

## **APPENDIX B**

### **BIOLOGICAL EVALUATION REPORT**



# PACIFIC BIOLOGY



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## **PG&E VALVE LOT RELOCATION PROJECT City of Fairfield, Solano County, CA**

### **BIOLOGICAL EVALUATION REPORT**

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## EXECUTIVE SUMMARY

The proposed project includes the relocation of a PG&E valve lot and installing new gas pipelines connecting the existing pipeline system to the new valve lot. The project site primarily contains non-native grasses and ruderal (i.e., weedy) vegetation, but there is a wetland and two roadside drainages within the footprint of the proposed gas pipeline alignment. Access restrictions prevented a complete evaluation of the proposed valve lot property, and based on the presence of some wetland-associated vegetation, further evaluation is required to determine if jurisdictional wetlands are present on the property.

California red-legged frogs (*Rana draytonii*) are known to occur in a pond located approximately 0.7 mile to the southwest of a wetland and roadside drainage that cross the proposed pipeline alignment. There do not appear to be any physical barriers to movement between the offsite pond and the onsite seasonal wetland and drainage, but the potential movement route is restricted to a thin strip of vegetation located between Interstate-80 and a shopping center. It is possible that individual frogs could move across the wetland or drainage ditch while attempting to disperse between the offsite pond and Green Valley Creek. Given the absence of standing water in the onsite wetland and the ephemeral nature of the roadside drainage, potential use of these features would be limited to dispersal and potentially refuge habitat. The implementation of the avoidance measures recommended in this report would address potential project-related impacts to California red-legged frog.

Several special-status bird species could nest on or near the project site. The recommended preconstruction nesting bird surveys would serve to prevent the construction-related loss or disturbance of an active bird nest. Similarly, the abandoned building on the valve lot property provides potential roosting habitat for special-status bat species. The recommended preconstruction roosting bat survey would serve to prevent the construction-related loss or disturbance of an active bat roost.

## **1.0 INTRODUCTION**

Pacific Biology conducted a biological habitat evaluation of the PG&E Valve Lot Relocation project site, located in Fairfield, Solano County, California. The evaluation was conducted to identify and characterize onsite and surrounding habitats; to assess the potential of these habitats to support special-status plant and wildlife species; to identify any wetlands, riparian areas, or other sensitive habitats; to evaluate potential project-related impacts to sensitive biological resources; and to identify feasible mitigation and avoidance measures that could be implemented to protect sensitive biological resources.

## **2.0 PROJECT LOCATION**

The project site includes the location of the proposed valve lot, as well as nearby areas to be affected by the associated new gas pipelines (**Figure 1**). The proposed valve lot location is at 3630 Ritchie Road in the City of Fairfield, Solano County. The project site is mapped on the Cordelia USGS 7.5-minute quadrangle.

## **3.0 PROJECT DESCRIPTION**

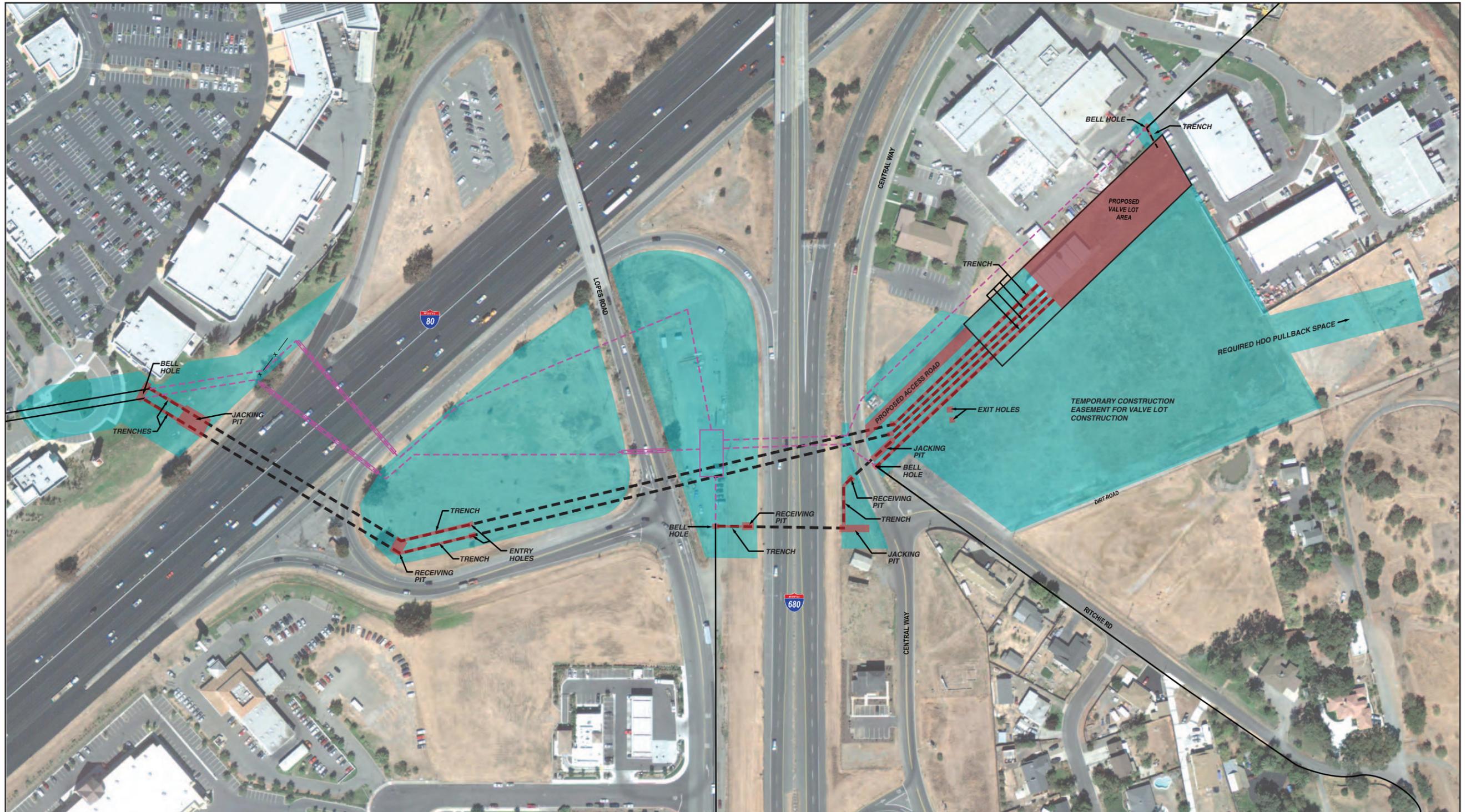
The proposed project includes the relocation of a PG&E valve lot and installing new gas pipelines connecting the existing pipeline system to the new valve lot. The valve lot would be constructed on the northern portion of an approximately 7-acre property owned by the Fairfield Suisun Unified School District (APN 045-300-070). Other portions of the valve lot property may be subject to temporary construction-related disturbance. Five new natural gas pipelines will be installed to provide a direct connection to the new valve lot. The pipelines would traverse under both Interstate 80 (I-80) and Interstate 680 (I-680) (**Figure 1**).

