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**SOUTH COUNTY WATER RECYCLING
SHORT-TERM PHASE I CAPITAL IMPROVEMENT PROJECT
BIOTIC STUDY**

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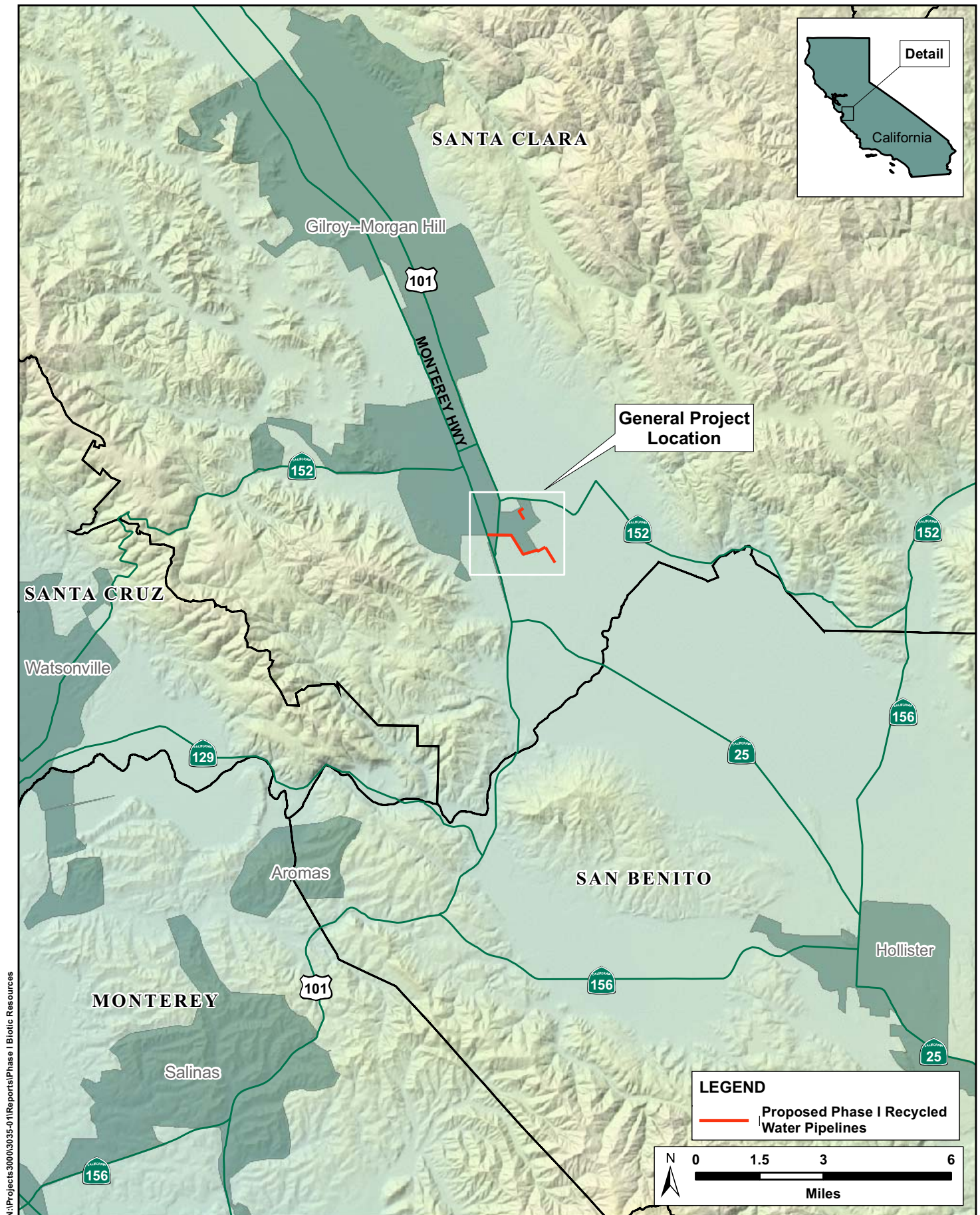
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INTRODUCTION

This Biotic Study provides information on the biological resources within the South County Water Recycling Short-Term Phase I Capital Improvement Project (CIP) (hereafter Project) area for the preparation of an Environmental Assessment (EA) to meet the requirements of the National Environmental Policy Act (NEPA). The Santa Clara Valley Water District (District), the South County Regional Wastewater Authority (SCRWA), and the City of Gilroy have developed a multi-phased water recycling program, following an analysis of alternatives during a master planning process. The proposed Project is the first phase of this multi-phased program. The program will increase the reliability of Santa Clara County's long-term water supply by expanding the use of tertiary-treated recycled water. Although the Short-Term Phase I CIP will complement future phases if they are constructed, it is also independent of future phases because it will result in the expanded use of tertiary-treated recycled water regardless of whether the future phases are constructed.

The Short-Term Phase I CIP will be constructed in 2010-2011 using federal funding through the U.S. Bureau of Reclamation. It will serve to connect the existing SCRWA water recycling plant to existing South County recycled water pipelines, as well as extending those pipelines to customers. The Project will entail the construction of a maximum of 3 miles (mi) of 30-inch transmission pipeline (Figure 1). The Project will be located entirely on lands to the east of Monterey Highway and west of Llagas Creek. The first pipeline segment extends approximately 1.6 mi from the SCRWA plant along Engle Way to Southside Drive, continuing westerly along Southside Drive to Rossi Lane and along Rossi Lane to the intersection with East Luchessa Avenue. The second segment will extend westerly about 0.6 mi from the intersection of east Luchessa Avenue and Rossi Lane to connect with the existing pipeline at Monterey Road. The third segment of the Short-Term Phase I CIP will entail extending a pipeline to an existing recycled water customer. This segment will extend northwesterly approximately 0.5 mi from the existing pipeline, along Camino Arroyo to Holloway Road, and will then extend easterly along Holloway Road to the customer's existing buildings.



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Figure 1: Vicinity Map

South County Water Recycling Short - Term Phase I CIP (3035-01)
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ENVIRONMENTAL SETTING

GENERAL CHARACTERISTICS

For the purpose of this analysis, the Project area was defined as the area within 25 ft on either side of the proposed pipeline alignments; this area is intended to include the pipeline alignment and areas that may be temporarily impacted by construction of the pipeline. The Project area is situated in the southwestern portion of the Santa Clara Valley in the City of Gilroy, Santa Clara County, California (Figure 1). The Project area is situated on the valley floor and is consequently relatively flat with elevations ranging from approximately 160 to 190 ft above sea level (Gilroy and Chittenden USGS 7.5-minute quadrangles). Figure 2 shows the proposed pipeline alignments overlaid onto recent aerial photography with the biotic habitat types and approximate locations of potentially regulated habitats. The proposed pipeline alignments traverse developed land (where pipelines will be located adjacent to existing roadways), agricultural land, and roads within the sewage treatment complex. The Project is situated at least 1400 ft west of Llagas Creek and approximately 2 mi north of the confluence of Llagas Creek with the Pajaro River.

The Project area is nearly entirely underlain by fertile, well-drained alluvial floodplain soils, including loams and sandy loams of the Yolo, Garretson, Zamora, and Cortina series. Somewhat poorly-drained silty clays of the Sunnyvale and Campbell series underlie the existing treatment reservoirs and other facilities at the SCRWA wastewater treatment plant (SCS 1968). In general, this portion of Santa Clara County is agricultural and rural residential in character, with Gilroy forming the hub of small farming communities in the region. However, development in the past decade has resulted in the rapid transition of agricultural land to single-family residential land uses in the Gilroy area. Significant natural areas occur just west of the Project site in Mt. Madonna County Park and the undeveloped eastern slopes of the Santa Cruz Mountains.

HABITAT TYPES AND LOCATIONS

Reconnaissance-level field surveys of the Project area were initially conducted on 1 September 2005 by H. T. Harvey & Associates botanist L. Infante, M.S. and wildlife ecologist L. Henkel, M.S. These surveys were conducted to: 1) assess existing biotic habitats, 2) assess the Project area for its potential to support special-status species and their habitats, and 3) identify potential jurisdictional habitats including Waters of the U.S., riparian habitat, and ordinance trees. On 17 July 2009, wildlife ecologist N. Thorngate, M.S. conducted an additional reconnaissance-level survey to 1) assess any substantial changes in the landscape since the completion of the original biotic study in 2005, and 2) to re-examine the wildlife resources within the Project area in light of recent changes in special-status species in the vicinity, and the development of the Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP). H. T. Harvey & Associates senior wildlife ecologist S. Rottenborn, Ph.D. conducted a site visit to review the Short-Term Phase I CIP pipeline segments on 16 November 2009. In preparing this report, H. T. Harvey & Associates also drew on knowledge of the biological resources of the



Project vicinity gained from field surveys for other projects in the vicinity, including the Hecker Pass Specific Plan (H. T. Harvey & Associates 2006a), U.S. 101 Widening project (H. T. Harvey & Associates 2009), Gavilan College residential project (H. T. Harvey & Associates 2006b), and others. The survey area, which comprised the entire Project area, included a corridor approximately 25 ft in width on either side of the proposed pipeline alignment.

The Project area includes developed land (existing agricultural and commercial structures as well as roads), agricultural land, non-native herbaceous vegetation, and ephemeral aquatic habitat associated with agricultural ditches (Figure 2). Where appropriate, these habitats have been described based on Holland's system of classification (1986). Biotic habitats/land use types within the Project area are described below.

Disturbed/Developed Land

A substantial portion of the Project area consists of land currently modified for transportation and commercial uses. Pipeline segments along roadways will be located within disturbed or developed land on the road shoulder. Disturbed/developed land within the Project area includes hardscape such as roads, bridges, and associated culverts, rip-rap, berms and other structures, as well as ruderal and landscaping vegetation.

Vegetation. Disturbed and developed land in the Project area is generally relatively barren but in some places supports horticultural plantings. Roadsides such as those within the Project area typically support ruderal (disturbance-loving) species such as telegraph weed (*Heterotheca grandifolia*), spurge (*Euphorbia* sp.), and cheeseweed (*Malva parviflorum*).

Wildlife. Developed habitats support primarily common, urban-adapted wildlife species, and overall wildlife abundance and diversity is typically low. During the 2009 survey, western fence lizards (*Sceloporus occidentalis*) were observed utilizing roadside ruderal habitat, and a southern alligator lizard (*Elgaria multicarinata*) was seen within the Project area. Other common reptiles such as gopher snakes (*Pituophis catenifer*) are also expected to use developed habitat within the Project area on occasion.

Prevalent urban-adapted birds such as red-shouldered hawks (*Buteo lineatus*), mourning doves (*Zenaida macroura*), rock pigeons (*Columba livia*), European starlings (*Sterna vulgaris*), and house finches (*Carpodacus mexicanus*) are common in developed areas and were observed throughout the developed portions of the Project area during surveys. In the winter, flocking golden-crowned sparrows (*Zonotrichia atricapilla*) are widespread in southern Santa Clara Valley, including developed areas.

A variety of bat species are known to forage in the Project vicinity. Occasional burrows of California ground squirrels (*Spermophilus beecheyii*) were noted within developed land in the Project area. Mesocarnivores including raccoons (*Procyon lotor*), Virginia opossums (*Didelphis virginiana*), and domestic cats (*Felis catus*) occur regularly in urban habitats and may frequent developed portions of the Project area.

Agricultural Habitat

Vegetation. Agricultural habitat, which, depending on the year may include row-crops, grain, hay and pasture, and/or disked/short-term fallowed agricultural habitat types occur adjacent to portions of the Project Area. These habitat types are all manipulated frequently and are dominated by herbaceous plants. Soils in most croplands are routinely disked or maintained and are typically devoid of any vegetation but the cover crop. In some cases, fields are left fallow, with no planted vegetation, for some duration. Hay is cut, baled, and trucked off-site while pasture is consumed by livestock on-site. Typical crops in these areas include alfalfa, sweet clover (*Melilotus* spp.), true clover (*Trifolium* spp.), oats (*Avena* spp.), Italian ryegrass (*Lolium multiflorum*), barley (*Hordeum vulgare*), and wheat (*Triticum aestivum*). In some cases, ruderal, fast-growing species such as ripgut brome (*Bromus diandrus*) and black mustard (*Brassica nigra*) occur on the fringes of these habitat types or in fallow fields, but are frequently sprayed or mowed prior to flowering. Mustard and wild radish (*Raphanus sativus*) also commonly occur as undesirable vegetation (weeds) in these areas.

Wildlife. Few wildlife species are expected to use the agricultural portions of the Project area due to the lack of structural diversity, high pesticide loads (which reduce prey abundance), and regular disturbance for planting, harvesting, and plowing. However, several common wildlife species may forage or take refuge in agricultural lands. Brewer's blackbirds (*Euphagus cyanocephalus*) and red-winged blackbirds (*Agelaius phoeniceus*) were observed foraging in the cultivated fields and edges within the Project area during surveys, and winter flocks of American pipits (*Anthus rubescens*) also frequent such habitat. Small rodents such as western harvest mice (*Reithrodontomys megalotis*), broad-footed moles (*Scapanus latimanus*), and Botta's pocket gophers (*Thomomys bottae*) could shelter in well-developed vegetation or burrow in the moist soil of the crop rows.

Non-Native Herbaceous Habitat

Vegetation. This habitat differs from that of developed habitat in that it supports much a greater density of herbaceous vegetation and lacks infrastructure, and it differs from non-native annual grassland in having greater structural diversity. Annual grasses including wild oat (*Avena fatua*) and ripgut brome (*Bromus diandrus*) generally dominate these areas, with heavy infestations of wild lettuce (*Lactuca serriola*), Italian thistle (*Carduus pycnocephalus*), yellow star thistle (*Centaurea solstitialis*), and black mustard (*Brassica nigra*) common throughout these habitats within the Project area.

