

## 3.7 BIOLOGICAL RESOURCES

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### EXECUTIVE SUMMARY

This section identifies major plant and animal resources within the County's Planning Area, and assesses the potential impacts of the proposed Santa Clarita Valley Area Plan on biological resources with the understanding that certain resources, especially wildlife, are transitory and may potentially be present in a wide variety of areas regardless of previous records of observation. The County's Planning Area consists of unincorporated land outside the City's boundaries and adopted Sphere of Influence (SOI) but within the One Valley One Vision (OVOV) Planning Area boundaries. The City's Planning Area consists of its incorporated boundaries and adopted SOI. Both the County and the City Planning Areas comprise the OVOV Planning Area. The County Planning Area encompasses a portion of the Santa Clara River Valley, the eastern extension of the Santa Susana Mountains, the westernmost reaches of the San Gabriel Mountains, the eastern Sierra Madre Mountains, and the majority of the Liebre/Sierra Pelona Range.

The major natural features of the County Planning Area are the Santa Clara River, Santa Susanna Mountains, Liebre Mountains, western San Gabriel Mountains, Castaic Valley, San Francisquito Canyon, Bouquet Canyon, Placerita Canyon, Mint Canyon, Sand Canyon, and Hasley Canyon. Although a substantial portion of the area, primarily adjacent to the City of Santa Clarita and within its Sphere of Influence, has been developed, portions of the Planning Area are undeveloped or open space, and still support a relatively large number of native plant and animal habitats and communities. Species within the remaining natural areas are adapted to the Mediterranean climate of the region, in that they thrive in the cool, wet winters, and dry, hot summers typical of the area.

Predominately undeveloped portions of the County's Planning Area encompass portions of the northeastern Santa Susanna Mountains, including the Newhall Ranch High Country and Lyon and Towsley Canyons; the eastern reaches of the Santa Clara River, including Kentucky Springs and adjacent uplands west of the community of Ravenna; the southwestern Sierra Madre Mountains; Castaic Lake and nearby upland habitats in Tapia and Charlie Canyons; and portions of the northwestern San Gabriel, southern Liebre, and western Sierra Madre Mountains, including Vasquez Rocks and Cruzan Mesa, Tick Canyon, Mint Canyon, Bouquet Canyon, San Francisquito Canyon, Sand Canyon, Soledad Canyon, and portions of the two units of the Angeles National Forest.

Additional natural areas are present within the City's Planning Area, which abut and link surrounding natural areas in the County Planning Area. These generally support a similar suite of species and communities as are found in the County's Planning Area, and include:

- the Santa Clara River and adjacent uplands between Lang Station, which is located approximately at the confluence of Bee and Soledad Canyon, and the Interstate 5 (I-5) Freeway;
- areas east of the I-5 Freeway near Castaic Junction; and
- portions of San Francisquito Canyon, Sand Canyon, Whitney Canyon, Elsmere Canyon, and Placerita Canyon.

Potentially significant impacts associated with the proposed Area Plan are those relating to special-status species, sensitive communities, federally protected wetlands, wildlife movement, and nursery sites. The proposed Area Plan policies address avoidance and minimization of impacts on habitats, provisions for the acquisition of habitats in cooperation with conservation groups, provisions for no net loss of jurisdictional wetlands within the Planning Area, and provisions for the identification and protection of at least one designated wildlife corridor linking the two units of the Angeles National Forest through the Valley.

The proposed policies do not provide a mechanism for the compensation of lost habitats when avoidance of impacts, or minimization of impacts to a level that is less than significant, is considered to be infeasible; the policies also do not mitigate for the direct mortality of individuals of listed, proposed, or candidate species. In conjunction with the proposed Area Plan policies, mitigation measures **MM 3.7-1** through **3.7-3** would reduce these potential impacts. **MM 3.7-1** requires preparation of biological site survey reports prepared by a qualified biological consultant for proposed projects. **MM 3.7-2** addresses direct mortality of special-status species through construction activities. **MM 3.7-3** addresses impacts on sensitive habitats from implementation of the proposed Area Plan through land acquisition.

Although the loss of sensitive habitats may be compensated for through land acquisition, the loss of special-status species and wildlife movement opportunities would remain significant. Special-status species are dependant on a variety of habitat types, not all of which are necessarily sensitive, such as annual grassland and various common scrub and chaparral types. Consequently, the conversion of all types of currently undeveloped wildlife habitat to Residential, Commercial and Industrial uses permitted under the proposed Area Plan would result in impacts on special-status species that would remain significant at the plan level.

Impacts on wildlife movement opportunities would also be significant and unmitigable because of the loss of connectivity for wildlife movement through the Planning Area; this connectivity would not be recoverable once the area has been developed.

## EXISTING CONDITIONS

### Vegetation

Major plant and terrestrial communities identified within the County's Planning Area include coastal and desert scrub, and chaparral vegetation types. Other vegetation types in the Planning Area include bigcone spruce-canyon oak forest, coast live oak woodland, coast live oak riparian forest, juniper woodland, pinyon-juniper woodland, southern sycamore-alder woodland, southern cottonwood-willow riparian woodland and forest, southern willow scrub, freshwater marsh, vernal pools, alluvial fan sage scrub, and native and annual grassland.<sup>1</sup>

### Wildlife

Wildlife within the County's Planning Area is extremely diverse with particular abundance in undeveloped high quality habitats, such as riparian, wetland, and woodland areas. Some wildlife species are entirely dependent upon a single vegetative community for all aspects of their life histories; however, most reptiles, birds and medium to large-sized mammals may utilize a number of community types through their lives, and the majority of the natural areas within the County's Planning Area support the multifaceted needs of these species by comprising a mosaic of vegetation constituting a continuum of functional ecosystems.<sup>2</sup> The river channels, canyon bottoms, and open upland areas of the County's Planning Area provide movement and foraging opportunities for a large suite of resident and migratory species and they form part of a network of open-space within the greater OVOV Planning Area connecting the two units of the nearby Angeles National Forest, which in turn provide larger blocks of uninterrupted habitat for many of the same species.

Amphibian populations are generally restricted in semi-arid and arid habitats but may be particularly abundant and relatively diverse within moister woodland areas, along montane canyon bottoms, in riparian areas, and within surface water features. The overall riparian systems of the Santa Clara Valley support abundant populations of Pacific chorus frog (*Pseudacris regilla*), California chorus frog (*P. cadaverina*), California toad (*Bufo boreas halophilus*), western spadefoot (*Spea hammondi*), bullfrog (*Rana catesbeiana*), and African clawed frog (*Xenopus laevis*) (the latter two species are non-native). In San Francisquito Canyon, California red-legged frog (*Rana draytonii*) and arroyo toad (*Bufo californicus*). Arboreal salamander (*Aneides lugubris*), painted ensatina (*Ensatina eschscholtzii picta*), and garden slender salamander (*Batrachoseps major*) also are present.

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<sup>1</sup> PCR Services Corp. 2000.

<sup>2</sup> Ibid.

Open scrub, chaparral and alluvial fan habitats support diverse reptile populations, and the overall reptile fauna of the Valley encompasses numerous lizard and snake species, along with southwestern pond turtle (*Actinemys marmorata pallida*) in Agua Dulce and Bear Canyons. The lizard and snake species include Yucca night lizard (*Xantusia vigilis vigilis*), side-blotched lizard (*Uta stansburiana*), western fence lizard (*Sceloporus occidentalis*), western skink (*Eumeces skiltonianus*), San Diego alligator lizard (*Elgaria multicarinata webbii*), coastal whiptail (*Cnemidophorus tigris stejnegeri*), coast horned lizard (*Phrynosoma coronatum*), silvery legless lizard (*Anniella pulchra pulchra*), and San Diego banded gecko (*Coleonyx variegatus abbotti*) are all present. A robust snake fauna is also present, including western blind snake (*Leptotyphlops humilis*), red coachwhip (*Masticophis flagellum piceus*), California striped racer (*M. lateralis lateralis*), coast patchnose snake (*Salvadora hexalepis virgulata*), rosy boa (*Charina trivirgata*), San Diego gopher snake (*Pituophis catenifer annectens*), western glossy snake (*Arizona occidentalis*), California kingsnake (*Lampropeltis getula californiae*), California mountain kingsnake (*L. zonata*), longnose snake (*Rhinocheilus lecontei*), California night snake (*Hypsiglena torquata nuchalata*), lyre snake (*Trimorphodon biscutatus*), western blackhead snake (*Tantilla planiceps*), two-striped garter snake (*Thamnophis hammondi*), San Bernardino ringneck snake (*Diadophis punctatus modestus*), and southern Pacific rattlesnake (*Crotalus oreganus helleri*). Although not reported within the Planning Area, south coast garter snake (*Thamnophis sirtalis* ssp.) is known nearby in Ventura County and may be present in the western portion of the County's Planning Area.

The scrubland, woodland, riparian, and grassland habitats in the Valley provide excellent foraging and cover habitat for year-round resident, seasonal resident, and migrating song birds. In addition, habitats in the County's Planning Area provide many year-round water sources, abundant raptor foraging, perching, and nesting habitat. The combination of these resources as well as the mosaic of many community types provides for an unusually high diversity of bird species. Coastal scrub and chaparral host a suite of birds typical of such sites at lower elevations over most of the coastal slopes of Southern California. The most productive sites for resident coastal scrub and chaparral birds are around riparian and freshwater systems, which also attract large numbers of migrants during spring and fall. Vernal pools attract moderate numbers of migrating waders and waterfowl, and provide important winter foraging areas for resident and migratory birds of prey.

