

3.5 BIOLOGICAL RESOURCES

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SECTION SUMMARY

The Project would temporarily affect up to 695 acres of currently existing vegetation (both native plant communities and agricultural lands) within the 100-foot-wide maximum disturbance corridor, as well as additional lands (possibly as much as 246 acres) needed for construction staging and work areas. Only about 12.5 acres needed for above-ground facilities would remain disturbed for the 30-year Project life. A number of special-status plant and animal species would be temporarily impacted through the temporary loss of habitat; mortality of some protected species could result from on-site construction activities. On-site biological surveys, in concert with data base consultation resulted in the determination that 72 special-status plant species and 90 special-status wildlife species could potentially occur in the Project region. In addition, sensitive habitats and plant communities (e.g., wetlands, native oak woodlands) would be affected throughout the 10- to 15-month construction period. Some of these impacts would be considered permanent (e.g., the loss of mature oak trees), though most habitats would be restored after the construction phase.

Overall, the adverse impacts to biological resources and individual species, when viewed in a regional context, are not anticipated to be significant. However, individual species and community impacts could be significant unless available and appropriate mitigation measures are implemented to minimize disturbances and avoid sensitive species and habitats to the maximum extent possible. Off-site mitigation is proposed for unavoidable impacts such as the loss of mature oak trees and the loss or degradation of habitat for state and federal protected species. The Applicant will be required to implement feasible mitigation as provided in the Biological Resources Summary Table below.

BIOLOGICAL RESOURCES SECTION SUMMARY TABLE

Impacts and Mitigation Measures	Level of Significance	
	<i>Before Mitigation</i>	<i>After Mitigation</i>
BIOLOGICAL RESOURCES		
Impact 3.5-1: Direct Impact to Upland Vegetation Due to Removal	PS	LTS
<p>Mitigation Measure 3.5-1a: Biological Construction Monitoring and Clearance Procedures</p> <p>CPL shall provide qualified biologist and resource specialists to monitor construction activities where sensitive resources have been identified on Project maps. Monitors shall examine all potential work areas to ensure avoidance of critical resources (wetlands, riparian vegetation, breeding ponds, kit fox burrows, etc.).</p> <p>Mitigation Measure 3.5-1b: Tree Avoidance and Replacement</p> <p>CPL shall avoid, minimize, and compensate for impacts to living oak trees, including oak trees protected by local ordinances, by implementing pre-construction and construction-period avoidance and minimization measures and compensating for unavoidable impacts to oak trees. Compensation may be implemented through one of three mechanisms, or some combination thereof: 1) replacement via replanting, 2) permanent preservation of oak trees, which could include, but not be limited to, establishment of a conservation easement on lands that support oak trees, or 3) contribution to an established, County-approved oak woodland conservation fund.</p> <p>Mitigation Measure 3.5-1c: Serpentine Habitat Impact Minimization and Revegetation</p> <p>CPL shall minimize and compensate for impacts to serpentine habitat areas by implementing construction-period impact minimization measures and specific post-construction revegetation actions.</p>		
Impact 3.5-2: Direct Impact to Riparian and Wetlands Due to Removal or Fill	PS	LTS
<p>Mitigation Measure 3.5-2a: Riparian Avoidance, Impact Minimization, and Replacement</p> <p>CPL shall avoid, minimize, and compensate for impacts to riparian woodlands, including those protected by local ordinances, by implementing pre-construction and construction-period avoidance and minimization measures and developing and implementing a riparian habitat replacement plan for unavoidable impacts. CPL shall obtain all applicable permits from regulatory agencies (e.g., CDFG, RWQCB, ACOE) prior to construction.</p>		

Impacts and Mitigation Measures	Level of Significance	
	Before Mitigation	After Mitigation
<p><u>Avoidance/Impact Minimization:</u> At crossings supporting native riparian woodland, CPL shall propose HDD or jack and bore construction unless such methods are not feasible. If open trench methods are used, construction limits shall be marked and the on-site monitor shall recommend field measures to protect and/or preserve vegetation.</p> <p><u>Riparian Scrub Recolonization:</u> Native riparian scrub (e.g., mulefat scrub and alluvial fan scrub) shall be allowed to naturally recolonize. The results of recolonization and remedial measures shall be reported and monitored such that riparian scrub re-establishes at a 1:1 replacement ratio.</p> <p><u>Riparian Tree Compensation:</u> Tree compensation may be implemented through one of three mechanisms, or some combination thereof: 1) replacement via replanting, 2) permanent preservation of oak trees, which could include, but not be limited to, establishment of a conservation easement on lands that support existing riparian forest/woodlands, or 3) contribution to an appropriate conservation fund.</p> <p>Mitigation Measure 3.5- 2b: Wetland Avoidance and Impact Minimization</p> <p>CPL shall avoid or minimize impacts to wetlands and other waters of the U.S. by implementing pre-construction and construction-period avoidance and minimization measures, creating post-construction conditions conducive to natural recolonization of wetlands and, if applicable, providing wetland mitigation for unavoidable permanent impacts to wetlands. CPL shall obtain all applicable permits from regulatory agencies (e.g., CDFG, RWQCB, ACOE) and shall provide a copy of these permits and permit conditions to both Counties prior to construction.</p> <p><u>Avoidance and Impact Minimization Measures:</u> At crossings supporting perennial flow and/or in-stream wetlands HDD or jack and bore construction shall be implemented to the extent feasible. If open trench methods are used, construction limits shall be marked and the on-site monitor shall recommend field measures to protect and/or preserve vegetation.</p> <p><u>Wetland Recolonization:</u> Applicant shall fine grade the streambed in a manner conducive to natural recruitment of wetland vegetation. Wetland patches salvaged and stockpiled prior to construction shall be re-planted on-site.</p>		

Impacts and Mitigation Measures	Level of Significance	
	Before Mitigation	After Mitigation
<p><u>Wetland Mitigation:</u> Applicant shall implement a wetland mitigation plan in consultation with the ACOE and RWQCB that compensates for temporary impacts to wetland resources at a minimum 0.5:1 replacement ratio, or as required by the ACOE and RWQCB. Permanent impacts to wetlands shall be mitigated off-site at a 3:1 replacement ratio, or as required by the ACOE and RWQCB. Mitigation may occur via restoration, creation, or preservation of wetlands. Mitigation shall occur at a site acceptable to Monterey and Fresno Counties and permitting agencies and pursuant to Project permit requirements.</p>		
<p>Impact 3.5-3: Construction Effects of Special-status Plant Species</p>	PS	LTS
<p>Mitigation Measure 3.5-3a: Federal- and State Endangered Listed Species Avoidance</p> <p>The Applicant shall avoid impacts to the potentially occurring colony of California jewelflower, a federal- and state-listed endangered species and a species on CNPS List 1B by implementing pre-construction and construction-period avoidance and minimization measures.</p> <p>Mitigation Measure 3.5-3b: CNPS List 1B, 2, 3, and 4 Plant Species Avoidance and Minimization Measures</p> <p>CPL shall avoid impacts to the documented colonies of CNPS List 1B, 2, 3 and 4 species to the greatest extent feasible by implementing pre-construction and construction-period avoidance and minimization measures and by developing and implementing a topsoil/seedbank salvage and replacement plan for unavoidable impacts.</p>		
<p>Impact 3.5-4: Construction Effects on Wildlife Habitat for Common Species</p>	PS	LTS
<p>Mitigation Measure 3.5-4a: Confine Vegetation Clearing to Minimal Area</p> <p>During surveying and staking of the pipeline right-of-way, access roads, staging areas and Mid-Line Heating Station, the area to be cleared of vegetation would be clearly demarcated to minimize the disturbed area to that necessary for the project construction.</p> <p>Mitigation Measure 3.5-4b: Implement All BMPs for Construction</p> <p>Stockpiling of excavated materials and topsoil shall be conducted in a manner that reduces impacts to sensitive habitats to the extent feasible. Construction in areas of steep terrain or adjacent to sensitive habitats such as wetlands shall be conducted in such a manner to avoid side-casting of excavated materials into sensitive habitats. Topsoil to be stored temporarily for respreading shall be placed in designated staging areas. Excavated soils in excess of that needed for refilling trenches shall be</p>		

Impacts and Mitigation Measures	Level of Significance	
	<i>Before Mitigation</i>	<i>After Mitigation</i>
<p>removed from the construction and staging areas in a timely manner and taken to an approved disposal site. A Project-specific Erosion Control Plan (as specified in Sections 3.7, Geology [Mitigation Measure 3.7-5] and 3.9, Hydrology and Water Quality [Mitigation Measure 3.9-6]) would be implemented in an appropriate time-frame.</p> <p>Mitigation Measure 3.5-4c: Prevent Animal Entrapment in Trenches</p> <p>The Applicant shall provide suitable escape ramps in active trench construction areas to prevent trapping of wildlife and livestock.</p> <p>Mitigation Measure 3.5-4d: Prohibit Hunting and Firearms</p> <p>Project personnel shall be prohibited from bringing pets or firearms to the Project area vicinity and shall be prohibited from hunting, capturing, or collecting wildlife in construction areas.</p> <p>Mitigation Measure 3.5-4e: Dust and Noise Control</p> <p>Dust control BMPs shall be implemented by spraying water from trucks on sites with high dust potential. Construction shall be limited to daytime hours, generally 6:00 a.m. to 7:00 p.m., except where 24 hour construction is required (e.g., HDD, hydrotesting, tie-ins).</p> <p>Mitigation Measure 3.5-4f: Staging and Equipment Maintenance</p> <p>Fueling/maintenance of equipment shall be conducted at least 150 feet from aquatic areas; waste products shall be properly contained and removed to an approved disposal site. Workers shall be advised of plans to contain/remove petroleum spills in a timely manner.</p> <p>Mitigation Measure 3.5-4g: Fire Containment and Prevention</p> <p>Personnel shall be informed of specific measures to prevent and contain wild fire from construction activities.</p> <p>Mitigation Measure 3.5-4h: Minimize Pipeline Crossings at Creeks and Wetlands</p> <p>Open trenching through ephemeral and intermittent streams and wetlands shall be conducted when dry conditions are present in the stream beds. HDD or other options for placing pipeline under perennial creeks and wetlands shall be implemented where feasible.</p>		

Impacts and Mitigation Measures	Level of Significance	
	<i>Before Mitigation</i>	<i>After Mitigation</i>
<p>Mitigation Measure 3.5-4i: Implement Revegetation Plan</p> <p>After construction, revegetation of natural habitats, excluding agricultural and developed areas, shall be implemented with seeds/seedlings following the original plant community to the extent feasible, in consultation with resource agencies, as consistent with landowner agreements.</p>		
<p>Impact 3.5-5: Construction Effects on Special-status Wildlife Species and their Habitat</p>	PS	LTS
<p>Mitigation Measure 3.5-5a: Obtain All Required Permits from State and Federal Regulatory Agencies for Potential Take of Listed Species</p> <p>Prior to any ground disturbance or vegetation removal, the Applicant shall obtain a Biological Opinion from the USFWS through Section 7 consultation process with ACOE, and a 2081 California Endangered Species Act permit (or 2080.1 consistency finding) from CDFG.</p> <p>Mitigation Measure 3.5-5b: Provide Qualified Biologists to Conduct Preconstruction Surveys and Construction Monitoring for Federal- and State-Listed Wildlife Species</p> <p>The Applicant shall provide qualified biologists, approved by each agency as appropriate, to conduct preconstruction surveys and monitor construction in habitats for federal- or state-listed species.</p> <p>Mitigation Measure 3.5-5c: Avoid and Minimize Direct Mortality or Injury to Special-Status Wildlife Species</p> <p>Implement the following general measures to avoid and minimize direct mortality or injury to special-status wildlife species:</p> <ul style="list-style-type: none"> • Provide qualified biologists and trained biological monitors to monitor the construction areas for special-status wildlife species; • Provide worker awareness training presented by a qualified biologist for special-status species; • Establish a maximum speed limit for construction-related vehicles not to exceed 15 mph; • The qualified biologists and biological monitors shall keep daily logs of construction monitoring; • Garbage shall be properly contained and removed from the construction site on a daily basis; • Open trenches and pits shall include suitable ramps provided to 		

Impacts and Mitigation Measures	Level of Significance	
	Before Mitigation	After Mitigation
<p>prevent entrapment of wildlife; and</p> <ul style="list-style-type: none"> Project personnel shall be prohibited from bringing pets or firearms to the vicinity of the Project area and from hunting, capturing, or collecting of wildlife in construction areas. <p>Mitigation Measure 3.5-5d: Avoid and Minimize Direct Mortality to Special-Status Wildlife Species-Specific Species and Groups of Species</p> <p>Appropriate measures shall be implemented, as spelled out by applicable state and federal agencies with authority over special-status species. These measures include, but are not limited to preconstruction surveys, delay of construction activities during nesting seasons, implementation of construction avoidance and buffer zones when warranted, use of HDD or other avoidance construction techniques to the extent possible, purchase of mitigation credits in approved mitigation banks, establishment of a conservation easement to offset habitat losses, reporting of any take of protected species to the applicable agencies and to Monterey and Fresno Counties, relocation of individuals to suitable habitat outside the pipeline construction zone, and other applicable measures as defined Mitigation Measure 3.5-5d1 through 3.5-5d14 for the following species: Tree Nesting Raptors and Migrant Bird, Vernal Pool Fairy Shrimp, California Tiger Salamander (CTS) and Western Spadefoot Toad (WST), California Red-Legged Frog (CRLF), Foothill Yellow-Legged Frog (YLF), Western Pond Turtle, Blunt-Nosed Leopard Lizard (BNLL), Lizards and Snakes, White-Tailed Kite, Golden Eagle, and Swainson’s Hawk, Western Burrowing Owl, Northern Harrier, California Horned Lark, and Loggerhead Shrike, Burrowing Mammals, Monterey Dusky-Footed Woodrat, and San Joaquin Kit Fox (SJKF).</p>		
<p>Impact 3.5-6: Construction Staging, Work, and Soil Storage Area Effects on Biological Resources</p>	PS	LTS
<p>Mitigation Measure 3.5-6: Biological Survey of All Staging and Access Road Areas Prior to Disturbance</p> <p>Prior to any ground disturbance or vegetation removal, the biological monitor or other qualified biologist shall survey the proposed access roads and staging areas to be located in natural habitats and all special-status wildlife shall be cleared from these areas.</p>		

Impacts and Mitigation Measures	Level of Significance	
	<i>Before Mitigation</i>	<i>After Mitigation</i>
Impact 3.5-7: Impact to Rare/Sensitive Plant Communities, Native Trees, Riparian Woodland, Wetlands and Special-Status Plant Species Due to Pipeline Vegetation Maintenance	PS	LTS
Mitigation Measure 3.5-7: Maintenance Operations The Applicant shall retain native shrubs and herbaceous plant species naturally colonizing the construction corridor to the extent that aerial surveillance of the pipeline route is possible and to the extent that recolonizing plants do not conflict with USDOT.		
Impact 3.5-8: Maintenance of the Pipeline Corridor has the Potential to Cause Direct and Indirect Impacts to Special-Status Wildlife Species	PS	LTS
Mitigation Measure 3.5-8: Maintenance Operations Mitigation Measures 3.5-1, 3.5-2, 3.5-4, and 3.5-5 above shall apply to all maintenance and pipeline repair activities, including the purchase of credits for permanent and temporary impacts to federal-listed species.		

3.5.1 Introduction

Chevron Pipe Line Company (CPL or Applicant) is proposing to construct an underground heated crude oil pipeline commencing at the San Ardo Oil Field in Monterey County and terminating at the existing Kettleman Los Medanos (KLM) oil pipeline southeast of Coalinga in Fresno County. The details of the Project, including construction, operation, and decommissioning of the proposed pipeline are described in detail in Section 2.0, Project Description. A summary of the environmental setting within the Project corridor is provided in Section 3.1, Regional Overview. A brief reiteration of regional features affecting the biological resources of the Project corridor is included below. This Biological Resources Section describes the currently existing biological resources along the pipeline corridor, assesses the impacts that would occur as a result of Project implementation, and proposes mitigation needed to minimize these impacts.

The Project traverses areas subject to various phases of the Mediterranean climate, which is characterized by warm, dry summers and mild, wet winters. The Project is located far enough inland from the coast that the climate is only slightly modified by marine influences. Elevation ranges from 400 to 3,200 feet above mean sea level (msl) along the proposed pipeline route. Mean annual precipitation ranges from 8 to 25 inches, with rainfall levels sometimes reaching a maximum in excess of 25 inches at the

crest of the Diablo Range, which occurs along the pipeline route at about MP 19 and roughly corresponds with the Monterey-Fresno County Line. In most years the western end of the pipeline route near San Ardo gets at least 4 inches of precipitation more than the eastern end of the route near Coalinga. An observable climatic gradient occurs across the Central Coast Ranges; the western side is hot and sub-humid and the eastern side is hot and arid. Mean annual temperatures are between 48 and 69°F. The Project corridor is characterized by open space, rural residential, and grazing land uses in the west and more intensive crop agriculture in the east.

Construction of the Project would require a discretionary permit from the United States Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act (CWA). The proposed Project has the potential to impact species that are listed, proposed, or candidates for listing under the Federal Endangered Species Act (FESA). Therefore, in July 2006 the ACOE initiated consultation with the United States Fish and Wildlife Service (USFWS) under Section 7 of FESA (16 U.S.C. 1536 (c)). The Project also has the potential to impact state-listed species under the California Endangered Species Act (CESA), and the Applicant will consult with California Department of Fish and Game (CDFG) for either a permit under Section 2081 of the Fish and Game Code for state-listed species that could be affected by the Project, or a CESA consistency determination.

Study methodology included appropriate field surveys in the appropriate seasons, literature review, aerial photograph interpretation, and the use of electronic databases to assess the likelihood of special-status species presence within the pipeline construction corridor. Literature and data base searches included the California Natural Diversity Data Base (CNDDDB) "Rare Find" (CDFG 2007) and California Native Plant Society (CNPS) Rare Plant Electronic Inventory (2007) for the Wunpost, Slack Canyon, Smith Mountain, Curry Mountain, Kreyenhagen Hills, Avenal, La Cima quadrangles, and surrounding quadrangles. A list of potentially-occurring special-status or sensitive plant and animal species was prepared for the Project corridor, utilizing species recognized by CDFG, USFWS, and CNPS.

The biological study area was a 200-foot-wide corridor centered on the proposed pipeline alignment, with observations of plant communities extending up to 1,000 feet from the proposed centerline. Mapping of vegetation communities outside of the Project construction corridor was accomplished through analysis of 1:2,400 scale aerial photographs of the Project corridor. Vegetation mapping allowed for an assessment of habitat for common and special-status wildlife species. Additionally, records of all

wildlife species observed or determined to be present through diagnostic sign (e.g., track, scat, etc.) were maintained, and natural features such as cliffs and rock outcrops that could be used by wildlife species were noted.

As described in Section 2.0, Project Description, a 100-foot-wide maximum construction disturbance corridor along the entire length of the pipeline has been assumed to assess construction impacts. In actuality, the Applicant has negotiated right-of-way agreements of varying widths along the alignment route. These negotiated landowner agreements include easements ranging from 40 to 100 feet in width. Thus, impact estimates provided in this document using the 100-foot-wide maximum construction disturbance corridor evaluate the most that could actually occur within the construction corridor. Mitigation ultimately imposed for biological impacts will be based on the actual acres disturbed, which will be confirmed by on-site biological construction monitors during pipeline construction. Thus, acreages presented in this analysis are provided for purposes of assessing the magnitude of impacts in a regional context, rather than as an exact tabulation of specific disturbances.

3.5.2 Affected Environment

3.5.2.1 Vegetation and Wetlands

The vegetation resources within the maximum construction disturbance corridor (see Project Description Table 2-3, Section 2.5) as described below, are based on a review of available existing information and field reconnaissance site visits by the EIR preparers on July 5, 2005 and May 19, 2006, as well as peer review of technical reports prepared by the Applicant's team of field biologists. These technical reports include results of field studies and rare plant surveys and include:

- Biological Assessment, Biological Resources Report, and Supplemental Plant Survey Results prepared for the project by URS (2006a, 2006b, and 2006c);
- A jurisdictional delineation of wetlands by URS (2006d);
- A review of plant community mapping and aerial photographs of the proposed pipeline alignment (URS 2006e);
- Supplemental Biological Assessment for the San Andreas Fault Reroute (URS 2006i); and
- Effects of Ricco Complex Fire (URS 2006j).