## **4.0 METHODOLOGY**

### Database and Information Review

The latest version of the California Natural Diversity Data Base (CNDDDB) was reviewed for the project area (i.e., the project site and surrounding three-mile area). The intent of the database review was to document all occurrences of special-status plant and wildlife species in the project area and to determine their location relative to the project site.

Existing spatial information depicting the project area was compiled and reviewed prior to the field survey. This information included publicly available digital ortho-rectified aerial photography and topographical quadrangle maps. This review served to determine the general habitat types on and bordering the project site and the general location of nearby creeks.



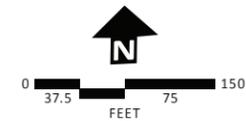
**Legend**

**Areas of Disturbance**

- Construction Impact Areas
- Soil Disturbance Area

- Proposed Pipeline
- Existing Pipeline
- Existing Pipeline (To be abandoned)

\* Areas of disturbance include permanent and temporary disturbances.



Area of Disturbance **Figure** **BIO 1**

Biological documentation prepared for the Interstate 80/Interstate 680/State Route 12 Interchange Project was also reviewed. This documentation did not directly address the property on which the valve lot would be located, but did address all areas crossed by the proposed pipeline alignment. The documentation reviewed included the Biological Resources Chapter of the EIR/EIS (2010), the Preliminary Delineation of Waters of the United States (prepared in 2008 and verified in 2009), and the Site Assessment for California Red-legged Frog (2009).

#### Field Survey

Josh Phillips, Principal Biologist of Pacific Biology, conducted reconnaissance-level field surveys on June 2 and August 23, 2011. The purpose of the field surveys was to characterize the biological resources occurring on and near the project site and to evaluate the potential of special-status species to occur based on the suitability of habitat, known range and life history requirements, and other factors.

Due to access restrictions, portions of the project site could only be viewed from roadside areas. Project areas that were not accessible included the proposed valve lot property, portions of the pipeline alignment area bordering I-680 to the west (currently being used as a construction staging area), and portions of the area west of Lopes Road bounded by highway on-ramps. These areas were viewed with binoculars from publically accessible locations.

### **5.0 EXISTING BIOLOGICAL CONDITIONS**

The project site is located in an area characterized by highways (I-80 and I-680) and associated uses (e.g., gas stations), as well as industrial and commercial uses. The proposed valve lot location is bordered to the north by automotive and metal finishing businesses, and a shopping center occurs immediately to the west of the western extent of the proposed pipeline alignment. Large expanses of undeveloped and agricultural land occur in the surrounding area. Green Valley Creek is located approximately 0.1 mile northeast of the proposed valve lot location and Cordelia Slough is located approximately 0.5 mile to the southeast. The plant communities and habitat types occurring on the project site area further discussed below and representative photographs are included in **Appendix A**.

#### Valve Lot Relocation Site

The proposed location of the valve lot is currently vacant, with the exception of an old building along the site's northern edge. The western portion of the site was previously developed with a middle school facility, but the structures have been demolished and removed. The site is currently in a disturbed condition and is dominated by non-native grasses and ruderal (i.e.,

weedy) plant species. Areas of exposed gravel and bare dirt occur at locations throughout the site.

As previously discussed, it was not possible to enter this portion of the project site due to an access restriction. This limited the ability to document all the plant species present. Additionally, the biological documentation prepared for the Interstate 80/Interstate 680/State Route 12 Interchange Project did not directly address this property. From roadside vantage points, the dominant plant species observed included wild oat (*Avena* sp.), Italian ryegrass (*Lolium multiflorum*), wild radish (*Raphanus raphanistrum*), Italian thistle (*Carduus pycnocephalus*), bristly ox-tongue (*Picris echioides*), common vetch (*Vicia sativa*), and bird's-foot trefoil (*Lotus corniculatus*). Rabbit's-foot grass (*Polypogon monspeliensis*) and curly dock (*Rumex crispus*), both non-native species often found in wetlands, were also observed in portions of the site. Relatively large patches of salt grass (*Distichlis spicata*), a native species usually associated with wetlands, are also present. A large and dense stand of Italian thistle occurs in the eastern portion of the site. Several moderate-sized non-native trees occur on the project site, including two tamarisks (*Tamarix* sp.) and an ash (*Fraxinus* sp.). No California ground squirrels (*Otospermophilus beecheyi*) or their associated burrows were observed on the project site.

Due to access restrictions, it was not possible to precisely determine the extent of wetland-associated vegetation on the property or to conduct a jurisdictional wetland delineation. As discussed above, rabbit's-foot grass, curly dock, and salt grass occur on portions of the site. These species are generally associated with wetlands, but can be found in non-wetland areas. Italian ryegrass, bristly ox-tongue, and bird's-foot trefoil are also present. These species are as equally likely to occur in wetlands as in non-wetlands. Given the extent of wetland-associated vegetation on the site, it appears that wetlands are present at locations throughout the property, including within the proposed valve lot area. However, in order to determine if these areas meet the criteria to be considered jurisdictional wetlands, site access would be required to further evaluate the vegetation composition and hydrology and soil characteristics.

#### Pipeline Areas

The proposed pipeline alignment crosses under I-680 and I-80 and the installation of the pipelines would require the temporary disturbance to habitats bordering these highways. These roadside areas are in a disturbed condition and are dominated by a tall growth of non-native grasses and ruderal plant species such as wild oat, harding grass (*Phalaris aquatica*), mustard (*Brassica* sp.), and wild radish. Moderate-sized eucalyptus trees (*Eucalyptus globulus*) occur in areas near the proposed pipeline alignment.

The biological documentation prepared for the Interstate 80/Interstate 680/State Route 12 Interchange Project directly addressed all areas to be affected by the proposed pipeline alignment (i.e., off-site construction areas). The jurisdictional delineation conducted for that project (which was verified in 2009) identified one wetland and two roadside drainages within the area to be affected by the pipeline alignment. **Figure 2** illustrates the location of these wetland and drainage features. As shown, a seasonal wetland (identified as W-61b) occurs in the western portion of the project site. There is also a roadside drainage between the wetland and I-80 (identified as OW-61a). Additionally, there is a roadside drainage that parallels Lopes Road (identified as OW-45a). The location and current condition of W-61b and OW-45a were confirmed during the field visit conducted by Pacific Biology. The seasonal wetland was dominated by cattails (*Typha latifolia*) and nutsedge (*Cyperus* sp.), and the roadside drainage contained wild oat, fennel (*Foeniculum vulgare*), and other ruderal plant species.

## **6.0 SPECIAL-STATUS SPECIES AND POTENTIAL IMPACTS**

**Figure 3** shows the location of special-status plant and wildlife species that have been documented by the CNDDDB in the surrounding project vicinity (i.e., within three miles of the project site). The potential occurrence of these and other special-status species on the project site is discussed below.

### **(i) Special-Status Plant Species**

For the purposes of this report, special-status plants include those species that are state or federally listed as Rare, Threatened or Endangered; federal candidates for listing; proposed for state or federal listing; or included on Lists 1, 2, 3, or 4 of the CNPS Inventory of Rare and Endangered Plants of California (CNPS Inventory).