Coastal sage and chaparral birds resident or breeding within the County Planning Area include southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Bell's sage sparrow (*Amphispiza belli belli*), black-chinned sparrow (*Spizella atrogularis*), lark sparrow (*Chondestes grammacus*), lazuli bunting (*Passerina amoena*), coastal California gnatcatcher (*Polioptila californica californica*), California quail (*Callipepla californica*), greater roadrunner (*Geococcyx californianus*), spotted towhee (*Pipilo maculatus*),

California towhee (*P. crissalis*), California thrasher (*Toxostoma redivivum*), phainopepla (*Phainopepla nitens*), northern mockingbird (*Mimus polyglottos*), and Anna's (*Calypte anna*), Costa's (*C. costae*), and black-chinned hummingbirds (*Archilochus alexandri*). Oak woodlands and riparian areas support many more species; notable species include summer tanager (*Piranga rubra*), Bullock's oriole (*Icterus bullockii*), black-headed grosbeak (*Pheucticus melanocephalus*), western scrub jay (*Aphelocoma coerulescens*) band-tailed pigeon (*Patagioenas fasciata*), western wood-pewee (*Contopus sordidulus*), several swallow species, willow flycatcher (*Empidonax traillii*), and least Bell's vireo (*Vireo bellii pusillus*). Species associated with ruderal sites and grasslands include western meadowlark (*Sternula neglecta*), California horned lark (*Eremophila alpestris actia*), and savannah (*Passerculus sandwichensis*) and grasshopper sparrows (*Ammodramus savannarum*). Birds of prey (including common migrants) observed within the valley include red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*B. jamaicensis*), Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*A. striatus*), Swainson's hawk (*Buteo swainsoni*), merlin (*Falco columbarius*), American kestrel (*F. sparverius*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), prairie falcon (*Falco mexicanus*), and golden eagle (*Aquila chrysaetos*). Many of these, as well as common raven (*Corvus corax*), nest in cliffs within the valley. Resident owl species include barn owl (*Tyto alba*), great horned owl (*Bubo virginianus*), long-eared owl (*Asio otus*), and California spotted owl (*Strix occidentalis occidentalis*).

Native mammal diversity within the Valley is considerable. This includes bats (at least seven species), rodents (at least four species of deer mice (*Peromyscus* spp.), two species of woodrat (*Neotoma* spp.), California ground squirrel (*Spermophilus beecheyi*), and western gray squirrel (*Sciurus griseus*)), two types of rabbits (desert cottontail and brush rabbit (*Sylvilagus audobonii* and *S. bachmani*)) and one hare (black-tailed jackrabbit (*Lepus californicus bennettii*)), broad-footed mole (*Scapanus latimanus*), long-tailed weasel (*Mustela frenata*), American badger (*Taxidea taxus*), western spotted skunk (*Spilogale gracilis*), striped skunk (*Mephitis mephitis*), northern raccoon (*Procyon lotor*), common gray fox (*Urocyon cinereoargenteus*), bobcat (*Lynx rufus*), coyote (*Canis latrans*), cougar (*Puma concolor*), mule deer (*Odocoileus hemionus*), and American black bear (*Ursus americanus*).

### **Sensitive Biological Resources**

Sensitive biological resources are those habitats or species that have been recognized by federal, state, and/or local agencies as being Endangered, Threatened, Rare, or in decline throughout all or part of their historical distribution.

Sensitive terrestrial communities reported to the California Natural Diversity Database (CNDDDB) in the County Planning Area include southern California threespine stickleback stream, Riversidian alluvial fan sage scrub, valley needlegrass grassland, canyon live oak ravine forest, southern coast live oak riparian

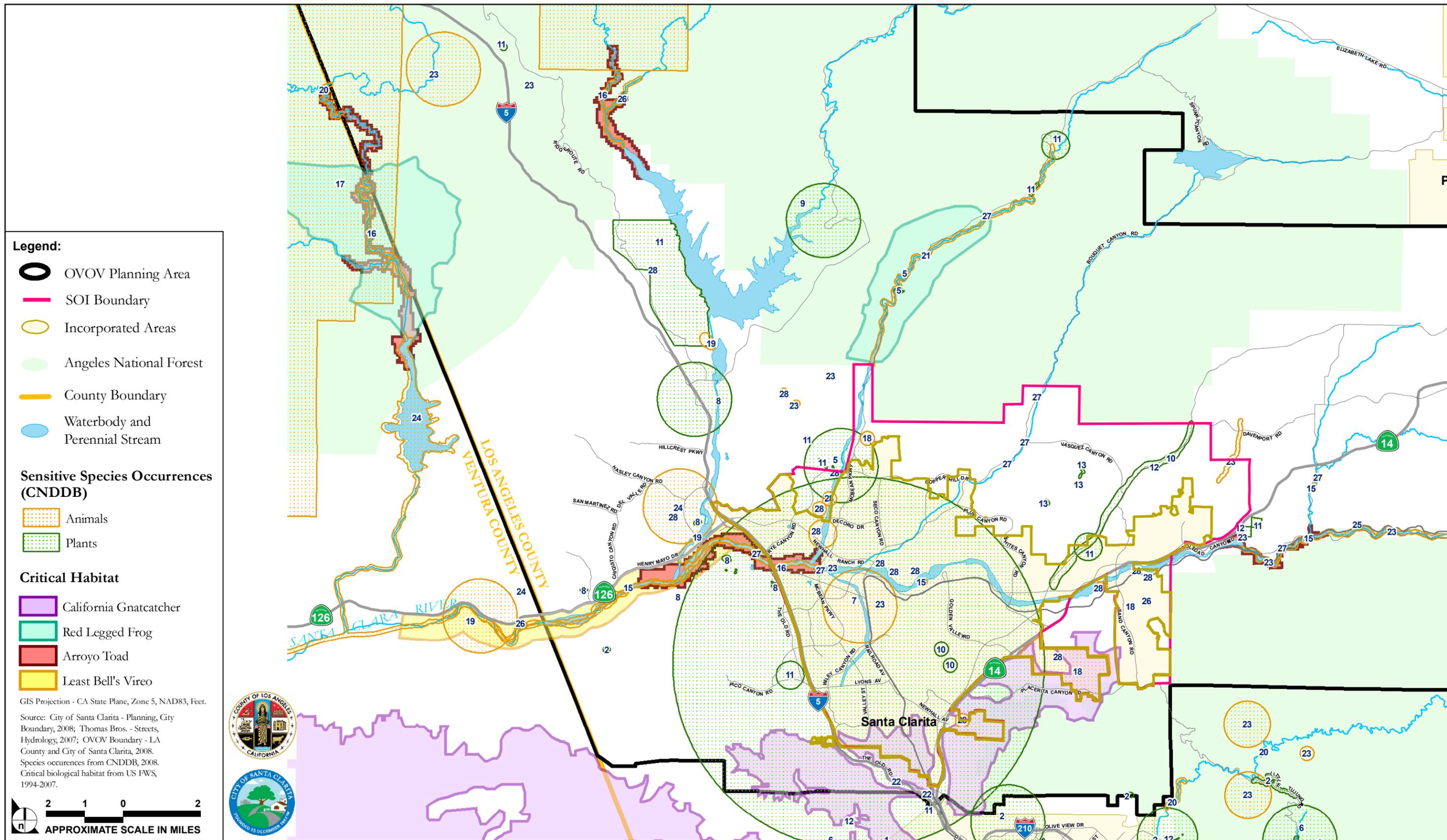
forest, southern cottonwood willow riparian forest, southern mixed riparian forest, southern riparian forest, southern riparian scrub, southern sycamore alder riparian woodland, southern willow scrub, California walnut woodland, valley oak woodland, and mainland cherry forest. Although not included in the CNDDDB, vernal pools have been identified on Cruzan Mesa, and within Vasquez Canyon, Plum Canyon, and on Fair Oaks Ranch. These are highly significant sensitive resources within the County Planning Area (**Figure 3.7-1, Sensitive Biological Resources**).

Query results of the CNDDDB and California Native Plant Society (CNPS) Inventory for the U.S. Geological Society (USGS) 7.5-minute quadrangles within which the County Planning Area is located,<sup>3</sup> as well as biological reports prepared for projects within the County's Planning Area indicate at least 92 sensitive plant and animal taxa occur within the region. These are identified in **Tables 3.7-1, Special-Status Wildlife Species Known to Occur in the County's Planning Area**, and **3.7-2, Special-Status Plant Species Known to Occur in the Region**. Among these are 20 federal and state-listed Candidate, Threatened, Rare, and Endangered species. These include Braunton's milk-vetch (*Astragalus brauntonii*), Nevin's barberry (*Berberis nevinii*), Mt. Gleason Indian paintbrush (*Castilleja gleasonii*), San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*), slender-horned spineflower (*Dodecahema leptoceras*), Moran's navarretia (*Navarretia fossalis*), California Orcutt grass (*Orcuttia californica*), Riverside fairy shrimp (*Streptocephalus woottoni*), vernal pool fairy shrimp (*Branchinecta lynchi*), San Diego fairy shrimp (*B. sandiegoensis*), Santa Ana sucker (*Catostomus santaanae*), unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), arroyo toad, California red-legged frog, Sierra Madre yellow-legged frog (*Rana muscosa*), Swainson's hawk (*Buteo swainsoni*), southwestern willow flycatcher (*Empidonax traillii extimus*), California condor (*Gymnogyps californianus*), coastal California gnatcatcher (*Polioptila californica californica*), and least Bell's vireo (*Vireo bellii pusillus*).

