No valley elderberry longhorn beetles or exit holes in elderberry shrubs were observed; however, all elderberry shrubs with a stem diameter greater than one inch at ground level are considered to be habitat for valley elderberry longhorn beetle by the USFWS.

All suitable aquatic features on the site were surveyed for the presence of California red-legged frog. Portions of Carson Creek occurring on the site are unlikely to provide suitable habitat for this species, due to the speed of the water and strength of the current observed. Additionally, bullfrogs (*Rana catesbeiana*) and mosquitofish (*Gambusia affinis*) were observed in the creek, further reducing the likelihood that California red-legged frog would be present as these species compete with and prey upon California red-legged frogs. Carson Creek does support in-stream pool habitat; however, all pools observed within Carson Creek and drainages tributary to it were associated with scouring of the stream bottom by routine high-flow events as indicated by the destruction of adjacent emergent vegetation. California red-legged frog is primarily a frog species of ponds and slow moving sections of streams (Stebbins, 2003 and Barry, 2009), neither of which is represented in the portions of Carson Creek, or drainages tributary to it, that occur on the site. Based on the species requirements and field observations, the portions of Carson Creek and drainages tributary to it within the site do not support suitable habitat for California red-legged frog. While California red-

legged frog was not observed on the site and is not known to occur within five miles of the site, a small pond located north of Highway 50 in the eastern portion of the site provides potential habitat for California red-legged frog (**Figure 3**).

Some wetlands on the site hydrologically connect to Waters of the U.S., but these wetlands are located very high in the watershed of the Consumnes River and are not expected to have significant contributions to the Waters of the U.S. As mentioned in the 2005 Biological Resource Assessment, portions of Carson Creek and its tributaries occurring onsite do not provide habitat for listed fish species. Furthermore, Carson Creek is not known to provide habitat for listed fish species. Impacts to Carson Creek and its tributaries are expected to be avoided or minimized as portions of Carson Creek and its tributaries on the site are expected to be spanned by bridges.

Although western pond turtle (*Emys marmorata*) was not observed during the surveys, there are three occurrences within five miles of the site and slower portions of Carson Creek provide suitable habitat for the species. On one occasion a turtle was briefly seen entering the creek, but it could not be readily identified.

Numerous raptor and bird species were observed flying over or near the site including, acorn woodpeckers (*Melanerpes formicivorus*), turkey vulture (*Cathartes aura*), northern mocking bird (*Mimus polyglottos*), killdeer (*Charadrius vociferus*), mourning dove (*Zenaida macroura*), red-tailed hawk (*Buteo jamaicensis*), and cliff swallows (*Petrochelidon pyrrhonota*). Two colonies of acorn woodpeckers were observed north of Highway 50 utilizing hollows in oak trees. Multiple active cliff swallow nests were observed within the eastern culverts that convey Carson Creek under Highway 50. A species list of wildlife observed on site during the survey was recorded and is provided as **Appendix B**.

### **Habitat Mapping:**

As described above, the study area is dominated by annual grassland. In addition, two woodland habitat types, three wetland habitats, and purple needlegrass grassland were also identified. Approximately 52.5 acres of the study area are currently roads, construction staging areas, or other development (**Figure 3**). Habitat impacts from the proposed project are shown in **Figure 4**, and habitat impacts from the proposed alternatives for the power line, dry utilities, and other facilities corridor are shown in **Figures 5-7**.

#### *Annual Grassland*

Annual grassland is characterized primarily by an assemblage of non-native grasses and herbaceous species. Dominant grass species consisted of barley (*Hordeum murinum*), ryegrass (*Lolium*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), barbed goatgrass (*Aegilops triuncialis*), rattlesnake grass (*Briza minor*), and wild oat (*Avena fatua*). Annual grassland habitat supports breeding, foraging, and shelter habitat for several species of wildlife.

There are some scattered oak trees within portions of the grasslands. Oak species within the annual grassland include blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizeni*),

and valley oak (*Quercus lobata*). The proposed project will impact  $\pm 34.31$  acres of the total  $\pm 125.26$  acres of annual grassland.

As part of this study, impacts associated with three alternatives for the installation of power lines, dry utilities, and other facilities corridor were assessed. The following alternatives are expected to impact the associated quantity of this habitat type: Alternative 1  $\pm 4.80$  acres, Alternative 2  $\pm 8.43$  acres, and Alternative 3  $\pm 0.44$  acres.

#### *Blue Oak Woodland*

Blue oak woodland is open, savannah-like stands trees with a minimum of 10% oak canopy cover. Although these woodlands are dominated by blue oaks, valley oaks and interior live oaks are also found in the canopy. The understory generally consists of annual grasses with occasional masses of shrubs, which are typically limited to areas around rocky outcroppings. Understory plant species observed include miners' lettuce (*Claytonia parviflora*), common chickweed (*Stellaria media*), poison oak, buckeye (*Aesculus californica*), and Italian thistle (*Carduus pycnocephalus*). Blue oak woodlands provide habitat for a variety of species, including acorn woodpeckers, oak titmouse, and California whipsnake.

Blue oak woodlands are protected under the El Dorado County Oak Woodland Management Plan. A total of  $\pm 17.42$  acres of blue oak woodland were mapped and the project is expected to impact  $\pm 5.58$  acres.

As part of this study, impacts associated with three alternatives for the installation of power lines, dry utilities, and other facilities corridor were assessed. The following alternatives are expected to impact the associated quantity of this habitat type: Alternative 1  $\pm 1.64$  acres, Alternative 2  $\pm 4.37$  acres, and Alternative 3 no impact.

#### *Valley Foothill Riparian*

Valley foothill riparian habitat is found along perennial streams, some ephemeral streams, and certain types of wetlands. The canopy is dominated by valley oak and cottonwoods (*Populus fremontii*), with California buckeye (*Aesculus californica*), California alder (*Alnus rhombifolia*), and assorted willows. Canopy cover generally ranges from 20%-80% and undergrowth is often thick with a variety of shrubs and vines including Himalayan blackberry (*Rubus discolor*), poison oak, and willows. This habitat provides foraging, migration, and nesting habitat for many species of birds, as well as habitat for bullfrog and potentially western pond turtle.

Valley foothill riparian habitat dominated by oak trees is considered oak woodland under the El Dorado County Woodland Management Plan. Of the  $\pm 11.87$  acres of valley riparian habitat in the study area,  $\pm 0.70$ -acre is expected to be impacted by the proposed project.

As part of this study, impacts associated with three alternatives for the installation of power lines, dry utilities, and other facilities corridor were assessed. The following alternatives are expected to impact the associated quantity of this habitat type: Alternative 1  $\pm 0.37$ -acre, Alternative 2  $\pm 1.69$ -acre, and Alternative 3  $\pm 0.03$ -acre.

### *Purple Needlegrass Grassland*

Purple needlegrass grassland is dominated by the native bunchgrass for which it is named. Within the study area, this grassland is associated and intergrades with perennial and seasonal wetland. In addition to purple needlegrass, annual grasses, and rushes are common in this vegetation community.

A total of  $\pm 1.67$ -acre of purple needlegrass grassland was mapped in the study area. The proposed project is expected to impact  $\pm 0.09$ -acre of this vegetation community.

As part of this study, impacts associated with three alternatives for the installation of power lines, dry utilities, and other facilities corridor were assessed. The following alternatives are expected to impact the associated quantity of this biological resource: Alternative 1  $\pm 0.37$ -acre, Alternative 2  $\pm 0.78$ -acre, and Alternative 3  $\pm 0.08$ -acre.

### *Wetlands and Other Waters*

Perennial wetlands in the study area include slope seep wetlands and riverine perennial marsh. Since these wetlands provide moisture year-round they are dominated by a variety of rushes (*Juncus* spp.), cattail, spikerush (*Eleocharis macrostachya*), and bulrush. Perennial wetlands are often closely associated with riparian habitat and harbor similar species of wildlife.

Both riverine and depressional seasonal wetlands are present in the study area. Seasonal wetlands within the study area are dominated primarily by Bermuda grass.

A small man-made pond is present on the eastern side of the site. It was created with the construction of an earthen dam in a seasonal wetland. The majority of the pond is open water, edged by rushes and cattails. This pond is potential habitat for California red-legged frog. It is not expected to be impacted by the proposed project.

A total of  $\pm 11.83$  acres of wetlands and other waters have been mapped within the study area. All wetlands and other waters expected to be impacted by the project total  $<1$  acre. This estimate assumes the worst case scenario; however, creek crossings and wetlands will likely be avoided where possible.