Each of these reports is available for public review at the locations identified in Chapter 1.0, Section 1.1.3 of this Draft EIR.

The jurisdictional delineation for a 200-foot-wide corridor (2006d) has been verified by the ACOE, with the exception of the approximate 3-mile segment included in the San Andreas Reroute. The delineation of the San Andreas Reroute area has been prepared and submitted to the ACOE (November 2007) as an amendment to the previously verified alignment route.

The Project corridor described in this section includes a 100-foot-wide maximum construction disturbance corridor along the pipeline alignment as described above. As previously noted, however, biological studies were conducted over a wider 200-foot corridor to accommodate any minor re-routes determined to be necessary during final design and to include work areas and other Project-related disturbances that could occur outside of the proposed right-of-way. Plant community descriptions are based on the classification system developed by CNDDDB's *California Terrestrial Natural Communities* (CDFG 2003), and amended as necessary to reflect site conditions. Plant nomenclature is according to the *Jepson Manual* (Hickman 1993) and *An Illustrated Field Key to the Flowering Plants of Monterey County* (Matthews 1997).

The plant community types were mapped onto the Project base maps by URS (2006e) using a Geographical Information System (GIS) database. This information is provided in Appendix D, Biological Resources Maps, on a series of maps that include each of the vegetation community polygons. The mapped area is approximately 2,000 feet wide (1,000 feet on either side of the pipeline) and extends the entire length of the pipeline. These maps represent plant communities prior to the July 2006 Ricco Complex fire, which burned vegetation through portions of the Project corridor between MP 7.8 and MP 15.4.

The plant communities documented within the 100-foot-wide maximum construction disturbance corridor are listed in Table 3.5-1, Vegetation Types and Approximate Acreages Documented Within the 100-Foot-Wide Maximum Disturbance Corridor in Monterey and Fresno Counties. The corridor includes about 694.5 acres. Upland vegetation types within the Project corridor include grassland, chaparral, scrub, juniper woodland, oak woodland, foothill pine-oak woodland and riparian woodland. Wetland vegetation types include riparian scrub, in-stream seasonal wetlands, and freshwater marsh. The seasonal wetlands and freshwater marsh features were too

**TABLE 3.5-1
VEGETATION TYPES AND APPROXIMATE ACREAGES DOCUMENTED WITHIN THE 100-FOOT-
WIDE MAXIMUM CONSTRUCTION DISTURBANCE CORRIDOR IN
MONTEREY AND FRESNO COUNTIES**

CNDDB Code	Community Type	Total Area ³ (acres)	Monterey County ³ (acres)	Fresno County ³ (acres)
GRASSLANDS				
42.000.00	Non-native Grassland	133.8	62.9	70.9
41.150.00 ²	Needlegrass Grassland ¹			
WOODLANDS				
71.040.00 ²	Valley Oak Woodland	19.9	0.7	19.2
71.020.60	Blue Oak Woodland	99.6	56.3	43.3
87.130.00	Foothill Pine – Oak Woodland	91.1	41.0	50.1
88.100.01 ²	Juniper – Oak Cismontane Woodland	4.4	--	4.4
88.100.02 ²	Cismontane Juniper Woodland and Scrub	39.8	--	39.8
SCRUB AND CHAPARRAL				
36.302.00	Valley Saltbush Scrub	30.0	--	30.0
32.120.00	Diablan Sage Scrub	12.0	4.1	7.9
37.100.01	Northern Mixed Chaparral	5.8	5.8	--
RIPARIAN WOODLANDS AND RIPARIAN SCRUB				
71.060.20 ²	Coast Live Oak Riparian Forest	11.4	11.4	--
61.130.00 ²	Fremont Cottonwood Riparian Woodland	5.3	--	5.3
63.510.20	Mulefat Scrub	4.5	2.5	2.0
63.810.00	Tamarisk Scrub	10.5	--	10.5
32/070.00 ²	Southern Alluvial Fan Scrub (Scalebroom Scrub)	0.6	0.3	0.3
DEVELOPED AREAS				
None	Agricultural Fields	198.0	17.9	180.1
None	Developed Areas	27.8	22.0	5.8
TOTAL PROJECT CORRIDOR		694.5	224.9	469.6

Notes:

- ¹ Aerial extent of vegetation map does not allow mapping and calculation of acreage of these small patches.
- ² Plant type considered rare and worthy of consideration by CDFG, September 2003.
- ³ Calculated by URS Corporation based on project-specific mapping and GIS data. Acreages were rounded to the nearest tenth of an acre.

small to map at the community level; therefore, they were mapped as a part of the larger plant communities and are not broken out separately in Table 3.5-1. However, the extent of wetlands and 'other waters of the United States' have been enumerated in

URS (2006d) and are summarized in the subsection below describing wetlands. In addition to the natural vegetation communities present within the study area, the Project corridor also supports active agricultural fields; these fields are located in Fresno County, in the vicinity of Coalinga. Developed areas occur adjacent to the San Ardo Oil Field near San Ardo (Monterey County) and around various ranches adjacent to the proposed pipeline alignment. As indicated by the total Project corridor acreage figures shown at the bottom of Table 3.5-1, about one-third of the corridor lies in Monterey County (224.9 acres) and two-thirds in Fresno County (476.8 acres). It should be noted that some construction staging and work areas would occur outside this corridor; environmental clearance procedures for those areas are discussed in the impact analysis in Section 3.5.4, as is the potential areal extent of these staging and work areas.

Brief descriptions of each of the vegetation communities studied within the biological study area are provided below.

Non-Native Grassland

The non-native grassland is the most prevalent plant community within the Project corridor (with the exception of agricultural lands). Encompassing 133.8 acres, this grassland type is found along the entire length of the proposed pipeline alignment. In the eastern portion of the Project corridor the grassland is expansive and dominates the landscape. Along the crest of the coast range, the grasslands intermix with oak woodland and scrub communities, transitioning to small patches amid juniper, foothill pine, valley oak, and blue oak woodlands eastward toward the floor of the Central Valley. The majority of the grasslands within the Project corridor are used as pasture for grazing cattle, as depicted in Figure 3.5-1, Mosaic of Non-Native Grassland and Cismontane Juniper Woodland and Scrub near MP 33, Fresno County. Grassland areas between MP 7.8 and MP 15.4 were burned in the July 2006 Ricco Complex fire; most of these grassland patches are interspersed with blue oak woodland and pine-oak woodland, such as near MP 10.5 and MP 14. Plant cover is dominated by annual, non-native grasses of wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum leporinum*), soft chess (*Bromus hordeaceus*), and rattail fescue (*Vulpia myuros*). Purple needlegrass (*Nassella pulchra*), a native perennial bunchgrass, was also documented in small patches within the otherwise non-native grassland. Native herbaceous species documented from the Project Corridor include rancher's fiddleneck (*Amsinkia menziesii*), small head clover (*Trifolium microcephalum*), blue-eyed grass (*Sisyrinchium bellum*), California buttercup (*Ranunculus californica*), wine cup clarkia (*Clarkia purpurea*), vinegar weed (*Trichostema lanceolata*), sky lupine (*Lupinus nanus*),

California poppy (*Eschscholzia californica*), common ragweed (*Ambrosia psilostachya*), blow wives (*Achyrachaena mollis*), pretty face (*Triteleia ixioides*), slender tarweed (*Madia gracilis*), and dove weed (*Eremocarpus setigerus*). Non-native forbs are also common in the grassland, including tocalote (*Centaurea melitensis*), hedge parsley (*Torilis arvensis*), short pod mustard (*Hirschfeldia incana*), horehound (*Marrubium vulgare*), rose clover (*Trifolium hirtum*), dandelion (*Taraxacum officinale*), and filaree (*Erodium sp.*). Individuals of pigweed (*Amaranthus albus*) and Russian thistle (*Salsola tragus*), two agricultural weeds commonly called tumbleweed, grow along the edges of many ranch roads that traverse the grassland. Round-leaved filaree (*Erodium macrophyllum*) and Paso Robles navarretia (*Navarretia jaredii*), two locally uncommon species, have been documented from non-native grasslands within the Project Corridor.

Serpentine-derived soils and rock outcrops also occur in the otherwise non-native grassland. Serpentinite slopes with serpentinite rock outcrops occur along the western portion of the San Andreas Reroute (Pitts Ranch, in vicinity of MP 16.5). These serpentine areas are characterized by the dominance of native plant species, including bunchgrasses and species restricted to serpentine-derived soils. Priest Valley spineflower (*Chorizanthe ventricosa*), a locally-uncommon species, has been documented in the Project corridor in serpentine outcrops. Since the small inclusions of serpentine bunchgrass/rock outcrops were present in patches too small to map, the inclusions were not considered a separate plant community type within the otherwise non-native grassland. As noted in a subsequent description of Blue Oak Woodland, patches of the serpentine bunchgrass/rock outcrop also occur between MP 10 and 13.

Needlegrass Grassland

This grassland type occurs as remnant stands on the hilltops and slopes in the Project corridor, intermixing with the more common non-native grassland, blue oak woodland, and foothill pine-oak woodland. The grassland is distinguished by the presence of perennial bunchgrasses, most notably purple needlegrass and needlegrass (*Achnatherum coronatum*), as well as native and non-native forbs common to the adjacent non-native grassland. Due to the small area that the needlegrass grassland patches occupy, they were not mapped onto the vegetation maps and acreages were not calculated.

Valley Oak Woodland

This woodland type grows along a portion of the proposed pipeline alignment along Pancho Rico Creek (MP 16) and Warthan Creek (MP 23.5 to 25.5) (Fresno County), encompassing 19.9 acres of the Project corridor. The woodland is dominated by valley



SOURCE: Biotic Resources (2006)

Figure 3.5-1
Mosaic of Non-Native Grassland and
Cismontane Juniper Woodland and Scrub Near MP 33, Fresno County

CHEVRON
SAN ARDO TO COALINGA
HEATED OIL PIPELINE

RESOURCE DESIGN
TECHNOLOGY, INC.

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oak (*Quercus lobata*), a native, deciduous tree that grows in deep, well-drained alluvial soils that occur along these creeks. The woodland supports many mature, large-sized trees. Most of the valley oak woodlands within the Project corridor have a relatively open canopy; the trees are interspersed amid a predominantly non-native grassland understory.

Blue Oak Woodland

The blue oak woodland is characterized by the dominance of blue oak (*Quercus douglassii*), a deciduous oak species. This tree species forms dense stands on north-facing slopes between the San Ardo facility and MP 8. The woodland varies from dense stands to more open-canopied areas on hillsides between MP 8 to MP 30, as it forms a mosaic with non-native grassland and sage scrub; this mosaic of vegetation types is depicted in Figure 3.5-2, Mosaic of Non-Native Grassland and Blue Oak Woodland, Fresno County. The Project corridor supports 99.6 acres of this plant community type. In addition to the blue oak, other tree species include interior live oak (*Quercus wislizenii*), scrub oak (*Q. berberidifolia*), Tucker oak (*Q. john-tuckeri*), Alvord oak (*Q. alvordiana*) as well as scattered foothill pine (*Pinus sabiniana*). The woodland supports many mature, large-sized trees. The understory includes grasses and forbs common to the adjacent non-native grasslands, as well as shrubs of California sage (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*). The July 2006 Ricco Complex fire burned through approximately 5.5 miles of the corridor that supports blue oak woodland. Observations of the post-fire conditions by URS biologists revealed that there was extensive mortality and damage to the blue oak woodland. Where the fire burned intensively, the fire is considered to be “stand-replacing”, in that all trees were lost. In the moderately and lightly burned areas, scorched trees and shrubs may recover. Round-leaved filaree and serpentine bedstraw, two locally uncommon species, have been documented from blue oak woodlands within the Project corridor. Four occurrences of serpentine bedstraw were documented from woodlands impacted by the Ricco Fire Complex.

Foothill Pine – Oak Woodland

This woodland type occupies the dry, rocky hillsides of the Project corridor, typically east of MP 14 and along the San Andreas Reroute. The Project corridor supports 91.1 acres of this plant community type. Foothill pine and blue oak are co-dominant as overstory species; however, other trees also occur, such as scrub oak and Alvord oak. The understory can be open, with grasses and forbs common to the adjacent non-native grassland or can include shrubs typical of nearby sage scrub and chaparral. Typical

understory species within the foothill pine-oak woodland include California sage, milkweed (*Asclepias sp.*), coyote brush (*Baccharis pilularis*), paintbrush (*Castilleja sp.*), mountain mahogany (*Cercocarpus betuloides*), and branching phacelia (*Phacelia ramosissima var. ramosissima*). Native grasses have also been documented, including Idaho fescue (*Festuca idahoensis*), June grass (*Koeleria macrantha*), and purple needlegrass.

Serpentine-derived soils and rock outcrops also occur in this woodland. Serpentine slopes with serpentine rock outcrops occur in areas mapped as foothill pine-oak woodland along the western portion of the San Andreas Reroute (Pitts Ranch, northeast of MP 16.5 through 17.5).

Individuals of San Benito thornmint (*Acanthmintha obovata ssp. obovata*), south coast range morning glory (*Calystegia collina ssp. venusta*), and San Antonio Hills monardella (*Monardella antonina ssp. antonina*), locally uncommon species, have been documented from the foothill pine-oak woodland within the Project corridor.

Juniper – Oak Cismontane Woodland

The juniper–oak woodland is located along the eastern portion of the proposed pipeline alignment, between MP 28 and MP 32. The Project corridor supports 4.4 acres of this plant community type. California juniper (*Juniperus californica*), a low-stature evergreen tree, intermixes with several oak species, on steep, dry, rocky slopes to form this plant community type. The woodland can be dense with trees, often with shrubs typical of chaparral and scrub habitats in the understory. Rocky areas have been documented to support California buckwheat, chaparral yucca (*Yucca whipplei*), and mountain mahogany. Evergreen shrubs of buck brush (*Ceanothus cuneatus*), toyon (*Heteromeles arbutifolia*), and coffee berry (*Rhamnus californica*) also occur in this woodland type.

Cismontane Juniper Woodland and Scrub

This plant community type is a mosaic of trees and shrubs that form a mosaic with non-native grassland and sage scrub between MP 31 to MP 36.5 (Fresno County), encompassing 39.8 acres. The vegetation is adapted to the dry, somewhat rocky slopes, with tree and shrub density varying due to changes in slope, aspect and hillside drainage features. Plant species include California juniper, Alvord's oak, California sage, California buckwheat, and scattered occurrences of chamise (*Adenostoma fasciculatum*). The grassy understory includes non-native grasses, such as wild oat, ripgut brome and rattail fescue. Patches of the native blue wildrye (*Elymus glaucus*) and big squirrel tail (*Elymus multisetus*) were observed in rocky areas. Native forbs in this



SOURCE: Biotic Resources (2006)

Figure 3.5-2
Mosaic of Non-Native Grassland and Blue Oak Woodland, Fresno County

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TECHNOLOGY, INC.

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community are also common, including elegant clarkia (*Clarkia unguiculata*), dove weed, and vinegar weed. Individuals of gypsum-loving larkspur (*Delphinium gypsophilum* ssp. *gypsophilum*), a locally uncommon species, were observed in this community (near Station 1817+00, MP 34.5).

Valley Saltbush Scrub

This scrub community is limited to an area of upper alluvial terrace along a portion of Warthan Creek between MP 37 and MP 40.5, encompassing 30.0 acres. The community is characterized by a mixture of three saltbush species: alkali saltbush (*Atriplex polycarpa*), spinescale (*A. spinifera*), and hoary saltbush (*A. canescens*), three native shrubs common to alkaline places. The saltbush scrub forms an almost continuous corridor along the flat and sloping hillsides adjacent to Warthan Creek, abutting the tamarisk scrub that grows immediately within and adjacent to the creek. Other plant species within the saltbush scrub include grasses and forbs typical of non-native grasslands and San Joaquin matchweed (*Gutierrezia californica*), a sticky perennial subshrub that is adapted to the dry, rocky, inland conditions.

Diablan Sage Scrub

This sage scrub inhabits the steep, dry and rocky slopes in the middle portion of the proposed pipeline alignment and along the San Andreas reroute. Most of the plant species cover is provided by California sage, black sage (*Salvia mellifera*), and California buckwheat. The Project corridor supports 12.0 acres of this plant community type. The July 2006 Ricco Complex fire burned numerous south-facing slopes supporting Diablan sage scrub between MP 8 and MP 12. Observations of the post-fire conditions by URS biologists revealed that these steep slopes were denuded, with extensive damage to the shrubs. The rate of recovery of the sage scrub will depend on the mosaic of the burn pattern. Moderate and lightly burned areas are expected to recover more quickly than severely burned areas, assuming erosion over the winter season is minimal. Scrub species are adapted to fire; many species stump-sprout after fires, while seed germination in other species can be spurred by fire activity.

Chamise Chaparral

The 200-foot-wide corridor surveyed for vegetation resources includes small patches of chamise chaparral, primarily located along south-facing slopes and ridgetops, usually in areas with thin soil layers. These chaparral areas occur near MP 14.5 to MP 15 and along the San Andreas Reroute, though no patches of this vegetation types actually

occur within the 100-foot-wide maximum construction disturbance corridor. Thus, chamise chaparral is not included in Table 3.5-1. However, it is possible that construction staging and/or work areas could encroach on this community; hence this description is included here. Chamise provides the most plant cover; other typical plant species of this community include buckbrush, toyon, and big berry manzanita (*Arctostaphylos glauca*). There is little herbaceous cover due to the dense growth of the chamise. The July 2006 Ricco Complex fire burned patches of chamise chaparral on south-facing slopes between MP 14.5 and MP 15. Observations of the post-fire conditions by URS biologists revealed that these steep slopes were denuded, with extensive damage to the shrubs. As discussed for the Diablan sage scrub, the rate of recovery of the chaparral will depend on the mosaic of the burn pattern and the ability of plant species to stump sprout (i.e., sprouting from the budbank of species with lignotubers, such as toyon, coffee berry, and poison oak) or germinate from the soil seed bank (e.g., chamise, big berry manzanita, and ceanothus).

Northern Mixed Chaparral

This chaparral type is co-dominated by a variety of evergreen shrubs, such as buckbrush, toyon, big berry manzanita, and chamise. Scrub oak (*Quercus berberidifolia*) always occurs in this chaparral. Similar to the chamise chaparral, the mixed chaparral occupies south-facing slopes and ridgetops within the Project Corridor. Stands of mixed chaparral occur between MP 12 and MP 13.25. The July 2006 Ricco Complex fire spread through all the mapped occurrences of this plant community within the Project corridor. As discussed for the sage scrub and chamise chaparral habitats, the rate of recovery of the chaparral will depend on the mosaic of the burn pattern and the ability of plant species to stump sprout (i.e., toyon, oaks, coffee berry, and poison oak) or germinate from the soil seed bank (e.g., chamise, big berry manzanita, and ceanothus). The Project corridor supports 5.8 acres of this plant community type.

Coast Live Oak Riparian Forest

Riparian forests within the Project corridor occur along intermittent streams in Monterey County; woodland dominated by coast live oak is confined to a portion of Sargents Canyon Creek between MP 6.0 and MP 8.5. The creek edge and floodplain areas support widely spaced coast live oaks, with scattered Fremont cottonwood (*Populus fremontii*) trees and mulefat (*Baccharis salicifolia*) shrubs. Trees of blue oak, common to the adjacent blue oak woodland, also occur within the riparian area. The riparian understory is sparse, likely due to long-term cattle grazing and the dry conditions of the area. The July 2006 Ricco Complex fire burned a section of oak

riparian woodland along Sargents Creek (MP 7.8 to MP 8.5). Observations of the post-fire conditions by URS biologists revealed that there was mortality and damage to the oaks within the woodland. Where the fire burned intensively, all trees may be lost. In moderately and lightly burned areas, scorched trees and shrubs may recover. The Project corridor supports 11.4 acres of this plant community type.