As previously discussed, it was not possible to enter the proposed valve lot property due to an access restriction. Additionally, the biological documentation prepared for the Interstate 80/Interstate 680/State Route 12 Interchange Project did not directly address this property. However, the historic use of the property and its current vegetative composition make the potential occurrence of special-status plant species highly unlikely. More specifically, the property was previously used as a middle school facility, appears to have been graded, and currently contains a dense growth of non-native grasses and ruderal plant species. Additionally, there are large areas of gravel and the soils appear to be heavily disturbed. These conditions are not conducive to rare plants and are not associated with local occurrences of rare plant species.

Therefore, special-status plants are not expected to occur on the proposed location of the valve lot.

The biological documentation prepared for the Interstate 80/Interstate 680/State Route 12 Interchange Project directly addressed all areas to be affected by the proposed pipeline alignment (i.e., off-site construction areas). As part of Interstate 80/Interstate 680/State Route 12 Interchange Project, botanical surveys were conducted in April and May 2004, April and May 2005, August 2007, and April 2009. No special-status plant species were identified in areas to be affected by the proposed pipeline alignment. Additionally, the areas to be affected include roadside areas densely vegetated with non-native grasses and ruderal plant species, which provide unsuitable habitat for rare plants. Given the survey results and marginal quality of the habitat, no special-status plant species are expected to occur within areas affected by the proposed pipeline alignment.

#### Recommended Avoidance and Mitigation Measures

None required.

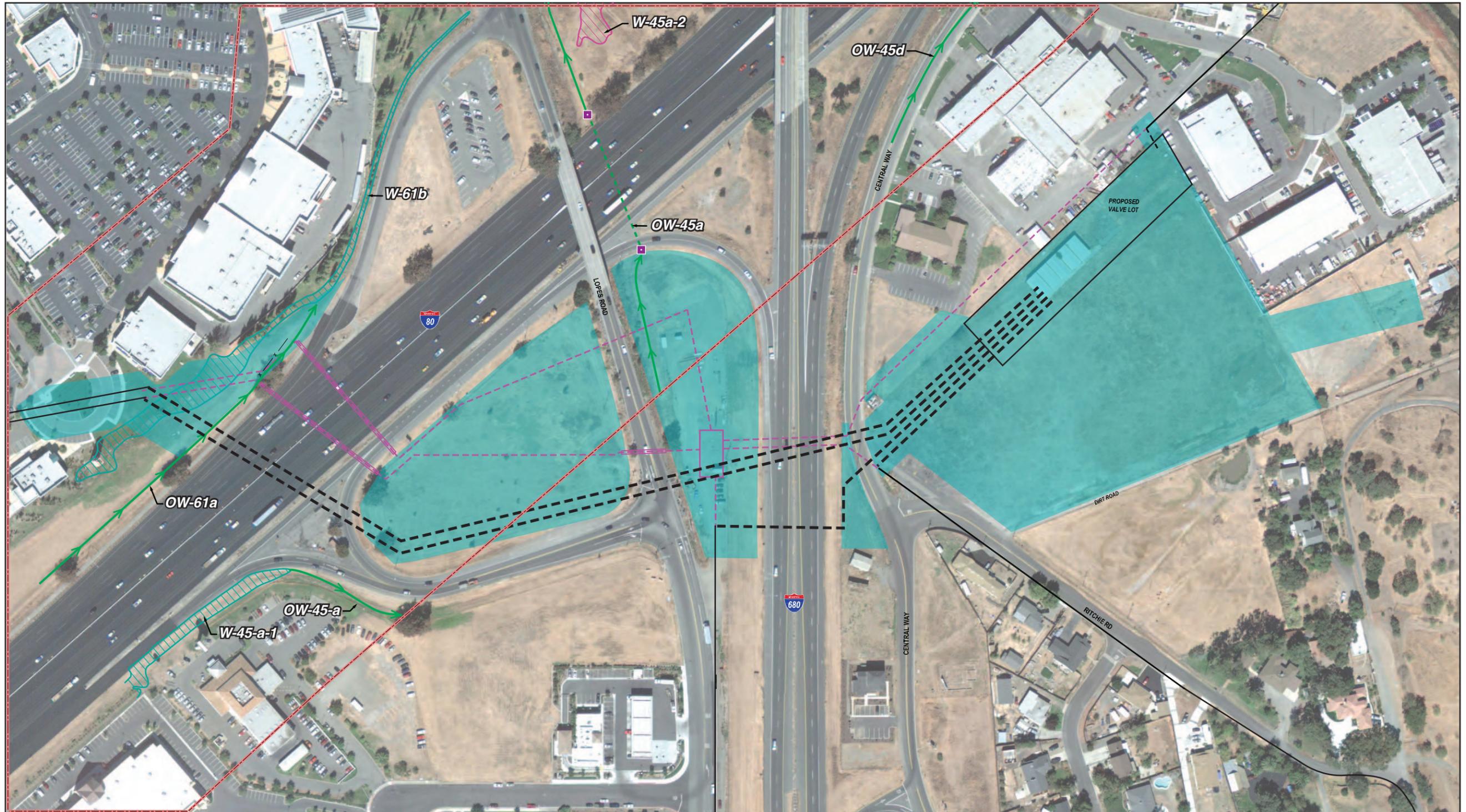
#### **(ii) Special-Status Wildlife Species**

For the purposes of this report, special-status wildlife species include those that are state or federally listed as Threatened or Endangered, proposed for listing as Threatened or Endangered, designated as state or federal candidates for listing, a federal Bird of Conservation Concern, a state Species of Special Concern, a state Fully Protected Animal, or included on the CDFG Special Animals List.<sup>1</sup>

Based on review of the CNDDDB, documentation prepared for the Interstate 80/Interstate 680/State Route 12 Interchange Project, and knowledge of the project area, 32 locally occurring special-status wildlife species were identified. These species are identified in **Table 1, Special-Status Wildlife Species Known to Occur in the Project Region**, along with their regulatory status, habitat requirements, and an evaluation of their potential occurrence on the site.

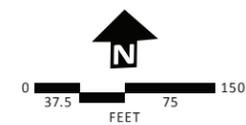
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<sup>1</sup> The California Department of Fish and Game (CDFG) maintains a Special Animals List. "Special Animals" is a general term that refers to all of the taxa the CNDDDB is interested in tracking, regardless of their legal or protection status. The CDFG considers the taxa on this list to be those of greatest conservation need.



**Legend**

- |   |                                     |   |   |
|---|-------------------------------------|---|---|
|  | Areas of Disturbance                |  | Seasonal Wetland                        |
|  | Proposed Pipeline                   |  | Culvert                                 |
|  | Existing Pipeline                   |  | Seasonal Drainage in Culvert            |
|  | Existing Pipeline (To be abandoned) |  | Area Delineated for Interchange Project |



\* Areas of disturbance include permanent and temporary disturbances.