As part of this study, impacts associated with three alternatives for the installation of power lines, dry utilities, and other facilities corridor were assessed. The following alternatives are expected to impact the associated quantity of wetlands and/or other waters: Alternative 1  $\pm 0.30$ -acre, Alternative 2  $\pm 2.28$ -acre, and Alternative 3  $\pm 0.03$ -acre.

### **Sensitive Habitats:**

Purple needlegrass grassland is listed as a sensitive plant community on the CDFG Natural Communities List and is required to be considered in CEQA documents. The study area supports 1.67 acres of purple needlegrass grassland, of which approximately 0.09-acre is expected to be impacted by the proposed project.

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA, Section 1600 of the California Fish and Game Code, or Section 404 of the Clean Water Act. Additionally, sensitive habitats are protected under the specific policies outlined in the El Dorado County General Plan. Sensitive habitats within the site include oak woodlands, purple needlegrass grasslands, and waters of the U.S., which include perennial marsh, riparian wetland, slope-seep wetlands, and seasonal wetlands (**Figure 6**). No native resident or migratory wildlife corridors or native wildlife nursery sites were identified in the study area.

Potential jurisdictional waters of the U.S. within the project area total approximately 11.83 acres. This acreage includes 6.77 acres of perennial marsh, 0.05-acre of seasonal marsh, 0.95-acre of riparian wetland, 0.71-acre of slope-seep wetland, 0.97-acre of seasonal wetlands and associated ephemeral drainages, 2.36 acres of perennial drainages, and 0.02-acre of pond. The potential wetland areas in the project area have been formally delineated. As of the writing of this biological assessment, the Army Corps of Engineers (Corps) has verified these acreages.

As mentioned previously, the project site contains scattered oak trees within the annual grassland community and the western and eastern portion of the project site contain oak woodlands with extensive oak trees. Oak trees are regulated under the El Dorado County General Plan based on canopy coverage onsite. Oak tree removal, revegetation, and mitigation will be consistent with the El Dorado County's Oak Woodland Management Plan as required by the El Dorado General Plan.

### **Recommendations:**

As mentioned earlier, the conditions and recommendations in 2005 BRA continues to apply to the site, unless otherwise noted in this document. A summary of the results discussed above and a comparison with the previous Environmental Impact Report, prepared in 1991, is shown in **Table 1**.

#### *Valley Elderberry Longhorn Beetle*

Although no valley elderberry longhorn beetles were observed, there is some potential for valley elderberry longhorn beetle to be present on the site due to the five blue elderberry shrubs observed in the study area (**Figure 3**). All of the elderberry shrubs observed onsite are large and could potentially provide habitat for valley elderberry longhorn beetle. Currently, the USFWS suggests mitigation for impacts to any elderberry shrub with stems of greater than 1 inch diameter at ground level. USFWS calls for a 100-foot buffer to be maintained around any existing elderberry shrub to prevent potential valley elderberry longhorn beetle habitat from being impacted. If a 100-foot buffer cannot be maintained, then the elderberry shrub should be transplanted according to USFWS guidelines to a suitable designated mitigation area and additional elderberry shrubs and associated riparian plant species should be planted in the designated mitigation area. The number of additional elderberry shrubs and associated vegetation varies depending on the number and diameter of elderberry stems suitable for use by valley elderberry longhorn beetle that are impacted by the project. The USFWS requests that transplantation occur between the beginning of November and the first two weeks of

February when elderberries are typically dormant and the chance of transplantation success is higher. These mitigation measures would only be required if the elderberry shrubs within the project area are impacted. The proposed project is expected to impact four of the five shrubs; therefore, these four shrubs will need to be transplanted and additional elderberry plantings made in accordance with USFWS guidelines.

#### *California Red-legged Frog*

While the potential for this species to occur onsite is low, potential habitat for California red-legged frog occurs in the study area within the small pond. Even though the pond is not expected to be impacted, this species can occur in the immediate upland areas outside of the pond. Because this species is federally threatened, a habitat assessment of the pond per USFWS guidelines is expected to be required. Based on the results of the habitat assessment report, coordination with USFWS will determine if further action is necessary.

#### *Western Pond Turtle*

Perennial marsh and riparian habitats within the study area contain suitable habitat for western pond turtle and there are CNDDDB records for this species within the Carson Creek watershed. Therefore, it is recommended that a pre-construction survey for western pond turtle be conducted for any construction activity that would directly impact perennial marsh habitat or occur within 300 feet of perennial marsh or riparian habitat no more than 15 days before the onset of construction. If western pond turtles are found during the pre-construction survey, coordination with CDFG is recommended to produce a relocation plan. Once such a plan is in place, relocate any western pond turtle found to a suitable location.

#### *Nesting Raptors and Other Bird Species Protected by MBTA*

Active raptor nests are protected by the California Fish and Game code Section 3503.5 and the MBTA. Active migratory bird species' nests are protected by Section 3503.5 of the California Fish and Game Code. If construction begins during the nesting season (February through September), a survey for active migratory bird and raptor nests (including tricolor blackbird and Swainson's hawk) should be carried out by a biologist experienced in such surveys no more than 30 days prior to construction. If an active nest is found, subsequent surveys will be necessary to determine when the nest is no longer active.

If construction begins outside of the nesting season, surveys for western burrowing owl (*Athene cunicularia hypugaea*) should be conducted no more than 30 days prior to the initiation of construction activities, as this species can be present year-round. If an active nest or occupied burrow is found, CDFG should be contacted regarding passive relocation guidelines. If no active nests or occupied burrows are found, no further mitigation is required.

#### *Oak Woodland Mitigation*

Approximately 29.29 acres (13.7%) of the study area are composed of blue oak woodland and valley foothill riparian habitat that are regulated under the El Dorado County Oak Woodland Management Plan. The first 10% of oak canopy removed must be mitigated at a 1:1 ratio, additional canopy area removed must be mitigated at a 2:1 ratio. Mitigation may consist of

on-site re-planting, off-site acquisition of oak woodland and establishment of a conservation easement, or paying a fee into the oak woodland conservation fund. The proposed project will remove a total of 12.34 acres (42.1%) of oak woodland canopy. It should be noted that the potential impact of oak woodland canopy acreage of 12.34 acres was calculated based on the 6.28 acres expected to be impacted by the project and impacts associated with Alternative 2 (6.06 acres), the worst-case scenario with the greatest amount of oak woodland canopy impact acreage. This will require a total of 21.75 acres of oak woodland canopy mitigation planting or off-site “like kind” preservation. Another mitigation option to offset impacts to oak woodland canopy involves contributing funds to the County’s Oak Woodlands Conservation Fund. By implementing this mitigation, potential impacts to riparian areas are expected to be mitigated for as well. A complete mitigation plan should be prepared once the project design is finalized.

As part of this study, impacts associated with three alternatives for the installation of power lines, dry utilities, and other facilities corridor were assessed. The following amounts of oak woodland canopy are expected to be impacted with the implementation of the associated alternatives: Alternative 1 ± 2.01 acres, Alternative 2 ± 6.06 acres, and Alternative 3 ± 0.03 acres. As mentioned above, the project’s potential impact of oak woodland canopy of 12.34 acres and associated mitigation of 21.75 acres include impacts and mitigation associated with Alternative 2, as it is the worst-case scenario and if implemented would remove the greatest amount of oak woodland canopy out of the other proposed alternatives. Therefore, the amount of oak woodland canopy removed could be less than the expected impact of 12.34 acres and, consequently, mitigation required would also be less than the expected amount of 21.75 acres.

#### *Purple Needlegrass Grassland*

A total of 1.67 acres of purple needlegrass grassland was mapped within the study area and approximately 0.09-acre (5.4% of the total area) is expected to be impacted. As mentioned earlier, purple needlegrass grassland is considered a sensitive plant community by CDFG on their Natural Communities List and is required to be considered in the preparation of CEQA documents. Since only 5.4% of this resource within the study area is expected to be impacted and the acreage of purple needlegrass grassland has nearly doubled since the 1991 EIR was created, the impact to purple needlegrass grassland is expected to be less than significant. Further, the expected total impact to this habitat type of 0.09-acre is significantly less than the Ridge Design impact of 0.15-acre previously proposed in the 1991 EIR. Consequently, no mitigation for less than significant impacts to purple needlegrass grassland is anticipated to be required.