Wildlife. As is the case with developed habitat, most of the wildlife species found in non-native herbaceous ruderal habitats are wide-ranging species tolerant of disturbance, although grassland-associated species occur in larger expanses of ruderal habitat. In addition, species residing in adjacent habitats often forage in these disturbed areas. Western fence lizards and gopher snakes breed and forage in this habitat. A white-tailed kite (*Elanus leucurus*) and a flock of rock pigeons were observed foraging in ruderal herbaceous habitat in the Project area during the 2009 survey; other bird species expected to forage or collect nesting material in this habitat type include red-shouldered hawks, red-tailed hawks (*Buteo jamaicensis*), golden-crowned sparrows, lesser goldfinches (*Spinus psaltria*), house finches, and Brewer's blackbirds. Few birds are likely to nest in this habitat, but red-winged blackbirds may attempt nesting in such habitat on

occasion. Several California ground squirrels and their burrows were noted in herbaceous ruderal habitat within the Project alignment, and a variety of bat species forage over such areas. Other mammals present in this habitat type include Botta's pocket gophers (*Thomomys bottae*), deer mice (*Peromyscus maniculatus*), raccoons, striped skunks, Virginia opossums, and feral domestic cats.

SPECIAL STATUS SPECIES AND SENSITIVE HABITATS

Special-status Plant Species

Reconnaissance-level surveys were conducted on 1 September 2005 for special-status plant species, and for habitats capable of supporting these species. A query of the California Natural Diversity Database (CNDDDB) was performed prior to field surveys to identify special-status plant species potentially occurring in the Project vicinity. The CNDDDB was again queried in July 2009 in order to update the findings of this Biotic Study. Specific habitats specified in the query included valley and foothill grassland, riparian woodland, cismontane woodland, and marshes and swamps. These California Native Plant Society (CNPS) designated habitats were chosen for the similarity of their constituent species to those on the site. In addition, the CNPS's *Inventory of Rare and Endangered Plants of California, 7th Edition* (2009) was used to identify and assess additional species occurring in similar habitats throughout Santa Clara County. Figure 3 depicts the CNDDDB-mapped locations of special-status plants in the Project vicinity.

Eighty-one special-status plant species were identified in these queries. Seventy-seven of these plant species were considered but rejected due to the disturbed nature of the majority of the Project area, the lack of specific edaphic conditions (particularly serpentine or rocky substrates) or the absence of known associated species from the Project area (Appendix 1). Twenty-one of these 81 species are covered under the working draft Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP) or are listed as "no-take" species under the HCP/NCCP and are further analyzed in Table 1; however, these species were not considered further for occurrence within the Project area for the reasons listed previously, unless habitat for these species was modeled in the HCP/NCCP within the Project area. In addition, some of the rejected species are considered to have been extirpated from Santa Clara County, are known only from historical occurrences, or are considered extinct. These plants, and the reasons they were rejected from consideration, are listed in Appendix 1. No sensitive habitats were identified in the CNDDDB query.

Four species of the 81 species considered were further analyzed for their possible occurrence within the Project area due to their proximity to the site and are listed in Table 1. However, these species are also presumed absent from the Project area. California androsace (*Androsace elongata* ssp. *acuta*) is associated with rocky, serpentine substrates or other areas with relatively low densities of non-native grasses, while arcuate bush mallow (*Malacothamnus arcuatus*), typically associated with rocky drainages, is a perennial shrub that was not observed during surveys. Marginally suitable habitat for Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*) occurs on clay soils in the vicinity of the wastewater treatment plant, but this species has never been observed in the southern Santa Clara Valley and is not expected to occur there. Santa Clara red ribbons (*Clarkia concinna* ssp. *automixa*) may occur in oak woodland or within the

Table 1. Special-status Plant and Animal Species, Their Status, and Potential Occurrence in the South County Water Recycling Master Plan Area.

NAME	*STATUS	HABITAT	POTENTIAL FOR OCCURRENCE IN THE PROJECT AREA
Federal or State Endangered or Threatened Species			
Tiburon Indian paintbrush (<i>Castilleja affinis</i> ssp. <i>neglecta</i>)	FE, ST, CNPS List 1B.2, HCP/NCCP No Take	Valley and foothill grassland habitat in serpentinite soils.	Serpentine or other rocky substrates absent from the Project area; grassland densely vegetated with non-native species and does not provide suitable habitat. Presumed absent.
Coyote ceanothus (<i>Ceanothus ferrisiae</i>)	FE, CNPS List 1B.1, HCP/NCCP	Chaparral, coastal scrub, and valley and foothill grassland habitat types in serpentinite soils.	Serpentine or other rocky substrates absent from the Project area; grassland densely vegetated with non-native species and does not provide suitable habitat. Presumed absent.
Robust spineflower (<i>Chorizanthe robusta</i> var. <i>robusta</i>)	FE, CNPS List 1B.1, HCP/NCCP No Take	Maritime chaparral, openings in cismontane woodland habitat, coastal dunes, and coastal scrub habitats with sandy or gravelly soils.	No suitable maritime sandy or gravelly soils occur within the Project area. Presumed absent.
Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	FE, CNPS List 1B.1, HCP/NCCP	Cismontane woodland and valley and foothill grassland habitat types on rocky, serpentinite soils.	Serpentine or other rocky substrates absent from the Project area; grassland and oak woodland understory densely vegetated with non-native species and do not provide suitable habitat. Presumed absent.
Contra Costa goldfields (<i>Lasthenia conjugens</i>)	FE, CNPS List 1B.1, HCP/NCCP No Take	Mesic areas within cismontane woodland, alkaline playa, valley and foothill grassland, and vernal pool habitat types.	No suitable habitat present within the Project area. Presumed absent.
Rock sanicle (<i>Sanicula saxatilis</i>)	SR, CNPS List 1B.2, HCP/NCCP	Broadleaved upland forest, chaparral, and valley and foothill grassland habitat types in rocky soils.	No suitable habitat in an undisturbed state is present within the Project area. Presumed absent.
Metcalf Canyon jewel-flower (<i>Streptanthus albidus</i> ssp. <i>albidus</i>)	FE, CNPS List 1B.1, HCP/NCCP	Valley and foothill grassland habitat in serpentinite soils.	Serpentine or other rocky substrates absent from the Project area; grassland densely vegetated with non-native species and does not provide suitable habitat. Presumed absent.
Showy Indian clover (<i>Trifolium amoenum</i>)	FE, CNPS List 1B.1, HCP/NCCP No Take	Coastal bluff scrub and valley and foothill grassland habitats, sometimes within serpentinite soils.	Serpentine or other rocky substrates absent from the Project area; grassland densely vegetated with non-native species and does not provide suitable habitat. Presumed absent.
Bay checkerspot butterfly (<i>Euphydryas editha bayensis</i>)	FT, HCP/NCCP	Serpentine grasslands in the San Francisco Bay area where larval host plant (<i>Plantago erecta</i>) is present.	Project area is outside of the known range of species; no habitat (serpentine grassland) present in Project area. Presumed absent.
South-Central California Coast steelhead (<i>Oncorhynchus mykiss</i>)	FT, CSSC, HCP/NCCP	Cool unobstructed coastal streams.	Potentially present east of the Project area in Llagas Creek, which is designated critical habitat for this species, but not present in the Project area itself.
California red-legged frog (<i>Rana aurora draytonii</i>)	FT, CSSC, HCP/NCCP	Freshwater ponds and still pools in streams.	No CNDDB records within 3 mi of the Project area. Suitable breeding habitat is likely absent from the SCRWA ponds and lower Llagas Creek, and the

			only aquatic habitat in the Project area itself consists of ephemeral channels. Urban development and U.S. 101 serve as barriers to dispersal from potentially occupied areas in the hills far to the west. Not expected to occur on-site.
California tiger salamander (<i>Ambystoma californiense</i>)	FT, SC, CSSC, HCP/NCCP	Temporary or permanent pools or ponds, primarily in grasslands.	No CNDDDB records within the Project area. Recent CNDDDB breeding records approximately 1 mi away are separated from the Project area by substantial barriers (e.g., U.S. 101 and urban development) and distance. No suitable breeding habitat within the Project area. Not expected to occur on-site.
American peregrine falcon (<i>Falco peregrinus anatum</i>)	SE, SP	Nests on cliffs, and occasionally on buildings or bridges; forages for birds over many habitats.	No suitable breeding habitat in the Project area, but may occur as an occasional forager.
Bank swallow (<i>Riparia riparia</i>)	ST	Nests in burrows in steep stream banks or similar earth cliffs.	Found nesting near Chittenden Pass, along the Pajaro River, in 1931; long since extirpated from the area. May occur as an occasional migrant, but no suitable nesting habitat in the Project area.
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	FE, SE, HCP/NCCP	Low-elevation riparian habitat, particularly early-successional habitat dominated by cottonwoods and willows.	The species has occurred recently along lower Llagas Creek, 0.5 mi east of the southeastern terminus of the Project site, but no suitable nesting or foraging habitat is present in or near the immediate Project site. Not expected to occur on-site.
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	FE, ST, HCP/NCCP	Flat or gently sloping grasslands on the margins of the San Joaquin Valley and adjacent valleys.	Project area outside of species' range. Presumed absent.
California Species of Special Concern			
Monterey roach (<i>Lavinia symmetricus subditus</i>)	CSSC	Fairly warm streams and rivers flowing into Monterey Bay.	Expected to occur in Llagas Creek east of the Project area, but no suitable habitat on-site.
Foothill yellow-legged frog (<i>Rana boylei</i>)	CSSC, HCP/NCCP	Streams, usually with relatively little riparian vegetation and a cobble substrate.	Extirpated from the valley floor in southern Santa Clara County. The nearest recent record is from the eastern side of the valley, near Coyote Lake. No suitable breeding habitat within the Project area. Not expected to occur in the Project area.
Western pond turtle (<i>Actinemys marmorata</i>)	CSSC, HCP/NCCP	Creeks, ponds, and other aquatic habitat. Nests in heavy upland soils.	Small numbers may be present in Llagas Creek well east of the Project area, but no suitable habitat is present within the Project area, and this species is not known to occur in the SCRWA ponds. Not expected to occur on-site
Northern harrier (<i>Circus cyaneus</i>)	CSSC	Nests in extensive marshes and wet fields, forages in marshes, grasslands, and ruderal habitats.	No suitable nesting habitat in the Project area, but may occur as an occasional forager.
Burrowing owl (<i>Athene cunicularia</i>)	CSSC, HCP/NCCP	Grasslands and ruderal habitats where ground squirrel burrows or other burrows are present.	Suitable breeding and foraging habitat is present in the Project area, and two individuals were observed in the Project area by District biologists in

			November 2009. Small numbers may occasionally occur, and could breed, in the Project area.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	CSSC	Nests in tall shrubs and dense trees, forages in grasslands, marshes, and ruderal habitats.	Shrubs and trees in the Project area provide suitable breeding habitat. Expected to occur.
Olive-sided flycatcher (<i>Contopus cooperi</i>)	CSSC	Nests in montane forests.	No suitable breeding habitat in the Project area, but expected to occur as an occasional migrant.
Yellow warbler (<i>Dendroica petechia</i>)	CSSC	Nests in riparian habitats, particularly those dominated by cottonwoods and willows.	Known to nest along Llagas Creek well east of the Project area, but no suitable nesting habitat on-site. May occur as an occasional forager
Yellow-breasted chat (<i>Icteria virens</i>)	CSSC	Nests in dense stands of willow and other riparian habitat.	Known to nest along Llagas Creek well east of the Project area, but no suitable nesting habitat on-site. Unlikely to occur on-site.
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	CSSC	Breeds and forages in meadows, fallow fields, and pastures.	No suitable breeding habitat in the Project area, but may occur as an occasional migrant.
Bryant's savannah sparrow (<i>Passerculus sandwichensis</i>)	CSSC	Breeds and forages in meadows, fallow fields, pastures, and salt marshes.	No suitable breeding habitat in the Project area, but may occur as an occasional migrant.
Tricolored blackbird (<i>Agelaius tricolor</i>)	CSSC, HCP/NCCP	Nests colonially in cattails or other emergent vegetation around freshwater ponds.	No suitable breeding habitat in the Project area. Breeding colonies are not expected to occur, but individuals may occur as occasional foragers.
Pallid bat (<i>Antrozous pallidus</i>)	CSSC	Forages over many habitats; roosts in buildings, large oaks or redwoods, rocky outcrops and rocky crevices in mines and caves.	May forage on the site on occasion, but no suitable roosting habitat is present on-site.
Western red bat (<i>Lasiurus blossevillii</i>)	CSSC	Found in forest or woodlands, especially in or adjacent to riparian habitat.	Not known to breed in the San Francisco Bay Area, but does occur in the Santa Clara Valley during migration and in winter. May occasional forage over the Project site, but no suitable roosting habitat is present on-site.
Dusky-footed woodrat (<i>Neotoma fuscipes annectens</i>)	CSSC	Builds large stick nests in a variety of habitats, including riparian areas, oak woodlands, and scrub.	Riparian woodland habitats along Llagas Creek well east of the site provides suitable habitat, but no suitable habitat is present within the Project area. Not expected to occur on-site.
American badger (<i>Taxidea taxus</i>)	CSSC	Grasslands and open scrub and woodland.	High-quality habitat absent from the Project area. Occasional individuals may disperse through the Project area, particularly in less developed areas.
State Protected Species or CNPS Species			
California androsace (<i>Androsace elongata</i> ssp. <i>acuta</i>)	CNPS List 4.2	Dry hillsides in cismontane habitats from southern California through the coast ranges.	Presumed absent. Grassland habitat in the Project area is highly disturbed due to grazing pressure and invasion of non-native species.
Big-scale balsamroot (<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>)	CNPS List 1B.2, HCP/NCCP	Chaparral, cismontane woodland, valley and foothill grassland habitat types, sometimes in serpentinite soils.	Presumed absent. Serpentine or other rocky substrates are absent from the Project area, grassland densely vegetated with non-native species does not provide suitable habitat.
Chaparral harebell (<i>Campanula exigua</i>)	CNPS List 1B.2, HCP/NCCP	Rocky soils, usually serpentinite, in chaparral habitat.	Serpentine or other rocky substrates absent from the Project area. In addition, no chaparral habitat is present within the Project area. Presumed absent.