Other sensitive species known to occur within the County's Planning Area include 24 plant, 1 mollusk, 2 insect, 1 fish, 2 amphibian, 9 reptile, 20 bird, and 13 mammal species. The California Department of Fish and Game (CDFG) identifies all listed sensitive species and their habitats on its website ([www.dfg.ca.gov](http://www.dfg.ca.gov)).

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<sup>3</sup> The Planning Area lies within or is immediately adjacent to portions of the following USGS quads: Acton, Agua Dulce, Mint Canyon, San Fernando, Newhall, Val Verde, Santa Susana, Oat Mountain, Ritter Ridge, Lake Hughes, Green Valley, Sleepy Valley, Liebre Mountain, Burnt Peak, Whitaker Peak, Warm Springs Mountain, Black Mountain, Cobblestone Mountain, La Liebre Ranch, Neenach School, Frazier Mountain, Lebec.



SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - March 2009

FIGURE 3.7-1

Sensitive Biological Resources

Important habitats and biological resource areas within the County's Planning Area include the following:

- Land within the Angeles and Los Padres National Forests, including Elsmere Canyon and wildlife corridors between the Santa Susana Mountains and the San Gabriel Mountains;
- Canyon areas, including Whitney, Elsmere, Wiley, East, Towsley, Rice, San Francisquito, and all other canyons which provide important habitat (water, food, shelter, and movement corridors), biological resources, and add to the viewshed of the Santa Clarita Valley;
- Land between SR-14 and Sand Canyon Road providing critical habitat for the arroyo toad;
- State-listed endangered and threatened plant and wildlife species associated with riparian woodlands in the Santa Clara River;
- Open water habitats provided by Castaic Lake, Castaic Lagoon, and isolated locations along the Santa Clara River;
- Habitat for State and federally Endangered and Threatened plant and wildlife species found in chaparral and coastal scrub habitat;
- Habitat and associated biological resources in the Significant Ecological Areas designated by the County of Los Angeles. Currently these include (a) Santa Susana Mountains; (b) Lyon Canyon; (c) Valley Oak Savannah; (d) the Santa Clara River (as described below); (e) San Francisquito Canyon; and (f) Kentucky Springs (see **Figure 3.7-2, Current and Proposed Significant Ecological Areas**);
- Habitat for federally listed Endangered, Threatened, or Rare plant, animal species associated with the riparian woodlands in the Santa Clara River; and
- Oak, sycamore, cottonwood, and willow trees located along the Santa Clara River.

**Table 3.7-1  
Special-Status Wildlife Species Known to Occur in the County's Planning Area**

Common Name	Species	Federal	State
<b>Mollusks</b>			
Undescribed species of pyrg snail	<i>Pyrgulopsis sp. nova</i>	–	–
<b>Crustaceans</b>			
Riverside fairy shrimp	<i>Streptocephalus woottoni</i>	FE	–
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT	–
San Diego fairy shrimp	<i>Branchinecta sandiegoensis</i>	FT	–
<b>Insects</b>			
Cuckoo wasp (no common name)	<i>Ceratochrysis longimala</i>	–	CDFG Special Animals List
Monarch butterfly	<i>Danaus plexippus</i>	–	CDFG Special Animals List

Common Name	Species	Federal	State
<b>Fish</b>			
Santa Ana sucker	<i>Catostomus santaanae</i>	FT, FSS	SSC
Unarmored threespine stickleback	<i>Gasterosteus aculeatus williamsoni</i>	FE, FSS	SE, SFP
Arroyo chub	<i>Gila orcuttii</i>	FSS	SSC
<b>Amphibians</b>			
Arroyo toad	<i>Bufo californicus</i>	FE	SSC
Yellow-blotched salamander	<i>Ensatina eschscholtzii croceator</i>	BLMS, FSS	SSC
California red-legged frog	<i>Rana draytonii</i>	FT	SSC
Sierra Madre yellow-legged frog	<i>Rana muscosa</i>	FE, FSS	SSC
Western spadefoot	<i>Spea hammondi</i>	BLMS	SSC
<b>Reptiles</b>			
Southwestern pond turtle	<i>Actinemys marmorata pallida</i>	FSS, BLMS	SSC
Silvery legless lizard	<i>Anniella pulchra pulchra</i>	FSS	SSC
Coastal western whiptail	<i>Cnemidophorus tigris stejnegeri</i>	–	CDFG Special Animals List
San Bernardino ring-neck snake	<i>Diadophis punctatus modestus</i>	FSS	–
California mountain kingsnake	<i>Lampropeltis zonata pulchra</i>	FSS	SSC
Coast horned lizard	<i>Phrynosoma coronatum</i>	BLMS, FSS	SSC
Coast patch-nosed snake	<i>Salvadora hexalepis virgultea</i>	–	SSC
Two-striped garter snake	<i>Thamnophis hammondi</i>	FSS, BLMS	SSC
South coast garter snake	<i>Thamnophis sirtalis</i> ssp.	–	SSC
<b>Birds</b>			
Cooper's hawk	<i>Accipiter cooperi</i>	–	CDFG Watch List
Sharp-shinned hawk	<i>Accipiter striatus</i>	–	SSC
Tricolored blackbird	<i>Agelaius tricolor</i>	BCC, BLMS	SSC
Southern California rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	–	SSC
Grasshopper sparrow	<i>Ammodramus savannarum</i>	–	CDFG Special Animals List
Bell's sage sparrow	<i>Amphispiza belli belli</i>	BCC	SSC
Long-eared owl	<i>Asio otus</i>	–	SSC
Burrowing owl	<i>Athene cunicularia</i>	BCC, BLMS	SSC
Golden eagle	<i>Aquila chrysaetos</i>	BCC, BLMS	SSC, SFP, CDF
Ferruginous hawk	<i>Buteo regalis</i>	BCC, BLMS	CDFG Watch List
<b>Birds (continued)</b>			
Swainson's hawk	<i>Buteo swainsoni</i>	FSS, BCC	ST
Northern harrier	<i>Circus cyaneus</i>	–	SSC
Yellow warbler	<i>Dendroica petechia brewsteri</i>	–	SSC

Common Name	Species	Federal	State
White-tailed kite	<i>Elanus leucurus</i>	–	SFP
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	FE, FSS	SE
California horned lark	<i>Eremophila alpestris actia</i>	–	SSC
Prairie falcon	<i>Falco mexicanus</i>	BCC	SSC
California condor	<i>Gymnogyps californianus</i>	FE	SE, SFP, CDF
Yellow-breasted chat	<i>Icteria virens</i>	–	SSC
Loggerhead shrike	<i>Lanius ludovicianus</i>	BCC	SSC
Coastal California gnatcatcher	<i>Polioptila californica californica</i>	FT	SSC
California spotted owl	<i>Strix occidentalis occidentalis</i>	FSS, BCC, BLMS	SSC
Le Conte's thrasher	<i>Toxostoma lecontei</i>	BCC, BLMS	SSC
Least Bell's vireo	<i>Vireo bellii pusillus</i>	FE, BCC	SE
Gray vireo	<i>Vireo vicinior</i>	–	CDFG Special Animals List
<b>Mammals</b>			
Pallid bat	<i>Antrozous pallidus</i>	FSS, BLMS	SSC
Ringtail cat	<i>Bassariscus astutus</i>	–	SFP
Spotted bat	<i>Euderma maculatum</i>	BLMS	SSC
Hoary bat	<i>Lasiurus cinerius</i>	–	CDFG Special Animals List
Western mastiff bat	<i>Eumops perotis californicus</i>	BLMS	SSC
San Diego black-tailed jackrabbit	<i>Lepus californicus bennettii</i>	–	SSC
Fringed myotis	<i>Myotis thysanodes</i>	BLMS	–
Yuma myotis	<i>Myotis yumaensis</i>	BLMS	–
Lodgepole chipmunk	<i>Neotamias speciosus speciosus</i>	–	CDFG Special Animals List
San Diego desert woodrat	<i>Neotoma lepida intermedia</i>	–	SSC
Southern grasshopper mouse	<i>Onychomys torridus ramona</i>	–	SSC
Tehachapi pocket mouse	<i>Perognathus alticolus inexpectatus</i>	FSS	SSC
American badger	<i>Taxidea taxus</i>	–	SSC

Status abbreviationsFederal

FE: Federally listed as Endangered

FT: Federally listed as Threatened

FC: Federal candidate species (former category 1 candidates)

BLMS: Bureau of Land Management Sensitive Species

FSS: USDA Forest Service Sensitive

BCC: Fish and Wildlife Service Birds of Conservation Concern

State

SE: State-listed as Endangered

ST: State-listed as Threatened

CDF: California Department of Forestry and Fire Protection Sensitive

SFP: CDFG Fully Protected

SSC: CDFG Species of Special Concern

Source: PCR Services Corp., Significant Ecological Area Update Study, November 2000; California Department of Fish and Game Natural Diversity Database, October 2008.