Fremont Cottonwood Riparian Woodland

This riparian woodland type occurs in the eastern portion of the Project corridor along intermittent streams in Fresno County. Stands of cottonwood-dominated woodland occur along portions of Warthan Creek, such as in Dogwood Canyon (MP 22) and near MP 25. Larger corridors of riparian woodland grow downstream of Parkfield Junction (MP 30.5 to MP 32.25), where the woodland grows along lower reaches of Warthan Creek. The Project corridor supports 5.3 acres of this plant community type. In addition to Fremont cottonwood, other plant species within the woodland include native shrubs of mulefat, scalebroom (*Lepidospartum squamatum*), and screwbean mesquite (*Prosopis pubescens*). Non-native shrubs include tree tobacco (*Nicotiana glauca*), and tamarisk (*Tamarix ramoissima*). The herbaceous species are common grasses and forbs, such as wild oat, western ragweed, common sunflower (*Helianthus annuus*) and yellow star thistle (*Centaurea solstitialis*).

Mulefat Scrub

Mulefat scrub is a riparian plant community common along intermittent creeks within the Project corridor, encompassing 4.5 acres. Mulefat is the predominant species, often forming dense stands, depending upon the intensity of the previous year's stream flow. Associated species include tamarisk, scattered Fremont cottonwood and tree tobacco. Mulefat scrub has been mapped along the upper reaches of Sargent Canyon Creek (MP 10.5) and along portions of Warthan Creek (MP 24 to MP 25.5). Herbaceous plants, such as salt grass (*Distichlis spicata*) and seaside heliotrope (*Heliotropium curassavicum*) often grow within the creeks.

Tamarisk Scrub

This riparian plant community is characterized by the dominance of tamarisk, an invasive, non-native plant species. Tamarisk forms dense stands ranging from young shrubs to mature tree stands, along intermittent drainages within the Project corridor, most notably in Fresno County along reaches of Warthan, Zapato Chino, and Jacalitos Creeks and their associated tributaries. The Project corridor supports 10.5 acres of this

plant community type. Other species that intermix with younger stands of tamarisk include scalebroom, tree tobacco, and saltbush.

Southern Alluvial Fan Scrub (Scalebroom Scrub)

Scalebroom, a perennial shrub that inhabits washes and gravelly places that are periodically scoured by seasonal flooding dominate this riparian scrub community. Within the Project corridor, this alluvial fan scrub is limited to a section of Warthan Creek near MP 40.5, encompassing 0.6 acres. Scalebroom grows within the creek channel of this intermittent creek, abutting floodplain areas supporting valley saltbush scrub and non-native grassland.

Wetlands

Various creeks within the Project corridor support in-stream or emergent seasonal wetlands. These in-stream wetlands occur within ephemeral and intermittent watercourses. Most of the wetland features occur within the Ordinary High Water Mark of the streambed. The in-stream wetlands were documented to support toad rush (*Juncus bufonius*), rabbitsfoot grass (*Polypogon monspeliensis*), salt grass and seaside heliotrope (*Heliotropium curassivicum*). The Project corridor also supports stands of freshwater marsh within perennial sections of otherwise intermittent waterways (e.g., Salt Canyon Creek upstream of the Greve Ranch, portions of Warthan Creek). The dominant plant species include three-square bulrush (*Scirpus pungens*), saltgrass, sedges (*Carex spp.*), cattail (*Typha sp.*) and rabbitsfoot grass. Some areas also included mulefat and tamarisk. The instream wetlands described here have been determined to meet the definition of wetlands under Section 404 of the Clean Water Act; fill within these areas is subject to permitting with the ACOE.

A wetland delineation within the Project corridor has been completed by URS (2006d) and verified by the ACOE, with the exception of the 3-mile San Andreas Re-Route segment of the currently proposed alignment (updated information has been submitted to the ACOE, and verification is pending on this revision). The permit application for a Nationwide Permit identifies 29.34 acres of wetlands and 'other waters of the United States' within a 200-foot-wide study corridor (URS 2006d). This overstates the acreage of wetlands within the 100-foot-wide maximum disturbance corridor used as the basis for evaluating the affected environment in this Draft EIR. A more recent summary of wetlands and other waters of the U.S. prepared by URS from GIS data (pers. comm., A. Fraser, May 4 and July 20, 2007) identifies about 12.2 acres of wetland and 'waters of the U.S.' features within the 100-foot-wide maximum construction disturbance corridor. Of

these 12.2 acres, about 2.1 acres are wetlands (1.1 acres in Monterey County; 1.0 acres in Fresno County) and about 10.1 acres are classified as ‘other waters of the U.S.’ (4.6 acres in Monterey County; 5.5 acres in Fresno County).

Developed Areas and Agricultural Fields

Developed areas are characterized by structures, such as ranch houses and barns, paved areas and unvegetated, disturbed areas (horse corrals, plowed agricultural fields). Natural vegetation within these areas is absent, although landscaping or agricultural crops may be present. The Project corridor encompasses 27.8 acres of developed land.

Agricultural land is broadly defined as land used primarily for production of food and fiber. Agricultural areas are easily identified on aerial photos (Appendix D) by the distinctive patterns of row and field crops, as well as orchards and vineyards. Major row and field crops in the vicinity of the Project corridor include cotton, dry farmed wheat and oat hay, onions, cantaloupe, garlic, and tomatoes. The Project corridor supports 198 acres of agricultural land.

3.5.2.2 Wildlife and Aquatic Species

The diversity and abundance of wildlife species within the Project corridor varies with habitat type and complexity. As described above, the Project crosses several habitat types, including those with predominantly native plants (e.g., blue oak woodland), those dominated by non-native plants (e.g., non-native grassland), and those permanently or periodically disturbed by human activities (e.g., access roads, agricultural fields). With the exception of the portions of the Project within the existing San Ardo Oil Field, most of the Project corridor crosses rural areas, with only sparsely-occurring structures and low-density residential uses. Thus, much of the Project corridor provides high value habitat for native wildlife species that thrive in large scale, relatively unfragmented habitats. A summary of each of the primary habitats within the Project corridor is provided below.

Grasslands as Wildlife Habitat

Grasslands are the dominant habitat type along the Project corridor and provide valuable habitat for wildlife that live in and forage in open spaces. The grasses and forbs produce an abundance of seeds and attract numerous insects, providing food for granivorous and insectivorous wildlife. Sparrows, rabbits, and rodents are commonly found in this habitat. Consequently, grasslands are valuable foraging sites for raptors

such as hawks and owls, and other predators including coyote, fox, skunk, and snakes. Aerial foraging species that occur over grasslands include bats and swallows. Common wildlife species expected to occur in this habitat type include western fence lizard, gopher snake, western bluebird, western meadowlark, Say's phoebe, red-tailed hawk, California ground squirrel, California vole, and coyote.

Oak and Juniper Woodlands as Wildlife Habitat

Oak and Juniper Woodlands provide high structural habitat diversity and an important food source of acorns for wildlife. The dense canopy of oaks provides cover for many nesting or roosting species, and the natural cavities in oak provide habitat for many native birds and mammals. Common wildlife species expected to occur in this habitat include California slender salamander, scrub jay, California quail, red-tailed hawk, bats, western gray squirrel, woodrat, and deer.

Chaparral and Scrub as Wildlife Habitat

Chaparral and Scrub habitats are more arid than the forested habitats and wildlife that can tolerate a drier climate and are more common here. The seeds and foliage of scrub plants provide valuable forage for many wildlife species, and the dense cover of chaparral plants provides nesting and cover habitat for more secretive wildlife species. Common wildlife species that are expected to occur in this habitat type include California towhee, white-crowned sparrow, California thrasher, and Audubon's cottontail. The ecotone (edge) between chaparral habitats and adjacent open areas is valuable to a number of wildlife species, as it allows them to use the shrubs as lookout posts while hunting prey in the adjacent openings or to use cover in the dense shrubs for camouflage. Western fence lizard, loggerhead shrike, and mountain lion utilize chaparral habitat ecotones for hunting.

Riparian Woodlands as Wildlife Habitat

Riparian Woodlands provide high value habitat for native wildlife species because the structural diversity and complexity of the canopy and understory plants provides nesting and foraging opportunities for a wide variety of species, and the presence of water provides breeding, drinking, and breeding habitat for some species. The deciduous trees and understory plants in the riparian habitats are host to an abundant invertebrate fauna, and this in turn provides valuable forage for both resident and migratory wildlife, such as neotropical migrant birds. Common wildlife species expected to occur in the riparian habitats along the Project corridor include Pacific

treefrog, western aquatic garter snake, black phoebe, violet-green swallow, raccoon, and deer.

Wetlands as Wildlife Habitat

Wetlands that occur along the Project corridor include both small patches of in-stream wetlands along intermittent creeks and larger spring-fed areas of freshwater marsh that are perennial. Wetlands and open waters also occur in some stock ponds along the project corridor. These areas also provide valuable wildlife habitat, with abundant plant growth for forage, aquatic insect and invertebrate prey base for many wildlife species, seasonal drinking water source, and breeding habitat for some species. Common species expected to inhabit the wetlands along the Project corridor include Pacific tree frog, mallard, red-winged blackbird, cliff swallow, and raccoon.

Developed Areas and Agricultural Fields as Wildlife Habitat

Developed Areas and Agricultural Fields provide the lowest quality habitat for native wildlife species along the project corridor. The disturbance (either permanent or periodic) from human activities is a deterrent to many wildlife species. However, the annual croplands provide some forage for common species such as Brewer's blackbird, gophers, and deer, which can tolerate the disturbances to obtain forage.

3.5.2.3 Special-Status Plant Species

Special-status species include officially listed threatened and endangered species that are legally protected under federal and/or state Endangered Species Acts, and other species that are not classified as threatened or endangered but are otherwise under scrutiny by federal or state agencies or the scientific community. They include species that are candidates or proposed for listing, and plants from Lists IA, and IB of the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2007). Plants from Lists 2, 3 and 4 of the CNPS (2007) inventory are not protected but are potential candidates for higher listing because of documented declines and/or negative impacts to populations. Rare or sensitive plant communities are also afforded special consideration as an approach to protecting species at the ecosystem level. Plants from CNPS Lists 2, 3 and 4 and rare/sensitive natural communities are generally reviewed under CEQA relative to avoidance and minimization of environmental impact.

The potential for special-status plant species to occur within the Project corridor was determined by field reconnaissance/habitat assessments and focused protocol surveys

conducted in mid-season 2005; early and late season surveys in 2006 (URS 2006a, URS 2006d, URS 2006i); and early and mid season surveys in 2007 (URS 2007).

From the habitat assessment, it was determined that 72 special-status plant species had the potential to occur in the Project region; these species are listed in Table 3.5-2, Special-Status Plant Species with Potential to Occur Along the Proposed Pipeline Right-of-Way.

Based on the surveys conducted in 2005 and 2006, 11 special-status plant species have been observed within, or in the immediate vicinity of, the Project corridor; shaded boxes in Table 3.5-2 depict these species. One plant species, California jewelflower (*Caulanthus californicus*), a federal- and state-listed endangered plant species, has been documented by CNDDDB (CDFG 2007) in the vicinity of the Project corridor, although URS biologists did not observe this species during focused protocol surveys in 2005, 2006, and 2007. Hardham’s evening primrose (*Camissonia hardhamieae*), also a CNPS List 1B species, was found only in areas burned by the Ricco Complex Fire and only during the 2007 survey (the only survey conducted after the fire). Another species, the round-leaved filaree (*Erodium macrophyllum*), is on CNPS List 2. This species is rare in California, yet is common in other states. San Antonio Hills monardella (*Monardella antonina* ssp. *antonina*) is on CNPS List 3, meaning more information is needed on its rarity in the State. The other seven species are on CNPS List 4, meaning they have limited distributions within the State. Many species on List 4 are often considered “locally-unique”, inferring their limited distribution within the region.

**TABLE 3.5-2
SPECIAL-STATUS PLANT SPECIES WITH THE POTENTIAL TO OCCUR
ALONG THE PROPOSED PIPELINE RIGHT-OF-WAY**

Common Name	Scientific Name	Listing Status			Habitat
		State	Federal	CNPS	
Santa Clara thornmint	<i>Acanthomintha lanceolata</i>	-	-	4	Chaparral, cismontane woodland, often serpentine; one population (several hundred plants) documented on a serpentinite talus toeslope near MP 17.7 (Sta. 934+00 to 935+00)

3.5 Biological Resources

Common Name	Scientific Name	Listing Status			Habitat
		State	Federal	CNPS	
Heart-leaved thornmint	<i>Acanthomintha obovata ssp. cordata</i>	-	-	4	Chaparral, cismontane woodland, juniper woodland, grassland
San Benito thornmint	<i>Acanthomintha obovata ssp. obovata</i>	-	-	4	Chaparral, cismontane woodland, grassland serpentine or alkaline soils; Plants documented between MP 20.28 and 23.77 (25 plants at Sta. 1065+00; 45 plants at Sta. 1255+00)
Hickman's onion	<i>Allium hickmanii</i>	-	-	1B	Closed cone forests, chaparral, scrub, wet areas
Forked fiddleneck	<i>Amsinckia vernicosa var. furcata</i>	-	-	4	Cismontane woodland, grassland
California androsace	<i>Androsace elongata ssp. acuta</i>	-	-	4	Grassy slopes in chaparral and oak woodland
Oval-leaved snapdragon	<i>Antirrhinum ovatum</i>	-	-	4	Chaparral, woodland, juniper woodland, grassland, heavy soils
Salinas milk-vetch	<i>Astragalus macrodon</i>	-	-	4	Chaparral, cismontane woodland, grassland, shale or serpentine
Crownscale	<i>Atriplex coronata ssp. coronata</i>	-	-	4	Grasslands, seasonal wetlands, chenopod scrub, alkaline soils
Brittlescale	<i>Atriplex depressa</i>	-	-	1B	Grasslands, seasonal wetlands, chenopod scrub, alkaline soils
Bakersfield smallscale	<i>Atriplex tularensis</i>	E	-	1B	Grasslands, seasonal wetlands, chenopod scrub, alkaline soils
Dwarf calycadenia	<i>Calycadenia villosa</i>	-	-	1B	Chaparral, cismontane woodland, grassland, gravelly areas
South Coast Range morning glory	<i>Calystegia collina ssp. venusta</i>	-	-	4	Chaparral, cismontane woodland; Plants documented between MP 15.5 and MP 19.4 at MP 15.5 (300 plants at Sta. 820+00 on the grassy bank of an ephemeral stream); MP 17.5 (65 plants at Sta. 926+00; and MP 19.4 (5 plants at Sta. 1025+50)

Common Name	Scientific Name	Listing Status			Habitat
		State	Federal	CNPS	
Hardham's evening primrose	<i>Camissonia hardhamiae</i>	-	-	1B	Chaparral, scrub, and woodland settings, often associated with sandy or limestone soils after burns or other disturbances; Several populations documented in spring 2007 in areas burned by Ricco Complex Fire in 2006 between MP 12 and 15 at MP 12.05 (250 plants at Sta. 636+00); MP 12.58 (several hundred plants at Sta. 664+00); MP 12.63 through 12.78 (whole slopes from Sta. 666+00 and 676+00); MP 12.85 through 12.95 (whole slopes from Sta. 678+00 and 683+50); MP 13 (200 plants at Sta. 686+00); and MP 14.91 (500 plants at Sta. 787+00 through 788+00)
Tompkin's sedge	<i>Carex tompkinsii</i>	-	-	4	Chaparral, cismontane woodland, conifer forests
California jewelflower	<i>Caulanthus californicus</i>	E	E	1B	Chenopod scrub, grassland, juniper woodland; CNDDDB record from a few hundred feet east of the proposed pipeline alignment near MP 37 (approximately station 1950+00); surveys associated with pipeline failed to locate this species
Lemmon's jewelflower	<i>Caulanthus coulteri</i> var. <i>lemmonii</i>	-	-	1B	Juniper woodland, grassland
Purple amole	<i>Chlorogalum purpureum</i> var. <i>purpureum</i>	-	T	1B	Cismontane woodland, blue oak woodland, grassland
San Benito spineflower	<i>Chorizanthe biloba</i> var. <i>immemora</i>	-	-	1B	Chaparral, cismontane woodland, sandy and gravelly soils
Douglas spineflower	<i>Chorizanthe douglasii</i>	-	-	4	Chaparral, cismontane woodland, scrub, sandy and gravelly soils

3.5 Biological Resources

Common Name	Scientific Name	Listing Status			Habitat
		State	Federal	CNPS	
Palmer's spineflower	<i>Chorizanthe palmeri</i>	-	-	4	Chaparral, cismontane woodland, grassland
Straight-awned spineflower	<i>Chorizanthe rectispina</i>	-	-	1B	Chaparral, cismontane woodland, coastal scrub, granite soils
Priest Valley spineflower	<i>Chorizanthe ventricosa</i>	-	-	4	Chaparral, cismontane woodland, grassland; Plants known from grassland north of San Andreas Fault (Route)
Brewer's clarkia	<i>Clarkia breweri</i>	-	-	4	Chaparral, cismontane woodland, coastal scrub, serpentine soils
Jolon clarkia	<i>Clarkia jolonensis</i>	-	-	1B	Chaparral, cismontane woodland, coastal scrub
Small-flowered morning glory	<i>Convolvulus similans</i>	-	-	4	Cismontane woodland, grassland, coastal scrub, serpentine soils
Rattan's cryptantha	<i>Cryptantha rattanii</i>	-	-	4	Cismontane woodland, riparian, grassland
Hall's tarplant	<i>Deinandra halliana</i>	-	-	1B	Chenopod scrub, cismontane woodland, grassland, alkali soils
Gypsum-loving larkspur	<i>Delphinium gypsophilum</i> ssp. <i>gypsophilum</i>	-	-	4	Chenopod scrub, cismontane woodland, grassland; Plants documented at MP 34.5 (3 plants at Sta. 1817+00)
Ewan's larkspur	<i>Delphinium hansenii</i> ssp. <i>ewanianum</i>	-	-	4	Cismontane woodland, grassland
Recurved larkspur	<i>Delphinium recurvatum</i>	-	-	1B	Chenopod scrub, cismontane woodland, grassland, alkali soils
Umbrella larkspur	<i>Delphinium umbraculorum</i>	-	-	1B	Cismontane woodland, mesic areas
Hoover's woolly star	<i>Eriastrum hooveri</i>	-	-	4	Chenopod scrub, grassland, juniper woodland, alkaline and sandy soil
Clay-loving buckwheat	<i>Eriogonum argillosum</i>	-	-	4	Cismontane woodland, serpentine
Eastwood's buckwheat	<i>Eriogonum eastwoodianum</i>	-	-	4	Cismontane woodland, sandy or clay soils

3.5 Biological Resources

Common Name	Scientific Name	Listing Status			Habitat
		State	Federal	CNPS	
Western Heerman's buckwheat	<i>Eriogonum heermannii</i> var. <i>occidentale</i>	-	-	4	Cismontane woodland, sandy or clay soils
Temblor buckwheat	<i>Eriogonum temblorense</i>	-	-	1B	Grassland, bare clay or sandstone
Bay buckwheat	<i>Eriogonum umbellatum</i> var. <i>bahiiforme</i>	-	-	4	Cismontane woodland, conifer forests, rocky areas
Jepson's woolly sunflower	<i>Eriophyllum jepsonii</i>	-	-	4	Chaparral, Cismontane woodland, scrub
Round-leaved filaree	<i>Erodium macrophyllum</i>	-	-	2	Cismontane woodland, grasslands with clay soils; Plants documented between MP 20.5 and 35.5 (50-100 plants between Sta. 1080+00 and 1082+00; 50-100 plants between Sta. 1211+00 and 1215+00; plants between Sta. 1362+00 and 1370+00; plants between 1376+00 and 1380+00; plants N of Sta. 1424+00; plants between Sta. 1426 +00 and 1427+00; plants S of Sta. 1435+00; plants S of Sta. 1475+00; plants between Sta. 1526+00 and 1527+50; plants between Sta. 1531+50 and 1535+50; plants at Sta. 1869+50).
San Benito poppy	<i>Eschscholzia hypocoides</i>	-	-	4	Chaparral, cismontane woodland, grassland, serpentine clay soils
Stinkbells	<i>Fritillaria agrestis</i>	-	-	4	Chaparral, cismontane woodland, grasslands, clay soils or serpentinite; Plants documented along San Andreas Fault Reroute between MP 16.5 and 17.2; one plant at Sta 878+00 on bank of ephemeral stream and 25 plants at Sta 909+00 through 910+00 near rock outcrop in grassland