Wetlands and Waters of the United States in the Project Vicinity

Figure

**BIO 2**

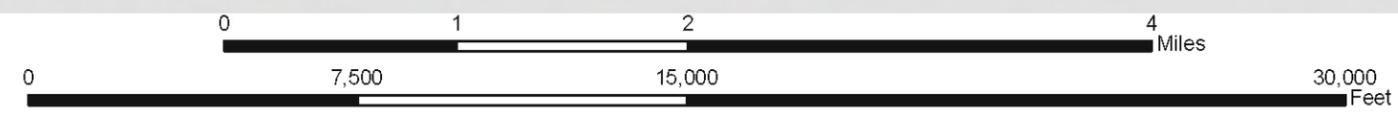
**FIGURE 3: LOCAL CNDDDB MAP**  
**PG&E Electric Valve Lot Relocation Project**



Image: NAIP 2009, 1-Meter Resolution; Data: CNDDDB 2011

Figure prepared by Pacific Biology, May 2011

● Documented Special-Status Species (CNDDDB)



Scale 1:50,000

**Table 1**  
**Special-Status Wildlife Species Known to Occur in the Project Region**

Common and Scientific Name	Status		Habitat Requirements	Occurrence On Site
	Federal	State		
<b>Invertebrates</b>				
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	--	Vernal pools and other seasonal pools with sparse vegetation.	<i>Not Expected:</i> The project site does not contain vernal pools and/or other suitable aquatic habitat.
Vernal Pool tadpole shrimp <i>Lepidurus packardii</i>	FE	--		
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT	--	Deposits eggs within elderberry stems.	<i>Not Expected:</i> No suitable habitat (i.e., elderberry shrubs) present on the project site.
Callippe silverspot butterfly <i>Speyeria callippe callippe</i>	FE	--	Open hillsides where wild pansy ( <i>Viola pendunculata</i> ) grows. Larvae feed on Johnny jump-up plants, whereas adults feed on native mints and nonnative thistles.	<i>Not Expected:</i> Suitable habitat (i.e., open hillsides, stands of John jump-up) not present.
<b>Amphibians</b>				
California tiger salamander <i>Ambystoma californiense</i>	FT	CT	Grasslands and lowest foothill regions; breeds in long-lasting rain pools; aestivation sites (e.g., small mammal burrows) are necessary within one mile of breeding areas.	<i>Not Expected:</i> Project site is outside of the expected distribution of the species. <sup>2</sup>
California red-legged frog <i>Rana draytonii</i>	FT	CSC	Permanent and semipermanent aquatic habitats, such as creeks and coldwater ponds, with emergent and submergent vegetation. May aestivate in rodent burrows or cracks during dry periods.	<b>Potential:</b> The species has been documented in Mangels Pond, located approximately 0.7 mile southwest of Wetland W-61b and Drainage OW-61a. There is some possibility that the species could disperse to these areas and temporarily occur in that portion of the project site.
Giant garter snake <i>Thamnophis gigas</i>	FT	CT	Sloughs, canals, low-gradient streams, and freshwater marshes where there is a prey base of small fish and amphibians. Also irrigation ditches and rice fields. Requires grassy banks and emergent vegetation for basking and areas of high ground protected from flooding during winter.	<i>Not Expected:</i> The project site is on the edge of the species' range. No suitable habitat (perennial marsh and slough) is present.

<sup>2</sup> The Draft EIR/EIS for the Interstate 80/Interstate 680/State Route 12 Interchange Project reported that it was confirmed by the CDFG that California tiger salamander is not expected to occur in the action area.

Common and Scientific Name	Status		Habitat Requirements	Occurrence On Site
	Federal	State		
<b>Reptiles</b>				
Western pond turtle <i>Emmys marmorata</i>	--	CSC	Aquatic habitats including ponds, streams, and irrigation ditches; requires basking sites such as partially submerged logs, vegetation mats, or open mud banks.	<i>Not Expected:</i> Suitable aquatic habitat is not present on the project site or in areas from which the species would be expected to disperse to the site.
<b>Birds</b>				
Tricolored blackbird <i>Agelaius tricolor</i>	BCC	CSC	Nests in freshwater marshes and riparian scrub.	<b>Potential:</b> Wetland W-61b provides low quality, but potential nesting habitat. No other potentially suitable nesting habitat is present.
Western burrowing owl <i>Athene cunicularia</i>	BCC	CSC	Forages and nests in grasslands and open scrub with small mammal burrows.	<i>Not Expected:</i> Suitable habitat (i.e., grasslands with low growing vegetation and ground squirrel burrows) is not present on or adjacent to the project site. All onsite grassland habitats were surveyed for ground squirrels and associated burrows from roadside locations. No ground squirrels or associated burrows were observed and vegetation on most of the site was too tall for use by burrowing owls.
Swainson's hawk <i>Buteo swainsoni</i>	BCC	CT	Forages in agricultural areas; nests in large isolated oaks or other trees in agricultural areas.	<b>Potential:</b> A nest was documented along Cordelia Slough in 2004, approximately 0.7 mile southeast of the proposed valve lot location.
Northern harrier <i>Circus cyaneus</i>	--	CSC	Grasslands, meadows, marshes, and seasonal and agricultural wetlands.	<i>Not Expected:</i> Onsite nesting and foraging habitat for the species is marginal. Only large undeveloped areas contain tall grasses and ruderal vegetation.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT	CSC	Requires sandy, gravelly, or friable soils for nesting; sandy beaches, salt pond levees, shores of large alkaline lakes.	<i>Not Expected:</i> No suitable nesting habitat (i.e., sandy beaches) present on or near the project site.
White-tailed kite <i>Elanus leucurus</i>	--	CFP	Usually nests in large bushes or trees, often in isolated stand, surrounded by open foraging habitat.	<b>Potential:</b> Suitable nesting and foraging habitat present on portions of the project site.
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	--	CSC	Found in freshwater marshes, coastal swales, swampy riparian thickets, brackish marshes, salt marshes, and the edges of disturbed weed fields and grasslands that border soggy habitats.	<i>Not Expected:</i> No suitable nesting habitat (i.e., riparian, brackish marshes) present on or near the project site.