Pink creamsacs (<i>Castilleja rubicundula</i> ssp. <i>rubicundula</i>)	CNPS 1B.2, HCP/NCCP No Take	Openings in chaparral, cismontane woodland, meadows and seeps, and valley and foothill grassland habitat types in serpentinite soils.	Serpentine or other rocky substrates absent from the Project area, grassland densely vegetated with non-native species does not provide suitable habitat. Presumed absent.
Mount Hamilton thistle (<i>Cirsium fontinale</i> var. <i>campylon</i>)	CNPS List 1B.2, HCP/NCCP	Chaparral, cismontane woodland, and valley and foothill grassland habitat types in serpentinite seeps.	Serpentine or other rocky substrates absent from the Project area, grassland densely vegetated with non-native species does not provide suitable habitat. Presumed absent.
Congdon's tarplant (<i>Centromadia parryi</i> ssp. <i>congdonii</i>)	CNPS List 1B.2	Low-elevation, alkaline fields in valley and foothill grassland habitat throughout the southern end of the San Francisco Bay and northward to Contra Costa County and the San Ramon Valley.	Presumed absent. Marginally suitable habitat near wastewater treatment plant, but Project area outside of species' known range (H.T. Harvey and Associates 2005).
Santa Clara red ribbons (<i>Clarkia concinna</i> ssp. <i>automixa</i>)	CNPS List 4.3	Dry loose soil within grassland and foothill woodland in the coast ranges and Sierra foothills.	Presumed absent. No suitable habitat on-site.
San Francisco collinsia (<i>Collinsia multicolor</i>)	CNPS 1B.2, HCP/NCCP	Closed-cone coniferous forest and coastal scrub, sometimes in serpentinite soils.	Serpentine or other rocky substrates absent from the Project area, no coniferous forest or coastal scrub habitat types present in the Project area. Presumed absent.
Fragrant fritillary (<i>Fritallaria lilacea</i>)	CNPS List 1B.2, HCP/NCCP	Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland habitat types, often in serpentinite soils.	Serpentine or other rocky substrates absent from the Project area, grassland densely vegetated with non-native species does not provide suitable habitat. Presumed absent.
Loma Prieta hoita (<i>Hoita strobilina</i>)	CNPS List 1B.1, HCP/NCCP	Chaparral, cismontane woodland, and riparian woodland habitat types in mesic areas, usually with serpentinite soils	Serpentine or other rocky substrates absent from the Project area, grassland densely vegetated with non-native species does not provide suitable habitat. Presumed absent.
Smooth lessingia (<i>Lessingia micradenia</i> var. <i>glabrata</i>)	CNPS List 1B.2, HCP/NCCP	Chaparral woodland habitat on serpentinite soils, often on roadsides.	Serpentine or other rocky substrates absent from the Project area, no chaparral woodland habitat present within the Project area. Presumed absent.
Arcuate bush mallow (<i>Malacothamnus arcuatus</i>)	CNPS List 1B.2	Sandy or rocky soils in drainages; typically associated with chaparral species.	No suitable habitat present within the Project area. Presumed absent.
Hall's bush mallow (<i>Malacothamnus hallii</i>)	CNPS List 1B.2, HCP/NCCP	Chaparral and coastal scrub habitat types.	No suitable habitat present within the Project area. Presumed absent.
Robust monardella (<i>Monardella villosa</i> ssp. <i>globosa</i>)	CNPS List 1B.2, HCP/NCCP	Openings in broadleafed upland forest, openings in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitat types.	No suitable habitat present within the Project area. Presumed absent.
Hairless popcorn-flower (<i>Plagiobothrys glaber</i>)	CNPS List 1A, HCP/NCCP No Take	Alkaline meadows and seeps and coastal salt marshes and swamps.	No suitable habitat present within the Project area. Presumed absent.
Most beautiful jewel-flower (<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>)	CNPS List 1B.2, HCP/NCCP	Chaparral, cismontane woodland, and valley and foothill grassland habitat types in serpentinite soils.	Serpentine or other rocky substrates absent from the Project area, grassland densely vegetated with non-native species does not provide suitable habitat. Presumed absent.

Caper-fruited tropidocarpum (<i>Tripidocarpum capparideum</i>)	CNPS List 1B.1, HCP/NCCP No Take	Alkaline hills within valley and foothill grassland habitat.	No suitable habitat present within the Project area. Presumed absent.
White-tailed kite (<i>Elanus leucurus</i>)	SP	Nests in tall shrubs and trees, forages in grasslands, marshes, and ruderal habitats.	Present in the Project area in small numbers. Trees in less disturbed portions of the Project area provide suitable nesting habitat, and grassland and ruderal habitats provide suitable foraging areas.
Golden eagle (<i>Aquila chrysaetos</i>)	SP, HCP/NCCP	Nests on cliffs or in large trees, forages over grasslands and oak woodlands.	No suitable breeding habitat in the Project area, but may occur in grasslands or agricultural habitats as an occasional forager.
Other HCP/NCCP Covered Species			
Pacific lamprey (<i>Lampetra tridentate</i>)	HCP/NCCP	Breeds in coastal streams and rivers.	Could potentially occur in Llagas Creek well east of the Project site, but suitable habitat absent from the Project site itself.

SPECIAL STATUS SPECIES CODE DESIGNATIONS

FE = Federally listed endangered
FT = Federally listed threatened
SE = State listed endangered
ST = State listed threatened
SC = State Candidate. Sufficient biological information to support a proposal to list the species as endangered or threatened.
CSSC = California Species of Special Concern
SP = State Fully Protected Species
CNPS List 1A = Presumed extinct in California
CNPS List 1B = Plants rare, threatened, or endangered in California and elsewhere
CNPS List 4 = Plants with a limited distribution (watch list)
.1 = seriously endangered in California
.2 = fairly endangered in California
.3 = not very endangered in California

HCP/NCCP No Take = Species recommended for no-take status in the Santa Clara Valley HCP/NCCP

HCP/NCCP = Species covered under the Santa Clara Valley HCP/NCCP

grassland/woodland ecotone in other portions of the Gilroy area, but no such habitat is present in or adjacent to the Short-Term Phase I CIP area. As a result, no special-status plants are expected to occur on the Project site.

Special-status Animal Species

Reconnaissance-level field surveys of the Project area were initially conducted on 1 September 2005; a follow-up survey was conducted on 17 July and 16 November 2009 to provide updated information regarding the potential for special-status wildlife species to use the Project area. Additional information regarding the occurrence of special-status wildlife species in the Project area was obtained from previous H. T. Harvey & Associates projects performed in the vicinity. The legal status and likelihood of occurrence of special-status wildlife species known to occur, or potentially occurring, in the general Project vicinity are presented in Table 1. Figure 3 depicts the CNDDDB-mapped locations of special-status wildlife species in the Project vicinity.

Most of the special-status species listed in Table 1 were determined to be absent from the Project area. For example, the Project is outside of the known distribution of the bay checkerspot butterfly (*Euphydryas editha bayensis*), which occurs farther north in Santa Clara County but which is not currently known to occur south of San Martin, and no habitat for this species is present in the Project area. Several other species that are considered absent from the Project site are discussed in more detail below to document the reasons for their absence.

Several other special-status species are expected to occur in the Project area only as uncommon to rare visitors, migrants, or transients, or may forage on the site while breeding in adjacent areas. However, these species are not expected to breed in the Project area in any numbers, or to be affected by Project implementation. These species include the American peregrine falcon (*Falco peregrinus anatum*), golden eagle (*Aquila chrysaetos*), northern harrier (*Circus cyaneus*), bank swallow (*Riparia riparia*), olive-sided flycatcher (*Contopus cooperi*), yellow warbler (*Dendroica petechia*), grasshopper sparrow (*Ammodramus savannarum*), Bryant's savannah sparrow (*Passerculus sandwichensis alaudinus*), pallid bat (*Antrozous pallidus*), and western red bat (*Lasiurus blossevillei*).

The only special-status wildlife species that are known or expected to occur regularly on or near the Project site and may breed there are the loggerhead shrike (*Lanius ludovicianus*) and white-tailed kite. In addition, the burrowing owl (*Athene cunicularia*) has been observed on a portion of the site, and occasional dispersing American badgers (*Taxidea taxus*) could potentially occur on the Project site as well, though both are expected to be of less regular occurrence than the shrike and kite. These four species, as well as a number of species that are considered absent but for which resource agencies have expressed particular concern, are described in greater detail below.

Federal or State Threatened or Endangered Species

South-Central California Coast Steelhead (*Oncorhynchus mykiss*). Federal Status: Threatened; State Status: Species of Special Concern. The steelhead is an anadromous form of rainbow trout that spends portions of its life cycle both in the ocean and in freshwater streams. South-Central California Coast steelhead usually migrate upstream to spawning areas in late fall

or early winter, when flows are sufficient to allow them to reach suitable habitat in far upstream areas (Moyle 2002). Spawning occurs between December and June. Steelhead eggs remain in gravel depressions, known as redds, for 1.5-4 months before hatching. After hatching, young steelhead use the deeper reaches of streams as rearing areas, and will remain in fresh water for 1-4 years before migrating to the ocean. After migration to the ocean, steelhead typically grow rapidly for two to three years before returning to freshwater streams to spawn. Unlike other salmonids, steelhead do not necessarily die after spawning. Many adults survive and return to the ocean after spawning, coming back to spawn for one or more additional seasons.

Steelhead usually spawn in clear, cool, perennial sections of relatively undisturbed streams. Preferred streams typically support dense canopy cover that provides shade, woody debris, and organic matter. Stream reaches in which spawning occurs are usually free of rooted or aquatic vegetation. Gravel substrates are the optimum spawning habitat. Steelhead usually cannot survive long in pools or streams with water temperatures above 70°F. Despite their general requirement for cool water, steelhead can use warmer habitats if food is available, such as at fast water riffles where fish can feed on drifting insects (Moyle 2002). Ecology of the southern steelhead (including the South-Central California Coast ESU) differs slightly from northern steelhead. Southern steelhead can cope with higher water temperatures, but because southern coastal streams may become very warm, southern steelhead probably spend more time at-sea than their northern counterparts.

Steelhead populations have declined due to degradation of spawning habitat, introduction of barriers to upstream migration, over-harvesting by recreational fisheries, and reduction in winter flows due to damming and spring flows due to water diversion. Steelhead and other salmonids have been categorized into subpopulations, or Evolutionarily Significant Units (ESUs). In 1997, the National Marine Fisheries Service (NMFS) published a final rule to list the South-Central California Coast ESU of the steelhead as threatened under the Federal Endangered Species Act (FESA). This ESU includes all steelhead spawning from the Pajaro River south to (but not including) the Santa Maria River. In 2000, NMFS proposed critical habitat for this and other ESUs as accessible reaches of all rivers within the range of each listed ESU, but this critical habitat designation was vacated (rescinded) in 2002. In 2005, NMFS designated new critical habitat, including specific accessible streams (NMFS 2005). This critical habitat includes the entire reach of Uvas Creek within the Project area (Figure 2). The South-Central California Coast steelhead is considered a “covered species” by the Santa Clara Valley HCP/NCCP, which is currently in development.

Steelhead are suspected of occurring in Llagas Creek, which is located well east of the Project area. The only waterbodies that may be affected by the Project are ephemeral channels along the east side of Camino Arroyo. These channels convey runoff during storm events but are dry at other times, and they do not provide suitable habitat for steelhead. Therefore, steelhead do not occur in the Project area.

California Red-legged Frog (*Rana aurora draytonii*). Federal Status: Threatened; State Status: None. The California red-legged frog is California’s largest native frog. The species is generally restricted to riparian and lacustrine habitats in California and northern Baja California. Red-legged frogs prefer deep, calm pools (usually more than 2 ft deep) in creeks, rivers, or ponds

below 5000 ft in elevation (Jennings and Hayes 1994). Breeding habitat requirements include fresh water and emergent or dense riparian vegetation, especially willows adjacent to shorelines. Red-legged frogs can survive in seasonal bodies of water that are dry for short periods if a permanent water body or dense vegetation stands are nearby.

Adult red-legged frogs are normally active at night and breed in still water during the late winter or early spring after waters recede. Females attach eggs in a single cluster to a vegetation brace just under the surface of the water. The eggs hatch in just over a week and the resulting larvae feed on plant and animal material on the bottom of the pond. It takes at least four months for the larvae to metamorphose into juvenile frogs, and on rare occasions, larvae overwinter before metamorphosing. Red-legged frogs can move considerable distances overland. Dispersal often occurs within creek drainages, but movements of more than one mile over upland habitats have been reported in coastal mesic habitats (Bulger *et al.* 2003), and upland movements of at least 0.4 mi have been documented in inland, more xeric habitats (Tatarian 2008). Red-legged frogs are often found in summer months in habitat that would not be suitable for breeding; these individuals presumably move seasonally between summer foraging habitat and winter breeding habitat.

The U.S. Fish and Wildlife Service (USFWS) listed southern populations of the California red-legged frog as threatened in 1996, due to continued habitat degradation throughout the species' range, and population declines. Critical habitat was designated for the California red-legged frog in 2006 and re-proposed in 2008 (USFWS 2008). No portion of the Project area is within designated or proposed critical habitat. The California red-legged frog is considered a "covered species" by the Santa Clara Valley HCP/NCCP, which is currently in development.