3.5 Biological Resources

Common Name	Scientific Name	Listing Status			Habitat
		State	Federal	CNPS	
Talus fritillary	<i>Fritillaria falcata</i>	-	-	1B	Chaparral, cismontane woodland, shale, granite, serpentine talus
San Benito fritillary	<i>Fritillaria viridea</i>	-	-	1B	Chaparral, serpentine slopes
Serpentine bedstraw	<i>Galium andrewsii ssp. gatense</i>	-	-	4	Cismontane woodland, grassland on clay or serpentine; Plants documented between MP 10.5 and 13.5 (Sta. 535+00; SE of Sta. 561+00; NW of Sta. 610+50; 25 plants at Sta. 700+00); four occurrences within limits of Ricco Complex Fire (July 2006) and between MP 15.4 and 17.2 (5 plants at Sta 813+00; 30 plants between Sta 908+00 and 910+00)
Trumpet-throated gilia	<i>Gilia tenuiflora ssp. amplifaucalis</i>	-	-	4	Cismontane woodland, grassland, sandy areas
Delicate bluecup	<i>Githopsis tenella</i>	-	-	1B	Chaparral, cismontane woodland, mesic sites
Kellogg's horkelia	<i>Horkelia cuneata ssp. sericea</i>	-	-	1B	Coniferous forests, coastal scrub, chaparral, old sandhills
Salinas Valley goldfields	<i>Lasthenia leptalea</i>	-	-	4	Cismontane woodland, grassland
Rayless layia	<i>Layia discoidea</i>	-	-	1B	Chaparral, cismontane woodland, coniferous forests, serpentine talus
Pale-yellow layia	<i>Layia heterotricha</i>	-	-	1B	Pine-juniper woodland, grassland, alkaline or clay soils
Jones's layia	<i>Layia jonesii</i>	-	-	1B	Chaparral, grassland, clay and serpentine outcrops
Woolly-headed lessingia	<i>Lessingia hololeuca</i>	-	-	3	Chaparral, cismontane woodland, coastal scrub; serpentinite
Western lessingia	<i>Lessingia occidentalis</i>	-	-	4	Chaparral, cismontane woodland, coastal scrub, clay or serpentine
Showy madia	<i>Madia radiata</i>	-	-	1B	Grassland, cismontane woodland, chenopod scrub, adobe clay

3.5 Biological Resources

Common Name	Scientific Name	Listing Status			Habitat
		State	Federal	CNPS	
Abbott's bush mallow	<i>Malacothamnus abottii</i>	-	-	1B	Riparian scrub
Indian Valley bush mallow	<i>Malacothamnus arboriginum</i>	-	-	1B	Cismontane woodland, chaparral, granite outcrops, bare soil areas
Davidson's bush mallow	<i>Malacothamnus davidsonii</i>	-	-	1B	Coastal scrub, riparian woodland, cismontane woodland, sandy washes
Jones's bush mallow	<i>Malacothamnus jonesii</i>	-	-	4	Chaparral and cismontane woodland
Carmel Valley bush mallow	<i>Malacothamnus palmeri var. involucratus</i>	-	-	1B	Chaparral, cismontane woodland, talus slopes, serpentine
San Antonio Hills monardella	<i>Monardella antonina ssp. antonina</i>	-	-	3	Chaparral, cismontane woodland; Plants documented between MP 19.4 and 22.5 (1 plant at Sta. 1027+00; 1 plant at Sta. 1164+00; 1 plant at 1170+00)
San Joaquin woolly threads	<i>Monolopia congdonii</i>	-	E	1B	Chenopod scrub, grassland, alkaline or sandy soils
Paso Robles navarretia	<i>Navarretia jaredii</i>	-	-	4	Chaparral, cismontane woodland, grassland, clay, serpentine; Plants documented between MP 27.9 and 34.4 (Thousands of plants, most concentrated between MP 27.9 - 28.95 [Sta. 1475-1530]; MP 31.3-31.4 [Sta. 1640-1650], MP 32.85 [Sta. 1730], MP 33.0 [Sta. 1743], MP 33.1-33.2 [Sta. 1745-7150], and MP 34.4 [Sta. 1817])
Shining navarretia	<i>Navarretia nigelliformis ssp. radians</i>	-	-	1B	Cismontane woodland, grassland, vernal pools
Prostrate navarretia	<i>Navarretia prostrata occidentalis</i>	-	-	1B	Coastal scrub, grassland, vernal pools
Slender nemacladus	<i>Nemacladus gracilis</i>	-	-	4	Cismontane woodland, grassland, gravel or sandy areas
Slender pentachaeta	<i>Pentachaeta exilis ssp. aeolica</i>	-	-	1B	Cismontane woodland, grassland

Common Name	Scientific Name	Listing Status			Habitat
		State	Federal	CNPS	
Hartweg's golden sunburst	<i>Pseudobahia bahiifolia</i>	E	E	1B	Grassland, cismontane woodland, clay soils
San Joaquin adobe sunburst	<i>Pseudobahia peirsonii</i>	E	T	1B	Grassland, cismontane woodland, clay soils
Keck's checkerbloom	<i>Sidalcea keckii</i>	-	E	1B	Cismontane woodlands, grassland; serpentine and clay soils
Mason's neststraw	<i>Stylocline masonii</i>	-	-	1B	Chenopod scrub, pine-juniper woodland, sandy washes
Greene's tuctoria	<i>Tuctoria greenei</i>	R	E	1B	Vernal pools in open grassland

Source: CNDDDB, 2007; CDFG, 2007, URS, 2006a, b, d, g, and i.

Notes:

Highlighted species have been observed in the Project corridor or Project vicinity.

Federal Status Codes: E = Endangered; T = Threatened; **California Status Codes:** E = Endangered; T = Threatened; R = Rare; **CNPS Status Codes:** 1B = Rare, threatened or endangered in California and elsewhere; 2 = Rare, threatened or endangered in California, but common elsewhere; 3 = More information needed on rarity; and 4 = Limited distribution

3.5.2.4 Special-Status Wildlife and Aquatic Fauna Species

Special-status wildlife species are defined herein as those species that are candidates for listing, proposed for listing or currently listed as endangered or threatened under either State or Federal Endangered Species Acts. Other wildlife species considered special-status in this report include migratory birds protected by the Migratory Bird Treaty Act, California fully protected species, nesting raptors protected by CDFG code, and California Species of Special Concern.

The URS (2006a) report on biological resources of the Project corridor evaluated a total of 90 special-status wildlife species. Some of those species are not considered in this report because they do not meet the criteria listed above (e.g., species may be on a "watch" list but not listed, proposed, candidate or a state species of special concern, such as California thrasher). A search of the current CNDDDB database (CDFG 2007) for the quadrangles encompassing the Project corridor listed 11 special-status wildlife species within the general project vicinity. Table 3.5-3, Special-Status Wildlife Species with the Potential to Occur Along the Proposed Pipeline Right-of-Way, lists the wildlife species that may inhabit portions of the Project corridor based on known occurrences in the Project vicinity from the CNDDDB, focused species surveys (McCormick Biological 2005, Kucera 2006, URS 2006h), and previous wildlife habitat evaluations (URS 2006a, 2006b).

**TABLE 3.5-3
SPECIAL-STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR
ALONG THE PROPOSED PIPELINE RIGHT-OF-WAY**

Species	Status ¹	Habitat	Potential Occurrence On-Site
INVERTEBRATES			
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	Vernal pool, seasonal swales and other wetlands	Potential to occur in vernal pools and stock ponds between MP 9 and 21
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT	Lives only on elderberry	Surveys determined no habitat for this species within Project corridor
AMPHIBIANS			
California tiger salamander <i>Ambystoma californiense</i>	FT, CSC	Ponds and vernal pools for breeding; grasslands for upland	Potential to occur in suitable habitat between MP 8-10 and MP 12-30. Known to occur in Peachtree Valley and along pipeline alignment near MP 17.
Western spadefoot toad <i>Spea (=Scaphiopus) hammondi</i>	CSC	Ponds and vernal pools for breeding; grasslands for upland	Potential to occur in suitable habitat between MP 8-10 and MP 12-30. Known from vicinity of Jacalitos Creek.
California red-legged frog <i>Rana aurora draytonii</i>	FT, CSC	Riparian, marshes, estuaries and ponds.	Potential to occur in suitable habitat between MP 8-10 and MP 12-30.
Foothill yellow-legged frog <i>Rana boylei</i>	CSC	Perennial rivers and creeks with cobble substrate	Potential to occur. Known from portions of Warthan Creek.
REPTILES			
Western pond turtle <i>Emys marmorata marmorata</i>	CSC	Creeks and ponds, grasslands for nesting.	Potential to occur. Known from portions of Warthan Creek.
Blunt-nosed leopard lizard <i>Gambelia sila</i>	SE, FE	Alkali and desert scrub with burrows	Potential to occur in suitable habitat between MP 35-39, but focused surveys to-date have not observed on site.
Silvery legless lizard <i>Anniella pulchra pulchra</i>	CSC	Loose sandy loam soils needed for burrowing, with scattered vegetation, and soil moisture	Potential to occur in sandy loam soils.
Coast horned lizard <i>Phrynosoma coronatum frontale</i>	CSC	Sandy soils, alkali flats with scattered shrubs	Potential to occur in habitats with loose sandy soils.

3.5 Biological Resources

Species	Status ¹	Habitat	Potential Occurrence On-Site
San Joaquin whipsnake <i>Masticophis flagellum ruddocki</i>	CSC	Valley grasslands, saltbush scrub with mammal burrows	Potential to occur.
Two-striped garter snake <i>Thamnophis hammondi</i>	CSC	Streams with rocky or sandy beds, ponds and dense bank vegetation	Potential to occur.
BIRDS			
White-tailed kite <i>Elanus leucurus</i>	FP	Nests in riparian and oak woodlands	Potential nesting habitat present.
Northern harrier <i>Circus cyaneus</i>	CSC	Nests in tall grass or shrubs; forages in grasslands	Potential to occur.
Golden eagle <i>Aquila chrysaetos</i>	CSC, FP	Nests in trees with dense canopy such as oaks, forages in open areas	Potential to occur.
Cooper's hawk <i>Accipiter cooperii</i>	CSC	Nests in oak woodland or riparian woodland; forages widely	Observed nesting near MP 17.5, 24.75, and 31 in 2006.
Swainson's hawk <i>Buteo swainsoni</i>	ST	Nests in tall trees in riparian corridors or oak woodlands adjacent to open fields	Potential to occur. Nest observed near ROW in 2004, but no MP given.
Ferruginous hawk <i>Buteo regalis</i>	CSC	Winters in extensive grasslands, open shrub or deserts. Not known to breed in California.	Potential wintering habitat in large expanses of grasslands.
Merlin <i>Falco columbarius</i>	CSC	Winters in a variety of habitats; feeds on smaller birds; does not nest in California	Potential wintering habitat along the Project corridor.
Mountain plover <i>Charadrius montanus</i>	CSC	Wintering in short grasslands, agricultural fields, and bare ground. Not known to breed in California	Potential wintering habitat present.
Short-eared owl <i>Asio flammeus</i>	CSC	Nests on ground in grasslands with tall vegetation, marshes	Potential wintering habitat on site, but area outside known nesting range.
Western burrowing owl <i>Athene cunicularia hypugea</i>	CSC	Nests and winters in grasslands with burrows and short vegetation	Potential, observed owl signs near MP 4.65 and MP 52.75
California horned lark <i>Eremophila alpestris actia</i>	CSC	Nests on ground in habitats with short vegetation	Potential to occur.

Species	Status ¹	Habitat	Potential Occurrence On-Site
Loggerhead shrike <i>Lanius ludovicianus</i>	CSC	Nests in dense shrubs or low trees adjacent to open spaces	Potential to occur.
MAMMALS			
Short-nosed kangaroo rat <i>Dipodomys nitratooides brevinasus</i>	CSC	Grasslands, desert shrub with friable soils	Potential to occur.
Monterey dusky-footed woodrat <i>Neotoma fuscipes luciana</i>	CSC	Woodlands and forest habitats	Potential to occur in oak woodlands.
Tulare grasshopper mouse <i>Onychomys torridus tularensis</i>	CSC	Arid valleys and scrub	Potential to occur.
Salinas pocket mouse <i>Perognathus inornatus psammophilus</i>	CSC	Grasslands and desert scrub with sparse vegetation and sandy soils	Potential to occur.
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	FE, ST	Grasslands, scrub habitats	Potential to occur.
American badger <i>Taxidea taxus</i>	CSC	Open habitats with friable soils	Potential to occur.

¹ Key:

- FE = Federally listed as endangered species
- FT = Federally listed as threatened species
- SE = State listed as endangered species
- ST = State listed as threatened species
- FP = Fully protected by State
- CSC = California species of special concern

Several species discussed in the URS 2006b report are not expected to occur along the Project corridor because it is outside the species' known range or the Project corridor lacks suitable habitat for the species. These include: Conservancy fairy shrimp, longhorn fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, steelhead, arroyo toad, Santa Cruz long-toed salamander, black legless lizard, giant garter snake, white-faced ibis, sharp-shinned hawk, northern goshawk, western yellow-billed cuckoo, long-billed curlew, Vaux's swift, black swift, bank swallow, Least Bell's vireo, pallid bat, Townsend's big-eared bat, spotted bat, western mastiff bat, Nelson's antelope squirrel, Merced kangaroo rat, Fresno kangaroo rat, giant kangaroo rat, big eared kangaroo rat, and riparian brush rabbit. Other species may occur as occasional foragers or transients during migration, but the Project corridor contains no suitable breeding or wintering habitat. These species include: California condor, bald eagle, prairie falcon, peregrine falcon, willow flycatcher, yellow warbler, and tricolored blackbird.

3.5.3 Regulatory Setting

3.5.3.1 Federal

FEDERAL CLEAN WATER ACT

The U.S. Army of Corps of Engineers (ACOE) regulates activities within Waters of the United States pursuant to congressional acts: Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (1977, as amended). Section 404 of the Clean Water Act (CWA, 1977, as amended) requires a permit for discharge of dredged or fill material into Waters of the United States. Under Section 404, Waters of the United States is defined as all waters which are used currently, or were used in the past, or may be used in the future for interstate or foreign commerce, including waters subject to the ebb and flow of the tide up to the high tide line. Additionally, areas such as wetlands, rivers and streams (including intermittent streams and tributaries) are considered Waters of the U.S. Fill within wetlands is regulated under the CWA through a Nationwide Permit Program and an Individual Permit Program. The Project corridor may support wetlands that are considered "special aquatic sites" under this Act (if the site is hydrologically connected to adjacent waters). Isolated waters (i.e., those not part of a surface tributary systems) and adjacent wetlands, where no hydrological connection exists, are not currently considered jurisdictional under Section 404.

FEDERAL ENDANGERED SPECIES ACT (FESA)

The U. S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NOAA) administer the FESA of 1973 and Title 16 (implementing regulations) of the U.S. Code of Regulations (CFT) 17.1 et seq. USFWS administers the FESA for wildlife and most aquatic species; NOAA Fisheries administers the FESA for anadromous fish and marine species. FESA designates and provides protection for threatened and endangered plants and animals and their critical habitat. Section 9 of FESA prohibits the "take" of federally listed wildlife species; however, the "incidental take" of federally listed species may be permitted during the course of an otherwise lawful activity through provisions included in Section 7 or Section 10 of the Act. Section 7 of the Act applies to projects where a federal agency is involved by issuing a permit, funding, or conducting the project. Under Section 7, the federal agency involved with the project consults with the USFWS, which authorizes limited incidental take of the affected species in the form of a Biological Opinion letter, with specific terms and conditions to avoid and minimize the effects on the species. Early informal consultations with federal agencies for this Project have determined that incidental take for this Project will be

authorized under Section 7 consultation between the ACOE and the USFWS during the CWA 404 permit process. The Project corridor has no species (marine and anadromous fish) regulated by NOAA Fisheries; therefore, that agency will not be consulted.

MIGRATORY BIRD TREATY ACT

Section 50 CFG part 13 and part 21 regulate the “take” of migratory birds under the Migratory Bird Treaty Act. Migratory birds, bird parts, eggs, and nests are protected. The USFWS issues permits to allow certain activities such as research that may result in take of migratory birds, but the type of activities permitted is very limited and usually does not include standard project construction. The take of migratory birds associated with Project construction activities will be avoided.

3.5.3.2 State

CALIFORNIA ENDANGERED SPECIES ACT

Section 2080 of the California Fish and Game Code prohibits the “take” of species listed under the California Endangered Species Act (CESA) of 1984. Incidental take of state listed species may be authorized by Section 2081 of the Code, after consultation with the CDFG, and development of minimization and mitigation measures.

CALIFORNIA STREAMBED ALTERATION AGREEMENT

CDFG also regulates activities within watercourses, lakes and in-stream reservoirs. Under California Fish and Game Codes 1600-1603, modifications to the bed or bank of such a feature are subject to review and permitting by CDFG. Eight plant communities within the Project corridor are considered rare by CDFG (CDFG, September 2003); these plant communities are listed on Table 3.5-4, Vegetation Types/ Botanical Resources within Project Corridor Considered Rare, Sensitive, or Subject to Protections in General Plan Policies.

CALIFORNIA FISH AND GAME CODE FOR WILDLIFE

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code list animals that are fully-protected species and may not be taken or possessed at any time. Permits or licenses to take any fully protected species are issued only for very limited types of activities such as research. Section 3503, 3503.5 and 3513 of the Code protect resident, migratory non-game, and birds-of-prey.

**TABLE 3.5-4
VEGETATION TYPES/BOTANICAL RESOURCES WITHIN PROJECT CORRIDOR
CONSIDERED RARE, SENSITIVE, OR SUBJECT TO PROTECTIONS IN GENERAL PLAN POLICIES**

Plant Community Type	CDFG	Monterey County	Fresno County
Needlegrass grassland	X		
Serpentine outcrops /grassland	X		
Valley oak woodland	X	X	X
Foothill pine-oak woodland		X	X
Juniper-oak cismontane woodland	X		X
Cismontane juniper woodland and scrub	X		
Blue oak woodland		X	X
Coast live oak riparian forest	X	X	X
Fremont cottonwood riparian forest	X	X	X
Southern alluvial fan scrub (scalebroom scrub)	X	X	
Wetlands		X	X
Plant communities supporting rare plant species		X	X
Oak trees		X	X

Source:

CDFG 2003; Monterey County South County Area Plan and Zoning Ordinance – Title 21; Fresno County Open Space/Conservation Element 2000.

CALIFORNIA OAK WOODLAND CONSERVATION ACT

This Act formally recognizes the role of oak woodlands as wildlife habitat, erosion control, and sustaining water quality. The Act encourages voluntary, long-term private stewardship and conservation of oak woodland by landowners and promotes landowners to protect biologically functional oak woodlands. In a related action, effective January 2005, the State amended CEQA with the addition of Public Resources Code 21083.4. This Code requires that counties consider the significance of oak woodland conversions under CEQA and adopt an oak woodland management plan pursuant to the Oak Woodlands Conservation Act that contains measures to minimize impacts to oak woodlands along riparian zones, near wetlands and those that contain snags or other features used by wildlife. If significant impacts are determined under CEQA, mitigation alternatives may include conserving oaks through the use of conservation easements (2:1 ratio, conserved to impacted), restoration of former oak woodland area (2:1 ratio), contribution to the Oak Conservation Fund established under CDFG, or other mitigation measures developed by the Counties. If a planting program is implemented, replanting shall be at a 3:1 ratio (tree replacement) with requirements for planting maintenance and monitoring for seven years. The proposed pipeline

alignment would traverse through approximately 16 miles of oak woodland (i.e., valley oak woodland, blue oak woodland, foothill pine-oak woodland, and juniper-oak woodland).

3.5.3.3 Regional and Local

COUNTY GENERAL PLANS

Some of the plant communities within the Project corridor are considered to be environmentally sensitive under policies/codes in the Monterey County General Plan or Fresno County General Plan (Table 3.5-4). The pipeline alignment, as proposed, would cross through these plant communities. Both counties also have policies/ordinances protecting trees. Monterey County and Fresno County define regulated oak trees differently. Monterey County Zoning Ordinance (21.64.260) regulates all oak trees 6 inches or greater in diameter at breast height (dbh) (“protected tree”); oak trees 24 inches or more in diameter are considered “landmark” trees. Within Fresno County, the Open Space/Conservation Element (2000) has a goal to preserve and protect oak woodlands, including mature trees along scenic roads and “landmark”-sized trees.