Common and Scientific Name	Status		Habitat Requirements	Occurrence On Site
	Federal	State		
Loggerhead shrike <i>Lanius ludovicianus</i>	BCC	CSC	Grasslands with scattered shrubs, trees, fences or other perches; nesting habitat includes coastal scrub.	<b>Potential:</b> Suitable nesting and foraging habitat present.
Suisun song sparrow <i>Melospiza melodia maxillaris</i>	--	CSC	Intermixed stands of bulrush, cattail, and other emergent vegetation in tidal and brackish habitats.	<b>Not Expected:</b> No suitable nesting habitat (i.e., tidal or brackish marshes) present on or near the project site.
California black rail <i>Laterallus jamaicensis coturniculus</i>	--	CT, CFP	Inhabits saltwater, brackish, and freshwater marshes.	<b>Not Expected:</b> Suitable habitat (i.e., tidal marsh) is not present on or near the project site.
California clapper rail <i>Rallus longirostris oboletus</i>	FE	CFP	Restricted to salt marshes and tidal sloughs. Usually associated with heavy growth of pickleweed.	<b>Not Expected:</b> Suitable habitat (i.e., tidal marsh) is not present on or near the project site.
California least tern <i>Sterna antillarum</i>	FE	CE	Nests on sandy, upper ocean beaches, and occasionally uses mudflats. Forages on adjacent surf line, estuaries, or the open ocean.	<b>Not Expected:</b> Suitable habitat (i.e., sandy beaches) is not present on or near the project site.
<b>Mammals</b>				
Pallid bat <i>Antrozous pallidus</i>	--	CSC	Preferred roost sites include rocky outcrops, cliffs, crevices, and oak trees, but may also use buildings and bridges as roost sites.	<b>Potential:</b> Abandoned building on the valve lot property provides potential roosting habitat. The trees on project site are relatively small and isolated and are not expected to be used by roosting bats.
Western red bat <i>Lasiurus blossevilli</i>	--	CSC	Roosts within foliage of trees; known to roost within orchards.	<b>Not Expected:</b> The trees on the project site are relatively small and isolated and are not expected to be used by this foliage roosting bat species.
Fringed myotis <i>Myotis thysanodes</i>	--	*	Inhabits a variety of woodland habitats, roosts in crevices or caves, and forages over water and open habitats.	<b>Potential:</b> Abandoned building on the valve lot property provides potential roosting habitat. The trees on project site are relatively small and isolated and are not expected to be used by roosting bats.
Long-legged myotis <i>Myotis volans</i>	--	*	Inhabits a variety of woodland habitats, roosts in crevices or caves, and forages over water and open habitats.	<b>Potential:</b> Abandoned building on the valve lot property provides potential roosting habitat. The trees on project site are relatively small and isolated and are not expected to be used by roosting bats.
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE	CE, CFP	Saline wetlands of the San Francisco Bay and its tributaries; associated with pickleweed.	<b>Not Expected:</b> No suitable nesting habitat (i.e., tidal marsh) present on or near the project site.
Suisun shrew <i>Sorex ornatus sinuosus</i>	--	CSC	Occupies tidal marshes that provide dense cover, abundant food (primarily invertebrates), suitable nesting sites, and fairly continuous ground moisture.	<b>Not Expected:</b> No suitable nesting habitat (i.e., tidal marsh) present on or near the project site.

Common and Scientific Name	Status		Habitat Requirements	Occurrence On Site
	Federal	State		
<b>Fish</b>				
Delta smelt <i>Hypomesus transpacificus</i>	FT	CT	Euryhaline estuary channels.	<i>Not Expected:</i> Aquatic habitat on the project site is limited to ephemeral roadside ditches.
Central California coast steelhead distinct population segment (DPS) <i>Oncorhynchus mykiss</i>	FT	--	Cold water anadromous streams.	<i>Not Expected:</i> Aquatic habitat on the project site is limited to ephemeral roadside ditches.
Central Valley steelhead DPS <i>Oncorhynchus mykiss</i>	FT	--	Occurs in well-oxygenated, cool, riverine habitat. Habitat types are riffles, runs, and pools.	<i>Not Expected:</i> Aquatic habitat on the project site is limited to ephemeral roadside ditches.
Central California coast coho <i>Oncorhynchus kisutch</i>	FE	CE	Need cool, clear water with instream cover. Spawn in tributaries to large rivers or streams directly connected to the ocean.	<i>Not Expected:</i> Aquatic habitat on the project site is limited to ephemeral roadside ditches.
Sacramento River winter-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FE	FE	Occurs in well-oxygenated, cool, riverine habitat. Habitat types are riffles, runs, and pools.	<i>Not Expected:</i> Aquatic habitat on the project site is limited to ephemeral roadside ditches.
Central Valley spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FT	CT	Have the same general habitat requirements as winter-run Chinook salmon. Coldwater pools are needed for holding adults.	<i>Not Expected:</i> Aquatic habitat on the project site is limited to ephemeral roadside ditches.

STATUS KEY:

Federal

FE: Federally Endangered

FT: Federally Threatened

BCC: Bird of Conservation Concern

State

CE: California Endangered

CT: California Threatened

CFP: California Fully Protected

CSC: California Special Concern

Other

\*: Special Animals List

For the reasons discussed in **Table 1**, the following special-status wildlife species have some potential to occur in areas to be affected by the proposed project: California red-legged frog, Swainson's hawk, tricolored blackbird, white-tailed kite, loggerhead shrike, and several special-status bat species. The potential onsite occurrence of these species, and potential project-related impacts to these species, are further discussed below.

***Potentially Occurring Federally and/or State Listed Species***

**California red-legged frog** (*Rana draytonii*) is a federally threatened species and a California Species of Special Concern. The species occurs from sea level to elevations of 1,500 meters (5,200 feet). Breeding occurs in streams, deep pools, backwaters within streams and creeks, ponds, marshes, sag ponds, dune ponds, lagoons, and stock ponds. Breeding adults are often associated with deep (greater than 0.7 meter [2 feet]) still or slow moving water and dense, shrubby riparian or emergent vegetation (Hayes and Jennings 1988), but frogs have been observed in shallow sections of streams and ponds that are devoid of vegetative cover. The species also utilizes non-aquatic habitats for refuge and dispersal. The species is known to rest

and feed in riparian vegetation and it is believed that the moisture and cover of the riparian zone provides foraging habitat and facilitates dispersal. The species has also been documented dispersing through areas with sparse vegetative cover and dispersal patterns are considered to be dependent on habitat availability and environmental conditions (N. Scott and G. Rathbun *in litt.* 1998).

#### Onsite Habitat and Potential California Red-legged Frog Occurrence

The proposed valve lot property contains a dense growth of ruderal plant species and is separated from known occurrences of California red-legged frogs by developed areas and/or highways (**Figure 3**). While some wetland vegetation is present on the property, there are no ponds or other aquatic features. Additionally, the project site is not located between areas of suitable California red-legged frog habitat, and therefore, is not part of a potential movement route for the species. For these reason, California red-legged frog is not expected to occur on the valve lot property.

Wetland and aquatic habitat in the off-site construction areas is limited to Wetland W-61b, a roadside drainage located adjacent to that wetland (identified as OW-61a), and a roadside drainage located on the south side of I-80 adjacent to Lopes Road (OW-45a). Wetland W-61b is dominated by cattails and nutsedge and does not contain any standing water. The roadside drainage ditches appear to only hold water during and immediately following storm events. Additionally, the roadside drainage ditch paralleling Lopes Road is isolated from other areas of aquatic habitat by culverts and heavily traveled roads.

As shown in **Figure 3**, California red-legged frogs have been documented in Mangels Pond, which is located approximately 0.7 mile southwest of Wetland W-61b and the roadside drainage OW-61a. Based on aerial photography, there do not appear to be any physical barriers to movement between the offsite pond and the onsite portions of the seasonal wetland and roadside drainage, but the potential movement route is restricted to a thin strip of vegetation located between I-80 and a shopping center. However, given that Green Valley Creek is located to the northeast of Wetland W-61b and the drainage ditch, it is conceivable that individual frogs could move across these areas while attempting to disperse between Mangels Pond and Green Valley Creek. Given the absence of standing water in the wetland and drainage ditch, potential use of these areas would be limited to dispersal and potentially refuge habitat. It should be noted that individual frogs would need to cross Green Valley Road or cross beneath the road in a culvert to access Green Valley Creek, which both pose an obstacle to dispersal via the construction area to/from Green Valley Creek.