#### *Mitigation for Impacts to Waters of the U.S.*

A total of 11.83 acres of jurisdictional waters of the U.S. and wetland features were delineated and mapped on the site. Of these 11.83 acres, 6.77 acres of perennial marsh, 0.05-acre of seasonal marsh, 0.95-acre of riparian wetland, 0.71-acre of slope-seep wetland, 0.97-acre of seasonal wetlands and associated ephemeral drainages, 2.36 acres of perennial drainages, and 0.02-acre of pond (**Figure 6**). These areas are regulated by the Corps and California Department of Fish and Game. Additionally, these areas are protected under the El Dorado

County General Plan. Therefore, a Section 404 permit must be acquired from the Corps. Any waters of the U.S. or jurisdictional wetlands that would be lost or disturbed should be replaced or rehabilitated on a “no-net-loss” basis in accordance with the Corps’ mitigation guidelines. Habitat restoration, rehabilitation, and/or replacement should be at a location and by methods agreeable to the Corps. Actual mitigation necessary to offset impacts to wetlands and waters of the U.S. will be determined in the process of obtaining the Section 404 permit. This mitigation is also expected to include protection of wetlands from construction areas according to the standards established in Sections 402 and 404 of the Clean Water Act.

If the project would result in impacts to the tributary to Carson Creek, Carson Creek itself, or associated riparian habitat; a Streambed Alteration Agreement should be obtained from CDFG, pursuant to Section 1600 of the California Fish and Game Code, for each stream crossing and any other activities affecting the bed, bank or associated riparian vegetation of the stream. If required, the project applicant should coordinate with CDFG in developing appropriate mitigation, and should abide by the conditions of any executed permits. Such mitigation is expected to include protection of riparian habitat from construction areas according to the standards established in Section 1600 of California Fish and Game Code.

Do not hesitate to call Ken Whitney or me at (916) 435-1202 or via e-mail, [ken@foothill.com](mailto:ken@foothill.com) or [meredith@foothill.com](mailto:meredith@foothill.com) , if you have any questions about this report.

Sincerely,



Meredith Branstad  
Biologist

**Attachments:**

- Table 1 — Biological Impact Analysis
- Figure 1 — Site and Vicinity
- Figure 2 — CNDDDB
- Figure 3 — Existing Habitat Map
- Figure 4 — Post-Project Habitat Map
- Figure 5 — Utility Alignment Alternatives
- Figure 6 — Impacts to Waters of the U.S.
- Appendix A — Plant Species Observed on the Site
- Appendix B — Wildlife Species Observed on the Site
- Appendix C — References

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
Biology Table 3-1	Diminished habitat for plants and wildlife.	Significant	Prepare and implement a detailed biological mitigation plan.	Less than significant	Change	<p><u>Discussion:</u> Mitigation for the impact changed based upon the 2005 BRA and 2010 Update to the BRA/Focused Special-Status Species Survey reports that were carried out. With implementation of the mitigation measures N-BIO-1 thru N-BIO-10 required herein impacts would be less than significant.</p> <p><u>Impact:</u> Reduced potential habitat for plants and wildlife.</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> O-BIO-1: Prepare and implement a detailed biological mitigation plan consistent with the mitigation measures N-BIO-1 thru N-BIO-10.</p> <p><u>Level of Significance after Mitigation:</u> LTS</p>
Table 3-1	Elimination or disturbance of the annual grasslands in the project area.	Less than significant	No mitigation is required	Less than significant	No change	<p><u>Impact:</u> Elimination or disturbance of the annual grasslands in the impact area.</p> <p><u>Level of Significance before Mitigation:</u> LTS</p> <p><u>Mitigation:</u> None required.</p> <p><u>Level of Significance after Mitigation:</u> N/A</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
Biology (cont) Table 3-1	Loss of annual grassland habitat, thereby displacing or eliminating wildlife species.	Less than significant	No mitigation is required	Less than significant	No change	<p><u>Discussion:</u> Non-native annual grassland habitat is common throughout the Central Valley and foothill regions and is not a protected habitat. Any special-status species with the potential to occur on the project site or in the vicinity that utilize non-native annual grassland habitats are discussed later in this table. Further, no wildlife corridors are known to occur in the impact area.</p> <p><u>Impact:</u> Loss of the annual grassland habitat in the impact area.</p> <p><u>Level of Significance before Mitigation:</u> LTS</p> <p><u>Mitigation:</u> None required.</p> <p><u>Level of Significance after Mitigation:</u> N/A</p>
Table 3-1	Elimination of blue oaks (Ridge Design would eliminate 59 blue oaks [51 with dbh exceeding 12 inches	Significant	Design the project to save as many oak trees as possible. Protect oak trees from construction and landscaping impacts. Replant with native oaks.	Less than significant	Change	<p><u>Discussion:</u> Current County policies in the Oak Woodland Management Plan require assessment and mitigation of the cumulative canopy area of all native species of oak trees, not on a species-specific per tree basis. (Pub. Resources Code, § 21083.4)</p> <p><u>Impact:</u> Under the revised project design, the project would remove up to 12.34 acres of oak woodland canopy, including construction of a new utility corridor.</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
	and 8 with dbh range of 6-12 inches].					<p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> Consistent with the County’s Oak Woodland Management Plan (OWMP) and Chapter 17.73 of the County Zoning Code, and prior to disturbance of any oak woodlands, one or more of the following mitigation measures shall be completed, or combination thereof: (i) preparation of a replacement planting plan by a qualified professional as defined in the OWMP which requires mitigating the first 10% of oak canopy removed at a 1:1 ratio and any additional canopy acreage to be removed at a 2:1 ratio. The Plan, if prepared, shall require maintaining plantings and replacing dead or diseased trees for not less than seven years to ensure “no net loss”; (ii) preserving “like kind” oak woodland habitat in perpetuity through acquisition of conservation easements or fee simple at the 1:1 and 2:1 ratio set forth in the OWMP; (iii) contributing funds to the Oak Woodlands Conservation Fund, consistent with the OWMP, for the purpose of purchasing oak woodlands conservation easements. (See associated 2010 Update to 2005 BRA &amp; Focused Special-Status Species report for details of mitigation acreage)</p> <p><u>Level of Significance after Mitigation:</u> LTS</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
Table 3-1	Loss or displacement of wildlife species of the blue oak woodland.	Significant	Implement the blue oak woodland vegetation mitigation measures.	Less than significant	Change	<p><u>Discussion:</u> Current County General Plan policies and the Oak Woodland Management Plan, require assessment and mitigation of the cumulative canopy area of all native species of oak trees affected by a project, not mitigation on a species-specific per tree basis.</p> <p><u>Impact:</u> Loss or displacement of general wildlife species and potentially nesting raptors that use the blue oak woodland/ oak woodlands.</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> Consistent with the County’s Oak Woodland Management Plan (OWMP) and Chapter 17.73 of the County Zoning Code, and prior to disturbance of any oak woodlands, one or more of the following mitigation measures shall be completed, or combination thereof: (i) preparation of a replacement planting plan by a qualified professional as defined in the OWMP which requires mitigating the first 10% of oak canopy removed at a 1:1 ratio and any additional canopy acreage to be removed at a 2:1 ratio. The Plan, if prepared, shall require maintaining plantings and replacing dead or diseased trees for not less than seven years to ensure “no net loss”; (ii) preserving “like kind” oak woodland habitat in perpetuity through acquisition of conservation easements or fee simple at the 1:1 and</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<p>2:1 ratio set forth in the OWMP; (iii) contributing funds to the Oak Woodlands Conservation Fund, consistent with the OWMP, for the purpose of purchasing oak woodlands conservation easements. (See associated 2010 Update to 2005 BRA &amp; Focused Special-Status Species report for details of mitigation acreage) Including Mitigation Measures for the Swainson’s hawks.</p> <p><u>Level of Significance after Mitigation:</u> LTS</p>
Table 3-1	Elimination of interior live oak trees and riparian shrubs.	Significant	Protect riparian woodland from construction impacts. Replant riparian areas with woody vegetation.	Less than significant	Change	<p><u>Discussion:</u> Current County General Plan policies and the Oak Woodland Management Plan, require assessment and mitigation of the cumulative canopy area of all native species of oak trees affected by a project, not mitigation on a species-specific per tree basis. Additionally, California Fish and Game Code Section 1600 regulates riparian areas.</p> <p><u>Impact:</u> Elimination of interior live oaks and riparian shrubs (up to 12.34 acres of blue oak, interior live oak, and valley oak canopy).</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> Consistent with the County’s Oak Woodland Management Plan (OWMP) and Chapter</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<p>17.73 of the County Zoning Code, and prior to disturbance of any oak woodlands, one or more of the following mitigation measures shall be completed, or combination thereof: (i) preparation of a replacement planting plan by a qualified professional as defined in the OWMP which requires mitigating the first 10% of oak canopy removed at a 1:1 ratio and any additional canopy acreage to be removed at a 2:1 ratio. The Plan, if prepared, shall require maintaining plantings and replacing dead or diseased trees for not less than seven years to ensure “no net loss”; (ii) preserving “like kind” oak woodland habitat in perpetuity through acquisition of conservation easements or fee simple at the 1:1 and 2:1 ratio set forth in the OWMP; (iii) contributing funds to the Oak Woodlands Conservation Fund, consistent with the OWMP, for the purpose of purchasing oak woodlands conservation easements. See associated 2010 Update to 2005 BRA &amp; Focused Special-Status Species report for details of mitigation acreage.</p> <p>Additionally, comply with any measures required by the Section 404 Permit and California Fish and Game Code Section 1600 permit to offset impacts to riparian shrubs. This is expected to require protection of riparian areas from construction impacts to the extent possible. At a minimum, this will include replacement or restoration of disturbed habitat sufficient to achieve no-net loss of function.</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<u>Level of Significance after Mitigation:</u> LTS
Table 3-1	Possible construction-related impacts to both creeks if debris or soil are sidecast into the channel from adjacent areas.	Potentially significant	Protect riparian woodland from construction impacts.	Less than significant	No change	<p><u>Impact:</u> Potential for creek impacts from construction debris/spoils.</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> Protect riparian habitat and associated wetlands from construction areas according to the standards established in California Fish and Game Code 1600 and Sections 402 and 404 of the Clean Water Act. Comply with wetland/waters of the U.S. mitigation required by Section 404 of the Clean Water Act and Section 1600 of California Fish and Game Code. At a minimum, this will include replacement or restoration of disturbed habitat sufficient to achieve no-net loss of function.</p> <p><u>Level of Significance after Mitigation:</u> LTS</p>
Table 3-1	Loss of interior live oak woodland habitat and	Significant	Implement the live oak riparian woodland vegetation mitigation measures.	Less than significant	Change	<p><u>Discussion:</u> Current County General Plan policies and the Oak Woodland Management Plan, require assessment and mitigation of the cumulative canopy area of all native species of oak trees effected by a project, not mitigation on a species-specific per tree</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
	subsequent elimination or displacement of wildlife species associated with this habitat.					<p>basis.</p> <p><u>Impact:</u> Elimination of interior live oak woodland habitat (up to 12.34 acres of blue oak, interior live oak, and valley oak canopy).</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> Consistent with the County’s Oak Woodland Management Plan (OWMP) and Chapter 17.73 of the County Zoning Code, and prior to disturbance of any oak woodlands, one or more of the following mitigation measures shall be completed, or combination thereof: (i) preparation of a replacement planting plan by a qualified professional as defined in the OWMP which requires mitigating the first 10% of oak canopy removed at a 1:1 ratio and any additional canopy acreage to be removed at a 2:1 ratio. The Plan, if prepared, shall require maintaining plantings and replacing dead or diseased trees for not less than seven years to ensure “no net loss”; (ii) preserving “like kind” oak woodland habitat in perpetuity through acquisition of conservation easements or fee simple at the 1:1 and 2:1 ratio set forth in the OWMP; (iii) contributing funds to the Oak Woodlands Conservation Fund, consistent with the OWMP, for the purpose of purchasing oak woodlands conservation easements. (See associated 2010 Update to 2005 BRA &amp; Focused Special-Status</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						Species report for details of mitigation acreage). <u>Level of Significance after Mitigation:</u> LTS
Biology (cont) Table 3-1	Elimination of wetlands including freshwater marsh habitat dominated by dense sedge (Ridge Design would eliminate 1.6 acres including 1.1 acres of freshwater marsh and 0.5 acres of habitat dominated by dense sedge).	Significant	Protect the marshes from construction impacts. Establish a wetland of equal acreage and value or enhance an existing degraded wetland. Design culvert outfalls that allow new ponds to form.	Less than significant	Change	<u>Discussion:</u> The preferred alternative (Ridge Design) avoids/minimizes impacts to wetlands and creek channels. In addition to design configurations that avoid or minimize wetland impacts, the current project now includes spanning the creeks, rather than installing culverts and other types of discharges of fill material. <u>Impact:</u> Elimination of up to 0.45 acres of wetlands. <u>Level of Significance before Mitigation:</u> Potentially Significant <u>Mitigation:</u> The County shall require avoidance of wetlands to the extent practicable. Prior to any construction activities that could directly or indirectly impact jurisdictional wetlands within the project area, the contractor and/or County shall obtain a Section 404 permit from the Army Corps of Engineers (Corps), as needed, and mitigate for the effects at a minimum 1:1 ratio to ensure “no-net-loss” through either wetland creation and/or restoration as agreed upon with the Corps.  The County shall be provided with evidence of