3.5.4 Standards of Significance, Environmental Consequences, and Mitigation Measures

SIGNIFICANCE CRITERIA FOR VEGETATION

The thresholds of significance presented in the CEQA Guidelines and general plan policies/ordinances of Monterey and Fresno Counties were used to evaluate Project impacts and to determine if implementation of the Project would pose significant impacts to sensitive plant communities/botanical resources. For this analysis, an adverse impact on vegetation would be considered significant and would require mitigation if the Project would:

- Directly or indirectly disturb a plant community considered rare by CDFG or by County policies or ordinances;
- Directly or indirectly affect oak trees greater than 6 inches in diameter (Monterey County) and/or trees in visually sensitive areas or landmark trees (Fresno County);
- Introduce new or expand the range of invasive, non-native plant species; and
- Result in an oil spill or leak that would contaminate soil and inhibit revegetation or cause disturbances to vegetation during remedial/clean-up operations.

SIGNIFICANCE CRITERIA FOR RIPARIAN HABITATS, WETLANDS, AND UNVEGETATED WATERS OF THE U.S.

Adverse impacts on riparian vegetation, wetland vegetation, and stream channels would be considered significant and would require mitigation if the Project would:

- Fill or alter in-stream wetlands, resulting in long-term change in hydrology, soils or plant species composition or affect a wetland community where natural regeneration would not restore the site to the pre-construction condition within two years;
- Fill or alter unvegetated streambeds where the pre-construction condition would not be restored within two years; and
- Remove riparian vegetation along a stream bank or other water feature where natural regeneration would not restore the site to the pre-construction condition within two years.

SIGNIFICANCE CRITERIA FOR SPECIAL-STATUS PLANT SPECIES

Adverse impacts on federal- or state-listed plant species or other special-status plant species would be considered significant and would require mitigation if the Project would:

- Directly or indirectly disturb a plant species (or its habitat) listed or proposed for listing by state or federal governments as rare or endangered;
- Directly or indirectly disturb a plant species (or its habitat) listed on CNPS List 1B;
- Directly or indirectly affect a substantial portion of a population of plant species listed on CNPS List 2, 3, or 4; and
- Introduce new or expand the range of invasive, non-native plant species that would impact habitat occupied by special-status plant species.

SIGNIFICANCE CRITERIA FOR SPECIAL-STATUS WILDLIFE SPECIES

Adverse impacts on federal- or state-listed animal species or California species of special concern would be considered significant and would require mitigation if the Project would:

- Directly or indirectly impact an animal species (or its essential habitat) listed or proposed for listing by state or federal governments as threatened or endangered;
- Substantially interfere with the movement, range, or population of migratory birds and special-status wildlife species;
- Cause adverse modification to designated critical habitat for federally listed species; and
- Introduce or expand the range of non-native, invasive animal species.

3.5.4.1 Construction Impacts and Mitigation

Impacts and mitigation measures relating to the construction period are addressed in this section. The Applicant, CPL, plans to minimize the width of the construction corridor to the greatest extent feasible. As described earlier in this chapter, a 100-foot-wide maximum construction disturbance corridor along the entire length of the pipeline has been assumed to assess construction impacts. As also described previously, the Applicant has negotiated right-of-way agreements of varying widths along the alignment route. These negotiated landowner agreements include easements ranging from 40 to 100 feet in width. Thus, impact estimates using the 100-foot-wide maximum construction disturbance corridor evaluate the maximum areal extent of impacts that could actually occur within the construction corridor. While the acreage amounts included in the impact tables in this section correlate with the maximum construction disturbance corridor, actual impact acreages could be considerably less if disturbance is contained within the variable width alignment associated with CPL's right-of-way agreements. For example, the 100-foot corridor would be anticipated to result in a disturbance area of about 695 acres over the 57-plus pipeline corridor, whereas if disturbance is contained within the CPL 'actual' variable width corridor, only about 480 acres would be disturbed.

Mitigation ultimately imposed for biological impacts will be based on the actual acres disturbed, which will be confirmed by on-site biological construction monitors during pipeline construction. Thus, acreages presented in this analysis are provided for purposes of assessing the magnitude of impacts in a regional context, rather than as an exact tabulation of specific disturbances.

As noted in Section 2.0, Project Description, construction staging areas, work areas, and soil storage areas are often defined late in the pipeline planning and design process. By the spring of 2007, CPL had identified a number of these areas that would be located

outside of the 100-foot-wide maximum disturbance corridor. These work areas are shown on large format (2 ft x 3 ft) route alignment sheets prepared at a scale of 1-inch equals 500 feet (Trigon-EPC 2007), but are too small to show on graphics scaled to a usable size in this Draft EIR. The Trigon (2007) detailed route alignment sets (also known as 'Revision H') are available for public review at the Monterey and Fresno County Planning Departments (refer to Section 1.1.3 for information on accessing technical documents). Areas likely to be disturbed by these staging and work areas are enumerated and evaluated to the extent possible in the impact analysis presented in this section. Currently identified staging and work areas would impact about 46 acres outside of the 100-foot construction corridor.

CPL has determined that additional staging areas, workspaces, and soil storage areas beyond those shown on the Revision H alignment sheets will likely be required during the anticipated 10- to 15-month construction period. CPL estimates the temporary use of these areas could result in the disturbance of an additional 100 acres of land at currently unknown locations. CPL states that siting of the as-yet unidentified staging, work, and soil storage areas would include an analysis of sensitive biological resources and that the avoidance of wetlands and other sensitive habitats would be a priority. It is also possible that minor adjustments could be made during final design in order to avoid or minimize the effects of certain geological features (e.g., landslides, etc.) on pipeline safety. All mitigation measures identified for known disturbance areas will be applicable to 'unknown' work areas and/or minor alignment modifications. Additionally, environmental clearance procedures for those areas are discussed in this section (see Mitigation Measures 3.5-1a and 3.5-6).

For the purposes of this document, the removal of mature native trees (e.g., oaks) is considered as a permanent on-site impact to wildlife habitat; however, mitigation is proposed by CPL to reduce loss of permanent on-site habitats through off-site mitigation, either in the form of credits in established mitigation banks and/or purchase of an agency-approved conservation easement protected in perpetuity. CPL is currently working with a conservation agency on the purchase of the 2,500-acre Los Vaqueros Ranch near the mouth of the Arroyo Seco Valley which would become a conservation easement protected from development in perpetuity. A description of this proposed mitigation is provided in Appendix E, Proposed Biological Mitigation: Los Vaqueros Ranch Conservation Easement.

VEGETATION AND WETLANDS

Pipeline construction has the potential to impact sensitive plant resources, including riparian communities, wetlands, and special-status plant species. In addition, construction activities will affect unvegetated streambeds (i.e., other waters of the U.S.) and locally significant features (i.e., mature oak trees).

Table 3.5-5, Vegetation Resources Potentially Impacted within the Project Corridor, and Table 3.5-6, Special-Status Species Potentially Impacted within the Project Corridor, quantify these disturbances within a range of parameters. The first ‘potential impacts’ column in Table 3.5-5 provides an estimate of the acres likely to be disturbed within the 100-foot maximum disturbance corridor. The second column includes the construction staging and work areas identified on the current alignment (Revision H) sheets in addition to the 100-foot-wide corridor disturbance. Those work areas yet to be sited are not included in Table 3.5-5 since it is not possible to determine which vegetation communities may be affected.

**TABLE 3.5-5
VEGETATION COMMUNITIES POTENTIALLY IMPACTED
WITHIN THE PROJECT CORRIDOR¹**

Resource	Direct Impact	Indirect Impact	Potential Impacts: 100-foot-wide Corridor (acres) ²			Potential Impacts: Work Areas Plus 100-foot-wide Corridor (acres)		
			<i>Fresno County</i>	<i>Monterey County</i>	<i>Total</i>	<i>Fresno County</i>	<i>Monterey County</i>	<i>Total</i>
RARE OR SENSITIVE PLANT COMMUNITIES/BOTANICAL RESOURCES								
Needlegrass grassland	X	X	Small stands on hillsides and slopes within non-native grassland	Small stands on hillsides and slopes within non-native grassland		Small stands on hillsides and slopes within non- native grassland	Small stands on hillsides and slopes within non-native grassland	
Valley oak woodland	X	X	19.2	0.7	19.9	21.2	6.2	27.4
Blue oak woodland	X	X	43.3	56.3	99.6	43.2	57.0	100.2

3.5 Biological Resources

Resource	Direct Impact	Indirect Impact	Potential Impacts: 100-foot-wide Corridor (acres) ²			Potential Impacts: Work Areas Plus 100-foot-wide Corridor (acres)		
			<i>Fresno County</i>	<i>Monterey County</i>	<i>Total</i>	<i>Fresno County</i>	<i>Monterey County</i>	<i>Total</i>
Foothill pine – oak woodland (including serpentinite areas near MP 16.5)	X	X	50.1	41.0	91.1	54.2	42.7	96.9
Juniper – oak cismontane woodland	X	X	4.4	0	4.4	4.6	0	4.6
Cismontane juniper woodland and scrub	X	X	39.8	0	39.8	41.5	0	41.5
Mature Oak Trees	X	X	Exact number not known; several hundred expected	Exact number not known; several hundred expected		Exact number not known; several hundred expected	Exact number not known; several hundred expected	
RIPARIAN AND WETLANDS								
Coast live oak riparian forest		X	0	11.4	11.4	0	13.0	13.0
Fremont cottonwood riparian woodland		X	5.3	0	5.3	7.5	0	7.5
Mulefat scrub	X	X	2.0	2.5	4.5	2.4	2.7	5.1
Tamarisk scrub	X	X	10.5	0	10.5	10.3	0	10.3
Southern alluvial fan scrub	X	X	0.3	0.3	0.6	0.4	0.3	0.7
Wetlands	X	X	1.0	1.1	2.0	1.0	1.1	2.1
Other Waters of the U.S. (unvegetated streambed)	X	X	5.5	4.6	10.1	5.5	4.6	10.1

3.5 Biological Resources

Resource	Direct Impact	Indirect Impact	Potential Impacts: 100-foot-wide Corridor (acres) ²			Potential Impacts: Work Areas Plus 100-foot-wide Corridor (acres)		
			Fresno County	Monterey County	Total	Fresno County	Monterey County	Total
SCRUB, CHAPARRAL, AND NON-NATIVE GRASSLAND								
Valley Saltbush	X	X	30.0	0	30.0	33.9	0	33.9
Diablan Sage	X	X	7.9	4.1	12.0	8.1	4.1	12.2
Northern Mixed Chaparral	X	X	0	5.8	5.8	0	6.0	6.0
Non-native grassland	X	X	70.9	62.9	133.8	81.0	73.1	154.1

Source:

URS/CPL Excel Tables Dated 5/07.

Notes:

¹ Agricultural Fields and Developed Areas are not included in this table as they do not represent ‘natural’ plant communities.

² All acreages rounded to the nearest tenth of an acre for purposes of this table. More specifics are defined for wetlands and other Waters of the U.S. in Table 3.5-8 and for submission to ACOE and CDFG for permitting purposes.

**TABLE 3.5-6
SPECIAL-STATUS SPECIES POTENTIALLY IMPACTED
WITHIN THE PROJECT CORRIDOR**

Resource	Direct Impact	Indirect Impact	Location of Special-Status Species Occurrence
Santa Clara thornmint	X	X	Plants documented near MP 17.7 (Several hundred plants at Sta. 934+00 to 935+00)
San Benito thornmint	X	X	Plants documented between MP 20.28 and 23.77 (25 plants at Sta. 1065+00; 45 plants at Sta. 1255+00)
South coast range morning glory	X	X	Plants documented between MP 15.5 and MP 19.4 (300 plants at Sta. 820+00 on the grassy bank of an ephemeral stream; 65 plants at Sta. 926+00; and 5 plants at Sta. 1025+50)
Hardham’s Evening primrose	X	X	Plants documented in areas burned by Ricco Complex Fire in 2006 between MP 12 and 15 (250 plants at Sta. 636+00; several hundred plants at Sta. 664+00; several thousand plants [whole slopes] from Sta. 666+00 and 676+00); MP 12.85 through 12.95; several thousand plants [whole slopes] from Sta. 678+00 and 683+50); 200 plants at Sta. 686+00; and 500 plants at Sta. 787+00 through 788+00)

Resource	Direct Impact	Indirect Impact	Location of Special-Status Species Occurrence
California jewelflower		X	Plants documented by CNNDDB near MP 37; CPL/URS plant surveys 2005-2007 failed to locate this species (approximately Sta. 1950+00);
Gypsum-loving larkspur	X	X	Plants documented at MP 34.5 (3 plants at Sta. 1817+00)
Round-leaved filaree	X	X	Plants documented between MP 20.5 and 35.5 (50-100 plants between Sta. 1080+00 and 1082+00; 50-100 plants between Sta. 1211+00 and 1215+00; plants between Sta. 1362+00 and 1370+00; plants between 1376+00 and 1380+00; plants N of Sta. 1424+00; plants between Sta. 1426 +00 and 1427+00; plants S of Sta. 1435+00; plants S of Sta. 1475+00; plants between Sta. 1526+00 and 1527+50; plants between Sta. 1531+50 and 1535+50; plants at Sta. 1869+50).
Stinkbells	X	X	Plants documented between MP 16.5 and 17.2 (1 plant at Sta. 878+00 and 25 plants at Sta. 909+00 through 910+00)
Serpentine bedstraw	X	X	Plants documented between MP 10.5 and 13.5 as well as between MP 15.4 and 17.2 (Sta. 535+00; SE of Sta. 561+00; NW of Sta. 610+50; 25 plants at Sta. 700+00; 5 plants at Sta. 813+00; 30 plants between Sta. 980+00 and 910+00)
San Antonio Hills monardella	X	X	Plants documented between MP 19.4 and 22.5 (1 plant at Sta. 1027+00; 1 plant at Sta. 1164+00; 1 plant at 1170+00)
Paso Robles navarretia	X	X	Plants documented between MP 27.9 and 34.4 (Thousands of plants, most concentrated between MP 27.9 - 28.95[Sta. 1475-1530]; MP 31.3-31.4 [Sta. 1640-1650], MP 32.85 [Sta. 1730], MP 33.0 [Sta. 1743], MP 33.1-33.2 [Sta. 1745-7150], and MP 34.4 [Sta. 1817])

Source:

URS 2006a, b, g, i; URS 2007

Impact 3.5-1: Direct Impact to Upland Vegetation Due to Removal

Pipeline construction, including associated facilities and access road improvements, will result in the temporary removal of upland vegetation, including native trees. Construction will also result in the removal of upland plant communities that are considered rare by CDFG or sensitive by local governments.

Impacts to upland vegetation will occur from the Project during grading, trenching, construction staging and improvements to right-of-way access roads, resulting in a temporary loss of vegetation. The temporary impacts to non-native grassland, Diablan sage scrub, chaparral, agricultural fields, and developed land would be considered adverse, but not significant. Impacts to plant communities that are considered rare by CDFG or sensitive by local governments (including individuals oak trees), however, are potentially significant.

A summary of the impacts to rare and/or sensitive upland plant communities, based on the acres of habitat likely to be disturbed by the pipeline, is listed in Table 3.5-5 as the first grouping of vegetation communities in the table. Direct impacts to rare and/or sensitive plant communities will occur from the removal of trees, shrubs, and herbaceous vegetation during pipeline construction. Indirect impacts may also be incurred from inadvertent equipment access into adjacent woodlands, trampling, erosion, and dust.

The maximum temporary and permanent (only in areas that must be maintained for visual surveillance of the pipeline) direct and indirect impacts to rare and/or sensitive plant communities are shown in the second column of Table 3.5-5 and are: valley oak woodland, up to 27.4 acres; blue oak woodland, up to approximately 100.2 acres; foothill pine-oak woodland, up to 96.9 acres; juniper-oak cismontane woodland, up to 4.6 acres; and cismontane juniper woodland and scrub, up to 41.5 acres. As previously described, serpentine bunchgrass/rock outcrop habitats also occur within the foothill-pine-oak woodland community along the San Andreas Reroute (Pitts Ranch, approximately MP 16.5 to MP 17.5).

The number of oak trees that will be potentially impacted by the Project has not been determined; however, several hundred trees may be removed (URS, 2006a). As discussed in Section 3.5.2, Affected Environment, the July 2006 Ricco Complex fire burned blue oak woodland and coast live oak riparian forest between MP 7.8 and MP 15.4. Observations of the post-fire conditions by URS biologists revealed significant mortality and damage to the oaks within the woodland. Where the fire burned intensively, all trees may be lost. In moderately and lightly burned areas, scorched trees and shrubs may recover.

The removal of live native trees, including oaks, is potentially significant.

Common shrubs and herbaceous plant species that grow within the rare/sensitive woodland communities within the Project corridor are expected to

naturally re-colonize the post-construction area. The Project Applicant has proposed to salvage and temporarily stockpile the upper 6 inches of topsoil from the construction area. This topsoil, and its accompanying seedbank of native plant species, will be redistributed over the construction site, thus disseminating the original seedbank over the construction area. Temporary impacts to the understory of woodland plant communities are considered adverse, but not regionally significant.

The Project has the potential to spread invasive, non-native weeds into the work area. The tires and undercarriages of equipment entering the work area from areas infested with invasive, non-native plant species may introduce weed species into the construction area. The spread of invasive, non-native plant species, including noxious weeds, may impact sensitive plant communities and/or colonies of special-status plant species

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Mitigation Measure 3.5-1a: Biological Construction Monitoring and Clearance Procedures

CPL shall provide qualified biologists and resource specialists to monitor construction activities where sensitive resources have been identified on Project maps. A biological resource monitor, as defined below, shall be on-site during all construction activities at stream or channel crossings that contain flowing water, sensitive species, or their habitat.

Monitors shall be hired and trained prior to construction and shall be responsible for pre-construction surveys; providing environmental awareness training to construction crews; staking sensitive resources; keeping daily records documenting actual construction disturbances (for the purpose of calculating final compensation acreages) and sighting of special-status species, any take of special-status species; and other specific tasks outlined in subsequent mitigation measures. Monitors shall also document violations and compliance, coordinate with contract compliance inspectors, and shall adhere to a pre-approved, standardized clearance procedure for construction and work areas. Monitors shall examine all potential work areas to ensure avoidance of critical resources

(wetlands, riparian vegetation, breeding ponds, kit fox burrows, etc.). Monitors will be provided with a County-approved clearance checklist to be developed in consultation with the Counties prior to any ground disturbance.

Resource monitors shall be familiar with the plant and wildlife species and other sensitive biological resources in the general Project area and shall be qualified to recognize potential construction effects to these resources. Monitoring shall be particularly intensive near identified habitat for federal- and state-listed species.

Mitigation Measure 3.5-1b: Tree Avoidance and Replacement

CPL shall avoid, minimize, and compensate for impacts to living oak trees, including oak trees protected by local ordinances, by implementing pre-construction and construction-period avoidance and minimization measures and compensating for unavoidable impacts to oak trees. Compensation may be implemented through one of three mechanisms, or some combination thereof: 1) replacement via replanting, 2) permanent preservation of oak trees, which could include, but not be limited to, establishment of a conservation easement on lands that support oak trees, or 3) contribution to an established, County-approved oak woodland conservation fund.

Avoidance and Impact Minimization Measures: During development of the final layout of the pipeline alignment (i.e., final construction drawings), CPL shall avoid impacts to oak trees to the greatest extent feasible. During clearing of the construction right-of-way, staging areas, and the Mid-Line Heating Station, a qualified biologist or arborist shall document the size (diameter at breast height [dbh] or 4.5 ft above the ground), species, and location of all oak trees that are removed. A qualified biological monitor shall be present during tree clearing activities. The biological monitor shall determine which of the trees affected by the 2006 Ricco Complex Fire (Monterey County) are still alive within the Project right-of-way, based on evidence of re-sprouting, live cambium layers or other measures, as determined by a qualified botanist or arborist.