California red-legged frogs have not been recorded anywhere in the Project vicinity, the closest CNDDDB-mapped record being located approximately 3 mi south of the western terminus of the Short-Term Phase I CIP (CNDDDB 2009). A 1997 analysis of known red-legged frog localities in Santa Clara County determined that the species has been largely extirpated from valley floor areas dominated by urban and agricultural development, including all of the Project area (H. T. Harvey & Associates 1997). The two ponds at the SCRWA adjacent to the alignment are unlikely to provide suitable habitat for this species due to water quality issues, and lower Llagas Creek, located more than 0.35 mi east of the site, is not known or expected to support a breeding population of this species. Furthermore, any populations in the foothills on the west side of the valley are separated from the majority of the Project site by urban development and U.S. 101. Thus, red-legged frogs are not expected to occur anywhere within the Project area.

California Tiger Salamander (*Ambystoma californiense*). Federal Status: Threatened; State Status: Species of Special Concern. The California tiger salamander occurs in areas of the Central Valley and Coast Ranges where temporary ponded environments (*e.g.*, vernal pools or human-made ponds providing water for at least three months) are surrounded by uplands that support small mammal burrows. Breeding pools are usually ephemeral (*e.g.*, vernal pools), but they must retain water long enough for metamorphosis to occur. Permanent ponds are also used for breeding, but larger ponds often contain predators that consume eggs and larvae and prevent successful breeding. Such ponds provide breeding and larval habitat, while small mammal

burrows (*e.g.*, those of ground squirrels and pocket gophers) in adjacent upland habitats provide aestivation sites for juvenile and adult salamanders during the dry season.

During summer months, California tiger salamanders occur in subterranean refuge sites, usually in small mammal burrows, but also in crevices in the soil. These sites are typically referred to as “aestivation” sites, although the exact behavior of tiger salamanders in refuge sites is not fully understood. After winter rains have moistened the ground, the salamanders emerge from their refugia and migrate to breeding pools. Females deposit one, or occasionally up to four, eggs in the water and attach them to submerged vegetation or debris. Females may lay eggs twice in a single season (USFWS 2004). Lifetime reproductive success of females is fairly low; females in one study bred an average of 1.4 times in their lives, producing about 11 young each (Trenham *et al.* 2000). Adults may live more than ten years, but do not reproduce until they are four to five years old (Trenham *et al.* 2000). Eggs take 10 to 14 days to hatch. Aquatic juveniles usually complete metamorphosis after three to six months. Generally, ephemeral breeding ponds dry up during summer months, but over-summering larvae have been observed (Shaffer *et al.* 1993). Following metamorphosis, juveniles spend a few days at the pond margin, and then migrate to refuge sites.

The USFWS listed the California tiger salamander as threatened throughout its range in 2004 (USFWS 2004). Critical habitat for the species was designated in 2005 (USFWS 2005). No portion of the Project area is within designated critical habitat for this species. In February 2009, the CDFG accepted a petition to list the species as endangered under the California Endangered Species Act; thus, the species is currently a candidate for state listing. The California tiger salamander is considered a “covered species” by the Santa Clara Valley HCP/NCCP, which is currently in development.

California tiger salamander have not been recorded in the immediate Project vicinity, the closest CNDDDB-mapped record being located approximately 1 mi southwest of the western terminus of the Short-Term Phase I CIP (CNDDDB 2009). Any such populations on the west side of the valley are separated from the westernmost part of the Project site by this long distance and by Uvas Creek, and from the majority of the Project site by urban development and U.S. 101 as well. The two ponds at the SCRWA adjacent to the alignment are unlikely to provide suitable habitat for this species due to water quality issues, and no other ponds or pools suitable for this species are present in the vicinity. Thus, California tiger salamanders are not expected to occur anywhere within the Project area.

Least Bell’s Vireo (*Vireo bellii pusillus*). **Federal Status: Endangered; State Status: Endangered.** The least Bell’s vireo is a small neotropical migratory songbird sparsely distributed along waterways in southern California and northern Baja California, Mexico (Brown 1993). In California, the least Bell’s vireo was historically distributed throughout much of the state, including the Central Valley, the central and southern Coast Ranges, local areas of the eastern Sierra Nevada, and the southwestern portion of the state (Franzreb *et al.* 1994, Kus 2002). The least Bell’s vireo is a riparian-obligate breeder (Kus 1998), using dense thickets of willows and other low trees and shrubs along perennial or ephemeral streams. Prime least Bell’s vireo habitat can be described as a wide (greater than 250 m), structurally heterogenous riparian corridor with dense shrub growth extending vertically from 0.6 to 3 m, few trees greater than 8

cm dbh in the canopy, and an open canopy (Brown 1993, Sharp and Kus 2006). Vireos arrive on their breeding grounds in mid-March, and the nesting season runs from early April through July. Least Bell's vireos exhibit high breeding site fidelity, returning to the same territory, and even nesting in the same shrub, over multiple years. The least Bell's vireo is considered a "covered species" by the Santa Clara Valley HCP/NCCP, which is currently in development.

Prior to 1920, the California population of the least Bell's vireo was considered abundant in dense riparian thickets, especially in upper Salinas Valley (Roberson 2002). Its coastal range (*i.e.*, west of the Central Valley) extended north through the Salinas River valley, but apparently ended in extreme southern Santa Clara County, where the only record prior to 1997 was of a nest collected at Sargent along the Pajaro River (on the Santa Clara/San Benito County line near the current location of Highway 101) in 1932 (Unglish 1937). By 1930, however, declines were widespread, mostly due to parasitism by Brown-headed Cowbirds (*Molothrus ater*). The species was thought to be extirpated from northern California by 1970. In 1980, the species was listed by the State of California as endangered. In 1986, the species was federally listed as endangered (USFWS 1986), and critical habitat for the species was designated in 1994 (USFWS 1994). Isolated and infrequent sightings of singing males in northern and central California suggest that the species may eventually recolonize historical habitat in northern California. In 1972, and again in 1982, lone singing males were found in riparian habitat in Pinnacles State Park, in San Benito County (Roberson 2002). In 1983, three singing males were found on the Salinas River in southern Monterey County, and a female was observed building a nest.

There have been only four coastal records from the Pajaro River watershed north in recent years. One was observed along the lower Pajaro River, along the Monterey/Santa Cruz County border, on 29-30 May 1996. In southern Santa Clara County, a pair was observed building a nest in May 1997 (Rottenborn 2007), and two singing males were reported on 17 May 2001 (CNDDDB 2009); both of these records were from lower Llagas Creek between its confluence with the Pajaro River and Highway 152, just east of Gilroy. On 20 June 2006, a singing male was heard along Coyote Creek near the Coyote Creek Golf Course (H. T. Harvey & Associates, unpublished data); subsequent visits to that site did not relocate the bird. H. T. Harvey & Associates conducted USFWS protocol-level surveys along Uvas Creek between Santa Teresa Boulevard and the Hecker Pass Road bridge in 2006 (H. T. Harvey & Associates, unpublished data), along Uvas Creek for ¼-mi upstream and downstream from the Hecker Pass Road bridge in 2007 (H. T. Harvey & Associates 2007), and at a number of creek crossings along Highway 101 between the Uvas Creek crossing in Gilroy and the San Benito River in San Benito County in 2007 (H. T. Harvey & Associates 2009); all of these surveys produced negative results.

The nearest potential habitat for this species to the Project area is located along Llagas Creek, approximately 0.35 mi from the Project site. Given this distance, no Project activities would affect breeding least Bell's vireos even if they were present along Llagas Creek, and no suitable habitat for the species is present elsewhere in the Project area. Therefore, least Bell's vireos are not expected to occur at all within or near the Project site.

San Joaquin Kit Fox (*Vulpes macrotis mutica*). Federal Status: Endangered; State Status: Threatened. The San Joaquin kit fox is the largest subspecies of kit fox, the smallest canid species in North America. The kit fox is primarily nocturnal and typically occurs in annual

grassland or mixed shrub/grassland habitats throughout low, rolling hills and in the valleys. The diet of kit foxes varies geographically, seasonally, and annually, but typically consists primarily of rodents, rabbits, ground nesting birds, and insects. They require underground dens for temperature regulation, shelter, reproduction, and predator avoidance. Kit foxes commonly modify and use dens constructed by other animals and human-made structures (USFWS 1998). Dens are usually located in loose-textured soils on slopes less than 40 degrees, but the characteristics of San Joaquin kit fox dens vary across the geographic range of the species in regard to the number of openings, shape, and the slope of the ground on which they occur (USFWS 1998). Kit foxes change dens regularly, often using numerous dens each year.

The San Joaquin kit fox was listed as endangered by the USFWS in 1967 and by the State of California in 1971. Loss of habitat from urban, agricultural, and industrial development are the principal factors contributing to the decline of the San Joaquin kit fox. Subpopulations of the San Joaquin kit fox appear to be increasingly isolated from one another due to developments including cities, aqueducts, irrigation canals, surface mining, road networks, petroleum fields, other industrial projects, and wind farms (USFWS 1998). Critical habitat has not been designated for this species.

The modeled habitat distribution of this species in the working draft HCP/NCCP does not depict any areas within the Project's immediate vicinity as providing kit fox habitat. Although the majority of the kit fox population occurs in the southern San Joaquin Valley, satellite populations and individuals occur on the western edge of the San Joaquin Valley extending north nearly to Antioch in Contra Costa County, and in the Salinas Valley (Bell 1994). A small population occurred historically southeast of the town of Hollister in San Benito County (USFWS 1998), but the current status of this population is poorly known. San Joaquin kit foxes were infrequently sighted in San Benito County and southern Santa Clara County in the early 1970's. Morrell (1975) reported four sightings prior to 1972, and seven sightings between 1972 and 1975 within this region. These reports are not precise with respect to date or location, but provide information obtained from interviews with resource staff members familiar with the area, and from limited ground surveys of the region. These reports include nine sightings in San Benito County near Hollister, and two sightings in Santa Clara County between Pacheco Pass and San Felipe Lake. The reliability of these sightings is unknown, as kit fox reports frequently turn out to be based on unidentified individuals of other canid species.

Since 1975, there has been only one CNDDDB report of a San Joaquin kit fox in Santa Clara County. One adult was reported near Bell Station in an outlying portion of Henry Coe State Park in 2002 (CNDDDB 2009). Several studies conducted between Gilroy and Pacheco Pass in the last 20 years have failed to document kit foxes in that area (Weslar 1987, McGinnis 1993, Young 2000). The CNDDDB maps the potential range of the San Joaquin kit fox according to Bell (1994). The current range of the San Joaquin kit fox, as mapped by the CNDDDB, does not include any portion of Santa Clara County west of Highway 101, or any portion of the Project area. In Santa Clara County, this range is the same as that mapped by the FWS in the Recovery Plan (1998). Bell based this range estimation on the presence of ostensibly suitable habitat, in addition to actual occurrence records or documentation of historic use, although the lack of records from much of the mapped area indicates that Bell overestimated the actual range of the species. The source populations for the San Benito and southern Santa Clara County sightings appear to be the well known populations that occur along the east side of the Diablo Range in

San Joaquin, Stanislaus, and Fresno counties. Various low mountain passes (*e.g.*, Pacheco Pass) may provide avenues for occasional (but very infrequent) westward dispersal by kit foxes. However, San Joaquin kit foxes are not expected to venture west as far as the Project area, and the species is thus considered absent from the Project area.

California Species of Special Concern and State Fully Protected Species

Monterey Roach (*Lavinia symmetricus subditus*). **Federal Status: None; State Status: Species of Special Concern.** This small fish is one of several subspecies of California roach that occur throughout northern California. The Monterey roach occurs in tributaries entering Monterey Bay, including the Salinas, Pajaro, and San Lorenzo river drainages. Monterey roach are found in warm, small to moderate-sized streams, and large numbers are often seen clustered in isolated pools in intermittent drainages (Moyle 2002). They appear to prefer warm, shallow streams with coarse gravelly substrate and relatively little canopy cover, but are nevertheless found in a wide variety of stream conditions. They feed primarily on filamentous algae, and spawn in shallow areas with gravelly substrate. The subspecies is likely declining due to habitat alteration, including pressures exerted by nonnative species such as green sunfish (*Lepomis cyanellus*).

This species may occur in Llagas Creek, which is located well east of the Project area. The only waterbodies that may be affected by the Project are ephemeral channels along the east side of Camino Arroyo. These channels convey runoff during storm events but are dry at other times, and they do not provide suitable habitat for the Monterey roach. Therefore, this species does not occur in the Project area.

Foothill Yellow-legged Frog (*Rana boylei*). **Federal Status: None; State Status: Species of Special Concern.** The foothill yellow-legged frog is a stream-breeding frog typically found in small to mid-sized streams and rivers from the Coast Ranges to the western Sierra Nevada and San Gabriel mountain foothills (Jennings and Hayes 1994). Shallow stream riffles with cobble-sized rocks and slow water flows are necessary components of breeding habitat for the species, while open, sunny banks surrounding breeding locations provide foraging habitat (Fellers 2005). Breeding occurs during the spring in California, typically April – June, although rainfall during the breeding season can cause females to delay oviposition. Egg masses are anchored to cobbles in the streambed, and hatch within one to five weeks after oviposition. Tadpoles take refuge amongst the cobbles near their hatching site, where they forage on algae and detritus (Fellers 2005). Adult yellow-legged frogs feed on a wide variety of terrestrial and aquatic invertebrates.

No suitable habitat for this species is present on the Project site. The only waterbodies that may be affected by the Project are ephemeral channels along the east side of Camino Arroyo. These channels convey runoff during storm events but are dry at other times, and they do not provide suitable habitat for yellow-legged frogs. Furthermore, foothill yellow-legged frogs have not been detected anywhere in the Project vicinity, and an analysis of known records indicated that the species had been largely extirpated from the floor of the Santa Clara Valley by 1999 (H. T. Harvey & Associates 1999). The nearest known CNDDDB record of a yellow-legged frog is more than 5 mi away, in Coyote Creek above the Coyote Lake Reservoir on the eastern side of the Santa Clara Valley (CNDDDB 2009). Due to the absence of suitable habitat and the lack of

any records in the Project vicinity, yellow-legged frogs are not expected to occur in the Project area.