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<p>fulfillment of this measure, including but not limited to proof of purchase of credits in a mitigation bank, or with a Habitat Mitigation and Monitoring Plan for creation of wetlands coupled with proof that the mitigation site will be preserved in perpetuity</p> <p><u>Level of Significance after Mitigation:</u> LTS</p>
Table 3-1	Loss of marsh habitat, thereby eliminating sources of water for wildlife.	Significant	Implement the freshwater marshes and seeps vegetation mitigation measures.	Less than significant	Change	<p><u>Discussion:</u> The preferred alternative (Ridge Design) avoids/minimizes impacts to wetlands and creek channels. In addition to design configurations that avoid or minimize wetland impacts, the current project now includes spanning the creeks, rather than installing culverts and other types of discharges of fill material.</p> <p><u>Impact:</u> Elimination of up to 0.45 acres of wetlands.</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> The County shall require avoidance of wetlands to the extent practicable. Prior to any construction activities that could directly or indirectly impact jurisdictional wetlands within the project area, the contractor and/or County shall obtain a Section 404 permit from the Army Corps of Engineers (Corps), as needed, and mitigate for the effects at a minimum 1:1 ratio to ensure “no-net-loss” through either wetland</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<p>creation and/or restoration as agreed upon with the Corps.</p> <p>The County shall be provided with evidence of fulfillment of this measure, including but not limited to proof of purchase of credits in a mitigation bank, or with a Habitat Mitigation and Monitoring Plan for creation of wetlands coupled with proof that the mitigation site will be preserved in perpetuity.</p> <p><u>Level of Significance after Mitigation:</u> LTS</p>
Biology (cont) Table 3-1	Elimination of purple needlegrass grassland (Ridge design 0.15 acres).	Significant	Protect the purple needlegrass from construction impacts. Replant an area with purple needlegrass.	Less than significant	Change	<p><u>Discussion:</u> Purple needlegrass grassland is listed as a sensitive plant community of the CDFG Natural Communities List and is required to be considered in CEQA documents. While the amount of purple needlegrass grassland on the site has increased in size since the 1991 EIR, the expected impact (0.09-acres) of purple needlegrass grassland is less than the 0.15-acre impact associated with the Ridge Design in the 1991 EIR. Therefore the impact to the species is less than significant and no mitigation is required by CDFG. The total acreage of purple needlegrass in the study area is 1.67 acres; however, only 0.09-acre of purple needlegrass grassland will be impacted by the project.</p> <p><u>Impact:</u> Elimination of approximately 0.09-acre of</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<p>purple needlegrass grassland.</p> <p><u>Level of Significance before Mitigation:</u> LTS</p> <p><u>Mitigation:</u> None required.</p> <p><u>Level of Significance after Mitigation:</u> LTS</p>
Table 3-1	Elimination of habitat for wildlife species associated with the purple needlegrass grassland.	Significant	Implement the purple needlegrass grassland vegetation mitigation measures.	Less than significant	Change	<p><u>Discussion:</u> Purple needlegrass grassland is listed as a sensitive plant community of the CDFG Natural Communities List and is required to be considered in CEQA documents. While the amount of purple needlegrass grassland on the site has increased in size since the 1991 EIR, the expected impact (0.09-acre) of purple needlegrass grassland is less than the 0.15-acre impact associated with the Ridge Design in the 1991 EIR. Therefore the impact to the species is less than significant and no mitigation is required by CDFG. The total acreage of purple needlegrass in the study area is 1.67 acres; however, only 0.09-acre of purple needlegrass grassland will be impacted by the project.</p> <p><u>Impact:</u> Elimination of habitat for wildlife species associated with the purple needlegrass grassland.</p> <p><u>Level of Significance before Mitigation:</u> LTS</p> <p><u>Mitigation:</u> None required.</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<u>Level of Significance after Mitigation:</u> LTS
Table 3-1	No impacts to any other special status plant species.	–	No mitigation is required.	–	No change	<u>Impact:</u> None <u>Level of Significance before Mitigation:</u> N/A <u>Mitigation:</u> None required. <u>Level of Significance after Mitigation:</u> N/A
Table 3-1	Loss of possible foraging habitat for Swainson's hawks.	Less than significant	No mitigation is required.	Less than significant	Change	<u>Foraging Habitat:</u> <u>Discussion:</u> The disturbed annual grassland onsite provides suitable foraging habitat for Swainson's hawk although no hawks have been observed onsite. The loss of possible foraging habitat for Swainson's hawks from approval of the modified project design is considered less than significant as there will be no substantial increase in any additional foraging habitat loss from that previously approved for the project. <u>Nests:</u> Potential impacts to active Swainson's hawk nests