- *Prior to clearing of trees, a qualified biologist or arborist shall implement field avoidance measures for trees that will not be removed. Such measures shall include installing, where feasible, protective fencing around the dripline of trees to be retained, proper techniques for trimming, and other field measures recommended by the biologist or arborist to protect and/or preserve native trees. In addition, CPL shall avoid impacts*

to live “landmark” oak trees (trees 24 inches or more in diameter) within the Project right-of-way, to the greatest extent feasible. Trees/tree groves protected by fencing or other measures shall be marked in the field as “SENSITIVE HABITAT AREA - NO CONSTRUCTION ACCESS”.

- *During construction, CPL’s qualified biologist or arborist shall monitor the contractor’s compliance with tree avoidance and impact minimization measures.*
- *After construction, CPL shall provide Monterey and Fresno Counties with a listing of all live oak trees (size, location) 6 inches or greater in diameter (“protected tree”) that were removed or otherwise impacted as a result of activities such as trimming or driving within the dripline.*

Compensation for Impacts to Oak Trees: *Within 12 months of the completion of construction, CPL shall implement compensation for impacts to protected oak trees. Compensation may be implemented through one of the three mechanisms, or some combination thereof: 1) replacement via replanting, 2) permanent preservation of oak trees, which could include, but not be limited to, establishment of a conservation easement on lands that support existing oak trees, or 3) contribution to a County-approved oak woodland conservation fund. If compensation includes plantings, maintenance and monitoring of the plantings shall occur for seven years after planting. Annual reports shall be submitted to Monterey and Fresno Counties by December 31 of each monitoring year, describing the results of the plantings, maintenance actions implemented, and any remedial measures necessary to achieve a performance standard of 80 percent survival. CPL shall replace each removed, protected tree on a 3:1 ratio (three trees planted for each protected tree removed), except for landmark trees which shall be replaced at a 5:1 ratio.*

If off-site mitigation is used, the ratio for impacted oaks to protected oak woodland shall be a minimum of 3:1. If an oak woodland conservation fund is established, differential rates shall be designated for each tree over 6 inches in diameter and shall be designated for each tree over 24 inches in diameter. Funds shall be provided at a rate approved by each County, and shall be sufficient to meet the required mitigation ratio through planting or conservation of existing oaks at off-site locations, and shall allow for management in perpetuity. Funds shall be used for oak woodland preservation and/or plantings, as determined by each County.

Mitigation Measure 3.5-1c: Serpentine Habitat Impact Minimization and Revegetation

CPL shall minimize and compensate for impacts to serpentine habitat areas by implementing construction-period impact minimization measures and specific post-construction revegetation actions.

Impact Minimization Measures: *During development of the final design and layout of the pipeline (i.e., final construction drawings), CPL shall minimize the construction footprint within serpentine bunchgrass areas to the greatest extent feasible. Areas of serpentine bunchgrass have been documented in foothill pine-oak woodlands along the western portion of the San Andreas Fault Reroute (MP 16.5 to 17.5).*

- *Prior to clearing and grubbing, a qualified biologist shall assess the limits of construction to verify that impacts to serpentine bunchgrass areas are minimized and identify the location and extent of field avoidance features that will be implemented prior to and during construction. Such measures shall include installing protective fencing or clearly marking the limits of grading and other field measures recommended by the biologist. Grassland areas protected by fencing or other measures shall be depicted on the construction documents and marked in the field as “SENSITIVE HABITAT AREA—NO CONSTRUCTION ACCESS”; and*
- *In areas that support serpentine bunchgrass, the upper 6 inches of topsoil that is stripped from the construction right-of-way shall be salvaged and stored at the edge of the construction right-of-way; serpentine substrate/topsoil shall be stored separately from non-serpentine topsoil.*

Revegetation Measures: *Following site construction, the stockpiled topsoil shall be replaced on site and finish graded to blend with pre-construction conditions. The area of disturbed serpentine bunchgrass shall be allowed to naturally regenerate or will be supplemented with locally native herbaceous plant species conducive to the re-establishment of serpentine bunchgrass communities.*

Level of Significance After Mitigation: Less than Significant

Impact 3.5-2: Direct Impact to Riparian and Wetlands Due to Removal or Fill

Pipeline construction will result in the temporary removal of riparian vegetation and in-stream wetlands. Construction will also result in temporary alteration of unvegetated streambeds. These communities are under the jurisdiction of ACOE, CDFG and the Regional Water Quality Control Board (RWQCB) and are considered to be sensitive habitats by local governments.

It is anticipated that the pipeline would cross ±154 total streams, including an estimated 8 perennial streams, 33 intermittent streams (or wetlands in intermittent streams) and 113 ephemeral streams. Several additional wetland features, though not actually crossed by the pipeline, would be affected by proposed construction work. By current estimates, 171 total wetland features would be affected by pipeline construction, assuming additional work areas not yet sited would avoid wetlands and 'other waters of the U.S.' CPL proposes to minimize impacts to riparian habitats by using a combination of horizontal directional drilling (HDD), jack and bore techniques, and both dry and wet open trench construction techniques. CPL's preferred method of crossing streams is the dry open cut method which can be used for many streams in this region during the dryer part of the year. It is anticipated that most construction would occur during the dry season, and given that most of the streams are either ephemeral or intermittent, stream crossings could, for the most part, be completed using the dry open cut method. The wet open cut method and HDD are available options if a stream channel is wet at the time of construction. Figure 2-17 in Chapter 2.0, Project Description, depicts a typical wetland crossing using mats to minimize equipment disturbances and compaction at wet open trench crossings. The most current alignment sheets (Revision H, Trigon-EPC 2007) indicate that HDD likely would be used at about nine stream crossings, most of which are located along Warthan Creek.

Project construction would result in temporary impacts to native riparian plant communities (i.e., central coast live oak riparian forest, mulefat scrub, Fremont cottonwood riparian woodland, and southern alluvial fan scrub) where the pipeline will cross streams supporting such resources. The Project may affect up to 26.3 acres of native riparian habitat; a summary of these impacts, by County and riparian type, is presented in Table 3.5-7, Summary of Impacts to Native Riparian Plant Communities. The disturbance acreages shown in Table 3.5-7 indicate the area that would be affected assuming disturbance of the entire the

100-foot maximum construction disturbance corridor and the additional work areas shown on current alignment sheets (Trigon-EPC 2007).

**TABLE 3.5-7
SUMMARY OF IMPACTS TO NATIVE RIPARIAN PLANT COMMUNITIES**

Habitat Type	Affected Area (acres)
	<i>100-Foot Maximum Disturbance Corridor and Work Areas</i>
MONTEREY COUNTY	
Coast Live Oak Riparian Forest	13.0
Mulefat Scrub	2.7
Southern Alluvial Fan Scrub	0.3
Subtotal	16.0
FRESNO COUNTY	
Fremont Cottonwood Riparian Woodland	7.5
Mulefat Scrub	2.4
Southern Alluvial Fan Scrub	0.4
Subtotal	10.3
TOTAL	26.3

Source:

URS 5/2007, based on Revision H alignment and work areas.

Depending upon the construction methods used at the creek crossings, impacts to riparian habitats may be incurred from vegetation removal (if open trench techniques are used), equipment access in the creek, trampling of vegetation by construction, and post-construction sedimentation or erosion. Impacts to riparian habitats are considered potentially significant.

Project construction would also result in direct and indirect impacts to in-stream (jurisdictional) wetlands and unvegetated creek channel areas (jurisdictional 'other waters of the U.S.') where the pipeline will cross creeks/drainages. Examples of direct impacts include loss of vegetation or disturbance to vegetation from equipment access. Indirect impacts may include degradation or loss of adjacent wetland resources if the Project significantly interrupts either groundwater or surface water flows to such resources. Indirect impacts to downstream wetlands could also occur after the construction period if backfill

material within the pipeline trench is more permeable than the native material and downstream surface and subsurface flow is substantially altered or dewatered.

As described above, a total of 154 stream crossings are proposed (pers. comm., A. Frasier, May 10, 2007), with a total of 171 wetland/stream features being affected in some way by Project construction activities. A summary of the impacts from these crossings, by County and wetland/stream type, is presented in Table 3.5-8, Summary of Impacts to Wetlands and Other Waters of the U.S. Project-wide, up to 12.178 acres of stream channel, encompassing both vegetated (wetlands) and unvegetated areas (waters of the U.S.) may be temporarily affected by the Project. These impacts are considered temporary, as wetlands are expected to recolonize the affected streambed after installation of the underground pipe.

Permanent impacts to wetlands will occur in only one area along the Project corridor, between MP 20.7 and 21.0. At this location, the pipeline will be installed in a trench to be placed within the limits of an existing private dirt road in a narrow, steep canyon. In order to ensure the long-term safety and stability of the pipeline, small retaining wall structures will be constructed and will result in a small amount (0.019 acres) of permanent fill within the adjacent spring-fed stream and jurisdictional wetlands.

While the impact analysis has determined up to approximately 12.178 acres of wetlands and/or other waters will be temporarily affected by the Project, the exact amount will depend upon the construction method used at the various stream crossings and the adjacent work areas. As noted in earlier text discussions, mitigation for wetland disturbances will be based on actual acreages disturbed as confirmed by the biological monitor during construction. Direct and indirect impacts to wetlands and unvegetated creek bed areas are potentially significant.

**TABLE 3.5-8
SUMMARY OF IMPACTS TO WETLANDS AND OTHER WATERS OF THE U.S.**

Habitat Type	Affected Area (acres) ¹		Number of Features Affected
	Temporary Impacts for 100-foot Maximum Disturbance Corridor and Work Areas	Permanent Impacts for 100-foot Maximum Disturbance Corridor and Work Areas	
MONTEREY COUNTY			
<i>Wetlands</i>			
Riverine Vegetated Streambed	1.141	0	7
<i>Other Waters of the U.S.</i>			
Ephemeral and Intermittent Streams and Stock Ponds	4.575	0	52
Subtotal	5.716	0	59
FRESNO COUNTY			
<i>Wetlands</i>			
Riverine Vegetated Streambed	0.950	0.019	9
<i>Other Waters of the U.S.</i>			
Ephemeral and Intermittent Streams and Stock Ponds	5.512	0	103
Subtotal	6.462	0.019	112
TOTAL	12.178	0.019	171

Notes:

¹ In general, acreages in this document are expressed to the closest tenth of an acre. However, wetland disturbances are represented to the nearest one-thousandth of an acre here in order to accurately represent the anticipated permanent wetland impacts.

Source:

URS May 4, 2007; URS July 20, 2007

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

**Mitigation Measure 3.5-2a: Riparian Avoidance, Impact
Minimization, and Replacement**

CPL shall avoid, minimize, and compensate for impacts to riparian woodlands, including those protected by local ordinances, by implementing pre-construction and construction-period avoidance and minimization measures and developing

and implementing a riparian habitat replacement plan for unavoidable impacts. CPL shall obtain all applicable permits from regulatory agencies (e.g., CDFG, RWQCB, ACOE) prior to construction. A biological monitor, as defined in Mitigation Measure 3.5-1a, shall be on-site during all construction activities at stream or channel crossings that contain flowing water, sensitive species, or their habitat.

Avoidance and Impact Minimization Measures: During development of the final layout of the pipeline alignment (i.e., final construction drawings), CPL shall avoid impacts to native riparian woodlands to the greatest extent feasible. At crossings supporting native riparian woodland, CPL shall propose HDD or jack and bore construction such that impacts to the riparian woodland are avoided. If such methods are not feasible, open trench methods would be used. For all open trench construction areas, concurrent with survey and staking of the construction right-of-way and staging areas, CPL shall document the type and extent of the riparian woodland within the limits of construction; the limits of the construction shall be clearly marked. Riparian areas protected by fencing or other measures shall be depicted on the construction documents and marked in the field as "SENSITIVE HABITAT AREA – NO CONSTRUCTION ACCESS". CPL shall submit this documentation to regulatory agencies pursuant to applicable permits, as well as to the Counties pursuant to the site clearance procedure provided in Mitigation Measure 3.5-1a.

- Prior to clearing and grubbing, a qualified biologist shall assess the limits of construction to verify the results of the riparian mapping and identify the location and extent of field avoidance features that will be implemented prior to and during construction. Such measures shall include installing protective fencing or clearly marking the construction limit line, techniques for trimming riparian vegetation to be retained, and other field measures recommended by the biologist to protect and/or preserve riparian vegetation;*
- Prior to the start of ground disturbing activities, CPL shall enter into a Streambed Alteration Agreement with CDFG. CPL shall provide Monterey and Fresno Counties with copies of the terms and conditions of this agreement prior to the start of construction, including documentation on the extent of construction disturbances to riparian vegetation and the measures to be implemented to protect adjacent riparian woodland during construction; and*

- *During construction, CPL's qualified biologist shall monitor the contractor's compliance with the riparian avoidance and impact minimization measures. CPL shall provide documentation to Monterey and Fresno Counties and applicable permitting agencies on the final amount of riparian vegetation removed and identify any remedial measures necessary to meet Fresno County, Monterey County, and any regulatory agency permit conditions.*

Riparian Scrub Recolonization: *Native riparian scrub (e.g., mulefat scrub and alluvial fan scrub) shall be allowed to naturally recolonize areas disturbed by construction. Within 12 months following construction, CPL shall submit a post-construction report to CDFG and Monterey and Fresno Counties describing the results of recolonization and any remedial measures necessary to ensure riparian scrub has re-established along the affected streams at a 1:1 replacement ratio. CPL's qualified biologist shall monitor the riparian scrub recolonization areas for two years after construction to ascertain if the scrub has re-established within the pipeline construction area. Annual reports shall be submitted to Monterey and Fresno County and CDFG by December 31 of each monitoring year, describing the results of the monitoring and any remedial actions needed to achieve the 1:1 habitat replacement ratio.*

Riparian Tree Revegetation: *Upon completion of construction, CPL shall implement a riparian revegetation plan that compensates impacts to riparian trees. Compensation may be implemented through one of three mechanisms, or some combination thereof: 1) replacement via replanting, 2) permanent preservation of oak trees, which could include, but not be limited to, establishment of a conservation easement on lands that support existing riparian forest/woodlands, or 3) contribution to an appropriate conservation fund. If planting is done, riparian trees shall be replanted at a 3:1 replacement ratio (three trees planted for each native riparian tree impacted by construction). The techniques used for revegetation shall be developed in consultation with CDFG, including spacing and timing of plant installation and maintenance of plantings. Maintenance and monitoring of the plantings shall be implemented for seven years after planting. Annual reports shall be submitted to permitting agencies and Monterey and Fresno Counties by December 31 of each monitoring year, describing the results of the plantings, maintenance actions implemented, and any remedial measures necessary to achieve a performance standard of 80 percent*

survival rate for the plantings and the 3:1 tree replacement ratio, or other ratio as specified by CDFG under the Streambed Alteration Agreement.

If off-site mitigation is implemented through permanent preservation including, but not limited to, establishment of a conservation easement, the ratio for impacted riparian trees to protected riparian woodland shall be a minimum of 3:1. If a riparian tree conservation fund is established, differential rates shall be designated for each tree over 6 inches in diameter and for each tree over 24 inches in diameter. Funds shall be provided at a rate approved by each County, and shall be sufficient to meet the required mitigation ratio through planting or conservation of existing oaks at off-site locations, and allowing for management in perpetuity. Funds shall be used for riparian woodland preservation and/or plantings, as determined by each County.

Mitigation Measure 3.5- 2b: Wetland Avoidance and Impact Minimization

CPL shall avoid or minimize impacts to wetlands and other waters of the U.S. by implementing pre-construction and construction-period avoidance and minimization measures, creating post-construction conditions conducive to natural recolonization of wetlands and, if applicable, providing wetland mitigation for unavoidable permanent impacts to wetlands. CPL shall obtain all applicable permits from regulatory agencies (e.g., CDFG, RWQCB, ACOE) and shall provide a copy of these permits and permit conditions to both Counties prior to construction.

Avoidance and Impact Minimization Measures: During development of the final layout of the pipeline alignment (i.e., final construction drawings), CPL shall avoid direct and indirect impacts to wetlands and to streams supporting in-stream wetlands to the greatest extent feasible.

- At crossings supporting perennial flow and/or in-stream wetlands CPL shall, to the extent feasible, implement HDD or jack and bore construction such that impacts to the perennial waterway and associated wetlands are avoided. If such methods are not feasible, wet open trench methods would be used, as described in Section 2.0, Project Description.*
- For all open trench construction areas, concurrent with survey and staking of the construction right-of-way and staging areas, CPL shall clearly mark the limits of construction adjacent to wetlands. Wetlands*

protected by fencing or other measures shall be depicted on the construction documents and in the field as “SENSITIVE HABITAT AREA – NO CONSTRUCTION ACCESS”.

- At all pipeline crossings and other areas of wetland disturbances, a qualified biologist shall assess the limits of construction prior to clearing and grubbing to identify the location and extent of field avoidance features that will be implemented prior to and during construction. Such measures shall include clearly marking or installing protective fencing at the construction limit line, techniques for salvage and temporary stockpiling of in-stream wetland patches/clumps, and any other field measures recommended by the biologist to protect and/or preserve in-stream wetland vegetation;*
- Prior to the onset of ground disturbing activities, CPL shall obtain an ACOE Section 404 Permit and RWQCB certification, waiver, or Waste Discharge Requirements (WDRs) in lieu of certification. CPL shall provide Monterey and Fresno Counties with copies of the terms and conditions of these permits prior to the start of construction, including documentation of the extent of construction impacts to wetlands and waters of the U.S., avoidance and minimization measures to be implemented during construction, and requirements for post-construction recovery and compensatory mitigation.*
- During construction, CPL’s qualified biologist shall monitor the contractor’s compliance with the wetland avoidance and impact minimization measures. CPL’s biological monitor shall provide documentation to Monterey and Fresno County, ACOE, CDFG, and RWQCB on the final amount of wetland vegetation impacted and identify any remedial measures necessary to meet regulatory agency permit conditions.*

Wetland Recolonization: To partially compensate for temporary impacts to in-stream wetlands, upon completion of construction, the Applicant shall fine grade the streambed in a manner conducive to natural recruitment of wetland vegetation. Wetland patches salvaged and stockpiled prior to construction shall be re-planted on-site. A post-construction report shall be submitted to permitting agencies and Monterey and Fresno Counties describing the results of the recolonization plan and any remedial measures necessary to ensure in-stream wetlands re-establish along the affected streams at a minimum 0.5:1 replacement ratio. CPL’s qualified biologist shall monitor the wetland recolonization areas for

two years after construction to ascertain if the in-stream wetlands have re-established within the pipeline construction area. Annual reports shall be submitted to Monterey and Fresno Counties and other applicable permitting agencies (e.g., CDFG, ACOE) by December 31 of each monitoring year, describing the results of the monitoring and any remedial actions needed to achieve the minimum 0.5:1 habitat replacement ratio.

Wetland Mitigation: To partially compensate for temporary impacts to in-stream wetlands, the Applicant shall implement a wetland mitigation plan in consultation with the ACOE and RWQCB that compensates for temporary impacts to wetland resources at a minimum 0.5:1 replacement ratio. Permanent impacts to wetlands shall be mitigated off-site at a 3:1 replacement ratio. Mitigation may occur via restoration, creation, or preservation of wetlands. Mitigation shall occur at a site acceptable to Monterey and Fresno Counties and permitting agencies and pursuant to Project permit requirements. If the compensatory mitigation includes restoration, enhancement, or creation of wetlands, CPL's qualified biologist shall monitor the designated wetland mitigation area for a minimum of five years to ascertain if the wetland mitigation is successful. Annual reports shall be submitted to Monterey and Fresno Counties and permitting agencies by December 31 of each monitoring year, describing the results of the monitoring and any remedial actions needed to achieve a minimum 0.5:1 habitat replacement ratio for temporary impacts and the 3:1 habitat replacement ratio for permanent impacts to wetlands and other waters.

Level of Significance After Mitigation: Less than Significant

Impact 3.5-3: Construction Effects of Special-Status Plant Species

Construction could result in the loss of individuals or known habitat of special-status plant species.

Project construction may cause direct and indirect impacts to a colony of California jewelflower, a federal- and state-listed endangered species documented by CNDDDB, but not found during the 2005 through 2007 rare plant surveys conducted by the Applicant's consultant, URS. The colony of California jewelflower documented in the CNDDDB was recorded approximately 300 feet east of the proposed pipeline alignment near MP 37 (approximately station 1950+00). Impacts could include inadvertent vehicle and human access, resulting in plant loss and trampling of habitat. Construction activities within the vicinity

may indirectly impact the species through the deposition of dust and the potential for wildfire from the use of construction equipment. Impacts to this species and/or its occupied habitat are considered potentially significant.