Western Pond Turtle (*Actinemys marmorata*). **Federal Status: None; State Status: Species of Special Concern.** The western pond turtle occurs in ponds, streams, and other wetland habitats in the Pacific Slope drainages of California and Baja Norte, Mexico. Two subspecies have been described, the northwestern pond turtle (*A. m. marmorata*) and the southwestern pond turtles (*A. m. pallida*), but central California appears to be an intergrade zone. Adult western pond turtles occur in a variety of aquatic habitats, including streams and ponds. Ponds or slack-water pools with suitable basking sites (such as logs) are an important habitat component, and western pond turtles do not occur commonly along high-gradient streams. Nesting habitat consists of open, unshaded, sandy or silty uplands near suitable aquatic habitat. Females typically lay their eggs within 165 ft of their aquatic habitat, but are known to make considerable overland journeys, and have been documented making their nests as far as 1300 ft from the water (Bury and Germano 2008). Breeding occurs in late spring or early summer (typically May-June). Juveniles feed in shallow aquatic habitats (often creeks) with emergent vegetation and ample invertebrate prey. Adults are omnivorous, feeding on a variety of aquatic and terrestrial invertebrates, detritus, and vegetation. Pond turtles may aestivate in upland areas when water sources are intermittent, but more study is needed (Bury and Germano 2008).

Although two ponds at the SCRWA plant, immediately adjacent to a segment of the Short-Term Phase I CIP pipeline, provide potential habitat for this species, H. T. Harvey & Associates wildlife biologist S. Rottenborn has not observed this species in the plant's ponds during numerous birding trips there. This species may occur in Llagas Creek east of the Project site, but due to the distance between the site and the nearest reach of Llagas Creek (at least 0.35 mi), pond turtles are not expected to disperse from the creek to the Project site. No other pond turtle habitat exists in the Project area east of Monterey Road. Therefore, pond turtles are not expected to occur in the Project area.

Golden Eagle (*Aquila chrysaetos*). **Federal listing status: None; State listing status: Fully Protected.** The golden eagle is widely distributed across the holarctic in a variety of open habitats (Kochert et al 2002). In California, the golden eagle is an uncommon permanent resident and migrant throughout the state and the breeding distribution excludes only the Central Valley, the immediate coast in the far north, and the southeastern corner of the state (Polite and Pratt 1990). Until recently golden eagle populations in North America were considered both abundant and stable, but recent declines have been noted in several western states, including southern California (Good et al 2007). Loss of habitat and accidental or purposeful mortalities due to human activities are the primary factors contributing to these declines (Kochert and Steenhof 2002), which are expected to continue as habitat loss and anthropogenic landscape alteration continue (Good et al 2007). Golden eagles breed in a range of open habitats including desert scrub, foothill cismontane woodlands, and annual or perennial grasslands. Prime golden eagle habitat is characterized by large, remote patches of grassland or open woodland; a hilly topography that generates lift; an abundance of small mammal prey; and tall structures to serve as nest platforms and hunting perches. Once a breeding pair establishes a territory, they may build a number of nests in tall structures including tall trees or snags, cliffs, or utility towers, only one of which is used in any given year. The breeding season begins in late January and runs

through August. After the nesting period is over, adults usually remain in or near their breeding territories, although in higher elevations they may move downslope somewhat. Migratory individuals from northern portions of the species range may winter in California. Young birds in California tend to be sedentary, remaining in or near their parental home ranges (Polite and Pratt 1990, Kochert et al 2002).

Golden eagles are known to forage in the general vicinity of the Project site, but they typically forage in extensive grasslands or other open habitats. The majority of the Project alignment runs along roadsides or in other areas where eagles are unlikely to forage. While there is a possibility that eagles could forage in the Project area on occasion, they are not expected to do so regularly or in numbers. Based on CNDDDB data and the Santa Clara Breeding Bird Atlas species account (Bousman 2007b), golden eagles have not been confirmed nesting along, or in close proximity to, the Project alignment, and no eagle nests were observed during reconnaissance surveys in 2005 and 2009. Therefore, the Project will not disturb nesting eagles.

White-tailed Kite (*Elanus leucurus*). **Federal Status: None; State Status: Fully Protected.** In California, white-tailed kites can be found in the Central Valley and along the coast, in grasslands, agricultural fields, cismontane woodlands, and other open habitats. Although the species rallied impressively after marked reductions during the early 20th century, populations may be exhibiting new declines as a result of recent increases in habitat loss and disturbance (Dunk 1995, Erichsen *et al.* 1996). White-tailed kites are year-round residents in California, establishing breeding territories that encompass open areas with healthy prey populations, and snags, shrubs, trees, or other nesting substrates (Dunk 1995). Nonbreeding birds typically remain in the same area over the winter, although some movements do occur (Polite *et al.* 1990). The presence of white-tailed kites is closely tied to the presence of prey species, particularly voles, and prey base may be the most important factor in determining habitat quality for white-tailed kites (Dunk and Cooper 1994, Skonieczny and Dunk 1997).

White-tailed kites are locally common breeders in the Gilroy area (Mammoser 2007). Kites are frequently observed along Llagas Creek east of the Project area, and they could potentially nest in small numbers in trees along the Project alignment. Non-native grassland, ruderal, and agricultural habitats throughout the Project alignment provide potential foraging habitat for the species.

Burrowing Owl (*Athene cunicularia*). **Federal Status: None; State Status: Species of Special Concern.** In California burrowing owls are distributed throughout the state, with populations in the northeast, Central Valley, interior San Francisco Bay area, Salinas Valley, Carrizo Plain, and Imperial Valley; and on several of the Channel Islands (Gervais *et al.* 2008). Habitat loss has reduced the abundance of this species within its range and resulted in local extirpations, particularly along the central and southern coasts. The burrowing owl is a small, terrestrial owl that resides in flat or gently sloping open grassland or sparse shrubland ecosystems. Preferred habitats are annual and perennial grasslands, typically with sparse or nonexistent tree or shrub canopies. In California, burrowing owls are found in close association with California ground squirrels. Ground squirrels provide nesting and refuge burrows, and maintain areas of short vegetation height, which provide foraging habitat and allow for visual detection of avian predators by burrowing owls. In the absence of ground squirrel populations,

habitats soon become unsuitable for occupancy by owls. Burrowing owls are semi-colonial nesters, and group size is one of the most significant factors contributing to breeding site fidelity. The nesting season, as recognized by the California Department of Fish and Game, runs from February 1 through August 31. Breeding pairs typically have four to five young each year. After nesting is completed, adult owls may remain in their nesting burrows or in nearby burrows, or may migrate (Rosenberg *et al.* 2007); young birds disperse across the landscape, moving 0.1 mi to 33 mi from their natal burrows (Rosier *et al.* 2006).

Neither the CNDDDB (2009) nor the Santa Clara County Breeding Bird Atlas (Trulio 2007) contain records of burrowing owls within the Project area. The species is rare and very local as a breeder in much of the Gilroy area (Trulio 2007), but individuals are periodically detected in the Gilroy vicinity (CNDDDB 2009). No burrowing owls were detected in the Project alignment during H. T. Harvey & Associates' 2005 or 2009 reconnaissance-level surveys. However, two owls were detected by District biologists within the Short-Term Phase I CIP area in November 2009 (Nina Merrill, pers. comm.), just east of Camino Arroyo, and potential habitat (open grassland or similar habitat with small mammal burrows) occurs adjacent to the planned pipeline in several locations. Burrowing owls therefore roost and forage, and could possibly breed, within the Project area, at least sporadically and/or in low numbers.

Loggerhead Shrike (*Lanius ludovicianus*). Federal Status: None; State Status; Species of Special Concern (breeding). The loggerhead shrike is distributed throughout much of California, except in higher-elevation and heavily forested areas including the Coast Ranges, the Sierra Nevada, the southern Cascades, the Klamath and Siskiyou ranges, and the highest parts of the Transverse Ranges (Humble 2008). While the species' range in California has remained stable over time, populations have declined steadily, likely as a result of loss and degradation of breeding habitat, as well as possible negative impacts of pesticides (Cade and Woods 1997). Loggerhead shrikes establish breeding territories in open habitats with relatively short vegetation that allows for visibility of prey; they can be found in grasslands, scrub habitats, riparian areas, other open woodlands, ruderal habitats, and developed areas including golf courses and agricultural fields (Yosef 1996). They require the presence of structures for impaling their prey; these most often take the form of thorny or sharp-stemmed shrubs, or barbed wire. Ideal breeding habitat for loggerhead shrikes is comprised of short grass habitat with many perches, shrubs or trees for nesting, and sharp branches or barbed wire fences for impaling prey. Shrikes nest earlier than most other passerines, especially in the west where populations are sedentary. The breeding season may begin as early as late February, and lasts through July. Nests are typically established in shrubs and low trees including sagebrush, willow, and mesquite, through brush piles may also be used when shrubs are not available (Yosef 1996, Humble 2008).

Shrikes are regular breeders throughout the less developed areas of the Santa Clara Valley floor and foothills (Bousman 2007a). Open habitats suitable for foraging, and trees and shrubs for impaling prey and nesting, are found in portions of the Project area. Therefore, the species is expected to be present within the Project area.

Tricolored Blackbird (*Agelaius tricolor*). Federal listing status: None; State listing status: Species of Special Concern (breeding). The tricolored blackbird is a year-round near-endemic to California, where more than 99% of the global population can be found (Beedy 2008).

Tricolored blackbirds are most abundant in the Central Valley, but breeding colonies can also be found locally on the North Coast and in northeastern California, along the Central and Southern Coasts, and in the western Mojave Desert (Beedy and Hamilton 2001). Tricolored blackbirds form the largest breeding colonies of any landbird, ranging from fewer than 20 to over 30,000 birds in a single colony. Tricolored blackbirds historically established their breeding colonies in bulrushes, cattails, and other emergent vegetation over open water, but currently many of the largest colonies are found nesting in non-native Himalayan blackberry (*Rubus discolor*) and thistles, and in grainfields near dairies (Cook and Toft 2005, Beedy 2008). Prime breeding habitat for tricolored blackbirds must include an open source of fresh water; protected nesting microhabitat such as flooded or thorny vegetation; and nearby foraging areas such as grain fields, pastures, or dairies (Churchwell *et al.* 2005). Tricolored blackbird colonies begin forming in March, and the breeding season extends through mid-July. After the breeding season, colonies disband and populations from across the species range congregate in the Central Valley to form loose foraging flocks (Hamilton 2004).

The modeled habitat distribution of this species in the working draft HCP/NCCP depicts two ponds at the entrance to the SCRWA plant as “primary habitat” and shows undeveloped areas in the Project vicinity as providing “secondary habitat”. However, the Santa Clara County Breeding Bird Atlas does not indicate any breeding records from the Project area (Rottenborn 2007b). The nearest recent breeding colony of tricolored blackbirds recorded in the CNDDDB was recorded approximately 7 mi south of Gilroy in a patch of bulrushes and willows near Soda Lake in the eastern foothills of the Santa Cruz mountains in 2003. The Project area lacks extensive stands of flooded emergent vegetation or extensive bramble patches, and the patches of cattails in the two SCRWA ponds are too small to support a colony of this species. Thus we do not expect breeding tricolored blackbird colonies to be present in or very near the Project area. Small numbers may forage in the Project alignment on occasion.

San Francisco Dusky-footed Woodrat (*Neotoma fuscipes annectens*); Federal Status: None; State Status: Species of Special Concern. The San Francisco dusky-footed woodrat can be found in a variety of woodland and scrub habitats throughout the southern San Francisco Bay Area and the adjacent central coast range down to the Pajaro River in northern Monterey County (Hall 1981, Bryiski *et al.* 1990). Woodrats prefer riparian and oak woodlands with dense understory, as well as thick chaparral habitat (Lee and Tietje 2005). Although woodrats are locally common where they occur, habitat conversion and increased urbanization, as well as increasing populations of introduced predators such as domestic cats pose substantial threats to this subspecies. Dusky-footed woodrats build large, complex nests of sticks and other woody debris, which may be maintained by a series of occupants for several years. However, woodrats are also adept at making use of human-made structures, and will nest directly in electrical boxes, pipes, wooden pallets and even portable storage containers. Typically, woodrat house densities increase with canopy density and the extent of poison oak distribution in the area. Dens serve as nurseries, shelter from weather and predators, and food storage facilities (Carraway and Verts 1991). The breeding season begins in February and sometimes runs through September, with females bearing a single brood of one to four young per year.

Dusky-footed woodrats occur along Llagas Creek well east of the Project area, but no suitable habitat for woodrat nests is present in the Project area due to the absence of dense brushy or riparian vegetation, and no woodrat nests were detected during reconnaissance-level wildlife

surveys in 2005 and 2009. Therefore, this species is not expected to occur within the Project area.

American Badger (*Taxidea taxus*). **Federal Status: None; State Status: Species of Special Concern.** American badgers are stocky, burrowing mammals that occur in grassland habitats throughout the western United States. Badgers can have large territories, up to 21,000 ac in size, varying by sex and season. They are strong diggers, and feed primarily on other burrowing mammals, such as ground squirrels. Badgers are primarily nocturnal but are often active during the day. They breed during late summer, and females give birth to a litter of young the following spring. The primary known sources of mortality for this species are automobiles and hunting (*i.e.*, guns, traps and poison).

American badgers are known to occur in the grassy foothills on either side of the valley in the Gilroy area (CNDDDB 2009). No high-quality habitat is present in the Project area due to the absence of extensive grasslands, frequency of ground disturbance associated with cultivation, and intensive road traffic in many areas, and badgers are unlikely to den in the Project area. However, these species can disperse over long distances, and individuals could disperse along roads, drainages, and open areas within and adjacent to the Project alignment. Thus badgers may occur within the Project area irregularly and in very low numbers.