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<p>would be potentially significant.</p> <p><u>Impact:</u> Potential effects to Swainson's hawk nests.</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> The County/contractor shall retain a Qualified Biologist to conduct a preconstruction survey in accordance with current CDFG guidelines. The survey shall be conducted before grading activities and no more than 30 days before the beginning of construction. If no nests are found, no further mitigation is required.</p> <p>If active nests are found within 0.25 miles of the construction area, consult with CDFG to establish measures to allow work within that zone. No construction activities shall take place within 0.25 mile of the nest until the young have fledged or consultation with CDFG has been completed. Weekly monitoring reports summarizing nest activities shall be submitted to the County and CDFG until the young have fledged and the nest is determined to be inactive. Trees found to contain active nests that must be removed as a result of project implementation shall be removed during the non-breeding season (late Sept. to late February).</p> <p><u>Level of Significance after Mitigation:</u> LTS</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
Table 3-1	Loss of possible foraging habitat for burrowing owls.	Less than significant	No mitigation is required.	Less than significant	Change	<p><u>Discussion:</u> The disturbed annual grassland onsite provides suitable foraging and nesting habitat for western burrowing owl. The loss of and additional possible foraging habitat for western burrowing owl under the revised project design is less than significant because burrowing owls are not known to occur in the project area, and in the event that burrowing owls do utilize the site considerable annual grassland habitat will remain undisturbed within the project area. Potential impacts to active western burrowing owl nests would be significant.</p> <p><u>Impact</u> Potential effects to nesting western burrowing owls.</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> Prior to grading the County/ applicant shall retain a Qualified Biologist to conduct preconstruction surveys (in accordance with current CDFG guidelines) of the project area and in a 250-foot wide buffer zone around the project site (excluding paved areas) to locate active burrowing owl burrows. If no burrowing owls are detected, a letter report documenting survey methods and findings will be submitted to the County and no further mitigation is required. If active burrowing owl burrows are detected, the County shall</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<p>require the following mitigation:</p> <ul style="list-style-type: none"> <li>• Occupied burrows will not be disturbed during the nesting season (2/1 – 8/31). This shall be accomplished by establishing a 250-foot buffer around the occupied burrows. The size of the buffer may be reduced if a Qualified Biologist and CDFG determine that the reduction of the buffer would not have an adverse effect on the owls.</li> <li>• If destruction of an occupied burrow is unavoidable during the nonbreeding season (9/1 – 1/31), passive relocation techniques approved by CDFG, such as installing one-way doors at the burrow entrance, will be used instead of trapping the owls. At least 1 week will be necessary to accomplish the passive relocation and allow the owls to acclimate to alternative burrows. After the owls have been confirmed to be absent from the burrows, the burrow entrances should be collapsed to prevent owls from re-entering the burrows.</li> </ul> <p><u>Level of Significance after Mitigation:</u> LTS</p>
Table 3-1	Loss of possible habitat for	–	No mitigation is required.	Less than significant	Change	<p><u>Discussion:</u> Portions of the marsh habitat provide suitable nesting substrate for tricolored blackbird.</p> <p>The loss of possible foraging and nesting habitat for</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
	the tricolored blackbird					<p>tricolored blackbird is less than significant, the tricolor blackbird is a common species throughout the Central Valley and is not listed as rare, threatened or endangered, but rather as a Species of Special Concern. The tricolor blackbird is listed under the MBTA, however. (50 CFR 10.13.) As such pre-construction surveys will be required. The modified project is not anticipated to have a measurable effect on the tricolored blackbird in part because the site provides marginally suitable nesting habitat.</p> <p><u>Impact:</u> Potential effects to active tricolored blackbird nests.</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> Conduct a preconstruction nesting bird survey for MBTA-regulated species 30 days prior to construction activities would be necessary. If an active nest is found, subsequent surveys will be necessary to determine when the nest is no longer active. If no active nests are found, no further mitigation is expected to be required.</p> <p><u>Level of Significance after Mitigation:</u> LTS</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
Biology (cont) Table 3-1	Loss of possible habitat for red-legged frog.	Less than significant	No mitigation is required.	–	Change	<p><u>Discussion:</u> The biological assessments prepared for the project support the SEIR’s conclusion that California red-legged frogs are unlikely to occur onsite because of the existing topography and climate, the potential habitat is marginal, and because no records exist of CRLF occurring within 5 miles of the project site. To the extent any potential upland habitat could exist (e.g., above the existing pond), that area would largely be avoided (e.g., the pond) the potential direct and indirect effects to CRLF is LTS..</p> <p><u>Impact:</u> Potential effects to California red-legged frog on the project site – upland of the existing pond.</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> Retain a Qualified Biologist to conduct a preconstruction survey prior to any disturbance of the upland areas above the pond per USFWS protocols in areas with potentially suitable habitat, if any, will be affected.</p> <p>Should no suitable CRLF habitat occur on the site following the habitat assessment, then no further mitigation shall be required. If CRLF habitat is determined to be present, then a presence/absence survey shall be conducted. If CRLF are not observed during the survey, then no further mitigation is</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<p>expected to be necessary. If CRLF are observed, the following shall be required: obtain a no jeopardy biological opinion from the USFWS in conjunction with the Clean Water Act Permit. All the terms and conditions of the BO from the USFWS shall be implemented. While at the discretion of the USFWS, the terms and conditions of the Biological will include measures to avoid and/or minimize incidental take of the species and conservation measures to ensure habitat protection..</p> <p><u>Level of Significance after Mitigation:</u> LTS</p>
Table 3-1	No loss of elderberry shrubs and, therefore, no impacts to valley elderberry longhorn beetle (VELB)	–	No mitigation is required.	Less than significant	Change.	<p><u>Discussion:</u> VELB is federally listed as threatened, although in October 2006 its “delisting” was proposed. It is not known whether the species occurs on the project site, but because the site is within the range of the species and suitable habitat is present (e.g., elderberry shrubs), it is assumed that the species could be present.</p> <p>Five elderberry shrubs were identified in the study area and an additional six shrubs were identified just outside the study area. No VELB or exit holes were observed; however, all elderberry shrubs with a stem diameter of greater than one inch at ground level are considered to be habitat for VELB by the USFWS.</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<p><u>Impact:</u> Loss of elderberry shrubs, which provide potential habitat for valley elderberry longhorn beetle. Four shrubs within the study area are expected to be impacted by the proposed project.</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> Implement elderberry mitigation per USFWS guidelines. Specifically, to minimize impacts on VELB habitat, the following measures shall be implemented consistent with USFWS’s Compensation Guidelines for verified VELB habitat and prior to commencement of construction.</p> <ul style="list-style-type: none"> <li>• A qualified biologist will identify and mark all elderberry shrubs in the study area containing stems 1.0 inch or greater. Orange construction barrier fencing will be installed at least 20 feet from the dripline of all elderberry shrubs or per USFWS, that will be avoided to identify and protect the shrubs. No construction activities will be allowed within the fenced area without consent of the USFWS.</li> <li>• Signs will be posted on the environmentally sensitive area fencing and maintained for the duration of construction. The signs will state, “This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not</li> </ul>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<p>be disturbed. This species is protected by the Endangered Species Act of 1973, as amended.”</p> <ul style="list-style-type: none"> <li>• Obtain a biological opinion from the USFWS under Section 7 and in conjunction with the Clean Water Act Permit.</li> <li>• The County/ applicant will coordinate with the USFWS through preparation of the BO and VELB mitigation plan to determine that one or more of the following measures will be implemented to fully mitigate for impacts to VELB: <ul style="list-style-type: none"> <li>• A. Transplant elderberry shrubs to a conservation area in accordance with USFWS’ current Conservation Guidelines for Valley Elderberry Longhorn Beetle;</li> <li>• B. Replace shrubs at a ratio from 1:1 through 8:1, depending on the diameter of the stem at ground level, whether the shrub is located in riparian or upland habitat, and if the shrub has evidence of exit holes;</li> <li>• C. Plant elderberry shrubs, and five seedlings and five associated native plants, in an area of at least 1,800 square feet per transplant;</li> <li>• D. Perform maintenance, implement remedial measures, and submit reports, following the requirements in the USFWS guidelines (1999); or</li> </ul> </li> </ul>