California red-legged frogs would not be expected to occur in the drainage ditch adjacent to Lopes Road because the ditch is ephemeral and separated from areas of potentially suitable California red-legged frog habitat by heavily traveled roads, highways, and/or culverts.

In summary, the potential occurrence of California red-legged frog on the project site would be limited to Wetland W-61b and Roadside Drainage OW-61a, which are located in the off-site construction area. If the species was to occur in these areas, potential uses would be limited to dispersal and refuge habitat due to the absence of long-lasting standing water. Both of these areas border I-80 and a shopping center and provide low quality potential habitat for California red-legged frog. Additionally, individual frogs potentially moving between Mangels Pond and Green Valley Creek (via W-61b or OW-61a) would need to cross Green Valley Road or cross beneath the road in a culvert, both of which pose an obstacle to dispersal via the project site to/from Green Valley Creek.

#### Potential Impacts to California Red-Legged Frog

The proposed project includes installing a 16” and 24” gas pipeline through Wetland W-61b and OW-61a. The gas pipelines would be installed beneath the ground and the wetland would be restored following construction activities. Therefore, the proposed project would not result in the permanent loss of habitat potentially used by California red-legged frog or created a barrier to movement by the species. However, should California red-legged frogs be present at the time of construction, individual frogs could be harmed by construction activities. Any loss or harm to the species would be considered a significant impact.

#### Recommended Avoidance and Mitigation Measures

The implementation of the below measures would reduce potential impacts to California red-legged frog to a less than significant level.

BIO-1A: A qualified biologist shall conduct a preconstruction clearance survey Wetland W-61b and Drainage OW-61a for California red-legged frog immediately preceding the commencement of construction activities. If California red-legged frogs are found, the biologist shall contact the USFWS and the project shall be halted until the USFWS provides guidance on how to proceed.

BIO-1B A California red-legged frog sensitivity training will be conducted for all on-construction personnel working within Wetland W-61b and Drainage OW-61a. Training components will include training on appropriate avoidance methods including species identification and protocols for contacting the biologist and

USFWS in the event of a sighting. Handouts will be prepared and provided to all construction personnel including color photographs for species identification, protocols, and contact phone numbers.

The qualified biologist will be onsite during all initial ground disturbance activities within Wetland W-61b and Drainage OW-61a. After initial ground-disturbance activities are complete, the qualified biologist will appoint a member of the construction team to act as the on-site construction monitor and will provide additional training to this person as required. Both the qualified biologist and the appointed construction monitor will have the authority to stop or redirect project activities to ensure protection of resources and compliance with all environmental permits and conditions of the project. If the biologist or construction monitor has requested that work stop because of take of any listed species, the USFWS and the CDFG will be notified within one working day by email or telephone. The biologist and construction monitor will complete a daily log summarizing activities and environmental compliance.

BIO-1C: During project activities, all trash that may attract predators shall be properly contained, removed from the work site and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

BIO-1D: After construction is complete, all temporarily disturbed wetland and drainage areas will be restored to pre-project conditions (also see BIO-4B).

BIO-1E Due to the potential presence of California red-legged frog, consultation with the USFWS may be required. The USFWS should be contacted to determine if any additional avoidance measures, consultation, or permitting is required.

**Swainson's hawk** (*Buteo swainsoni*), **Federal Bird of Conservation Concern, California Threatened**. This species generally nests in riparian areas or in large isolated trees adjacent to or within easy flying distance to agricultural areas providing suitable foraging habitat. Valley oaks (*Quercus lobata*), Fremont's cottonwood (*Populus fremontii*), willows (*Salix* spp.), sycamores (*Platanus* spp.), and walnuts (*Juglans* spp.) are the preferred nest trees for Swainson's hawk (Bloom 1980, Estep 1989). The CDFG (1994), has identified the following vegetation types/agricultural crops as foraging habitat for Swainson's hawk: alfalfa; fallow fields; beet, tomato, and other low-growing row or field crops; dry-land and irrigated pasture, rice land (when

not flooded); and cereal grain crops (including corn after harvest). Given the importance of available foraging habitat for successful nesting, the CDFG has developed policies to protect suitable Swainson's hawk foraging habitat within a 10-mile radius of an active nest (*i.e.*, a nest used during one or more of the last 5 years).

#### Onsite Habitat and Potential Swainson's Hawk Occurrence

Several moderate-sized trees occur on and near the project site, primarily consisting of eucalyptus and pine trees. The potential for a Swainson's hawk to nest in one of these trees is considered low for the following reasons: (1) these are not the preferred species of nest trees; (2) the trees are not part of a riparian woodland or adjacent to optimal foraging habitat; and (3) the proximity of the trees to I-80 and I-680. However, it is still possible that a Swainson's hawk could nest on or near the project site.

As shown in **Figure 2**, a Swainson's hawk nest was documented along Cordelia Slough in 2004, approximately 0.7 mile southeast of the proposed valve lot location. This nest location is within a riparian area and is near large expanses of agricultural fields that provide foraging habitat. While this nest site is within 1-mile of the proposed valve lot location, it is considered unlikely that Swainson's hawk would forage on that property given the relatively small size of the site and the extent of development surrounding the site. More specifically, the CDFG Mitigation Guidelines (1994) state that mitigation pursuant to CEQA or Management Authorization from the CDFG is not required for infill (within an already urbanized area) for project sites that have less than 5-acres of foraging habitat. While the valve lot property is approximately 7-acres in size, at least 1/3 of the site contains a tall dense growth of Italian thistle and does not provide suitable foraging habitat. Additionally, portions of the site contain a high density of gravel. Therefore, the acreage of suitable foraging habitat on the property is less than 5-acres, and the proposed project would only permanently develop 1.3 acres of this area. Further, approximately 1/3 of the valve lot property was previously developed with a school, and therefore, did not provide potential foraging habitat until recently. The other portions of the project site (*i.e.*, the off-site construction areas) are located in roadside areas, contain tall vegetation, and do not provide suitable Swainson's hawk foraging habitat.

#### Potential Impacts to Swainson's Hawk

For the reasons discussed above, the loss of potential Swainson's hawk foraging habitat is not considered substantial and related impacts are less than significant. For the reasons also discussed above, while considered unlikely, it is still possible that a Swainson's hawk could nest

on or near the project site. Therefore, any required tree removal could result in the loss of an active Swainson's hawk nest. Additionally, loud noise associated with construction activities has the potential to disturb nesting occurring in proximity to the site and to result in the abandonment of an active nest. Should the proposed project result in the loss or disturbance of an active Swainson's hawk nest, related impacts would be significant.

*Recommended Avoidance and Mitigation Measures*

The implementation of the following avoidance measure would reduce potential impacts to Swainson's hawk to a less than significant level. The measure would also served to protect the active nests of other bird species and to ensure compliance with state and federal laws protecting active bird nests.