Project construction would result in temporary disturbance of Hardham's evening primrose, a CNPS List 1B species. Given the ecology of Hardham's evening primrose (annual, disturbance-loving) and its propensity for emerging in burned or disturbed areas, pipeline construction through the populations found between MP 12 and 15 would not have a significant potential to permanently harm the viability of these populations, especially once the mitigation proposed below is implemented. Consultation with CDFG regarding this species within the Project area corroborated this assessment (pers. comm., T. Keeler-Wolf, CDFG, March 2007).

Project construction would result in the permanent loss of colonies of round-leaf filaree, a species on CNPS List 2 (species considered rare in California, yet more common elsewhere). Depending upon the exact pipeline alignment, up to nine colonies between MP 22.9 (station 1210+00) and MP 35.37 (station 1855+00), collectively encompassing about 2,900 plants could be affected by Project construction. Impacts may include loss of plants and habitat during roadway and pipeline construction, as well as inadvertent vehicle and human access, resulting in plant loss and trampling of habitat. Construction activities within the vicinity may indirectly impact the species through the deposition of dust and the potential for wildfire from the use of construction equipment. Impacts to this species and/or its occupied habitat are considered potentially significant.

The Project corridor supports colonies of plant species that are of limited distribution or infrequent within the greater Project region and are designated on CNPS List 3 or 4. These species include the San Antonio Hills monardella (CNPS List 3), serpentine bedstraw (CNPS List 4), gypsum-loving larkspur (CNPS List 4), Paso Robles navarretia (CNPS List 4), San Benito thornmint (CNPS List 4), Santa Clara thornmint (CNPS List 4), South Coast Range morning glory (CNPS List 4), and stinkbells (CNPS List 4). Depending upon the exact pipeline alignment, individuals of these plant species, as well as their habitat, could be affected by Project construction activities. Impacts may include loss of plants and habitat during roadway and pipeline construction, as well as inadvertent vehicle and human access, resulting in plant loss and trampling of habitat. Construction activities within the vicinity may indirectly impact the species

through the deposition of dust and the potential for wildfire from the use of construction equipment. Impacts to these species and/or their occupied habitat are considered potentially significant.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Mitigation Measure 3.5-3a: Federal- and State-Endangered Listed Species Avoidance

The Applicant shall avoid impacts to the potentially occurring colony of California jewelflower documented by CNDDDB, a federal- and state-listed endangered species and a species on CNPS List 1B. The colony is documented to have occurred approximately 300 feet east of the proposed pipeline alignment near MP 37 (approximately station 1950+00). CPL shall avoid impacts by implementing pre-construction and construction-period avoidance and minimization measures.

Avoidance and Impact Minimization Measures: During development of the final layout of the pipeline alignment (i.e., final construction drawings), CPL shall avoid removal of vegetation within 150 feet of the jewelflower colony, if found to be present. Concurrent with survey and staking of the construction right-of-way in the vicinity of MP 37, CPL shall demarcate the edge of the construction right-of-way adjacent to the jewelflower colony. This buffer area shall be depicted on the construction documents and in the field as "SENSITIVE HABITAT AREA – NO CONSTRUCTION ACCESS". CPL's qualified biologist shall inspect the fence and monitor the contractor's compliance with this avoidance measure.

Mitigation Measure 3.5-3b: CNPS List 1B, 2, 3, and 4 Plant Species Avoidance and Minimization Measures

CPL shall avoid impacts to the documented colonies of CNPS List 1B, 2, 3 and 4 species to the greatest extent feasible. CPL shall implement pre-construction and construction-period avoidance and minimization measures and develop and implement a topsoil/seedbank salvage and replacement plan for unavoidable impacts.

Avoidance and Impact Minimization Measures: During development of the final layout of the pipeline alignment (i.e., final construction drawings), CPL shall

minimize removal of habitat supporting List 1B, 2, 3, and 4 plant species to the greatest extent feasible. This shall be accomplished by reducing the construction area in these areas or other measures developed by CPL's qualified biologist. Concurrent with survey and staking of the construction right-of-way in the vicinity of documented List 1B, 2, 3, and 4 plant species, CPL shall demarcate the construction limits with protective fencing or by clearly marking these areas on the construction documents and in the field as "SENSITIVE HABITAT AREA – NO CONSTRUCTION ACCESS".

- *Prior to clearing and grubbing, a qualified biologist shall assess the limits of construction to identify and refine the location and extent of field avoidance features that can feasibly be implemented prior to and during construction. Such measures shall include, but not be limited to, adjusting the protective fencing or clearly marking between the construction limits and the special-status plant colony, and other field measures recommended by the biologist to protect the plant colonies to be retained. No construction activities shall occur within the sensitive habitat area;*
- *Prior to clearing and grubbing, in areas where impacts to perennial List 1B, 2, 3, or 4 plant species cannot be avoided (e.g., impacts to round-leaf filaree, gypsum-loving larkspur, serpentine bedstraw, stinkbells, South Coast Range morning glory, and San Antonio Hills monardella), CPL's qualified biologist shall collect any available above-ground seed pods/seed heads for future revegetation efforts. During construction, topsoil from areas supporting the perennial plant species shall be stripped from the construction area and stored at the edge of the construction right-of-way. The topsoil shall be used in future revegetation efforts;*
- *During construction, if impacts to annual List 1B, 2, 3, or 4 plant species cannot be avoided, the upper six inches of topsoil supporting seeds/plant parts of these species (i.e., Hardham's evening primrose, San Benito thornmint, round-leaf filaree, and Paso Robles navarretia) shall be stripped from the construction area and stored at the edge of the construction right-of-way. The topsoil shall be used in future revegetation efforts; and*
- *During construction, CPL's qualified biologist shall monitor the contractor's compliance with the avoidance measures, impact minimization measures, and topsoil salvage operations.*

Revegetation Measures: Following site construction, all stockpiled topsoil shall be replaced on site and finish graded to blend with pre-construction conditions. Under direction of CPL's qualified biologist, the areas shall be revegetated with locally native herbaceous plant species compatible with natural regeneration of the List 2, 3, and 4 plant species, as allowed under the terms of landowner agreements. CPL's qualified biologist shall hand broadcast any seeds collected from the perennial plant species into the appropriate habitat areas. CPL's qualified biologist shall monitor the revegetation areas for two years after construction to ascertain if the List 1B, 2, 3, or 4 plant species re-established within the pipeline construction area. Annual reports shall be submitted to Monterey and Fresno County by December 31 of each monitoring year, describing the results of the revegetation measures.

Level of Significance After Mitigation: Less than Significant

WILDLIFE SPECIES

Construction of the pipeline including access road improvements, staging areas, clearing, grading, and trenching has the potential to cause direct and indirect impacts to wildlife. Removal of habitat, potential petroleum product spills, and use of heavy equipment have the potential to cause direct mortality or injury to wildlife. Ground-dwelling animals of relatively low mobility (e.g., California tiger salamander, western spadefoot toad) are the most susceptible to direct impacts. More vagile species (e.g., San Joaquin kit fox) are more likely to be able to relocate themselves and avoid direct impacts. The eggs and chicks of nesting birds are vulnerable to direct construction impacts. Noise, dust, increased human presence, and reduction in visual cover have the potential to cause indirect impacts to wildlife both within and adjacent to the right-of-way. Nesting birds at certain critical stages of the nesting cycle may abandon their eggs or chicks because of these types of construction activities causing nest failure.

The construction along the pipeline right-of-way has the potential to cause temporary loss of wildlife habitat for feeding, nesting, dispersal and cover. The temporary loss of habitat has the potential to displace individuals to less suitable habitat, where they may be more vulnerable to predation; their dispersal or movement to breeding areas may be disrupted, resulting in failure of breeding for a season; and/or their ability to obtain food may be impacted. The relatively narrow width of the construction right-of-way (maximum width of 100 feet), the short duration of construction at any one site, and replacement of topsoil to enhance regrowth of vegetation would result in these

potential impacts being very short-term and would substantially reduce the overall potential adverse impact to wildlife populations.

Construction of the Mid-Line Heating Station and the mainline valve stations, which would be long-term structures (i.e., for the anticipated 30-year Project life), would have the potential to cause permanent loss of wildlife habitat. The construction of the San Ardo and KLM facilities would occur within areas of currently disturbed habitat (i.e., developed and agricultural, respectively) and would not result in the long-term loss of wildlife habitat. The above-ground valves would be located outside of riparian and wetland areas, and the total area (0.05 acres) covered by these valves would not represent a significant habitat loss for most wildlife species because of the small area compared to the abundance of wildlife habitat remaining in the Project vicinity; however, for state and federally listed species, this impact may be significant as discussed below.

Impact 3.5-4: Construction Effects on Wildlife Habitat for Common Species

Construction of the pipeline has the potential to cause temporary impacts to wildlife habitat for common species along the right-of-way, staging areas, and access roads. Construction of the Mid-Line Heating Station and the mainline valve stations has the potential to cause permanent impacts to wildlife habitat for some common species by loss upland habitat types.

The temporary impacts include loss of vegetative cover, loss of foraging area, loss of nesting habitat (e.g., primarily trees), and short-term disruption of wildlife movement between habitat areas for wildlife species that are generally common throughout the area. There is potential for significant impacts to wildlife to occur in oak woodland and riparian woodland habitat types, where mature habitat stands could be temporarily fragmented or permanently removed. This impact is potentially significant because several acres would be disturbed (see estimated acreages in Tables 3.5-5 and 3.5-6 above), and the slow-growing trees would take many years to reach maturity, and thus provide equivalent habitat to that which currently exists. The impacts to grassland, scrub, and wetland habitats are not considered significant for common wildlife species, because the plants in these communities quickly grow to maturity and could then be utilized by common wildlife in a similar manner to existing habitats. The Project includes replacing stored topsoil along the pipeline right-of-way, staging areas and access roads immediately following construction to restore vegetative cover and hence wildlife utilization of habitats. The permanent construction of the Mid-Line

Heating Station (MP 29.6) would result in the permanent loss of a small amount of degraded blue oak woodland habitat. Mitigation Measures 3.5-1a and 3.5-1b, 3.5-2a and 3.5-2b (above) would reduce the long-term effects of habitat loss to wildlife by planting of trees to offset the loss, and combined with the following mitigation measures would reduce potentially significant wildlife habitat loss for common species to a level of non-significance.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Mitigation Measure 3.5-4a: Confine Vegetation Clearing to Minimal Area

During surveying and staking of the pipeline right-of-way, access roads, staging areas and Mid-Line Heating Station, the area to be cleared of vegetation would be clearly demarcated to minimize the disturbed area to that necessary for the project construction. A qualified biological monitor, as specified in Mitigation Measure 3.5-1a, shall be present during all clearing and grading activities.

Mitigation Measure 3.5-4b: Implement All BMPs for Construction

Stockpiling of excavated materials and topsoil shall be conducted in a manner that reduces impacts to sensitive habitats to the extent feasible. Construction in areas of steep terrain or adjacent to sensitive habitats such as wetlands shall be conducted in such a manner to avoid side-casting of excavated materials into sensitive habitats. Topsoil to be stored temporarily for respreading shall be placed in designated staging areas. Excavated soils in excess of that needed for refilling trenches shall be removed from the construction and staging areas in a timely manner and taken to an approved disposal site. Soils placed back over the construction area shall be compacted and stabilized to blend with pre-construction contours. Construction activities shall be scheduled to the greatest extent possible for dry months. These procedures shall be reviewed and documented by the biological monitor, as described in Mitigation Measure 3.5-1a, including the implementation of clearance procedures for the excess soil disposal sites. A Project-specific Erosion Control Plan (as specified in Sections 3.7, Geology [Mitigation Measure 3.7-5], and 3.9, Hydrology and Water Quality [Mitigation Measure 3.9-6]) would be implemented in an appropriate time-frame.

Mitigation Measure 3.5-4c: Prevent Animal Entrapment in Trenches

During trench construction, the Applicant shall provide suitable escape ramps in active construction areas to prevent wildlife and livestock from becoming trapped in these areas.

Mitigation Measure 3.5-4d: Prohibit Hunting and Firearms

Personnel associated with the Project shall be prohibited from bringing pets or firearms to the vicinity of the Project area; Project personnel shall be prohibited from hunting, capturing, or collecting wildlife in construction areas.

Mitigation Measure 3.5-4e: Dust and Noise Control

Dust control BMPs shall be implemented by spraying water from trucks on sites with high dust potential, as described in Section 3.4, Air Quality. Construction shall be limited to daytime hours, generally 6:00 a.m. to 7:00 p.m., except where 24 hour construction is required (e.g., HDD, hydrotesting, tie-ins).

Mitigation Measure 3.5-4f: Staging and Equipment Maintenance

Fueling and maintenance of all equipment shall be conducted at least 150 feet from any aquatic areas. Waste products shall be properly contained and removed to an approved disposal site. The construction superintendent shall advise all workers of plans to contain and remove any accidental spill of petroleum products in a timely manner.

Mitigation Measure 3.5-4g: Fire Containment and Prevention

The construction superintendent shall inform all personnel of specific measures to prevent and contain wild fire from construction activities such as welding, which could pose a fire hazard if not properly supervised and controlled. The contractor shall use hot work permitting procedures which shall dictate requirements for fire containment and prevention methods, including but not be limited to firewatch personnel, fire extinguishers, availability of fire-fighting water supplies, and area preparation and restrictions for welding, cutting, grinding, vehicle/equipment operation and other methods of hot spark ignition sources.

Mitigation Measure 3.5-4h: Minimize Pipeline Crossings at Creeks and Wetlands

Open trenching through ephemeral and intermittent streams and wetlands shall be conducted when dry conditions are present in the stream beds. HDD or other options for placing pipeline under perennial creeks and wetlands shall be implemented where feasible. Necessary permits for work in creeks and wetlands (e.g., ACOE, CDFG, etc.) shall be obtained as specified above in Mitigation Measure 3.5-2a and 2b. Mitigation measures for trenching and work within live streams identified in Section 3.9, Hydrology and Water Quality, shall be implemented to reduce sediment input to waterways.

Mitigation Measure 3.5-4i: Implement Revegetation Plan

After construction, revegetation of natural habitats, excluding agricultural and developed areas, shall be implemented with seeds or seedlings following the original plant community to the extent feasible, in consultation with resource agencies, as consistent with landowner agreements, and as stated above in Mitigation Measures 3.5-1a, 3.5-1b, 3.5-2a and 3.5-2b.

Level of Significance After Mitigation: Less than Significant

Impact 3.5-5: Construction Effects on Special-Status Wildlife Species and their Habitat

Construction of the pipeline has the potential to kill or injure special-status wildlife species. Construction of the pipeline has the potential to cause temporary impacts to special-status wildlife species and their habitats along the right-of-way, staging and work areas, and access roads. Construction of the Mid-Line Heating Station and mainline valve stations has the potential to cause permanent impacts to some special-status wildlife species by loss of a small amount of their upland habitats.

The temporary impacts of Project construction include potentially significant direct mortality or injury to the special-status species listed in Table 3.5-3. Temporary loss of vegetative cover, foraging area, nesting habitat, and short-term disruption of movement between habitat areas for special-status wildlife species is considered a potentially significant impact. The Project is expected to result in the permanent loss of small amounts of upland habitats for some federally listed species at the Mid-Point Heating Station and at mainline valve stations. The total expected actual acreages and the maximum acreages of

potential temporary impacts to special-status wildlife habitat is listed in Table 3.5-9, Total Potential Acres of Impacts to Federal- and State-Listed Wildlife Species and Recommended Acres for Purchase at Mitigation Bank or Payment of In-Lieu Fees (pers. comm., A. Fraser, May 4, 2007). Impacts to special-status wildlife species can be reduced to a less than significant level with implementation of the mitigation measures identified below.

**TABLE 3.5-9
TOTAL POTENTIAL ACRES OF IMPACTS TO FEDERAL AND STATE LISTED WILDLIFE SPECIES
AND RECOMMENDED ACRES FOR PURCHASE AT MITIGATION BANK OR
PAYMENT OF IN-LIEU FEES**

Species Name	Habitat Type	Area of Permanent Impacts (acres) ¹	Temporary Impacts 100-foot ROW (acres)	Mitigation Ratio	Mitigation Location
California tiger salamander	Breeding: open water, wetlands	None	2.40	3:1	Purchase of 2,500-acre conservation easement on private ranch in Monterey County
	Upland ² : blue oak woodland, central coast live oak riparian forest, diablan sage scrub, Fremont cottonwood riparian woodland, foothill-pine oak woodland, juniper-oak cismontane woodland, mulefat scrub, northern mixed chaparral, non-native grassland, southern alluvial fan scrub, tamarisk scrub, valley oak woodland	0.47	437.98	1.1:1	
California red-legged frog	Breeding: open water, wetlands	None	2.4	3:1	Purchase of 2,500-acre conservation easement on private ranch in Monterey County
	Upland ² : blue oak woodland, central coast live oak riparian forest, diablan sage scrub, Fremont cottonwood riparian woodland, foothill-pine oak woodland, juniper-oak cismontane woodland, mulefat scrub, northern mixed chaparral, non-native grassland, southern alluvial fan scrub, tamarisk scrub, valley oak woodland	0.47	437.98	1.1:1	
Blunt-nosed leopard lizard ³	Fremont cottonwood riparian woodland, non-native grassland, southern alluvial fan scrub, tamarisk scrub, valley saltbush scrub ³	Not applicable	Not applicable	1.1:1	To be determined in consultation with CDFG, USFWS

Species Name	Habitat Type	Area of Permanent Impacts (acres) ¹	Temporary Impacts 100-foot ROW (acres)	Mitigation Ratio	Mitigation Location
San Joaquin kit fox	Agricultural land, developed land, blue oak woodland, central coast live oak riparian forest, diablan sage scrub, Fremont cottonwood riparian woodland, foothill-pine oak woodland, juniper-oak cismontane woodland, mulefat scrub, northern mixed chaparral, non-native grassland, southern alluvial fan scrub, tamarisk scrub, valley oak woodland, cismontane juniper woodland and scrub, valley, saltbrush scrub	12.44	740.97	Varies from 0.5:1 to 2.5:1 as per Recovery Plan ⁴ guidelines	Purchase of preservation credits for 59.28 acres at Kreyenhagen Hills Conservation Bank in Fresno County, and The Nature Conservancy; purchase of 2,500-acre conservation easement on private ranch in Monterey County

Notes:

¹Permanent impacts include valve stations and Mid-Line Heating Station, and are the same for both variable width and 100-foot right-of-way.

²Upland habitat includes foraging, dispersal and aestivation habitat.

³Acres are not provided because protocol-level surveys to date have been negative, indicating that the site does not support blunt-nosed leopard lizard. Mitigation ratio is provided for reference, but mitigation will only be provided if blunt-nosed leopard lizards are found during 2007 surveys.

⁴USFWS Recovery Plan guidelines SJKF habitats into three basic types: Recovery, Satellite, and Link. Each of these is subdivided into Agricultural Lands versus Natural Vegetation. The ratio of impacts to mitigation is determined by each of these types and subtypes.

The Project corridor provides habitats for several special-status birds that winter in the central California area, including ferruginous hawk, merlin, mountain plover, and short-eared owl. Where possible, wintering flocks or groups of these species should be avoided during construction work. However, due to the small width of the Project corridor (100 feet or less), the short duration of construction at any one site, the mobility of the species to relocate themselves, and abundance of other suitable wintering habitat for these species in the nearby vicinity, impacts to these wintering species are not considered significant.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Mitigation Measure 3.5-5a: Obtain All Required Permits from State and Federal Regulatory Agencies for Potential Take of Listed Species

Prior to any ground disturbance or vegetation removal, the Applicant shall obtain a Biological Opinion from the USFWS through Section 7 consultation process with ACOE, and a 2081 California Endangered Species Act permit (or 2080.1 consistency finding) from CDFG through consultation with that agency. These permits shall be submitted to Monterey and Fresno Counties prior to issuance of grading permits for the Project.