Other Santa Clara Valley HCP/NCCP Covered Species

Pacific Lamprey (*Lampetra tridentata*). **Federal Status: None; State Status: None.** The Pacific lamprey is a taxonomically diverse species found along the Pacific coast from Baja California to the coasts of northeastern Asia. Although there are land-locked populations, many Pacific lampreys are anadromous, spawning in freshwater streams and returning to the ocean to mature. In the Pajaro River area, the adults' upstream migration occurs in March and April, and spawning takes place in calm reaches of streams with gravelly or sandy beds. Juveniles take 4-6 years to mature in their natal streams before migrating to the ocean in winter or early spring.

Pacific lampreys have been recorded in the Pajaro River system and could potentially occur in Llagas Creek east of the Project area. The only waterbodies that may be affected by the Project are ephemeral channels along the east side of Camino Arroyo. These channels convey runoff during storm events but are dry at other times, and they do not provide suitable habitat for the Pacific lamprey. Therefore, this species does not occur in the Project area.

Sensitive/regulated habitats

Overviews of both United States Army Corps of Engineers (USACE) and California Department of Fish and Game (CDFG) jurisdictions are provided in Appendix 2.

United States Army Corps of Engineers Jurisdiction

Survey Results. Resources that are potentially under the regulatory jurisdiction of the USACE in the Project area include two ephemeral drainage channels, one at the intersection of Camino Arroyo and Ventura Way and the other just east of Camino Arroyo (Figure 2). The limit of USACE jurisdiction is defined by the ordinary high water mark on opposing creek banks. The

location of the ordinary high water mark is based on physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in character of soil, destruction of vegetation, exposed roots on the bank, deposition of leaf litter and other debris materials or lower limit of moss growth on channel banks. The channel at the intersection of Camino Arroyo and Ventura Way apparently carries runoff from a relatively large area, as this channel originates west of U.S. 101; this channel is likely to be considered jurisdictional by the USACE. The second channel conveys runoff only from a small area in the vicinity of Holloway Road and Camino Arroyo; it is unknown whether the USACE would claim jurisdiction over this channel.

No potential Section 404 wetlands occur within the Project area. Treatment ponds in the vicinity of the existing SCRWA plant support ruderal wetland vegetation, are underlain by hydric soils of the Clear Lake series, and are inundated or saturated for a significant portion of the growing period. However, these ponds are artificial features that are functioning as originally intended and are therefore not under the jurisdiction of the USACE.

California Department of Fish and Game Jurisdiction

Survey Results. Field surveys were also conducted in 2005 within the Project boundaries for habitats potentially under the regulatory jurisdiction of the CDFG as described under Division 2, Chapter 6, Section 1600-1607 of the Fish and Game Code of California (CDFG 1994). As shown on Figure 2, the two locations where the proposed pipeline crosses drainages that may be within the jurisdiction of the CDFG are the two channels mentioned above as possibly being subject to USACE jurisdiction. The limit of CDFG jurisdiction is typically defined by the topographic top of bank, and in some cases the edge of riparian vegetation beyond the top of bank, whichever is greater. Construction improvements within CDFG jurisdiction require a Streambed Alteration Agreement.

BIOTIC HABITAT IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

The proposed Project may have effects on the biological resources in the Project area. We evaluated project impacts to biological resources based on thresholds of significance guidelines from CEQA and NEPA. The California Environmental Quality Act (CEQA) and the CEQA Guidelines provide guidance in evaluating Project impacts and determining which impacts will be significant. CEQA defines “significant effect on the environment” as “a substantial adverse change in the physical conditions which exist in the area affected by the proposed Project.” Under CEQA Guidelines section 15065 and Appendix G, a project’s effects on biotic resources may be significant when the project would:

- “have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory”
- “have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service”
- “have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service”
- “have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act”
- “interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites”
- “conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance”
- “conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan”

REGULATORY SETTING

Biological resources are regulated by the following:

Federal Endangered Species Act. The FESA protects listed wildlife species from harm or “take” which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture,

collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that directly results in death or injury to a listed wildlife species. An activity can be defined as “take” even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under FESA if they occur on federal lands or if the project requires a federal action, such as a Section 404 fill permit.

The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over federally listed threatened and endangered species under the FESA. The USFWS also maintains lists of proposed and candidate species. Species on these lists are not legally protected under the FESA, but may become listed in the near future and are often included in their review of a project.

California Endangered Species Act. The California Endangered Species Act (CESA) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with the CESA, CDFG has jurisdiction over state-listed species (California Fish and Game Code 2070). Additionally, the CDFG maintains lists of "species of special concern" that are defined as species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats.

California Environmental Quality Act. Section 15380(b) of the California Environmental Quality Act (CEQA) Guidelines provides that a species not listed on the federal or state lists of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in FESA and CESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFG.

Clean Water Act. Under Section 404 of the Clean Water Act, the Corps is responsible for regulating the discharge of fill material into waters of the United States. Waters of the U.S. and their lateral limits are defined in 33 CFR Part 328.3 (a) and include streams that are tributary to navigable waters and their adjacent wetlands. Wetlands that are not adjacent to waters of the U.S. are termed “isolated wetlands” and, depending on the circumstances, may also be subject to Corps jurisdiction.

California Water Quality and Waterbody Regulatory Programs. Pursuant to Section 401 of the federal Clean Water Act, projects that are regulated by the Corps must obtain water quality certification from the Regional Water Quality Control Board (RWQCB). This certification ensures that the Project will uphold state water quality standards. The RWQCB may impose mitigation requirements even if the Corps does not.

The CDFG exerts jurisdiction over the bed and banks of rivers, lakes, and streams according to provisions of Section 1601 to 1603 of the Fish and Game Code. The Fish and Game Code requires a Streambed Alteration Agreement for the fill or removal of material within the bed and banks of a watercourse or waterbody and for the removal of riparian vegetation.

The Federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Most native bird species are covered by this Act.

The California Native Plant Society (CNPS), a non-governmental conservation organization, has developed lists of plant species of concern in California. Vascular plants included on these lists are defined as follows:

- List 1A Plants considered extinct.
- List 1B Plants rare, threatened, or endangered in California and elsewhere.
- List 2 Plants rare, threatened, or endangered in California but more common elsewhere.
- List 3 Plants about which more information is needed - review list.
- List 4 Plants of limited distribution-watch list.

Although the CNPS is not a regulatory agency and plants on these lists have no formal regulatory protection, plants appearing on List 1B or List 2 are, in general, considered to meet CEQA's Section 15380 criteria and adverse effects to these species are considered significant.

The City of Gilroy General Plan includes Open Space and Habitat Areas Policies and implementation actions designed to protect biological resources. The policies are as follows:

Policy 20.01 Open Space Areas. Preserve and protect the following open space areas:

- a) Natural resource and wildlife habitat areas, such as the Uvas Creek and Llagas Creek riparian communities; the heavily vegetated portions of the Santa Cruz Mountains; steep hillsides and significant hillside features (such as serpentine barrens); and natural features of high community value (e.g., the stands of trees along Miller Avenue and cedar trees bordering Hecker Pass Road/Highway 152).
- e) Recreational lands, including community, neighborhood, and linear parks; expand linear parks along Uvas and Llagas Creeks; and the Gilroy Municipal Golf Course.

Policy 20.02 Creek Protection. Protect the ecological, aesthetic and recreation value of the creeks that flow through the Gilroy Planning Area from urban encroachment and degradation. Ensure that new development preserves the function of natural drainages, include small canyons and seasonal creeks. The easements and setbacks adjacent to these creeks shall be maintained in open space. Access to the creeks should be of sufficient width to accommodate trails, flood control access, and protection of riparian habitat.

Policy 20.03. Plant and Wildlife Habitats. Preserve important plant and wildlife habitats, including riparian communities, heavily vegetated hillside areas, unique hillside areas (e.g., serpentine barrens), creeks and sensitive nesting sites. Loss of these habitats should be fully offset through creation of habitat of equal value, with the compensation rate for habitat creation determined by a qualified biologist.

Policy 20.04 Rare and Endangered Species. Limit development in areas that support the California tiger salamander and other rare or endangered species. If development of these areas must occur, any loss of habitat should be fully compensated onsite. If off-site mitigation is necessary, it should occur within the Gilroy Planning Area whenever possible, and must be accompanied by plans and a monitoring program prepared by a qualified biologist.

Significant Trees. The City of Gilroy Consolidated Landscaping Policy, section 6.0, states that the following trees shall be designated significant:

- Existing native trees (naturally occurring species in Gilroy) six (6) inches or more in diameter, at a point four and one half (4½) ft above the ground; or
- Trees that are important to the historical or visual aspect of Gilroy.

ASSUMPTIONS

The Short-Term Phase I CIP will primarily impact agricultural land, non-native herbaceous vegetation, and developed land along existing roads (Figure 2). The precise extent of impacts will not be known until the final design has been completed, and the impact estimates given below are likely maximum estimates. This impact analysis was based on the assumption that design specifications will incorporate the following impact avoidance measures:

1. Pipelines will be installed within or along existing roads. A temporary construction corridor of 25 ft on either side of the roadway was surveyed for sensitive biological resources, due to potential construction disturbance, temporary staging areas, etc., in adjacent areas. Impact acreages therefore represent the greatest potential impact before avoidance measures are incorporated.
2. Standard District Best Management Practices (BMPs) will be implemented to avoid and minimize impacts to biological resources.

IMPACTS FOUND TO BE LESS THAN SIGNIFICANT

Temporary Loss of Non-native Herbaceous Vegetation, Agricultural, and Developed Land and Associated Common, Widespread Wildlife Species

Construction of the Short-Term Phase I CIP pipeline will result in temporary impacts to a relatively small surface area of non-native herbaceous vegetation, agricultural, and developed land (up to 23.0 acres [ac]). These plant communities/land cover types are common in the Gilroy area and in Santa Clara County in general, and provide low-quality habitat for most native plants and wildlife. Although such impacts would be less than significant and thus do not require mitigation, all disturbed areas will be returned to the pre-construction grade, and originally vegetated areas will be reseeded with native grass and forb species. Impacts to these habitats, and the temporary loss of potential nesting, roosting, and foraging opportunities associated with such habitats, will result in a very limited short-term loss of regionally abundant habitat, and will

not result in substantial reductions in the regional populations of any species or the regional extent of any habitat types. Therefore, Project impacts to these habitats will be less than significant.

Potential Impacts to Certain Special-Status Species

Some special-status bird species may occur on the Short-Term Phase I CIP site only as nonbreeding visitors (e.g., in winter), migrants, or transients, or may forage in this area in low numbers while breeding in adjacent areas. These species include the American peregrine falcon, golden eagle, northern harrier, yellow warbler, grasshopper sparrow, Bryant's savannah sparrow, and tricolored blackbird. These species are not expected to breed on the site, or to occur there regularly or in large numbers. As a result, the Project is not expected to result in appreciable effects on regional populations of these species that occur only as occasional visitors or foragers. Therefore, impacts of the Short-Term Phase I CIP to these species are considered less than significant.

It is possible that up to one or two pairs of white-tailed kites and one pair of loggerhead shrikes could nest in vegetation adjacent to the proposed Short-Term Phase I CIP alignment, most likely near the entrance to the SCRWA. The trees in which these birds might nest will not be physically disturbed by construction activities, but there is some potential that construction activities during the nesting season could disturb birds to the point of abandonment of active nests, possibly including eggs and young. However, the District will implement BMPs BI-8 to BI-10 to avoid and minimize impacts to migratory birds prior to Project implementation, as described in greater detail in *Regulatory Overview for Birds* below. Implementing those measures will reduce the potential for any impacts to active nests of these and other bird species. Therefore, impacts of the Short-Term Phase I CIP to these species are considered less than significant.

We do not expect western pond turtles or other special-status aquatic species to occur in the Project area, but conservation measures such as preconstruction surveys and wildlife exclusion fencing around ponds have been incorporated into the Short-Term Phase I CIP's Biological Assessment for California red-legged frogs and California tiger salamanders as precautionary measures. These measures will also avoid impacts to western pond turtles, in the unlikely event that a pond turtle were to occur in the Project area. For example, biologists on the site to conduct preconstruction surveys for red-legged frogs and tiger salamanders will also look for pond turtles, and will relocate any turtles detected to safe areas providing suitable habitat. Therefore, impacts of the Project to western pond turtles and other special-status aquatic species are less than significant.

Temporary Impacts to Wildlife Movement

Construction of the Short-Term Phase I CIP pipeline will result in the presence of construction activity and equipment over a modest portion of the valley floor in the southeastern Gilroy area. The presence of such activity, as well as trenching for pipeline installation, could potentially disrupt movement of terrestrial wildlife species to some extent. However, various pipeline segments will be constructed at different times, so that at any given time, there will be ample opportunities for any animals attempting to move through the Project area to bypass the

construction area. Also, because the Project site is urbanized, wildlife movement is expected to be minimal over this area. Finally, the impacts to resulting from this Project will occur only for a brief duration during construction, and following installation of the pipeline, the Project area will be restored to its preconstruction condition. As a result, only minimal, short-term effects on wildlife movement will occur, and the Project's impacts from the Short-Term Phase I CIP to wildlife movement are thus considered less than significant.