BIO-2: If construction activities would commence anytime during the nesting/breeding season of native bird species potentially nesting on the site (typically February through August in the project region), a pre-construction survey for nesting birds should be conducted within one week of the commencement of construction activities.

The survey area shall include the project site and accessible/visible areas within 500 feet of the site. If active nests are found in areas that could be directly affected, or in areas that would be subject to prolonged construction-related noise, a no-disturbance buffer zone should be created around the nest during the breeding season, or until a qualified biologist determines that all young have fledged, or that the proposed activity would not affect the nesting success. The size of the buffer zone and types of activities restricted within them should be determined through consultation with the CDFG, taking into account factors such as the following:

- Noise and human disturbance levels at the project site at the time of the survey and the noise and disturbance levels expected during construction activities;
- Distance and amount of vegetation or other screening between areas where construction activities would occur and the nest; and
- Sensitivity of individual nesting species and behaviors of the nesting birds.

### ***Other Potentially Occurring Special-Status Species***

**Tricolored blackbird** (*Agelaius tricolor*) is a Federal Bird of Conservation Concern and a California Species of Special Concern. This species typically nests in large colonies in dense stands of cattails or tules in freshwater, emergent wetlands. It also has been observed nesting in dense stands of willows, blackberry, wild rose, and tall herbs. It forages on grasslands, cropland and along edges of ponds for insects, seeds, and grains.

Potential onsite nesting habitat for this species is limited to Wetland W-61b. Given the relatively small size of the wetland, the general absence of adjacent foraging habitat, and its roadside location, the potential for tricolored blackbirds to nest at this location is considered low. However, should the species occur, the proposed installation of the gas pipelines could result in the direct loss or noise-related disturbance of an active nest. Therefore, impacts to this species are potentially significant.

#### Recommended Avoidance and Mitigation Measures

The implementation of Measure BIO-2, above, would ensure that an active nest of this species is not disturbed during construction and reduce related impacts to a less than significance level.

**White-Tailed Kite** (*Elanus leucurus*) is a California Fully Protected Species. This species typically nests in trees, often in isolated stands, surrounded by open foraging habitat. Nests are built on top of oaks, willows, or other dense, broad-leaved deciduous trees within partially cleared or cultivated fields, grasslands, marsh, riparian, woodland, and savanna habitats.

Potential nesting habitat is present on and near the project site. Any required tree removal could result in the loss of an active white-tailed kite nest. Additionally, loud noise associated with construction activities has the potential to disturb nesting occurring in close proximity to the site and to result in the abandonment of an active nest. Should the proposed project result in the loss or disturbance of an active white-tailed kite nest, related impacts may be considered significant.

#### Recommended Avoidance Measures

The implementation of Measure BIO-2, above, would ensure that an active nest of this species is not disturbed during construction and reduce related impacts to a less than significant level.

**Loggerhead shrike** (*Lanius ludovicianus*) is a Federal Bird of Conservation Concern and a California Species of Special Concern. The loggerhead shrike is a predatory passerine that is a

resident in the lowlands and foothills throughout California. Preferred habitat consists of open spaces, such as grasslands, with scattered trees, shrubs, utility lines, and/or fences for perching. Loggerhead shrikes typically nest in densely vegetated trees and shrubs.

It is possible that this species could nest on or near the project site. Any required tree or shrub removal could result in the loss of an active loggerhead shrike nest. Additionally, loud noise associated with construction activities has the potential to disturb nesting occurring in proximity to the site and to result in the abandonment of an active nest. Should the proposed project result in the loss or disturbance of an active loggerhead shrike nest, related impacts may be considered significant.

#### Recommended Avoidance Measures

The implementation of Measure BIO-2, above, would ensure that an active nest of this species is not disturbed during construction and reduce related impacts to a less than significant level.

**Special-status bat species**, such as pallid bat (*Antrozous pallidus*), fringed myotis (*Myotis thysanodes*), and long-legged myotis (*Myotis volans*) could use the abandoned building on the valve lot property for roosting. The building could be used as a maternity roost during the period of May through August, or as a day-roost by non-breeding bats during this period or other times of the year. As the building is proposed to be demolished, there is potential that an active roost used by special-status bat species could be disturbed. Therefore, impacts to roosting special-status bats are potentially significant.

#### Recommended Avoidance and Mitigation Measures

The implementation of the following avoidance measure would ensure that an active bat roost is not disturbed and reduce related impacts to a less than significant level.

BIO-3: Prior to the removal of the remaining building on the proposed valve lot property, a focused survey shall be conducted by a qualified biologist to determine if an active bat roost is present. Should an active maternity roost be identified, the roost shall not be disturbed until the roost is vacated and juveniles have fledged, as determined by the biologist. Once all young have fledged, then the structure may be demolished. If a roost of non-breeding bats is identified, then the bats may be passively excluded using CDFG-approved methods.

## **7.0 JURISDICTIONAL RESOURCES AND POTENTIAL IMPACTS**

Wetlands, creeks, streams, and permanent and intermittent drainages are subject to the jurisdiction of the U.S. Army Corps of Engineers (ACOE) under Section 404 of the Federal Clean Water Act (CWA). The CDFG also generally has jurisdiction over these resources, together with other aquatic features that provide an existing fish and wildlife resource pursuant to Sections 1602-1603 of the California Fish and Game Code. The CDFG asserts jurisdiction to the outer edge of vegetation associated with a riparian corridor. Creeks and wetlands are also subject to regulation of the Regional Water Quality Control Board (RWQCB) under both the federal CWA and the State of California's Porter-Cologne Water Quality Control Act (California Water Code, Division 7).

A formal jurisdictional delineation has not been conducted for the proposed valve lot property, but a delineation was conducted for the remainder of the project site as part of the Interstate 80/Interstate 680/State Route 12 Interchange Project. The delineation was conducted in 2008 and the findings of the delineation were verified by the ACOE in 2009.

As previously discussed, it was not possible to enter the proposed valve lot property due to access restrictions. Therefore, observations on the vegetation composition and habitat types were made from roadside locations. Rabbit's-foot grass, curly dock, and relatively large areas of salt grass were observed on portions of the project site (including the location of the proposed valve lot). These species are generally associated with wetlands, but can be found in non-wetlands. Italian ryegrass, bristly ox-tongue, and bird's-foot trefoil were also present. These species are as equally likely to occur in wetlands as in non-wetlands. Given the occurrence of plant species known to occur within wetlands, a formal jurisdictional wetland delineation would be required to determine the extent of wetlands on the project site and if these wetlands are considered to be jurisdictional. It should be noted that the site does not appear to have a direct connection with a Waters of the U.S., and therefore, may be considered "isolated" and not jurisdictional. Additionally, the proposed valve lot property is in a disturbed condition, previously contained school buildings, and currently contains gravel areas. Therefore, it is possible that the wetland-associated plant species occurring on the site could be the result of an artificial hardpan created by gravel left on the site and/or depressions from building foundations. Alternatively, the presence of wetland-associated plants could be due to natural conditions such as a high water table or other factors. Regardless, given the presence of wetland-associated plants, and because only the ACOE has the authority to make the determination of if a wetland is jurisdictional, a formal jurisdictional delineation should be conducted on the valve lot property and submitted to the ACOE for

verification. In the absence of these steps, it is assumed that the proposed project would result in the fill of potentially jurisdictional wetlands on the valve lot property.