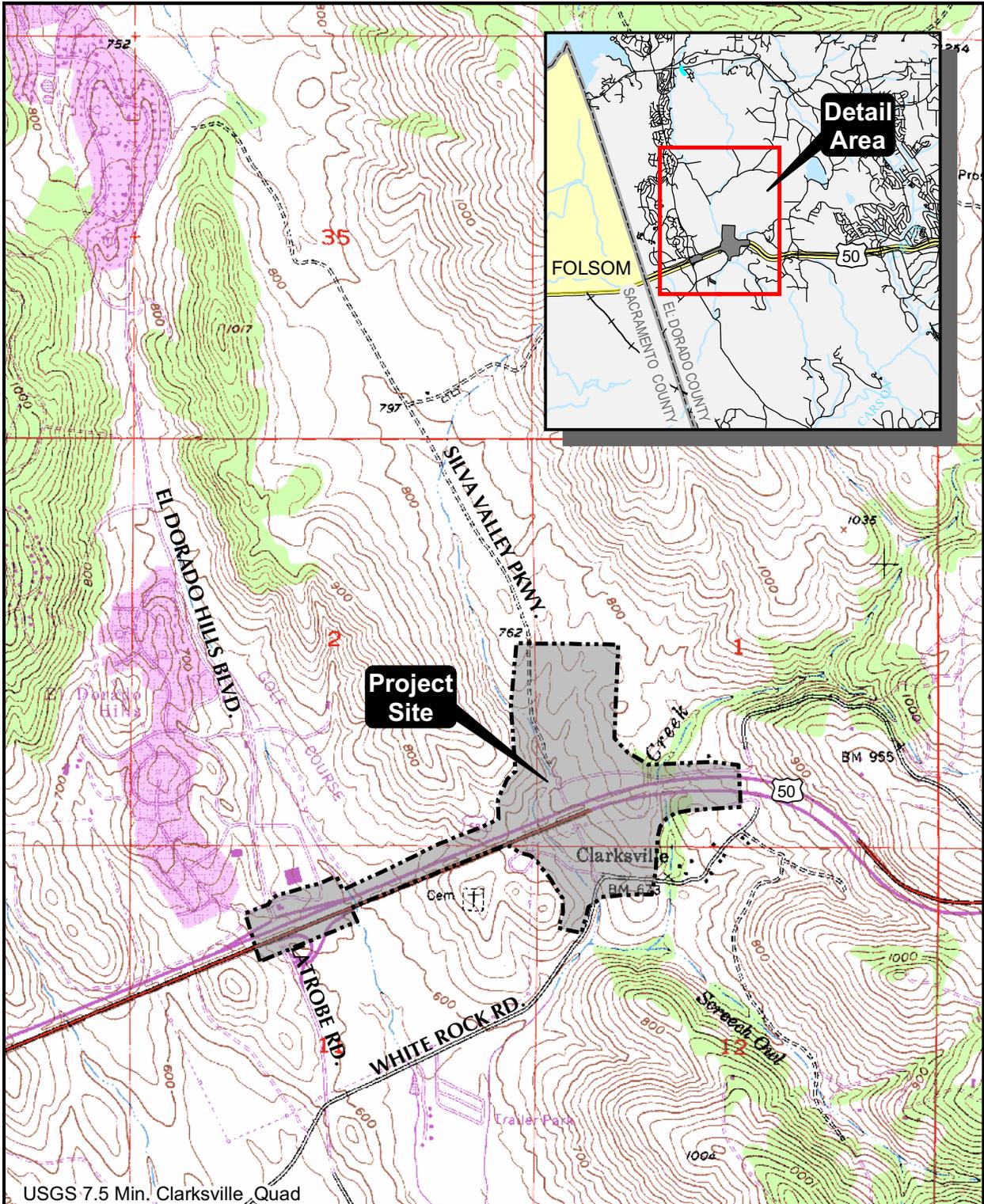
Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<ul style="list-style-type: none"> <li>E. To compensate for loss of habitat for VELB, the County/applicant may either acquire and manage in perpetuity a local mitigation site that is approved by USFWS for the sole purpose of compensating project impacts on VELB; or participate in a local USFWS-approved mitigation bank.</li> </ul> <p>The VELB mitigation plan shall be completed and submitted to the County and USFWS prior to grading or ground-disturbing activity within 100 feet of VELB habitat or potential habitat.</p> <p><u>Level of Significance after Mitigation:</u> LTS</p>
Table 3-1	Elimination of foraging habitat for several special status raptors.	Less than significant	No mitigation is required.	Less than significant	Change	<p><u>Discussion:</u> The loss of foraging habitat for several species of special-status raptors is not regulated; therefore, any impacts to special-status raptor species foraging habitat will be less than significant. However, impacts to nests of special-status raptor species would be significant.</p> <p><u>Impact:</u> Potential effects to active special-status raptor nests.</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> To avoid removal of active nests,</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<p>vegetation removal and trimming should be conducted during the non-breeding season (August 16–January 31). If this is not possible, the following measure will be implemented:</p> <p>If construction activities are anticipated to occur mainly during the nesting season for migratory birds and raptors (generally February through August), the County/applicant will retain a qualified biologist to conduct preconstruction surveys for nesting birds for all construction activities that occur within or near suitable breeding habitat. The surveys will be conducted no more than 30 days prior to the start of construction activities and will cover all affected areas, including construction areas and staging areas where ground disturbance or vegetation clearing is required. If no active nests are detected, no additional mitigation measures are required.</p> <p>If surveys indicate that migratory bird or raptor nests occur in areas where construction activities will take place, a no-disturbance buffer will be established around the nest site to avoid disturbance or destruction of the nest site until after the breeding season or until a wildlife biologist determines that the young have fledged. Generally, the buffer zones are 50–100 feet for nesting passerine birds and 300 feet for nesting raptors other than Swainson’s hawks. However, the</p>

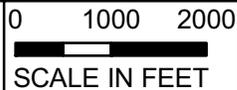
Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
						<p>extent of these buffers will be determined through coordination with CDFG and will depend on the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors will be analyzed to make an appropriate decision on buffer distances. Active nests occurring in or near the study area will be monitored during construction by the onsite monitor. If the onsite monitor determines that birds on the nest of a protected species are stressed (e.g., a bird constantly leaving an active nest or a bird not returning to the nest regularly to feed chicks), construction will be halted and the County/ DFG contacted to determine a further course of action.</p> <p><u>Level of Significance after Mitigation:</u> LTS</p>
Table 3-2	Bypassing and eliminating creek channel habitat for culvert extension and new	Less than significant	No mitigation is required	Less than significant	Change	<p><u>Discussion:</u> The number of crossings will increase, but overall impacts to wetlands/waters of the U.S. will decrease.</p> <p><u>Impact:</u> Creek disturbance associated with installation of crossings.</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p>

Environmental Topic	1991 EIR				Current Project/Ridge Design	
	Impact	Level of Significance	Mitigation Measures	Level of Significance After Mitigation	Impact	2010 Evaluation (Limits of Disturbance)
	culverts.					<p><u>Mitigation:</u> Implement wetland/waters of the U.S. mitigation as determined by Section 404 permit and agreed upon by the Corps.</p> <p><u>Level of Significance after Mitigation:</u> LTS</p>
Impacts to western pond turtle	Not considered	Not considered	Not considered	Not considered	Change (new impact)	<p><u>Discussion:</u> Marsh and riparian habitats, particularly slower portions of Carson Creek, provide suitable habitat for western pond turtle. There have also been three known occurrences within 5 miles of the site.</p> <p><u>Impact:</u> Potential impacts to western pond turtle.</p> <p><u>Level of Significance before Mitigation:</u> Potentially Significant</p> <p><u>Mitigation:</u> Retain a Qualified Biologist to conduct, not more than 15 days prior to construction, a preconstruction survey for adult western pond turtle(s), hatchlings and eggs, focusing on perennial marsh and riparian habitat areas and uplands within 300 feet of such potential habitat or to the boundary of the APE. If adult pond turtles are located in the construction area, the biologist will consult with CDFG about relocating the turtle to a suitable aquatic site outside the construction area. If an active pond turtle nest containing either pond turtle hatchlings or eggs is found, a no-disturbance buffer of 300 feet around the</p>