**Table 3.7-2  
Special-Status Plant Species Known to Occur in the Region**

Common Name	Species	Federal	State	CNPS
<b>Dicots</b>				
Kusche's sandwort	<i>Arenaria macradenia</i> var. <i>kuschei</i>	-	-	1B.1
Braunton's milk-vetch	<i>Astragalus brauntonii</i>	FE	-	1B.1
Horn's milk-vetch	<i>Astragalus hornii</i> var. <i>hornii</i>	-	-	1B.1
Nevin's barberry	<i>Berberis nevinii</i>	FE	SE	1B.1
Round-leaved filaree	<i>California macrophylla</i>	-	-	1B.1
Mt. Gleason Indian paintbrush	<i>Castilleja gleasonii</i>	-	SR	1B.2
San Fernando Valley spineflower	<i>Chorizanthe parryi</i> var. <i>fernandina</i>	FC	SE	1B.1
Slender-horned spineflower	<i>Dodecahema leptoceras</i>	FE	SE	1B.1
Fort Tejon wooly sunflower	<i>Eriophyllum lanatum</i> var. <i>hallii</i>	-	-	1B.1
San Gabriel bedstraw	<i>Galium grande</i>	-	-	1B.2
Undescribed species of everlasting	<i>Gnaphalium</i> sp. <i>Nova</i>	-	-	-
Los Angeles sunflower	<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	-	-	1A
Undescribed species of sunflower	<i>Helianthus</i> sp. <i>Nova</i>	-	-	-
Ross' pitcher sage	<i>Lepechinia rossii</i>	-	-	1B.2
Davidson's bush mallow	<i>Malacothamnus davidsonii</i>	-	-	1B.2
Tehachapi monardella	<i>Monardella linoides</i> ssp. <i>oblonga</i>	-	-	1B.3
Moran's navarretia	<i>Navarretia fossalis</i>	FT	-	1B.1
Ojai navarretia	<i>Navarretia ojaiensis</i>	-	-	1B.1
Baja navarretia	<i>Navarretia peninsularis</i>	-	-	1B.2
Short-joint beavertail	<i>Opuntia basilaris</i> var. <i>brachyclada</i>	-	-	1B.2
White rabbit-tobacco	<i>Pseudognaphalium leucocephalum</i>	-	-	2.2
Chaparral ragwort	<i>Senecio aphanactis</i>	-	-	2.2
Mason's neststraw	<i>Stylocline masonii</i>	-	-	1B.1
San Bernardino aster	<i>Symphotrichum defoliatum</i>	-	-	1B.2
Greata's aster	<i>Symphotrichum greatae</i>	-	-	1B.3

Monocots				
Mt. Pinos onion	<i>Allium howellii</i> var. <i>clokeyi</i>	–	–	1B.3
Slender mariposa lily	<i>Calochortus clavatus</i> var. <i>gracilis</i>	–	–	1B.2
Palmer’s mariposa lily	<i>Calochortus palmeri</i> var. <i>palmeri</i>	–	–	1B.2
Plummer’s mariposa lily	<i>Calochortus plummerae</i>	–	–	1B.2
Late-flowered mariposa lily	<i>Calochortus weedii</i> var. <i>vestus</i>	–	–	1B.2
California Orcutt grass	<i>Orcuttia californica</i>	FE	SE	1B.1

*Status abbreviations*

<u>Federal</u>	<u>CNPS lists</u>
FE: Federally listed as Endangered	1A: Plants presumed extinct in California
FT: Federally listed as Threatened	1B: Plants rare, threatened, or endangered in California and elsewhere
FC: Federal candidate species	2: Plants rare, threatened, or endangered in California, but more common elsewhere
<u>State</u>	<u>CNPS threat rank extensions:</u>
SE: State-listed as Endangered	0.1: Seriously threatened in California (high degree/immediacy of threat)
SR: State-listed as Rare	0.2: Fairly threatened in California (moderate degree/immediacy of threat)
	0.3: Not very threatened in California (low degree/immediacy of threats or no current threats known)

Source: PCR Services Corp., *Significant Ecological Area Update Study*, November 2000; CDFG, *California Natural Diversity Database*, November 2002; CDFG, *Special Vascular Plants, Bryophytes, and Lichens List*, February 2008 ; California Department of Fish and Game *Natural Diversity Database*, August, 2007

## Significant Ecological Areas

Significant Ecological Areas (SEAs) are biologically important areas that are designated by the County of Los Angeles as having valuable plant or animal communities. SEAs can be either upland or aquatic habitat, and are offered certain protections by this designation. The County of Los Angeles is currently in the process of updating the SEA designations and policies in the County and expanding these designations in the OVOV Planning Area. The SEAs discussed below are partially located within the City’s Planning Area and include a description of the existing and proposed SEAs. **Figure 3.7-2, Current and Proposed Significant Ecological Areas**, depicts the location of the current and proposed SEAs.

SEA designation was originally based on eight criteria set forth in the Los Angeles County Significant Ecological Area Study<sup>4</sup>. These criteria are as follows:

1. The habitat of state and federally listed endangered, rare, or threatened plants and animals;

<sup>4</sup> England and Nelson Environmental Consultants. 1976. Los Angeles County Significant Ecological Area Study. Prepared for Los Angeles County Department of Regional Planning.

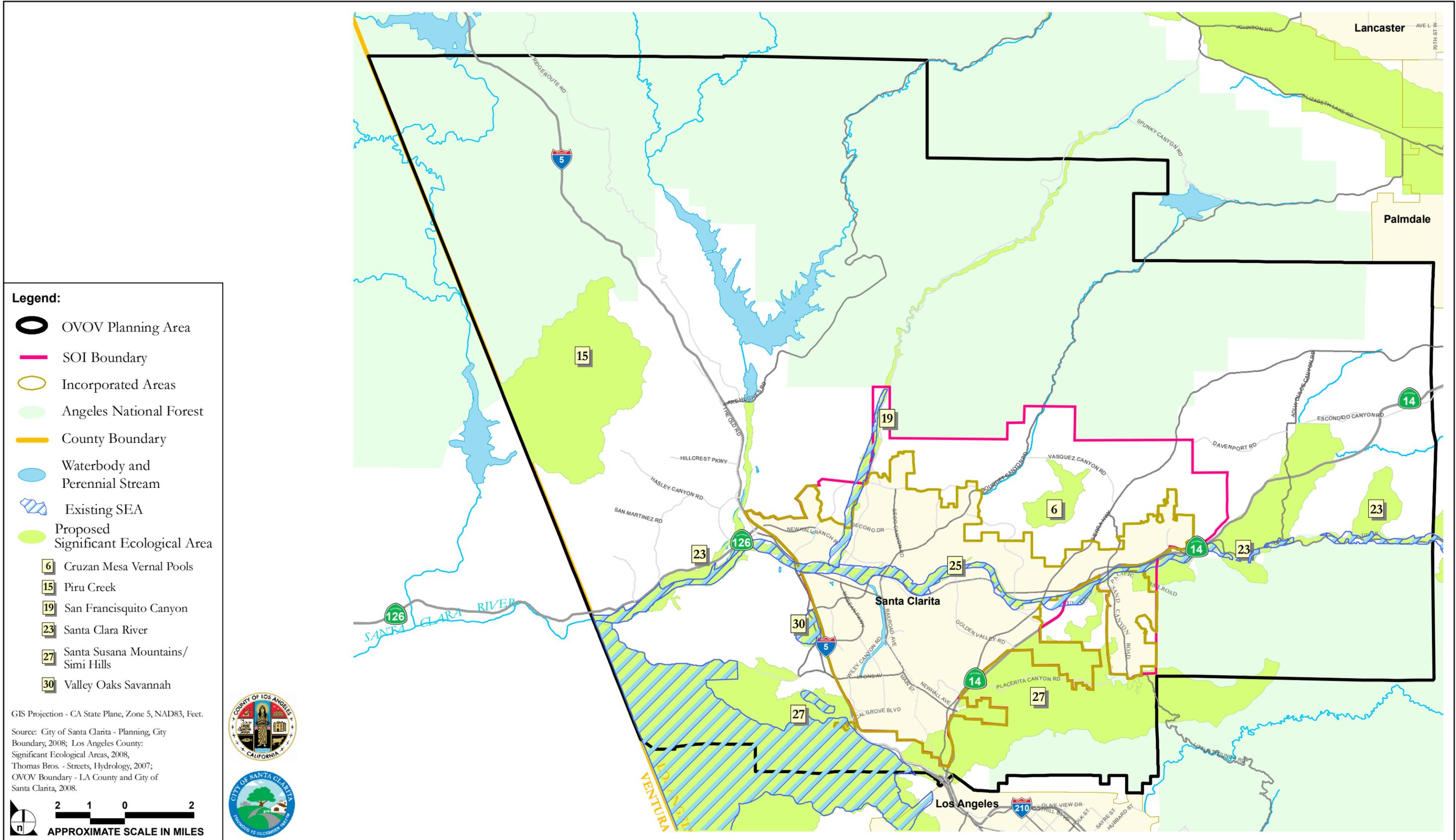
2. Biotic communities, vegetative associations, and habitats of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis;
3. Biotic communities, vegetative associations, and habitats of plant and animal species that are either one of kind, or are restricted in distribution in Los Angeles County;
4. Habitat that serves, at some point in the life cycle of a species or group of species, as a concentrated breeding, feeding, resting, or migrating grounds, and is limited in availability;
5. Biotic resources that are of scientific interest because they either are at an extreme in the physical or geographic range of a population or community, or they represent an unusual variation in a population or community;
6. Areas important as game habitat or fisheries resources;
7. Areas that would preserve relatively undisturbed examples of natural biotic communities in Los Angeles County; and
8. Special areas, not meeting the above criteria, but that have some notable biological feature (such as a wildlife corridor) can also be designated as SEAs.

### ***Existing SEAs***

#### **San Francisquito Canyon (SEA 19)**

##### **Criteria 1, 2, 3, 4, 5, 6, and 7**

San Francisquito Canyon drains a portion of the southern Leible Mountains north of the City, between Haskell and Charlie Canyons. San Francisquito Canyon possesses two populations of unarmored threespine stickleback. This species was formerly found in the Los Angeles, San Gabriel, and Santa Ana Rivers, but is now restricted to the Santa Clara River and San Francisquito Canyon. For this reason, the stickleback has been placed on both the state and federal Endangered Species lists. In San Francisquito Canyon, it is confined to permanent streams and pools below Drinkwater Reservoir, and above Baird Canyon. The lower population is dependent on legally mandated water release from Drinkwater Reservoir.