Mitigation Measure 3.5-5b: Provide Qualified Biologists to Conduct Preconstruction Surveys and Construction Monitoring for Federal- and State-Listed Wildlife Species

As per the terms and conditions of the wildlife agency permits (see Mitigation Measure 3.5-5a above), the Applicant shall provide qualified biologists, approved by each agency as appropriate, to conduct preconstruction surveys and monitor construction in habitats for federal- or state-listed species. The Applicant shall be responsible for submitting the results of the qualified biologists' surveys to Fresno and Monterey Counties in a timely manner and in no case less than one day prior to any construction phase commences on the relevant sections of the pipeline project. If at any time, construction activities or impacts vary from the terms of the wildlife permits, construction in that area of concern shall cease and the appropriate state and/or federal agencies shall be notified, as well as Fresno and Monterey Counties. Any modifications to construction methods recommended by the state or federal agencies to avoid additional take shall be approved by Fresno and Monterey Counties prior to recommencement of construction in the area of concern.

Mitigation Measure 3.5-5c: Avoid and Minimize Direct Mortality or Injury to Special-Status Wildlife Species – General Measures

Implement the following general measures to avoid and minimize direct mortality or injury to special-status wildlife species during Project construction:

- *Provide qualified biologists and trained biological monitors to monitor the construction areas for special-status wildlife species, as appropriate to each species or group of species;*
- *Provide worker awareness training presented by a qualified biologist for special-status species. Such training shall include printed flyers or other visual aides that include the identification of the target species, their habitat, their ecology, and specific Project-related measures to avoid and minimize direct impacts to the species. Training shall be provided to workers prior to any ground disturbance activities;*
- *Establish a maximum speed limit for construction-related vehicles along access roads and right-of-way not to exceed 15 mph. The biological monitors shall periodically monitor vehicle speed limits and report findings to construction supervisors for enforcement of violations;*
- *The qualified biologists and biological monitors shall keep daily logs of construction monitoring that includes name of monitor/biologist, date, MP segment monitored, species of all wildlife observed, location of any special-status wildlife species observed, measures undertaken to avoid injury to special-status wildlife (e.g., relocation), species and number of special-status wildlife that are killed or injured, and any other pertinent observations. These logs shall be submitted to Fresno and Monterey Counties in a timely manner (e.g., weekly), and summarized in a full report at the end of construction monitoring;*
- *The construction crew leader shall be responsible for informing all workers to contain and properly dispose of all litter, particularly food wrappers and food scraps that may attract predators such as San Joaquin Kit Fox. All garbage shall be properly contained and removed from the construction site on a daily basis;*
- *All open trenches and pits shall include suitable ramps provided to prevent entrapment of wildlife. The biological monitor shall be responsible for confirming the presence of ramps, and for inspecting the trench each morning prior to commencing construction activities; and*

- *Personnel associated with the Project shall be prohibited from bringing pets or firearms to the vicinity of the Project area; Project personnel shall be prohibited from hunting, capturing, or collecting of wildlife in construction areas.*

The above measures are provided to establish performance standards that provide the public and decision-makers an understanding of wildlife protection measures. The measures provided above may be revised, replaced, or superseded by project-specific measures required by regulatory agencies.

Mitigation Measure 3.5-5d: *Avoid and Minimize Direct Mortality to Special-Status Wildlife Species – Specific Species and Groups of Species*

The following measures described below shall be implemented to avoid and minimize direct and indirect impacts to special-status wildlife species. As noted above in Mitigation Measure 3.5-5a, terms and conditions for each federal- or state-listed species will be included in the take permits from the appropriate state or federal agency.

3.5-5d.1: Tree Nesting Raptors and Migrant Bird

Between February 1 and August 31, a qualified wildlife biologist shall conduct pre-construction surveys prior to construction activities, including removal of trees (such as oaks, pine, and cottonwoods). Pre-construction surveys shall be conducted no earlier than 30 days prior to ground disturbing activities. If nesting raptors are located, construction activities within 0.25 miles of the nest (or other distance as approved by CDFG) shall be delayed until after the juvenile birds can forage independently. If permission is granted from CDFG, construction vehicles may travel within the exclusion zone to facilitate relocation of construction activities away from the nest site. For other migratory birds, the qualified biologist shall determine a buffer-zone adequate to protect the nest.

3.5-5d.2: Vernal Pool Fairy Shrimp

Direct impacts to stockpounds which may provide habitat for vernal pool fairy shrimp shall be avoided by routing the pipeline around these habitats and clearly marking the edge of the right-of-way to exclude them from the

construction zone. A qualified biological monitor shall verify compliance with these measures.

3.5-5d.3: California Tiger Salamander (CTS) and Western Spadefoot Toad (WST)

CPL is assuming presence of CTS in the right-of-way and excluding construction and personnel from stockponds and seasonal pools using visible fencing and biological monitors to ensure compliance. If constructability issues prevent avoidance in target perennial vegetated wetlands (i.e., WL-23, WL-12, WL-13) then these portions of the right-of-way will be surveyed and cleared of CTS by a qualified biologist to prevent the species from re-entering the work zone. Any CTS and/or WST identified would be relocated and released outside the Project area by the qualified biologist. If CTS or WST eggs, larvae, juveniles or adults are observed in these areas, where HDD or other drilling methods cannot be employed to avoid the aquatic habitat, they shall be relocated to other suitable areas nearby, but outside the construction zone. Because CTS and WST utilize burrows in upland habitat near their breeding ponds, suitable upland habitat within the construction zone shall also be surveyed by a qualified biologist prior to commencement of work in such areas. Qualified biologists will be on-site to monitor during disturbance to suitable upland areas around potential CTS or WST breeding habitat, and will relocate any individuals that may be found during the construction activities to other suitable habitat nearby, but outside the construction zone. Any take of CTS or WST shall be reported to the USFWS, CDFG, and the Counties, as per the terms and conditions of the Biological Opinion. Any dead individuals shall be collected and submitted to the applicable regulatory agency in keeping with permit requirements.

Temporary and permanent impacts to suitable CTS habitats within the construction right-of-way shall be mitigated by purchase of credits in USFWS-approved conservation banks or by establishing a conservation easement on property with suitable habitat as approved by regulatory agencies at the ratios stated in Table 3.5-9. The Applicant shall provide Fresno and Monterey Counties proof of purchase of these acreages in an approved mitigation bank and/or payment of in-lieu fees prior to issuance of grading permit for the project.

3.5-5d.4: California Red-Legged Frog (CRLF)

A qualified biologist shall survey all wetlands, stock ponds, inundated intermittent and perennial streams, pools or swales prior to commencement of work in those areas. If CRLF eggs, larvae, juveniles or adults are observed in these areas, where HDD or other drilling methods cannot be employed to avoid the aquatic habitat, they shall be relocated to other suitable areas nearby outside the construction zone. CRLF utilize dense vegetation around aquatic habitats and occasionally burrow in upland habitat near their breeding ponds; thus, suitable habitats within the construction zone shall also be surveyed by a qualified biologist prior to commencement of work in such areas. Qualified biologists will be on-site to monitor during disturbance to suitable CRLF breeding habitat and adjacent areas within 300 feet, and will relocate any individuals that may be found during the construction activities to other suitable habitat nearby, but outside the construction zone. Any take shall be reported to the CDFG, USFWS, and the Counties, as per the terms and conditions of the Biological Opinion. Any dead individuals shall be collected and submitted to the applicable regulatory agency in keeping with permit requirements.

Temporary and permanent impacts to suitable CRLF habitats within the construction right-of-way shall be mitigated by purchase of credits in USFWS-approved conservation banks or by establishing a conservation easement on property with suitable habitat as approved by regulatory agencies at the ratios shown in Table 3.5-9. The Applicant shall provide Fresno and Monterey Counties proof of purchase for these acreages in approved mitigation bank and/or payment of in-lieu fees prior to issuance of grading permit for the Project.

3.5-5d.5: Foothill Yellow-Legged Frog (YLF)

Prior to the commencement of work, a qualified biologist shall survey all perennial streams, where construction in the stream cannot be avoided with HDD or other drilling methods. If any YLF eggs, larvae, juveniles or adults are observed in these areas, they shall be relocated to other suitable areas nearby, but outside the construction zone. In perennial streams where construction will impact the flowing water and streambeds, a qualified biologist will be on site to monitor for YLF, and relocate individuals as necessary. Any take shall be reported to CDFG, and Fresno

and Monterey Counties. Any dead individuals shall be collected and submitted to the applicable regulatory agency in keeping with permit requirements.

3.5-5d.6: Western Pond Turtle

Surveys and monitoring shall be conducted around perennial deep water habitats within the construction right-of-way (i.e., WL-12, WL-13, and WL-23) as described above for CRLF (3.5-5d.4). Adult and juvenile turtles shall be relocated to appropriate habitat nearby, but outside the construction zone, as necessary. If egg nests are observed, the qualified biologist shall immediately notify the construction crew leader, and take measures to prevent further disturbance to eggs. Such measures may include re-covering the eggs with soil, establishment by a biologist of a buffer zone around the nest, immediate cessation of construction activities within the buffer zone, and additional monitoring of the nest to determine if eggs successfully hatch.

3.5-5d.7: Blunt-Nosed Leopard Lizard (BNLL)

Protocol level surveys for BNLL were conducted in 2003, 2004, 2006, and 2007, but all surveys to-date have been negative for this species (McCormick Biological 2005, URS 2006k). Because some areas of the Project corridor are within historically occupied habitat for BNLL, a qualified biologist shall survey all suitable habitats along the project right-of-way (these occur intermittently between MP 35-39) within one year prior to construction, as per the CDFG protocol for this species. If BNLL are observed along the construction corridor, a buffer zone of 100 feet will be established around the occupied lizard burrow where no construction shall take place. A qualified biologist shall be on-site at construction areas adjacent to identify occupied BNLL habitat, to monitor construction and relocate BNLL should they enter construction zones. The Applicant shall consult with state and federal agencies on alternative construction methods to avoid occupied BNLL burrows. Fresno and Monterey Counties shall approve any alternative construction methods prior to implementation. Any take of BNLL shall be reported to CDFG, and Fresno and Monterey Counties. Any dead individuals shall be collected and submitted to the applicable regulatory agency in keeping with permit requirements.

Temporary and permanent impacts to suitable BNLL habitats within the construction right-of-way shall be mitigated by purchase of credits in USFWS-approved conservation banks or by establishing a conservation easement on property with suitable habitat as approved by regulatory agencies at the ratios shown in Table 3.5-9. The Applicant shall provide Fresno and Monterey Counties proof of purchase of these acreages in approved mitigation bank and/or payment of in-lieu fees prior to issuance of grading permit for the Project.

3.5-5d.8: Lizards and Snakes

A qualified biologist shall survey all portions of the pipeline in suitable habitat immediately prior to construction for the presence of silvery legless lizard, coast horned lizard, San Joaquin whipsnake, and two-striped garter snake. Individuals observed shall be relocated to suitable habitat outside the construction zone, and the area shall be monitored by a qualified biologist during construction.

3.5-5d.9: White-Tailed Kite, Golden Eagle, and Swainson's Hawk

In addition to Mitigation Measure 5d.1 above, a qualified biologist shall conduct preconstruction surveys along the pipeline corridor and within 0.25 mile of the construction zone for white-tailed kite, golden eagle and Swainson's hawk, as feasible, with regard to landowner access and through use of visual observation from the right-of-way of areas outside the right-of-way. Each of these raptor species requires large foraging areas to successfully nest and fledge their young. If nests of these species are detected within 0.25 mile of the construction corridor, a qualified biologist shall analyze the potential for the construction in that area to disrupt nesting or cause nest failure at that site, and shall establish a buffer zone of suitable area to protect the nest until all young are fledged and able to feed on their own. The biologist shall consult with CDFG to obtain approval for the proposed buffer zone. Construction will be rescheduled in these areas after the biologist has confirmed that all nesting is completed for the season, and that young can feed on their own. If permission is granted from CDFG, construction vehicles may travel within the exclusion zone to facilitate relocation of construction activities away from the nest site.

3.5-5d.10: Western Burrowing Owl

Burrowing owls are particularly vulnerable to disturbance of their nest because they are dependent upon small mammal burrows to provide them with nest burrows. A qualified biologist shall conduct preconstruction surveys in suitable habitat areas along the pipeline corridor and within 250 feet of the construction zone for burrowing owl nests as feasible with landowner access and through use of visual observation from the right-of-way of areas outside the right-of-way. If nesting burrowing owls are observed, the biologist shall establish a minimum of 250-foot buffer zone around the nest where no construction will occur until the biologist has determined that all young have fledged and are able to feed on their own. If wintering burrowing owls are observed, and the burrow cannot be avoided during construction, the biologist will place a “one-way” door on the burrow to allow the owl to leave the burrow, but not return prior to disturbance of the burrows (i.e., passive relocation).

3.5-5d.11: Northern Harrier, California Horned Lark, and Loggerhead Shrike

A qualified biologist shall conduct preconstruction surveys in suitable habitat areas along the pipeline corridor and within 250 feet of the construction zone for northern harrier, California horned lark, and loggerhead shrike nests, as feasible with regard to landowner access and visual observation from the right-of-way of areas outside the right-of-way. Horned lark are particularly vulnerable to disturbance because they nest in short vegetation in open grasslands and are sensitive to visual as well as mechanical disturbance. Northern harrier nest on the ground in tall grasses. Loggerhead shrike may nest in shrubs adjacent to open areas along the Project corridor. The biologist shall establish buffer zones of appropriate size where no construction will occur until young are fledged and able to feed on their own. The buffer size may vary according to habitat and topography, but a minimum of 100 feet is recommended.

3.5-5d.12: Burrowing Mammals

Portions of the Project corridor have been identified as potential habitat for short-nosed kangaroo rat, Tulare grasshopper mouse, Salinas pocket mouse, and American badger. Areas of the Project corridor with suitable habitat for these species (i.e., arid grasslands) should be monitored during

construction by a qualified biologist to relocate any animals disturbed by construction.

3.5-5d.13: Monterey Dusky-Footed Woodrat

Although listed as a California species of concern, this woodrat is very common in forested habitats within its range. A qualified biologist shall survey the oak woodlands within the Project corridor prior to construction to identify any woodrat nests. If woodrat nests cannot be avoided, the biologist shall either try to relocate the entire nest if feasible, or disassemble the nest by hand to allow any resident woodrats to escape into adjacent habitats.

3.5-5d.14: San Joaquin Kit Fox (SJKF)

The Applicant shall implement the entire USFWS 1999 guidance document for the “Standard Recommendations for the Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance”(USFWS 1999). This includes preconstruction surveys in suitable habitat by a qualified biologist to search for kit fox dens, establishing buffer zones around occupied natal dens where no construction shall take place until all young are weaned and able to forage on their own, and passive relocation of kit fox from cover or non-breeding dens. If natal dens cannot be avoided by construction timing or buffer zones, the applicant shall obtain permission from the USFWS and CDFG to relocate kit fox from the dens or propose an alternative construction method to avoid dens. Any alternative construction method shall be approved by Fresno and Monterey Counties prior to implementation.

Temporary and permanent impacts to suitable SJKF habitats within the construction right-of-way will be mitigated by purchase of credits in USFWS-approved conservation banks or by establishing a conservation easement on property with suitable habitat as approved by regulatory agencies at the ratios shown in Table 3.5-9. The Applicant shall provide Fresno and Monterey Counties proof of purchase of these acreages in an approved mitigation bank or conservation easement and/or payment of in-lieu fees prior to issuance of grading permit for the project.

The above measures are provided to establish performance standards that provide the public and decision-makers an understanding of wildlife protection measures. The

measures provided above may be revised, replaced, or superseded by project-specific measures required by regulatory agencies.

Level of Significance After Mitigation: Less than Significant

Impact 3.5-6: Construction Staging, Work, and Soil Storage Area Effects on Biological Resources

Development of construction staging, work, and soil storage areas for the pipeline has the potential to cause temporary impacts to special-status plant and wildlife species, as well as sensitive habitats, similar to those described above for the right-of-way. These impacts are potentially significant.

As discussed previously, locations of some construction staging and work areas and access roads have not yet been identified. The Project Applicant has stated that these areas will be sited along existing roads and disturbed areas where possible. However, where staging areas and access roads must be located in natural habitat areas, there is potential for significant impacts to special-status plant and animal species and sensitive habitats, similar to those described above for construction right-of-way impacts.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Mitigation Measure 3.5-6: Biological Survey of All Staging and Access Road Areas Prior to Disturbance

Prior to any ground disturbance or vegetation removal, the Applicant shall direct the biological monitor or other qualified biologist to survey the proposed access roads and staging areas to be located in natural habitats. The biologist shall adhere to the pre-approved, standardized clearance procedures, as specified in Mitigation Measure 3.5-1a, and recommend alternatives to avoid any sensitive habitat types, such as wetlands and oak woodlands. All special-status wildlife shall be cleared from these areas, as described above in Mitigation Measure 3.5-5. Any potential impacts to plant or sensitive plant communities shall be mitigated as described above in Mitigation Measures 3.5-1, 3.5-2, 3.5-3, and 3.5-4.

Level of Significance After Mitigation: Less than Significant

3.5.4.2 Operational Impacts and Mitigation

In this section, impacts and mitigation measures relating to the operation of the pipeline are addressed.

VEGETATION AND WETLANDS

Impact 3.5-7: Impact to Rare/Sensitive Plant Communities, Native Trees, Riparian Woodland, Wetlands and Special-Status Plant Species Due to Pipeline Vegetation Maintenance

Maintenance of the pipeline, including the need for aerial surveillance, may result in removal of vegetation, including native trees. Maintenance may also result in the removal of plant communities and/or plant species that are considered rare by CDFG or sensitive by local governments.

Maintenance of the pipeline alignment will include occasional mowing, as necessary, of the grass and shrub cover and removal of trees. This maintenance may impact native shrubs and herbaceous species from surrounding rare/sensitive habitats that are recolonizing the pipeline construction area as well as special-status plant species. Implementation of the following measure will reduce these impacts to a level of non-significance.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Mitigation Measure 3.5-7: Maintenance Operations

The Applicant shall retain native shrubs and herbaceous plant species naturally colonizing the construction corridor to the extent that aerial surveillance of the pipeline route would be possible and to the extent that recolonizing plants do not conflict with U.S. Department of Transportation requirements. This shall include native riparian plant species that colonize or are replanted along creeks, native wetland plants that naturally re-colonize creeks, and colonies of List 1B, 2, 3, and 4 plant species. The loss of native plants will be initially offset by revegetation in areas outside the pipeline maintenance corridor as described above in mitigation measures 3.5-1, 3.5-2, and 3.5-3.

Level of Significance After Mitigation: Less than Significant

WILDLIFE RESOURCES

Impact 3.5-8: Maintenance of the Pipeline Corridor has the Potential to Cause Direct and Indirect Impacts to Special-Status Wildlife Species

Maintenance of the pipeline alignment will include the periodic mowing of the grass and shrub cover and removal of small diameter trees to keep the area open for aerial surveillance. The pipeline corridor will also be accessed at least one time per month by ATVs or other vehicles for visual inspection. These activities have the potential to cause direct mortality or injury to some special-status wildlife species. This impact may be significant for less mobile species, such as salamanders and frogs; more mobile species such as lizards and kit fox have a greater ability to avoid slow-moving vehicles and are not expected to be significantly impacted. The relatively infrequent motorized vehicle access to monitor the pipeline is not expected to result in significant impacts to common wildlife species.

If pipeline leaks occur, the potential exists for contamination of soil and water surrounding the leak; this could result in significant impacts to wildlife species and their habitats. Additional impacts could result from any construction work required to repair leaks.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Mitigation Measure 3.5-8: Maintenance Operations

Mitigation Measures 3.5-1, 3.5-2, 3.5-4, and 3.5-5 above shall apply to all maintenance and pipeline repair activities, including the purchase of credits for permanent and temporary impacts to federal-listed species as shown within Table 3.5-9. The Applicant shall provide Fresno and Monterey Counties proof of purchase of these acreages in an approved mitigation bank and/or payment of in-lieu fees prior to issuance of grading permit for the Project.

Level of Significance After Mitigation: Less than Significant

3.5.4.3 Decommissioning Impacts and Mitigation

In this section, impacts and mitigation measures relating to the decommissioning of the pipeline are addressed.

VEGETATION AND WETLANDS

None identified.

WILDLIFE

None identified.