Based on the jurisdictional delineation conducted for the Interstate 80/Interstate 680/State Route 12 Interchange Project, there is a seasonal wetland (identified as W-61b) in the western portion of the off-site construction area (**Figure 2**). There is also a roadside drainage ditch between the wetland and I-80 (identified as OW-61a). It appears that the wetland and roadside ditch were both determined to be jurisdictional, but the associated delineation report (dated 2008) did not specifically address W-61b and stated that the adjacent drainage (OW-61a) was not jurisdictional. For the purposes of this analysis, it is assumed that both of these features were determined to be jurisdictional during the field verification conducted by the ACOE in 2009. Both of these features are crossed by the proposed gas pipeline alignment and would be temporarily disturbed by associated construction activities.

As shown in **Figure 2**, there is also a roadside drainage ditch that was determined to be a jurisdictional “other waters” (identified as OW-45a) that parallels Lopes Road and that extends across the proposed gas pipeline alignment. This feature would be temporarily disturbed during associated construction activities.

Therefore, given that site access and further evaluation would be required to determine if jurisdictional wetlands occur on the proposed valve lot property, and because the proposed gas pipeline alignment would cross a jurisdictional wetland and two jurisdictional other waters, impacts to jurisdictional resources are significant.

#### Recommended Avoidance and Mitigation Measures

BIO-4A Prior to the commencement to construction activities on the proposed valve lot property, a jurisdictional wetland delineation shall be conducted and the results shall be submitted to the ACOE for verification.

If jurisdictional wetlands are present, and if these wetlands would be impacted by the proposed project, then a Section 404 permit from the ACOE and a Section 401 Certification from the RWCQB shall be obtained prior to the commencement of construction activities. All conditions of these permits/certifications shall be implemented. Any unavoidable loss of jurisdictional wetlands shall be compensated for through the development and implementation of a project-specific Wetland Mitigation Plan or through purchasing credits at an ACOE approved wetland mitigation bank. The

minimum replacement ratio shall be 1:1. Should the project applicant opt for creating wetland habitat (rather than purchasing mitigation credits), the Wetland Mitigation Plan shall specify, at a minimum, the following: (1) the location of creation/enhancement sites; (2) the quantity and species of plants to be planted; (3) planting procedures, including the use of soil preparation and irrigation (when needed); (4) methods for the removal of non-native plants; (5) a schedule and action plan to maintain and monitor the creation/enhancement areas; (6) a list of criteria (e.g., growth, plant cover, plant diversity) and performance standards by which to measure success of the creation/enhancement project; and (7) contingency measures in the event that creation/enhancement/restoration efforts are not successful. The plan shall be subject to ACOE approval prior to the fill of any jurisdictional wetlands.

**BIO-4B** Prior to conducting any construction activities within Wetland W-61b and the two drainage ditches (OW-61a and OW-45a), the jurisdictional status of Wetland W-61b and OW-61a should be confirmed, and all required permits shall be obtained from the ACOE, RWQCB, and CDFG. The applicant shall comply with all conditions obtained in those permits/certifications/agreements. Project-rated disturbances to these features would be temporary, and following the completion of construction, W-61b, OW-61a, and OW-45a shall be restored to their baseline conditions.

Prior to the temporary disturbance of the wetland and drainage areas, a restoration plan shall be prepared by a qualified biologist. The plan shall describe the plant species in the wetland/drainage disturbance area, including the species present, the relative abundance of these species, and the relative abundance of native and non-native species. This information shall define the pre-disturbance condition to which the disturbed areas shall be restored. The plan shall also detail methods for ensuring that the disturbed areas are restored to a biological condition equivalent to or exceeding their pre-disturbance condition. At a minimum, the plan shall include the following: (1) methods for controlling the spread of invasive plant species into recently disturbed areas; (2) methods for determining if new planting is necessary or if the disturbed habitats will naturally revegetate with the surrounding plant species; (3) a monitoring schedule; (4) planting procedures, if it is determined that the site

will not naturally revegetate with appropriate vegetation; and (5) corrective measures to be implemented if restoration efforts are not initially successful, such as the removal of non-native species and the planting of native species.

## **8.0 SENSITIVE PLANT COMMUNITIES AND POTENTIAL IMPACTS**

Sensitive plant communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status species or their habitat. The most current version of the CDFG's *List of California Terrestrial Natural Communities* indicates which natural communities are of special status given the current state of the California classification. There are no sensitive plant communities on the project site.

### *Recommended Avoidance and Mitigation Measures*

None required.

## **9.0 PROTECTED TREES AND POTENTIAL IMPACTS**

The proposed project may require the removal of several eucalyptus trees (a non-native species) from the west side of Lopes Road, within the Caltrans' ROW on the island between I-680 and I-80. Section 25.36.3 of the City of Fairfield's Tree Conservation Guidelines defines a protected tree as:

- A. All trees on public property.
- B. Trees planted or preserved on private property or within the public right of way which were either (1) required by the City as a condition of approval for the project; or (2) shown on a landscape drawing or plan for a project approved by the City.
- C. The following species of trees located on undeveloped private properties which exceed 6 inches in caliper or diameter at breast height. Breast height is measured at a point located 4-1/2 feet above the existing ground level of the tree: native oak, bay laurel, madrone and buckeye.
- D. Trees or groups of trees having one or more of the following characteristics, as determined by the City during project review or through special studies: (1) demonstrated habitat value; (2) historical or cultural value; (3) important aesthetic value; (4) uniqueness or rarity; (5) unusual size or age.

A tree removal permit or authorization as part of a discretionary project by the City is required prior to the removal of any protected trees.

Recommended Avoidance and Mitigation Measures

BIO-5 Prior to the removal of any trees, the project applicant shall determine if the subject trees meet the requirements of being a protected tree as defined by Section 25.36.3 of the City's Tree Conservation Guidelines and obtain any required permits or authorizations.

**10.0 WILDLIFE MOVEMENT CORRIDORS AND POTENTIAL IMPACTS**

Wildlife corridors are described as pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or manmade obstacles such as urbanization. The proposed valve lot location is next to I-680 and other existing development, and therefore, would not create a barrier or obstruction to regional wildlife movement. The proposed gas pipes would be located underground, and therefore, also would not interfere with wildlife movement.

Recommended Avoidance Measures

None required.

## 11.0 LITERATURE CITED

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## APPENDIX A: SITE PHOTOGRAPHS



Photo 1: Proposed valve lot property, view northwest



Photo 2: Proposed valve lot property, dense Italian thistle



Photo 3: Proposed valve lot property, potential wetland area, northeastern portion of site



Photo 4: Proposed valve lot property, remaining buildings



Photo 5: Wetland W-61b, between shopping center and I-80



Photo 6: Roadside drainage (OW-45a), view north



Photo 7: Caltrans ROW, between I-80 and I-680