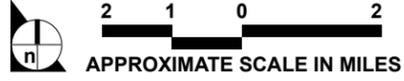


**Legend:**

-  OVOV Planning Area
-  SOI Boundary
-  Incorporated Areas
-  Angeles National Forest
-  County Boundary
-  Waterbody and Perennial Stream
-  Existing SEA
-  Proposed Significant Ecological Area
-  6 Cruzan Mesa Vernal Pools
-  15 Piru Creek
-  19 San Francisquito Canyon
-  23 Santa Clara River
-  27 Santa Susana Mountains/ Simi Hills
-  30 Valley Oaks Savannah

GIS Projection - CA State Plane, Zone 5, NAD83, Feet.

Source: City of Santa Clarita - Planning, City Boundary, 2008; Los Angeles County: Significant Ecological Areas, 2008, Thomas Bros - Streets, Hydrology, 2007; OVOV Boundary - LA County and City of Santa Clarita, 2008.



SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - March 2008

FIGURE 3.7-2

**Current and Proposed Significant Ecological Areas**

The watershed that supplies San Francisquito Canyon is relatively undisturbed. The hillsides support a dense cover of coastal sage scrub and chaparral. The San Francisquito streamcourse is mostly natural and it maintains a good riparian woodland community. The health of this drainage is evident by the fact that, in addition to supporting the unarmored threespine stickleback, the creek has been classified as an active trout fishing stream by the National Forest Service and the CDFG. The primary concern for the survival of the unarmored threespine stickleback is the maintenance of its habitat. The fish requires clean, free-flowing perennial streams and ponds surrounded by natural vegetation. Intermittent areas where surface water connects perennial streams are also important during the wet season. The natural vegetation along the intermittent portion of the stream slows heavy run-off during the rainy season, decreases destruction and siltation of habitat in downstream areas, and provides habitat for migration between populations.

### **Santa Susana Mountains (SEA 20)**

#### **Criteria 2, 3, 5, and 7**

The Santa Susana Mountains are one of several relatively small ridge systems that form the Western Transverse Ranges and blend eastward into the larger San Gabriel and San Bernardino Mountains. The Santa Monica Mountains are also part of this system and form a coastal barrier shielding the interior ridges from the direct influences of moist marine air, making these interior ridges drier than the coastal ones. The vegetation of the Santa Susana Mountains consists of coastal sage scrub on south-facing slopes, dense chaparral on north-facing slopes, and oak, walnut and riparian woodlands in valleys. The oak woodland communities are extremely diverse, supporting six species of oaks. These include coast live oak (*Quercus agrifolia*), valley oak (*Q. lobata*), canyon live oak (*Q. chrysolepis*), scrub oak (*Q. berberidifolia*), interior live oak (*Q. wislizenii*), and a single known location of Palmer's oak (*Q. palmeri*). The latter species is known in Los Angeles County only from this area. Walnut woodlands are frequently found in canyons of intermittent streams and consist primarily of California black walnut (*Juglans californica*), flowering ash (*Fraxinus dipetala*), Mexican elderberry (*Sambucus nigra* ssp. *caerulea*), and coast live oak. Fires appear to promote the expansion of walnut woodlands in this range. Unusual California walnut-flowering ash woodlands occur at mid-elevations within canyons of the north slopes. This community appears to be unique to the Santa Susana Mountains. The bigcone spruce (*Pseudotsuga macrocarpa*)-canyon live oak forest at higher elevations represents one of the southwestern-most examples of this community.

The Santa Susana Mountains are the main representative of these low, dry interior mountain ranges in Los Angeles County. The core of this range is in good condition and has not been heavily disturbed by human use. These mountains are becoming isolated from surrounding natural areas by continued urban expansion in the San Fernando, Simi, and Santa Clarita Valleys. The Santa Susana Mountains have

become an important wildlife corridor for gene flow and species movement between the San Gabriel and Santa Monica Mountains via the Simi Hills.

### **Santa Clara River (SEA 23)**

#### **Criteria 1, 2, 3, 4, 5, and 7**

Soledad Canyon and the Santa Clara River span the east-west extent of the County Planning Area. This area possesses several populations of unarmored threespine stickleback. In the Santa Clara River, the unarmored threespine stickleback is limited to permanent streams and pools from the mouth of San Francisquito Canyon west to the Ventura-Los Angeles County line, and from near Lang Station east to Arrastre Canyon.

The reason the unarmored threespine stickleback has been able to survive in the Santa Clara River is that its remaining habitat has been relatively undisturbed. The Santa Clara River is unique in being the only major river draining the San Gabriel Mountains that has not been channelized. The vegetation consists of freshwater marsh, coastal sage scrub, oak woodland, and riparian woodland communities. The broad wash association is unlike that found in steeper mountain canyons, and is exceedingly scarce in the Los Angeles basin. The trees serve as habitat for many raptorial bird species. The red-shouldered hawk is restricted to woodland communities, and the species is becoming increasingly uncommon in southern California due to habitat destruction.

The primary concern for the survival of the unarmored threespine stickleback is the loss of suitable habitat. The species requires clean, free-flowing, perennial streams and ponds surrounded by native vegetation. Intermittent areas connecting perennial streams are also important during the wet season when surface water is present. The natural vegetation and stream course slow heavy runoff during the rainy season, decrease destruction and siltation of habitat in downstream areas, and provide habitat for stickleback migration between populations.

### **Kentucky Springs (SEA 61)**

#### **Criteria 2, 3, 5, and 7**

This area contains the largest stand of Great Basin sage (*Artemisia tridentata*) remaining in Los Angeles County, and is one of the most intact in southern California. In addition, this stand and others in the County support Parish's Great Basin sagebrush (*A. t. ssp. parishii*), a distinct subspecies, and are of scientific interest for the study of geographic variation.

Although Great Basin sage is widespread in the western states, it is very limited in southern California. It is infrequently found from San Diego County north along the western edges of the deserts to the Sierra Nevada. In Los Angeles County it is known only from a few isolated locations in the Santa Clara River Valley and the Antelope Valley. These are probably relics from an earlier time when the community covered much of southern California.

### **Lyon Canyon (SEA 63)**

#### **Criterion 7**

The site consists of a relatively narrow canyon supporting oak woodland with an extensive chamise chaparral community. The oak woodland is found in the southerly portion of the area and contains both coast live oak and valley oak. Higher in the canyon is a chaparral community consisting of sugarbush (*Rhus ovata*), California lilac (*Ceanothus* spp.), black sage (*Salvia mellifera*), mulefat (*Baccharis salicifolia*), and chamise (*Adenostoma fasciculatum*), which is the dominant shrub.

### **Valley Oak Savannah (SEA 64)**

#### **Criteria 3 and 7**

This area contains one of the last remaining stands of valley oak in the Santa Clarita Valley. The site consists of specimens of this species scattered over the southerly 75 percent of the site. While trees generally appear to be healthy, there is little evidence of new trees on the property, which raises questions about their sustainability.

The northerly 25 percent of the site consists of a mixture of plants of coastal scrub and chaparral affinities typical of those found in the Santa Clarita Valley. The entire area is habitat for coyote, deer, and other animal life. A large portion of the SEA is now dedicated as open space with the buildout of the Westridge project. A smaller portion of the SEA is developed with a golf course.

### ***Proposed SEAs***

#### **Cruzan Mesa Vernal Pools**

##### ***General***

The Cruzan Mesa Vernal Pools Significant Ecological Area (SEA) lies in the southeastern end of the Liebre Mountains, north of the Santa Clara River, and southeast of Bouquet Canyon. The SEA boundaries

encompass the watershed and drainages of the Cruzan Mesa and Plum Canyon vernal pools, considered as a single ecosystem within the SEA. The SEA is located within an unincorporated portion of Los Angeles County and lies entirely within the United States Geological Survey (USGS) California Mint Canyon Quadrangle.

*Description*

The Cruzan Mesa Vernal Pools SEA includes mesas, canyons and interior slopes, with Plum Canyon creek running east-west through the southern portion of the overall SEA. The extent of the SEA encompasses the watershed supporting both of these regionally unique vernal pools, including the immediate watershed surrounding both systems and the corridor in between. Plum Canyon forms the major drainage running east-west through the southern portion of the SEA, draining west toward Bouquet Canyon. Uplands within the SEA are comprised of slopes and canyons supporting coastal sage scrub or scrub-chaparral vegetation. The Cruzan Mesa vernal pool complex lies within an elevated, topographically enclosed basin atop an eroded foothill between Mint and Bouquet canyons. The Plum Canyon vernal pool, situated in a landslide depression on a hillside terrace, is smaller than the Cruzan Mesa pools, but possesses the same essential vernal pool characteristics as the larger system, and the two areas together form an ecologically functional unit.

The seasonally wet vernal pools and surrounding open coastal sage scrub and chaparral slopes support a wide variety of migrant and resident birds and other native sage scrub vertebrate species. The steep cliffs which surround Cruzan Mesa, especially along the southeast and north margins, provide protected sites for perching, roosting and nesting by a variety of birds of prey.