IMPACTS FOUND TO BE LESS-THAN-SIGNIFICANT WITH MITIGATION

Indirect Impacts to Aquatic Species and Habitats Due to Degradation of Water Quality During Construction

The Short-Term Phase I CIP will involve connection of new segments of pipeline to an existing pipeline that runs along a west-east trending ephemeral channel within a ditch at the Camino Arroyo/Ventura Way intersection and installation of a new pipeline segment along a north-south trending ditch south of Holloway Road. Both of these ditches convey water at least during wet periods, and it is possible that either or both may be considered jurisdictional by the USACE, RWQCB, and/or CDFG. Work in or near stream channels and large ditches such as these could have a significant impact on water quality in these channels and in Llagas Creek, to which these channels flow, due to increased turbidity and siltation resulting from erosion during and after pipeline construction/trenching near the creek, if such work occurs during the wet season or if soil is allowed to enter the creek. However, work will occur primarily during the dry season, when little or no water will be present in these channels. Also, pipeline crossings of the east-west running channel, if necessary, will occur using the jack and bore method; thus, direct impacts to aquatic habitats and species, and to water quality, are unlikely. Nevertheless, there is some potential that impacts could occur as a result of work near aquatic habitats. Degradation of water quality resulting from construction constitutes a potentially significant impact to aquatic wildlife species in Llagas Creek downstream from the Project site, given the number of sensitive species that potentially occur in Llagas Creek.

The following mitigation measure will be implemented to reduce impacts to less than significant levels.

Mitigation Measure 1. The Project will incorporate standard District BMPs to prevent impacts related to the degradation of water quality, including WQ-1, WQ-5, WQ-6, WQ-9, WQ-15, WQ-18, WQ-40, and WQ-41. Specifically, the following measures will be adhered to in order to reduce water quality impacts to a less-than-significant level:

1. Wet season construction, including grading, will be avoided to the greatest extent practicable.
2. Work in channel areas will be conducted from top of bank if access is available and there are flows in the channel.
3. All wetlands in the Project area will be temporarily staked in the field by a qualified biologist to ensure that construction equipment and personnel avoid these features.
4. Only land that will be actively under construction in the near term will be cleared/prepared for construction.

5. If soil is stockpiled, no run-off will be allowed to flow into creeks. Exposed soil in the work areas will be controlled by stabilizing slopes and protecting channels.
6. Site ingress/egress locations will be stabilized.
7. Alterations to existing contours and slopes will be minimized, including grading the minimum area necessary.
8. Construction activities will be confined to a defined project area to reduce the amount of disturbed area.
9. Measures will be implemented to prevent mud from being tracked onto roadways, including use of geotextile mats, gravelling unsurfaced access roads, and keeping access areas as close to work areas as possible.
10. Nearby streets will be swept at least once per day during construction.
11. Existing vegetation will be preserved to the greatest extent possible, particularly in-channel vegetation. Disturbed areas will be revegetated with local native or noninvasive plants.
12. Where practicable, a vegetated buffer strip between staging/excavation areas and receiving waters will be maintained.
13. When accessing upland areas adjacent to riparian areas or streams, access routes on slopes of greater than 20 percent will be avoided if possible. Subsequent to access, any sloped area will be examined for evidence of instability and either revegetated or filled as necessary to prevent future landslide or erosion.
14. If high levels of groundwater are encountered at a work site, the water will be pumped out of the work site and into infiltration basins, holding ponds, or vegetated areas to remove sediment prior to the water re-entering a receiving water body.
15. Appropriate erosion control measures (*e.g.*, fiber rolls, filter fences, vegetated buffers) will be used onsite to reduce siltation and runoff of contaminants into wetlands, ponds, streams, or riparian woodland/scrub. Filter fences and mesh will be constructed of materials that will not entrap reptiles and amphibians.
16. The work site, access roads, and adjacent areas will be kept clean and orderly, free from debris and discarded materials. Surplus materials, rubbish, debris or other construction-related materials will be disposed of in designated areas, and will not be swept, graded or flushed into storm drains or waterways.
17. Oily, greasy, or sediment laden substances or other material that originate from the project operations and may degrade the quality of surface water or adversely affect aquatic life, fish, or wildlife will not be allowed to enter, or be placed where they may later enter, any waterway. The project will not increase the turbidity of any watercourse flowing past the construction site by taking necessary precautions to limit the increase in turbidity.
18. Water turbidity changes will be monitored. The discharge water measurements will be made at the point where the discharge water exits the water control system for tidal sites and 100 feet downstream of the discharge point for non-tidal sites. Natural watercourse turbidity measurements will be made in the receiving water 100 feet upstream of the discharge site. Natural watercourse turbidity measurements will be made prior to initiation of project discharges, preferably at least 2 days prior to commencement of operations.
19. Equipment storage, fueling, and staging areas will be sited on disturbed areas or non-sensitive habitat outside of any stream channel.

20. No equipment servicing will be done in the stream channel or immediate floodplain, unless equipment stationed at these locations cannot be readily relocated.
21. No construction or maintenance vehicles will be refueled within 200 ft of wetlands or ponds within the Project area.
22. Vehicles will be washed only at approved areas. No washing of vehicles will occur at job sites.
23. Personnel will prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water into channels.
24. Spill prevention kits will always be in close proximity when using hazardous materials. In the event of a spill, operators must immediately cease work, start clean-up, and notify the appropriate authorities.

Potential Impacts to Burrowing Owls

Burrowing owls have recently been observed within the Project area by District biologists; these owls are along the channel east of the Camino Arroyo/Ventura Way intersection. Potential habitat for this species is present in a number of areas. Burrowing owls could occur anywhere in ruderal herbaceous habitat and the margins of agricultural areas or fallow fields where ground squirrels are present and the vegetation is relatively low. Because burrowing owls occur in the Project area sporadically and in low numbers (relative to the extent of potential habitat), impacts to occupied habitat would be considerably less than impacts to ostensibly suitable habitat. However, any open, undeveloped habitat such as ruderal or agricultural habitat within the Short-Term Phase I CIP alignment represents potential burrowing owl habitat. As discussed previously, impacted areas will be restored following pipeline installation so that they will continue to provide habitat of a similar type and quality to existing conditions.

Construction activities in occupied burrowing owl habitat could result in injury or mortality of individual owls if occupied burrows are destroyed or blocked by construction, trapping owls within. Construction-related disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings by disturbing adults to the point that incubation or provisioning of young is reduced, or to the point of nest abandonment. Any loss of burrowing owls or fertile eggs, any activities resulting in nest abandonment, or the destruction of occupied burrowing owl burrows would constitute a significant impact under CEQA.

The following mitigation measures will be implemented to reduce impacts to less than significant levels.

Mitigation Measure 2a. Burrowing Owl Pre-construction Surveys. Pre-construction surveys for burrowing owls shall be completed no more than 15 days prior to the start of construction. Survey methodology shall be in accordance with CDFG guidelines and the California Burrowing Owl Consortium (1993) protocol. A qualified biologist will conduct an initial survey of any areas where Project construction activities, including excavation, grading, staging, or access, will occur, as well as all areas within 250 ft of these construction areas, to determine the locations of burrows providing potential owl roost/nest sites and to look for owls and evidence of their presence (e.g., feathers, pellets, or whitewash at burrows). Because ground squirrel burrows are known to be present in at least some portions of the Project site, site visits will be conducted on three additional days in the early morning or late evening to look for owls in areas where the

initial survey detected potential roost/nest sites. If no burrowing owls are located during these surveys, no additional action will be warranted. However, if burrowing owls are located on or immediately adjacent to (i.e., within 250 ft of) the Project area, the following mitigation measures will be implemented.

Mitigation Measure 2b. Burrowing Owl Buffer Zones. If the pre-construction surveys described in Mitigation Measure 2a detect burrowing owls using burrows within 250 ft of any areas where Project construction activities, including excavation, grading, staging, or access, will occur, buffer zones will be implemented in accordance with CDFG and California Burrowing Owl Consortium (1993) guidelines for as long as the burrows are occupied. If burrowing owls are present during the nonbreeding season (generally 1 September-31 January), a 160-ft buffer zone will be maintained around the occupied burrow(s), within which no new activity will be permissible, if practicable. However, if this buffer distance cannot be maintained, then during the nonbreeding season it will be permissible to perform construction activities in closer proximity to occupied burrows as long as there is no threat of injury of individual owls and no potential for occupied burrows to be destroyed by the construction activities. If there is such potential for direct impacts to individual owls or occupied burrows, then owls will be relocated (during the nonbreeding season only) as described in Mitigation Measure 2d below.

During the breeding season (generally 1 February-31 August), a 250-ft buffer will be maintained between Project activities and occupied burrows, within which no new activity will be permissible. Owls present on site after 1 February will be assumed to be nesting on or adjacent to the site unless evidence indicates otherwise. This protected area will remain in effect until 31 August, or at the CDFG's discretion and based upon monitoring evidence, until the young owls are foraging independently or until the nest has been abandoned for reasons unrelated to Project activities.

Mitigation Measure 2c. Worker Education. If burrowing owls are detected within 250 ft of construction areas during the pre-construction survey, a qualified biologist will provide training to construction personnel regarding avoidance procedures, buffer zones, and protocols to be followed in the event that a burrowing owl flies into the active construction zone, if construction occurs near active burrows.

Mitigation Measure 2d. Burrowing Owl Relocation. If occupied burrows cannot be avoided, eviction of owls will occur *outside the breeding season*. Owls will be evicted by a qualified biologist using one-way doors. No burrowing owls will be evicted from burrows during the breeding season (generally 1 February-31 August) unless evidence indicates that nesting is not actively occurring (*e.g.*, because the owls have not yet begun nesting early in the season, or because young have already fledged late in the season). Eviction methodology shall follow CDFG and California Burrowing Owl Consortium (1993) guidelines.

Mitigation Measure 2e. Construction of Artificial Burrows for Impacts to Occupied Burrowing Owl Burrows. If destruction of occupied (breeding or non-breeding season) burrows, or any burrows that were found to be occupied during pre-construction surveys, is unavoidable, artificial burrows will be created on-site following the restoration of the site to preconstruction conditions to provide suitable owl burrows while ground squirrels are

recolonizing the Project site. At least three artificial burrow complexes (each complex providing two burrows) will be constructed in suitable habitat as close as is feasible to the location of the original owl burrow. These burrow complexes will be maintained, and vegetation around these burrows will be controlled via hand-mowing, for a period of at least 3 years to maintain suitable conditions for owls.

Potential Impacts to American Badgers

Although it is extremely unlikely that a badger would den in the urbanized landscape characterizing the Short-Term Phase I CIP area, an occasional individual may den in fallow fields if they are not plowed. Badger habitat will not be permanently affected by Project activities, as impacted habitat will be restored following pipeline installation so that it will continue to provide habitat of a similar type and quality to existing conditions. Construction activities in occupied badger habitat could result in injury or mortality of individuals if occupied dens are destroyed or blocked by construction. In the unlikely event that badgers breed in this portion of the Project area, construction-related disturbance during the breeding season could result in disturbance of adults to the point of abandonment of young. Given the relative rarity of this species in the region, any loss of American badgers would constitute a significant impact under CEQA.

The following mitigation measures will reduce impacts to a less-than-significant level.

Mitigation Measure 3a. American Badger Pre-construction Surveys. A qualified mammalogist will conduct a pre-construction survey for badger dens no more than 15 days prior to the start of construction. This survey will include any given area occupied at the time by grassland or ruderal habitat where Project construction activities, including excavation, grading, staging, or access, will occur, as well as all areas within 300 ft of these construction areas. If no badger dens are located during these surveys, no additional action will be warranted. However, if occupied badger dens are located on or immediately adjacent to (i.e., within 300 ft of) the Project's construction areas, the following mitigation measures will be implemented.

Mitigation Measure 3b. American Badger Buffer Zones. If an occupied badger den is located on or immediately adjacent to (i.e., within 300 ft of) the Project's construction areas, a buffer, within which no new activity will be permissible, will be maintained between the den and construction activities during the pupping season (i.e., 15 February through 1 July, or as otherwise determined through surveys and monitoring of the den). The size of the buffer will be determined by a qualified mammalogist in consultation with the CDFG.

Mitigation Measure 3c. American Badger Relocation. After the pupping season, if a den is located within the construction area itself, the badgers will be evicted by excavation of the den using hand tools, in consultation with the CDFG and under the supervision of a qualified mammalogist. After the badgers have been evicted, the den will be refilled to prevent reoccupation.

CUMULATIVE IMPACTS

With implementation of the mitigation measures above, no significant impacts are expected as a result of the Project. Several other development projects recently constructed or approved, or currently pending, in the Gilroy area will also result in impacts to biological resources in the vicinity. These include the completed Eagle Ridge development; the planned Glen Loma Ranch, Hecker Pass Specific Plan, and Castro Valley Ranch developments; completed and proposed improvements to State Route 152 east of Gilroy; the proposed California High Speed Rail project; and the proposed Highway 101 widening project in southern Santa Clara County and northern San Benito County. Each of these projects has undergone, or will undergo, separate CEQA review, and it is expected that each will undergo its own permitting and consultation regarding impacts to jurisdictional habitats and state/federally listed species. Ecological impacts determined to be significant during CEQA review for these individual projects will be mitigated to less-than-significant levels. We therefore expect that significant impacts to sensitive species and habitats resulting from these projects to be mitigated via the CEQA and permitting processes. Cumulatively, these projects will also result in losses of common species and habitats that will not be mitigated, since these impacts may be considered less than significant individually for each development. However, due to the regional abundance of the more common habitats and species to be impacted by the Project, as well as the temporary nature of habitat impacts resulting from the Project, the Project will not result in a considerable contribution to any cumulative impacts to biological resources resulting from projects in the Gilroy area.

Furthermore, several conservation projects in the Gilroy area will enhance conditions for the species and habitats that could potentially be impacted by the Project, helping to offset cumulative impacts to biological resources in the region. These include the Upper Pajaro River Restoration Project currently under study by The Nature Conservancy and the Lucky Day Conservation Bank currently in development. If approved and implemented, the Santa Clara Valley HCP/NCCP will further offset cumulative impacts through its conservation strategy.

COMPLIANCE WITH ADDITIONAL LAWS AND REGULATIONS APPLICABLE TO BIOTIC RESOURCES

City of Gilroy

Significant Trees. The City of Gilroy Consolidated Landscaping Policy, section 6.0, states that the following trees shall be designated significant:

- Existing native trees (naturally occurring species in Gilroy) six (6) inches or more in diameter, at a point four and one half (4½) ft above the ground; or
- Trees that are important to the historical or visual aspect of Gilroy.