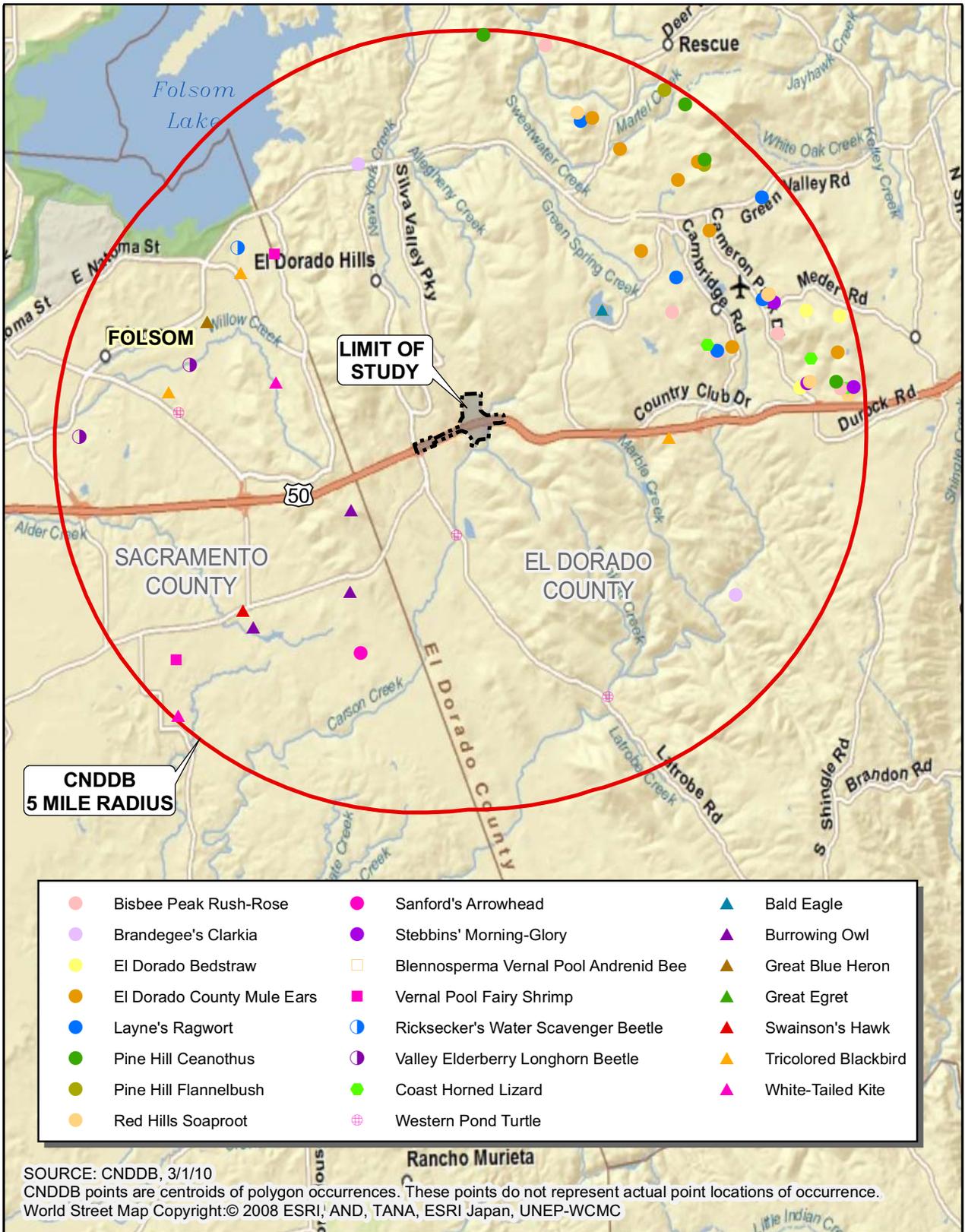
	<b>1991 EIR</b>				<b>Current Project/Ridge Design</b>	
<b>Environmental Topic</b>	<b>Impact</b>	<b>Level of Significance</b>	<b>Mitigation Measures</b>	<b>Level of Significance After Mitigation</b>	<b>Impact</b>	<b>2010 Evaluation (Limits of Disturbance)</b>
						nest site will be established until the hatchlings have moved to a nearby aquatic site or have been relocated.  <u>Level of Significance after Mitigation: LTS</u>



**SITE AND VICINITY**



**FIGURE 1**



## CNDDDB



# Legend

- Elderberry
- Blue Oak Woodland: 17.42 Acres
- Valley Foothill Riparian: 11.88 Acres
- Purple Needlegrass Grassland: 1.67 Acres
- Annual Grassland: 125.26 Acres
- Perennial Wetland: 3.52 Acres
- Seasonal Wetland: 1.07 Acres
- Pond: 0.02 Acres
- Roadway/ Development: 52.50 Acres



Aerial Photo: USGS 1ft Sacramento Urban Aerial, 2008.

## EXISTING HABITAT MAP



### HABITAT IMPACTS ACREAGES

HABITAT TYPE	IMPACTS IN PROJECT SITE	IMPACTS AVOIDED	TOTAL
Annual Grassland	34.31	90.95	125.26
Blue Oak Woodland	5.58	11.84	17.42
Perennial Wetland	0.17	3.35	3.52
Pond		0.02	0.02
Purple Needlegrass Grassland	0.09	1.58	1.67
Roadway/ Development	27.33	25.17	52.50
Seasonal Wetland	0.20	0.87	1.07
Valley Foothill Riparian	0.70	11.17	11.87
<b>TOTAL</b>	<b>68.38</b>	<b>144.95</b>	<b>213.33</b>

### OTHER HABITAT IMPACTS

FEATURE	IMPACTS	IMPACTS AVOIDED	TOTAL
Elderberry	4	1	5

### OTHER FEATURES

- Limit of Disturbance
- Limit of Study

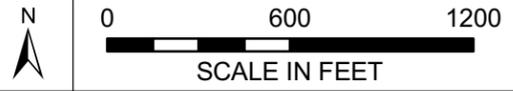
### UTILITY CORRIDOR ADDITIONAL HABITAT IMPACT ACREAGES

See Figure 5 for Utility Corridors

HABITAT TYPE	ALT. 1	ALT. 2	ALT. 3
Annual Grassland	4.80	8.43	0.44
Blue Oak Woodland	1.64	4.37	
Perennial Wetland	0.01	0.84	
Purple Needlegrass Grassland	0.37	0.78	0.08
Roadway/ Development	0.89	0.66	0.04
Seasonal Wetland		0.57	
Valley Foothill Riparian	0.37	1.69	0.03
<b>TOTAL</b>	<b>8.08</b>	<b>17.34</b>	<b>0.59</b>

Aerial Photo: USGS 1ft Sacramento Urban Aerial, 2008.