The SEA supports several regional biological values. These values include: sensitive plant species unique to seasonal pools on heavy clay soils, several of which are at the northernmost point in their overall ranges; seasonal surface water, providing breeding sites for sensitive amphibians, including western spadefoot and Riverside fairy shrimp; vernal pools, found nowhere else in Los Angeles County, and their coastal sage scrub watershed serving as a hydrological filter; seasonal ponds and surrounding mesic vegetation providing essential foraging and wintering sites for migrating birds otherwise uncommon in the southern Liebre Mountains; steep cliffs surrounding the mesa tops and their crevices and cavities providing roosting and nesting sites in the otherwise brush-covered hillsides. These pools are also the only three or four such pools in this portion of Southern California. The sensitive resources they support are unique locally and regionally, and biologists consider these to be among most sensitive habitat types in Southern California.

### *Vegetation*

The SEA encompasses formations of coastal sage scrub, vernal pool and non-native grassland. The vernal pool margins support limited densities of native grasses, but these do not form separate communities and are included within the vernal pool floral matrix. Sensitive plant species occurring or potentially occurring within the SEA are discussed below in the Sensitive Biological Resources section.

Plant communities within the SEA were classified using standard methodology and terminology. The communities discussed correspond directly with those listed in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1992 update). Descriptions and general locations of the each plant community present within the SEA are given below.

Vernal pool sites occur in the SEA within the southern end of the Cruzan Mesa basin and on a landslide terrace on the northern slope of upper Plum Canyon, about 1.5 aerial miles southwest of the Cruzan Mesa pool system. True vernal pools, which are rare in Southern California and extremely rare in Los Angeles County, form seasonally in shallow, closed basins, usually where a lens of heavy clay soil holds surface water following rainfall events. Agency-listed sensitive plant species occurring within both of the SEA pool systems include California Orcutt grass and spreading navarretia, along with other vernal pool endemics such as hairgrass, woolly-marbles, waterwort, *Mimulus latidens* and water-starwort.

Coastal sage scrub occurs throughout the slopes and ridges of most of the SEA, in places intermixed with chaparral elements. To some extent, the mosaic of coastal sage and chaparral reflects the fire history of any given portion of the site, with scrub formations generally occurring on sites which have more recently burned. However, some slopes within upper Plum and Mint canyons, where no fires have occurred for over 30 years, still support "pure" coastal sage scrub, suggesting that the formation is a climax community on those sites.

Dominant species on most slopes within the SEA are California sagebrush, woolly blue-curly, chaparral yucca, black sage, Acton encelia, white sage, and chamise. A variety of less dominant associated species are also present, including lance-leaved live-forever, common tarplant, California buckwheat, beavertail cactus, turkish rugging, and Peirson's morning-glory. Discarded or cleared areas have regrown with a dense cover of oats and bromes, California poppy, fiddleneck, several species of lupines, popcorn flower, combur and other disturbance-favored native annuals. Less-frequently disturbed portions of the upper watershed basin support dense stands of chamise – California scrub oak chaparral, with yerba santa abundant along dirt roads and other disturbed areas. In the lower portions of canyons and along Plum

Canyon creek, where ground-water levels permit, giant rye grass, Mexican elderberry, acourtia, redberry, toyon, holly-leaved cherry, Fremont cottonwood, western sycamore, and arroyo willow occur.

Non-native grassland generally consists of invasive annual grasses which are primarily of Mediterranean origin, and which have become the dominant ground cover formation on disturbed sites throughout the western states. Common species within this "community," which is a ruderal formation and not a true habitat or community, include oats, bromes, foxtail chess, and other grasses, along with wild mustards, yellow star thistle, wire lettuce, sow thistle, milk thistle, and other disturbance-favored "weedy" taxa. Non-native ruderal formations occur over most of the Mesa around the vernal pools, where coastal sage scrub has been disturbed or removed, in small strips and patches throughout the SEA primarily along disturbed dirt road edges and where grading or other substrate disturbances have not regrown to native species.

Mainland cherry forest is not well described but is typically composed of tall stands of hollyleaf cherry on rocky, dry slopes. Within the SEA, this community is not well developed and inter-mingles with chaparral. It can be found in a single narrow patch on a slope in the southwest portion of the SEA.

### *Wildlife*

Wildlife diversity and abundance within the SEA are moderate, commensurate with the relative homogeneity of the natural open space habitat types. A number of local wildlife species are more-or-less dependent upon coastal sage scrub or scrub-chaparral formations, while other species are strictly limited to seasonal pool habitats. The two vernal pool systems in the SEA, along with the coastal sage scrub-chaparral uplands surrounding and connecting them constitutes a single, integrated functional ecosystem for wildlife species, both within the SEA boundaries and as a part of the larger regional scrub-chaparral ecosystem.

Analysis of invertebrates on any particular site usually is limited by a lack of specific data, but the fact that the SEA contains only two primary natural habitat types insures that there is sufficient acreage to support healthy populations of whatever invertebrate species are present, probably several hundred terrestrial species. The vernal pools, when ponded, form aquatic habitats for a moderately diverse fauna of freshwater arthropods and other invertebrates, including native fairy shrimp, aquatic flies, diving beetles, water scavengers, ostracods, and snails. The only insect order presently known to have a vernal pool endemic within the SEA is Coleoptera, with one vernal pool ground beetle species thus far having been found.

Amphibians generally are relatively common in coastal sage scrub habitats with persistent surface hydrology during the breeding season, and the SEA supports abundant populations of Pacific chorus frog, western toad, and western spadefoot toad. At least two species of salamander also may be present within more mesic portions of the surrounding canyons and chaparral.

Reptile populations in the SEA would include numerous lizard species, including San Diego banded gecko, yucca night lizard, side-blotched lizard, western fence lizard, western skink, San Diego alligator lizard, coastal western whiptail, San Diego horned lizard, and silvery legless lizard. A robust snake fauna also would be expected within the SEA, including western blind snake, coachwhip (“red racer”), chaparral whipsnake, coastal patch-nosed snake, California rosy boa, San Diego gopher snake, California kingsnake, California mountain kingsnake, night snake, and southern Pacific rattlesnake.

Bird diversity within the SEA is related to habitat opportunities for year-round residents, seasonal residents, migrating raptors and song birds. Open coastal sage scrub hosts a suite of birds typical of such sites at lower elevations over most of the coastal slopes of Southern California. The most productive sites for resident coastal sage scrub and chaparral birds are around riparian and freshwater systems, which also attract large numbers of migrants during spring and fall. The vernal pools attract moderate numbers of migrating waders and waterfowl, and provide important winter foraging areas for resident and migratory birds of prey. Coastal sage and chaparral birds resident or breeding within the SEA include ashy rufous-crowned sparrow, Bell’s sparrow, black-chinned sparrow, lark sparrow, California thrasher, spotted towhee, California towhee, phainopepla, northern mockingbird, lazuli bunting, and several species of hummingbird, with additional species (western meadowlark, California horned lark, and perhaps also savannah and grasshopper sparrows) nesting and foraging in the grassland and ruderal habitats surrounding the vernal pools. Birds of prey observed around the vernal pools include red-tailed hawk, northern harrier, white-tailed kite, prairie falcon, and golden eagle. Barn owl, great horned owl, and common raven all nest in the cliffs surrounding Cruzan Mesa.

### ***Wildlife Movement***

The vernal pools situated within this SEA serve as isolated, high resource quality habitat linkage sites for migratory waterfowl. The vernal pools teem with arthropod and amphibian activity, and so provide essential feeding grounds for long-distance migrants, as well as for resident species of reptiles, birds and mammals. The ponds do not lie within any identified terrestrial movement routes for wildlife, but may serve as important seasonal watering sites for species moving through and across the Plum Canyon divide between Mint and Bouquet canyons. The Plum Canyon stream channel undoubtedly serves as a

movement pathway for more mobile species of terrestrial mammals, but it no longer links any larger habitat areas directly, due to land conversion in Mint and Bouquet Canyon.

#### *Sensitive Biological Resources*

Sensitive biological resources are habitats or individual species which have been accorded special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise of concern, principally due to the species' declining or limited distribution or population sizes, usually resulting from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups such as the California Native Plant Society (CNPS). The following indicates the habitats as well as plant and animal species present, or potentially present within the SEA, that have been afforded special recognition.

#### *Sensitive Plant Communities/Habitats*

This description supports several habitat types considered sensitive by resource agencies, namely the CDFG [California Natural Diversity Data Base (CNDDDB)], because of their scarcity and support of a number of state and federally listed endangered, threatened, and rare vascular plants, as well as sensitive bird and reptile species. These communities include coastal sage scrub, mainland cherry forest, and vernal pool. These communities or closely related designations are considered highest-inventory priority communities by the CDFG, indicating that they are declining in acreage throughout their range due to land use changes.

#### *Sensitive Species*

Sensitive species include those listed, or candidates for listing by the USFWS, CDFG, and CNPS. These sensitive species include, but are not limited to, spreading navarretia, California Orcutt grass, Vernal pool fairy shrimp, San Diego fairy shrimp, Riverside fairy shrimp, golden eagle, California gnatcatcher, San Diego black-tailed jackrabbit, San Diego desert woodrat, and southern grasshopper mouse. In addition, the SEA identifies species observed, recorded in the CNDDDB, or reported in previous documentation as observed within or in the immediate vicinity of the SEA.

## **Santa Felicia**

### *General*

The Santa Felicia Significant Ecological Area (SEA) encompasses the almost the entire Los Angeles County portion of the Santa Felicia watershed draining into Lake Piru. This watershed is largely undeveloped and contains vast stands of intact coast sage scrub and chaparral communities on south and north facing slopes, respectively. In addition to the undisturbed upland habitats, the watershed is dissected by excellent examples of mixed riparian (sycamore-willow), oak riparian and coast live oak forests and alluvial scrub in the bottomlands. Non-native grasslands occur in areas where grazing has taken place; however, there is little invasion of these ruderal taxa into the native communities. A brief summary of the plant communities present, or likely to occur, within the SEA is provided in the vegetation section below.