If impacts to potential Significant Trees cannot be avoided through Project design, a comprehensive tree survey shall be conducted and the appropriate tree removal permits obtained. Tree replacement may be required.

Regulatory Overview for Birds

Migratory Bird Treaty Act. The federal Migratory Bird Treaty Act (MBTA; 16 U.S.C., §703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment, a violation of the MBTA.

California State Fish & Game Code. Migratory birds are also protected in and by the state of California. The State Fish and Game Code §3503 (and other sections and subsections) emulates the MBTA and protects birds' nests and eggs from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFG.

Raptors (*i.e.*, eagles, hawks, and owls) and their nests are specifically protected in California under Fish and Game Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

Project Applicability. The vast majority of birds found in the Master Plan Project area are protected under the MBTA and Fish and Game Code Section 3503, and any raptors nesting in the Project area are also specifically protected by Fish and Game Code Section 3503.5. Project construction has the potential to take nests, eggs, young or individuals of these protected species. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to the abandonment of nests. This impact is not significant under CEQA due to the regional abundance of the species in question and the low magnitude of the potential impact. Nevertheless, we recommend that the following measures, which incorporate District BMPs BI-8 to BI-10 for avoiding impacts to migratory birds, be

implemented to reduce the risk of a violation of the MBTA and the California Fish and Game Code.

Compliance Measures:

Measure 1. Avoidance. Avoid nesting season construction. Construction shall be scheduled to avoid the nesting season to the extent feasible. The nesting season for most birds, including most raptors, in the South San Francisco Bay area extends from February through August.

Measure 2. Pre-construction/Pre-disturbance Surveys. If it is not possible to schedule construction between September and January, then pre-construction surveys for nesting birds shall be conducted by a qualified ornithologist to ensure that no nests will be disturbed during Project implementation. This survey shall be conducted no more than 15 days prior to the initiation of construction activities (including vegetation removal). During this survey, the ornithologist will inspect all trees and other potential nesting habitats (*e.g.*, grasslands, buildings) in and immediately adjacent to (*i.e.*, within 50 ft for non-raptors and 250 ft for raptors) the Project's construction areas for nests. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist, in consultation with CDFG, will determine the extent of a construction-free buffer zone to be established around the nest to ensure that no nests of species protected by the MBTA or State Code will be disturbed during Project implementation. Such buffers are typically 250 ft for raptors and 50 ft for non-raptors.

Measure 3. Inhibiting Nesting. If vegetation is to be removed by the Project and all necessary approvals have been obtained, potential nesting substrate (*e.g.*, bushes, trees, grass, burrows) that will be removed by the Project shall be removed before the start of the nesting season (February) to help preclude nesting. Pre-removal surveys are required for some species. Removal of vegetation or structures slated for removal by the Project shall be completed outside of the nesting season. Nest exclusion devices such as netting may be installed on bridges within the Project area outside of the nesting season. Such devices must be maintained throughout the nesting season or until work is completed, and must be removed when the work is completed.

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Personal Communications

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APPENDIX 1.
SPECIAL STATUS PLANTS CONSIDERED
BUT REJECTED FOR OCCURRENCE

Appendix 1. Special Status Plants Considered but Rejected for Occurrence.

Scientific Name	Common Name	Lack of serpentine substrates	Lack of strongly alkaline/adobe clay soils	Lack of associated species	Other edaphic factors absent from the Project area	Project Area outside elevation range of species or habitat absent
<i>Acanthomintha lanceolata</i>	Santa Clara thorn-mint	X		X		
<i>Allium peninsulare</i> var. <i>franciscanum</i>	Franciscan onion	X		X		
<i>Allium sharsmithiae</i>	Sharsmith's onion	X		X	X	X
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	X			X	
<i>Androsace elongata</i> ssp. <i>acuta</i>	California androsace			X	X	
<i>Arctostaphylos andersonii</i>	Anderson's manzanita			X		X
<i>Arctostaphylos regismontana</i>	Kings Mountain manzanita			X	X	
<i>Astragalus tener</i> var. <i>tener</i>	alkali milk-vetch		X		X	X
<i>Atriplex joaquiniana</i>	San Joaquin spearscale		X			X
<i>Azolla mexicana</i>	Mexican mosquito fern		X			
<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	big-scale balsamroot	X		X		
<i>California macrophylla</i>	round-leaved filaree		X		X	
<i>Calochortus umbellatus</i>	Oakland star-tulip	X			X	
<i>Calyptridium parryi</i> var. <i>hesseae</i>	Santa Cruz Mountains pussypaws			X		X
<i>Calystegia collina</i> ssp. <i>venusta</i>	South Coast Range morning-glory	X			X	
<i>Campanula exigua</i>	chaparral harebell	X				
<i>Castilleja affinis</i> ssp. <i>neglecta</i>	Tiburon Indian paintbrush	X		X		
<i>Castilleja rubicundula</i> ssp. <i>rubicundula</i>	pink creamsacs	X				
<i>Ceanothus ferrisiae</i>	Coyote ceanothus	X		X		
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant					X
<i>Chorizanthe robusta</i> var. <i>robusta</i>	robust spineflower				X	X
<i>Cirsium fontinale</i> var. <i>campylon</i>	Mt. Hamilton thistle	X		X		
<i>Clarkia breweri</i>	Brewer's clarkia	X		X		
<i>Collinsia multicolor</i>	San Francisco collinsia	X			X	
<i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	Point Reyes bird's-beak				X	X
<i>Coreopsis hamiltonii</i>	Mt. Hamilton coreopsis				X	X
<i>Delphinium californicum</i> ssp. <i>interius</i>	Hospital Canyon larkspur				X	
<i>Dirca occidentalis</i>	western leatherwood			X	X	
<i>Dudleya setchellii</i>	Santa Clara Valley dudleya	X		X		
<i>Eriastrum brandegeae</i>	Brandegee's eriastrum				X	
<i>Eriastrum tracyi</i>	Tracy's eriastrum			X	X	
<i>Eriogonum argillosum</i>	clay buckwheat	X	X			
<i>Eriogonum luteolum</i> var. <i>caninum</i>	Tiburon buckwheat	X				
<i>Eriogonum umbellatum</i> var. <i>bahiiiforme</i>	bay buckwheat	X				
<i>Eriophyllum jepsonii</i>	Jepson's woolly sunflower	X				
<i>Eryngium aristulatum</i> var. <i>hooveri</i>	Hoover's button-celery			X	X	

<i>Erysimum franciscanum</i>	San Francisco wallflower	X			X	
<i>Fritillaria agrestis</i>	stinkbells	X	X			
<i>Fritillaria falcata</i>	talus fritillary	X				X
<i>Fritillaria liliacea</i>	fragrant fritillary	X			X	
<i>Galium andrewsii</i> ssp. <i>gatense</i>	phlox-leaf serpentine bedstraw	X				
<i>Helianthus exilis</i>	serpentine sunflower	X				
<i>Hoita strobilina</i>	Loma Prieta hoita	X			X	
<i>Isocoma menziesii</i> var. <i>diabolica</i>	Satan's goldenbush			X	X	
<i>Lasthenia conjugens</i>	Contra Costa goldfields		X			X
<i>Leptosiphon acicularis</i>	bristly leptosiphon			X	X	
<i>Leptosiphon ambiguous</i>	serpentine linanthus	X		X		
<i>Leptosiphon grandiflorus</i>	large-flowered linanthus			X	X	
<i>Lessingia hololeuca</i>	woolly-headed lessingia	X	X			
<i>Lessingia micradenia</i> var. <i>glabrata</i>	smooth lessingia	X				
<i>Lessingia tenuis</i>	spring lessingia				X	X
<i>Lomatium observatorium</i>	Mt. Hamilton lomatium			X		X
<i>Madia radiata</i>	showy golden madia				X	X
<i>Malacothamnus arcuatus</i>	Arcuate bush-mallow			X	X	
<i>Malacothamnus davidsonii</i>	Davidson's bush-mallow			X		
<i>Malacothamnus hallii</i>	Hall's bush mallow			X		
<i>Micropus amphibolus</i>	Mt. Diablo cottonweed				X	
<i>Microseris sylvatica</i>	sylvan microseris	X				
<i>Monardella villosa</i> ssp. <i>globosa</i>	robust monardella			X	X	
<i>Navarretia cotulifolia</i>	cotula navarretia		X			
<i>Penstemon rattanii</i> var. <i>kleei</i>	Santa Cruz Mountains beardtongue			X	X	
<i>Pentachaeta exilis</i> ssp. <i>aeolica</i>	San Benito pentachaeta			X		X
<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	Gairdner's yampah		X	X	X	
<i>Phacelia phacelioides</i>	Mt. Diablo phacelia			X	X	X
<i>Piperia leptopetala</i>	narrow-petaled rein orchid				X	X
<i>Piperia michaelii</i>	Michael's rein orchid			X	X	
<i>Plagiobothrys chorisianus</i> var. <i>hickmanii</i>	Hickman's popcorn-flower			X	X	X
<i>Plagiobothrys glaber</i>	hairless popcorn-flower			X		X
<i>Plagiobothrys uncinatus</i>	hooked popcorn-flower			X	X	
<i>Potamogeton filiformis</i>	slender-leaved pondweed			X	X	
<i>Ranunculus lobbii</i>	Lobb's aquatic buttercup			X	X	
<i>Sanicula saxatilis</i>	rock sanicle			X	X	
<i>Senecio aphanactis</i>	rayless ragwort		X			
<i>Sidalcea malachroides</i>	maple-leaved checkerbloom			X	X	
<i>Streptanthus albidus</i> ssp. <i>albidus</i>	Metcalf Canyon jewel-flower	X				
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	most beautiful jewel-flower	X				
<i>Streptanthus callistus</i>	Mt. Hamilton jewel-flower				X	X
<i>Suaeda californica</i>	California seablite				X	X
<i>Trifolium amoenum</i>	two-fork clover	X		X		
<i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	saline clover			X	X	
<i>Tropidocarpum capparideum</i>	caper-fruited tropidocarpum		X			X

APPENDIX 2 REGULATIONS

Special-status Species Regulations Overview

Federal and state endangered species legislation gives several plant and animal species known to occur in the vicinity of the Project site special status. In addition, state resource agencies and professional organizations, whose lists are recognized by agencies when reviewing environmental documents, have identified as sensitive some species occurring in the vicinity of the Project site. Such species are referred to collectively as “species of special status” and include: plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA), animals listed as “fully protected” under the California Fish and Game Code, animals designated as “Species of Special Concern” by the CDFG, and plants listed as rare or endangered by the CNPS in the *Inventory of Rare and Endangered Plants of California* (2001).

Federal Endangered Species Act provisions protect federally listed threatened and endangered species and their habitats from unlawful take. “Take” under FESA includes activities such as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct.” The U.S. Fish & Wildlife Service’s (USFWS) regulations define harm to mean “an act which actually kills or injures wildlife.” Such an act “may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering” (50 CFR § 17.3). Activities that may result in “take” of individuals are regulated by the USFWS. The USFWS produced an updated list of candidate species September 19, 1997 (USFWS 1997; 50 CFR Part 17). Candidate species are not afforded any legal protection under FESA; however, candidate species typically receive special attention from federal and state agencies during the environmental review process.

Provisions of CESA protect state-listed threatened and endangered species. CDFG regulates activities that may result in “take” of individuals (*i.e.*, “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”). Habitat degradation or modification is not expressly included in the definition of “take” under the California Fish and Game Code. The CDFG, however, has interpreted “take” to include the “killing of a member of a species which is the proximate result of habitat modification” Additionally, the California Fish and Game Code contains lists of vertebrate species designated as “fully protected” (California Fish & Game Code §§ 3511 [birds], 4700 [mammals], 5050 [reptiles and amphibians], 5515 [fish]). Such species may not be taken or possessed without a permit.

The CDFG has also produced three lists (amphibians and reptiles, birds, and mammals) of “species of special concern” that serve as “watch lists.” Species on these lists either are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. Thus, their populations should be monitored. They may receive special attention during environmental review.

Plants listed as rare or endangered by the CNPS (2001), but which have no designated status under state endangered species legislation, are defined as follows:

- List 1A. Plants considered by the CNPS to be extinct in California.
- List 1B. Plants rare, threatened, or endangered in California and elsewhere.
- List 2. Plants rare, threatened, or endangered in California, but more numerous elsewhere.
- List 3. Plants about which we need more information - A review list.
- List 4. Plants of limited distribution - A watch list.

United States Army Corps of Engineers Jurisdiction

Areas meeting the regulatory definition of “Waters of the U.S.” (jurisdictional waters) are subject to the jurisdiction of the USACE under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as “Waters of the U.S.,” tributaries of waters otherwise defined as “Waters of the U.S.,” the territorial seas, and wetlands (termed Special Aquatic Sites) adjacent to “Waters of the U.S.” (33 CFR, Part 328, Section 328.3). Wetlands on non-agricultural lands are identified using the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987).

Construction activities within jurisdictional waters are regulated by the USACE. The placement of fill into such waters must comply with permit requirements of the USACE. No USACE permit will be effective in the absence of state water quality certification pursuant to Section 401 of the Clean Water Act. The State Water Resources Control Board is the state agency (together with the Regional Water Quality Control Boards) charged with implementing water quality certification in California.

California Department of Fish and Game Jurisdiction

The CDFG potentially extends the definition of stream to include “intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams (USGS), and watercourses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife” (CDFG 1994). Such areas on the site were determined using methodology described in *A Field Guide to Lake and Streambed Alteration Agreements, Sections 1600-1607* (CDFG 1994).

Activities that result in the diversion or obstruction of the natural flow of a stream, or which substantially change its bed, channel or bank, or which utilize any materials (including vegetation) from the streambed, may require that the Project applicant enter into a Streambed Alteration Agreement with the CDFG.