## POST-PROJECT HABITAT MAP



Drawn By: MMB, RJM  
Date: 11/16/10

FIGURE 4



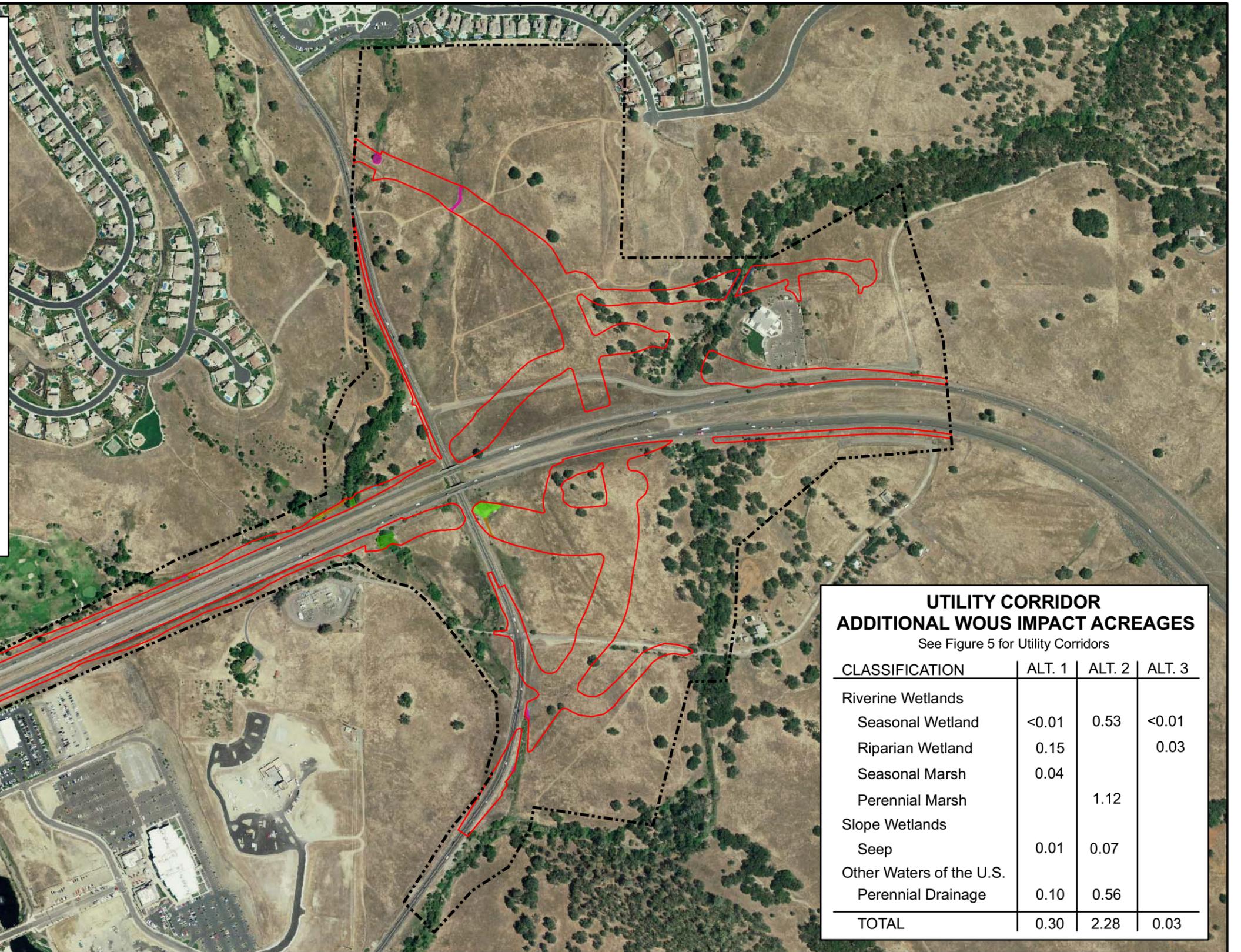
Utility Alignment Alternatives

**WATERS OF THE U.S. IMPACTS**

CLASSIFICATION	IMPACTS IN PROJECT SITE	IMPACTS AVOIDED	TOTAL
<b>Depressional Wetlands</b>			
Seasonal Wetland	 <0.01	0.05	0.05
<b>Riverine Wetlands</b>			
Seasonal Wetland	 0.15	0.75	0.90
Riparian Wetland	 0.13	0.82	0.95
Seasonal Marsh		0.05	0.05
Perennial Marsh	 0.09	6.68	6.77
<b>Slope Wetlands</b>			
Seep	 0.02	0.69	0.71
<b>Other Waters of the U.S.</b>			
Ephemeral Drainage	 <0.01	0.02	0.02
Perennial Drainage	 0.06	2.30	2.36
Pond		0.02	0.02
<b>TOTAL</b>	<b>0.45</b>	<b>11.38</b>	<b>11.83</b>

**OTHER FEATURES**

-  Limit of Disturbance
-  Limit of Study



**UTILITY CORRIDOR  
ADDITIONAL WOUS IMPACT ACREAGES**  
See Figure 5 for Utility Corridors

CLASSIFICATION	ALT. 1	ALT. 2	ALT. 3
<b>Riverine Wetlands</b>			
Seasonal Wetland	<0.01	0.53	<0.01
Riparian Wetland	0.15		0.03
Seasonal Marsh	0.04		
Perennial Marsh		1.12	
<b>Slope Wetlands</b>			
Seep	0.01	0.07	
<b>Other Waters of the U.S.</b>			
Perennial Drainage	0.10	0.56	
<b>TOTAL</b>	<b>0.30</b>	<b>2.28</b>	<b>0.03</b>

Aerial Photo: USGS 1ft Sacramento Urban Aerial, 2007.

**IMPACTS TO WATERS OF THE U.S.**

## APPENDIX A — PLANTS OBSERVED ON PROJECT SITE

Scientific Name	Common Name
<i>Aesculus californica</i>	California buckeye
<i>Alnus rhombifolia</i>	White alder
<i>Amsinckia menziesii</i>	Menzie's fiddleneck
<i>Anagallis arvensis</i>	Scarlet pimpernel
<i>Anthriscus caucalis</i>	Bur-chevril
<i>Aristolochia californica</i>	California pipevine
<i>Baccharis pilularis</i>	Coyote brush
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Centaurea solstitialis</i>	Yellow star-thistle
<i>Stellaria media</i>	Common chickweed
<i>Cercis occidentalis</i>	Western redbud
<i>Chamomilla suaveolens</i>	Pineapple weed
<i>Chlorogalum angustifolia</i>	Narrow-leaf soapplant
<i>Clarkia purpurea</i>	Purple clarkia
<i>Clarkia unguiculata</i>	Woodland clarkia
<i>Claytonia parviflora</i>	Miner's lettuce
<i>Conyza canadensis</i>	Horseweed
<i>Cynodon dactylon</i>	Bermudagrass
<i>Cynosurus echinatus</i>	Hedgehog dogtail grass
<i>Cyperus</i> sp.	Sedge
<i>Dichlostemma capitatum</i>	Bluedicks
<i>Eleocharis macrostachya</i>	Spikerush
<i>Eremocarpus setigerus</i>	Turkey mullein
<i>Erodium botrys</i>	Broadleaf filaree
<i>Erodium cicutarium</i>	Red-stem filaree
<i>Eschscholzia californica</i>	California poppy
<i>Eschscholzia lobbii</i>	Frying pan poppy
<i>Ficus carica</i>	Common fig
<i>Foeniculum vulgare</i>	Fennel
<i>Galium aparine</i>	Bedstraw
<i>Hordeum murinum</i>	Foxtail barley
<i>Hirschfeldia incana</i>	Shortpod mustard
<i>Lactuca serriola</i>	Prickly lettuce
<i>Limnanthes douglasii</i>	Douglas' meadowfoam
<i>Lolium perenne</i>	Perennial ryegrass
<i>Lupinus bicolor</i>	Miniture lupine
<i>Medicago polymorpha</i>	Bur clover
<i>Mentha pulegium</i>	Pennyroyal
<i>Mimulus guttatus</i>	Seep monkeyflower
<i>Muhlenbergia rigens</i>	Deergrass
<i>Nassella pulchra</i>	Purple needlegrass
<i>Nicotiana quadrivalvis</i>	Indian tobacco
<i>Olea europaea</i>	Olive
<i>Phacelia cicutaria</i>	Caterpillar phacelia

Scientific Name	Common Name
<i>Phalaris</i> sp.	Canarygrass
<i>Phytolacca americana</i>	Pokeberry
<i>Pinus pinea</i>	Italian Stone Pine
<i>Pinus sabiniana</i>	Foothill pine
<i>Pistacia chinensis</i>	Chinese pistache
<i>Plagiobothrys canescens</i>	Valley popcornflower
<i>Plantago lanceolata</i>	English plantain
<i>Polypogon monspeliensis</i>	Rabbitsfoot grass
<i>Populus fremontii</i>	Fremont's cottonwood
<i>Quercus douglasii</i>	Blue oak
<i>Quercus lobata</i>	Valley oak
<i>Quercus wislizeni</i>	Interior live oak
<i>Rosa californica</i>	California rose
<i>Rubus discolor</i>	Himalayan blackberry
<i>Rumex pulcher</i>	Fiddle dock
<i>Salix</i> spp.	Willow
<i>Scirpus</i> spp.	Bulrush
<i>Senecio vulgaris</i>	Old man of spring
<i>Trifolium hirtum</i>	Rose clover
<i>Trifolium incarnatum</i>	Crimson clover
<i>Triticum aestivatum</i>	Common wheat
<i>Typha</i> spp.	Cattail
<i>Verbascum thapsus</i>	Woolly mullein

**APPENDIX B — WILDLIFE OBSERVED ON PROJECT SITE**

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<b>Scientific Name</b>	<b>Common Name</b>
<b>Reptiles</b>	
<i>Sceloporus occidentalis</i>	Western fence lizard
<i>Thamnophis sirtalis</i>	Terrestrial garter snake
<b>Mammals</b>	
<i>Canis domesticus</i>	Domestic dog
<i>Felis catus</i>	Domestic cat
<i>Lepus californicus</i>	Black-tailed jackrabbit
<b>Birds</b>	
<i>Agelaius phoeniceus</i>	Red-winged blackbird
<i>Anas platyrhynchos</i>	Mallard
<i>Aphelocoma californica</i>	Western scrub jay
<i>Baeolophus inornatus</i>	Oak titmouse
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Cathartes aura</i>	Turkey vulture
<i>Charadrius vociferus</i>	Killdeer
<i>Circus cyaneus</i>	Northern harrier
<i>Corvus brachyrhynchos</i>	American crow
<i>Melanerpes formicivorus</i>	Acorn woodpecker
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Petrochelidon pyrrhonota</i>	Cliff swallow
<i>Sayornis nigricans</i>	Black phoebe
<i>Sturnella neglecta</i>	Meadowlark
<b>Amphibians</b>	
<i>Rana catesbeiana</i>	Bullfrog

## APPENDIX C — REFERENCES

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