### *Description*

The Santa Felicia SEA includes a wide variety of topographic features and habitat types. The orientation and extent of the SEA encompasses the surface and subsurface hydrology of the Santa Felicia watershed, from its headwater, tributaries, and basin to the point at which it exits Los Angeles County jurisdiction. The northern portion of the SEA is within the Angeles National Forest. Capturing the watershed tributaries, the eastern boundary follows a predominate ridgeline, the western boundary is the county border and the southern boundary captures two other small tributaries that feed the Santa Felicia, to encompass almost the entire watershed that ultimately drains into Lake Piru in Ventura County.

### *Vegetation*

Plant communities within the SEA include: coast live oak woodland, coast live oak riparian forest, chaparral, coastal sage scrub, coastal sage scrub, chaparral, non-native and native grasslands, alluvial fan sage scrub, and sycamore-willow riparian woodland. Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section of this document.

Plant communities within the SEA were classified using standard methodology and terminology. Most of the communities discussed correspond directly with those listed in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1992 update); some communities are named based upon the dominant species within them and/or other commonly used terminology. Descriptions of several plant communities present within the SEA are given below.

Coast live oak woodland consists of moderate-density overstory formations of coast live oak trees, usually on erosional plains along the margins of canyon bottoms and on lower slopes in chaparral and coastal sage scrub understory habitats.

Coast live oak riparian forest is a variation of coast live oak woodland wherein the canopy is more closely grown, and the trees occur in narrower formations along watercourses. Willow, California bay, mulefat, and other riparian species often occur in the understory.

Sycamore-willow riparian woodland may include the following: western sycamore, black willow, arroyo willow, skunkbush, and California blackberry.

Alluvial fan scrub generally consists of a mixture of shrubs, including scalebroom, California buckwheat, and white sage, which colonize and persist within infrequently scoured and flooded terrain such as floodplains, alluvial plains, or along seasonal streams.

Chaparral consists of broad-leafed or needle-leafed, sclerophyllous (hard-leafed), medium height to tall shrubs that form a dense cover on steep slopes, usually below 5,000 feet in Southern California. Dominant species found within this community include scrub oak, toyon, manzanita, and white sage.

Coastal sage scrub dominant species typically are California sagebrush, purple sage, giant wildrye, coyotebush, and California buckwheat.

Non-native grassland consists of invasive annual grasses that are primarily of Mediterranean origin, including short-pod mustard, tocalote, and riggut brome.

Native grassland communities consist of low, herbaceous vegetation dominated by grasses, with native formations generally mixed with native bulbs and other herbaceous species, often intermixed with naturalized annual taxa.

### ***Wildlife***

Wildlife within the SEA is extremely diverse and abundant, commensurate with extensive acreages of natural open space and great diversity of habitat types, within the stream channels and on the surrounding uplands. While a few wildlife species may be entirely dependent upon or obligate within a single vegetative community, the mosaic of vegetation communities within the area and adjoining uplands constitutes a continuum of functional ecosystems. These ecosystems support a wide variety of wildlife species, within the SEA boundaries and as a part of the regional ecosystem.

Analysis of invertebrates on any given site generally is limited by a lack of specific data, but the size of the SEA and diversity of habitats present are considered sufficient to support healthy populations of a very large number of invertebrate species. The riparian formations and aquatic habitats within the SEA support diverse faunas of arthropods, which may include native fairy shrimp, craneflies, blackflies and other aquatic dipterans, stoneflies, caddisflies, and dobsonflies, water boatmen, giant water bugs, ground beetles, diving beetles, and tiger beetles. Terrestrial insects abound around riparian corridors and in scrub habitats, and are particularly abundant in oak-dominated habitats.

Amphibians are abundant and relatively diverse within moister woodland areas, along montane canyon bottoms, in riparian areas, and within surface water features of the SEA. The overall riparian systems of the SEA provide habitat for a number of frog and toad populations, which may include populations of Pacific and California chorus frogs, western toad, and western spadefoot toad as well as the California red-legged frog and southwestern Arroyo toad. Open scrub, chaparral and alluvial fan habitats support diverse reptile populations, and the overall herpetofauna of the SEA would encompass numerous lizard species as well as a robust snake fauna.

Bird diversity within the SEA is related to habitat opportunities for year-round residents, seasonal residents, migrating raptors, and song birds. Coastal sage scrub and chaparral host a suite of birds typical of such sites at lower elevations over most of the coastal slopes of Southern California. The most productive sites for resident coastal sage scrub and chaparral birds are around riparian and freshwater systems, which also attract large numbers of migrants during Spring and Fall. Oak woodlands and riparian areas generally support many more species; notable species consist of the summer tanager, Bullock's oriole, black-headed grosbeak, band-tailed pigeon, western wood pewee, several swallow species, western yellow-billed cuckoo, willow flycatcher, and least Bell's vireo.

Native mammal diversity within the SEA is considerable. These likely include bats, rodents, squirrel, rabbits, mole, weasel, badger, skunks, raccoon, gray fox, bobcat, coyote, and mule deer. Black bear may also occur within the SEA boundaries, at least occasionally, but the San Gabriel Mountains population was introduced for game use, and this species is not native within the SEA.

### ***Wildlife Movement***

Historically riparian corridors have served as linkages between the Pacific coastline, coast ranges, interior ranges, the high desert and southern Sierras (via the Tehachapi range). Animals move through the Santa Felicia watershed along and within the riparian systems between Piru Lake in Ventura County and the

San Gabriel Mountain range and beyond. The tributary drainages in this SEA appear fully intact and open.

### *Sensitive Biological Resources*

Sensitive biological resources are habitats or individual species which have been afforded special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise of concern; this is principally due to the species' declining or limited population sizes, usually resulting from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, that have been afforded special recognition.

### *Sensitive Plant Communities/Habitats*

The Santa Felicia SEA supports several habitat types considered sensitive by resource agencies, namely the CDFG [California Natural Diversity Database (CNDDDB)] because of their scarcity and support of a number of state and federally listed endangered, threatened, and rare vascular plants, as well as sensitive bird and reptile species. These communities include: coast live oak, coast live oak riparian forest, alluvial fan sage scrub, and native grassland. These communities or closely related designations are considered highest-inventory priority communities by the CDFG, indicating that they are declining in acreage throughout their range due to land use changes.

### *Sensitive Species*

Sensitive species include those listed, or candidates for listing by the USFWS, CDFG, and CNPS. These species include, but are not limited to, the California condor, red-legged frog and Arroyo toad. The SEA identifies other species observed, recorded in the CNDDDB, or reported in previous documentation as observed within or in the immediate vicinity of the SEA.

## **Santa Clara River**

### *General*

The Santa Clara River Significant Ecological Area (SEA) encompasses the entire Los Angeles County reach of the Santa Clara River, primarily within unincorporated areas of Los Angeles County. The Santa Clara River SEA covers the length of the river and with the watershed extensions encompasses a wide

variety of topographic features and habitat types. The orientation and extent of the SEA also consists of the surface and subsurface hydrology of the Santa Clara River, from its headwater tributaries and watershed basin to the point at which it exits Los Angeles County jurisdiction.

*Description*

The eastern portion of the SEA surrounds the Kentucky Springs and Aliso Canyon watersheds, portions of which are within the Angeles National Forest. It follows the river channel downstream through the Acton basin, taking in Arrastre Creek, Mill Canyon and other side drainages and significant rock outcroppings, then stays within the channel to Agua Dulce Canyon, at which point the northern boundary loops around that watershed and includes Vasquez Rocks County Natural Area, and continues northwest to the forest, while the southern boundary encompasses the lower portion of Bear Canyon and undeveloped portions of Oak Spring Canyon adjacent to the river channel. The southern boundary leaves the river channel at the confluence with Sand Canyon and extends broadly to the south, to include all of the remaining natural areas of the Sand Canyon watershed, along with the major ridgeline, earthquake escarpment, grassland, and canyon habitat features and watersheds of Elsmere, Whitney, Placerita and Bear canyons.

From Sand Canyon west the SEA boundary remains close to the margins of the floodplain to the confluence with San Francisquito Canyon, wherein the northern boundary extends northward upstream on that drainage to the headwaters of San Francisquito Creek on the Angeles National Forest, then returns to the river channel and proceeds west to the confluence with Castaic Creek. From here, it extends north around the lower portion of Castaic Creek, embracing the riparian habitat areas around and above the confluence, with the boundaries of the SEA following the Santa Clara River channel to the Ventura County line. The biological and ecological functionality of the SEA is integrally linked to the river basin for its entire length, of course, so the biogeographic limits of the SEA would extend downstream through Los Angeles/Ventura County to its mouth at the Pacific Ocean, and encompass the significant tributary drainages (Piru Creek, Sespe Creek, Santa Paula Creek, Wheeler Creek, etc.).

The Kentucky Springs and Aliso Canyon watershed zones originate on National Forest land, in semi-arid chaparral and desert scrub habitat, but the drainages themselves support different formations of desert and interior riparian habitat, ranging from seasonal Great Basin sagebrush wash in Kentucky Springs to dense, mature, willow-cottonwood-sycamore woodlands over permanent streams in Aliso Canyon. The surrounding uplands in the basins support pinyon-juniper woodlands, chamise, mountain mahogany, and manzanita dominated chaparral formations, buckwheat scrub, and ruderal lands. Alluvial terraces within both drainages have been rather extensively cultivated for orchard crops or dryland agriculture,

and in more recent years, rural and urban-type residential developments have encroached on the watersheds. Portions of the Aliso Canyon riparian woodlands have been encroached upon by rural development, but the upper portion of the drainage possesses excellent xeric cottonwood-sycamore riparian woodland. The alluvial plain formed along the southern margin of the river basin below these canyons supports intact, high diversity xeric alluvial fan sage scrub.

Downstream of the Acton basin the SEA encompasses the Arrastre Creek drainage, which is the type locality for the federally and state endangered unarmored three-spined stickleback fish, and also loops around the high, rounded rocky butte-like outcroppings on the north side of the river. These features, while only a minor part of the watershed of the river, provide important nesting, roosting, and sheltering habitat values for bats, birds of prey, and other sensitive species foraging along the river corridor. Agua Dulce Canyon has a permanent stream and supports high quality riparian habitat formations from the confluence with the river to the intersection with the Antelope Valley Freeway; from that point north the riparian areas are fragmented, improving and maturing significantly where the creeks pass through Vasquez Rocks County Natural Area.

The alluvial terraces along the river channel as it enters the eastern portion of the Santa Clarita Valley support alluvial fan sage scrub, Great Basin sagebrush scrub, coast live oak woodland, and coastal sage scrub habitats. The alluvial fans of Oak Springs Canyon and Sand Canyon are important recharge grounds for the river aquifer; surface flows from both canyons presently entering the Santa Clara River basin through natural, unconfined channels. Recognizing the importance of this drainage, the SEA boundaries have been drawn to encompass the entire Sand Canyon-Bear Canyon watershed, most of which is within the National Forest. The major habitat linkage zones and watersheds between the river basin and the National Forest, and the protected areas of the county (Placerita Canyon Natural Area) have also been included within the SEA boundary. These canyons form a natural movement zone for wildlife moving across and through the western end of the San Gabriel range to the Santa Susana range and the Santa Clara River basin, and together encompass a spectrum of significant and unique habitat, vegetation and wildlife resources.

The segment of the Santa Clara River passing through the City of Santa Clarita is a dry channel except during seasonal runoff flows. Regardless of this condition, it supports relatively intact stands of alluvial sage scrub formations, riparian woodland, and southern riparian scrub. The dry zones are essential to the continued genetic isolation of the unarmored three-spined stickleback population in the upper reaches of the river.

San Francisquito Creek supports dense and mature southern riparian scrub and riparian woodland formations, along with small areas of freshwater marsh, providing essential wintering areas and resident habitat for waterfowl, wading birds, marshland birds, and a variety of other vertebrate species. After San Francisquito Creek passes from County land into the National Forest, the channel flows become less seasonal, and riparian resources expand and diversify.

Relatively vast areas of willow-cottonwood forest and southern riparian scrub occur west of San Francisquito Creek and within the junction zone of Castaic Creek and the Santa Clara River, supporting numerous sensitive species and providing multi-layered riparian habitat for a wide diversity of wildlife species, particularly birds of prey and riparian-obligate songbirds.

The Santa Clara River channel and its alluvial terraces and tributary creeks together form the single most important and natural value wildlife movement zone through Los Angeles County. Mobile species can enter the river basin anywhere along its length (outside of developed areas) and proceed in either direction without having to pass through narrow culverts or blind channels, with continuous vegetative cover and only short stretches of dry substrates. The overall drainage course provides a continuum of aquatic and terrestrial movement opportunities, shelter, forage, and resident habitat from the mouth of the river at Ventura to the Antelope Valley. The drainage course connects to both districts of the Angeles National Forest, and links together two large public resource preserves (Vasquez Rocks and Placerita Canyon Nature Preserve).

### *Vegetation*

Plant communities within the SEA include: bigcone spruce-canyon oak forest, coast live oak woodland, coast live oak riparian forest, chaparral, coastal sage scrub, coastal sage scrub-chaparral mixed scrub, non-native and native grasslands, alluvial fan sage scrub, southern cottonwood-willow riparian woodland and forest, southern sycamore-alder woodland, southern willow scrub, vernal pool, pinyon-juniper woodland, juniper woodland, and freshwater marsh. Transitional zones (ecotones) between these communities often contain unusual species compositions. Sensitive plant species occurring or potentially occurring within the SEA are discussed below in the Sensitive Biological Resources section.

Plant communities within the SEA were classified using standard methodology and terminology. Most of the communities discussed correspond directly with those listed in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1992 update); some communities are named based upon the dominant species within them and/or other commonly used terminology. Descriptions and general locations of each plant community present within the SEA are given below.

Bigcone spruce-canyon oak forest formations typically occur in higher elevation draws on north-facing slopes, and may have incense cedar, big-leaf maple, California bay, and other shade-loving species intermixed, depending upon slope orientation, substrates, and fire history. Understory vegetation usually is dominated by chaparral species such as scrub oak, poison oak, wild grape, and manzanita. This community occurs on watershed slopes in the eastern portion of the SEA, and in a few of the narrower, more mesic canyons along the southern side of Soledad Canyon.

Coast live oak woodland consists of moderate-density overstory formations of coast live oak trees, usually on erosional plains along the margins of canyon bottoms and on lower slopes in chaparral and coastal sage scrub understory habitats. Mexican elderberry, chaparral currant, squawbush, and California peony are frequent in the understory. Extensive stands of this formation occur in Sand, Placerita, Bear, Whitney, Elsmere, and Soledad Canyons, and in unnamed tributary canyons to these drainages.

Coast live oak riparian forest is a variation of coast live oak woodland wherein the canopy is more closely grown, and the trees occur in narrower formations along watercourses. Willow, California bay, mulefat, and other riparian species often occur in the understory.

Juniper woodland is an open formation dominated by California juniper, often with an understory of foothill yucca, buckwheat, and other scrub species. This community is found on lower slopes within the eastern portion of the SEA and is mixed with a few joshua trees and chaparral species in several places.

Pinyon-juniper woodland in the SEA typically consists of a mixture of single-needle leaf pinyon pine and California juniper, with mountain mahogany, buckwheat, squawbush, foothill yucca, penstemons, and native grasses. This formation occurs on middle elevation north-facing slopes in the Kentucky Springs watershed, and sporadically along the same orientations south of Acton.

Southern cottonwood-willow riparian woodland and forest is a broad-leafed winter- deciduous habitat dominated by Fremont cottonwood, in places mixed with black cottonwood, various species of willow, rarely an alder, and on drier sites, western sycamore. Southern cottonwood-willow riparian woodland (or forest) occurs in numerous reaches of the SEA, forming mature overstory habitat on the Santa Clara River, its main tributaries, oxbow ponds, and alluvial plains. Some of the most extensive formations occur just west of Acton, in upper Aliso Canyon, in lower San Francisquito Canyon, and from Santa Clarita to the Ventura County border. Large tracts of cottonwood-willow habitat occur in Ventura County as well.

Southern sycamore-alder woodland is a formation which most often occurs on broad plains with heavy alluvial substrates, often along narrow creeks and streams with high-energy, permanent flows within the SEA. Alders typically occur along the watercourse, while sycamores usually grow a bit further from the

active flowing channel. This community is uncommon within the SEA, occurring only in the upper reaches of the watershed and in portions of Bear, Sand, and Placerita Canyons and to a lesser extent in Aliso Canyon.

Southern willow scrub is a riparian community consisting of dense, broad-leafed, winter- deciduous riparian thickets occurring within and adjacent to seasonal or permanent water courses. The “scrub” formation generally is sub-mature, a state which often is maintained by frequent heavy over-flooding, and may attain woodland or forest stature if undisturbed for several decades. Dominant species of this community within the SEA are mulefat, sandbar willow, and arroyo willow. Within the SEA this community occurs throughout the tributary and primary drainages, wherever the habitat structure is maintained or repeatedly altered by frequent high water flows.

Freshwater marsh develops in areas of still or slow-moving permanent freshwater. This community is dominated by the perennial, emergent cattail or bulrush, which may reach heights of 7 feet and grow dense enough to form a closed canopy. This formation occurs in scattered ponds and slow-flow portions of the river and tributaries within the SEA.

Vernal pool systems are extremely rare in Los Angeles County and there are only two verified vernal pools currently recognized within the area; Cruzan Mesa and Plum Canyon. However, there is at least one small seasonal pond with typical vernal pool characteristics within the upper Placerita-Sand Canyon watershed break. This small pool is surrounded by coastal sage scrub, with a band of native needlegrass and melic grass on its fringes, and supports Riverside fairy shrimp and western spadefoot toad. It is considered a vernal pool by virtue of its habitat values and species unique to this type of seasonal formation.

Chaparral consists of broad-leafed or needle-leafed, sclerophyllous (hard-leafed), medium height to tall shrubs that form a dense cover on steep slopes, usually below 5,000 feet in Southern California. Dominant species found within this community include scrub oaks (several species), chamise, manzanita, wild lilac, toyon, and western mountain-mahogany on north-facing exposures; buckwheat, foothill yucca, chamise, hoary-leaf lilac, black sage, and goldenbush on south-facing slopes. This plant community occupies most of the basin slopes along the Santa Clara River and on interior ridges and slopes within the watersheds and drainages west of Acton. Chaparral also occurs on some of the higher elevations of the eastern watershed portions of the SEA, where the shrubs frequently are interspersed as understory formations within oak and conifer woodlands.

Coastal sage scrub and coastal sage scrub-chaparral mixed scrub are formations which typically occur on south or west-facing slopes within the western portion of the SEA. Some sites may be artifacts of fire frequency or occurrence, while other areas appear to be stable scrub communities. Dominant species typically are California sagebrush, purple sage, black sage, white sage, goldenbush, buckwheat, foothill yucca, California encelia, brittlebush, golden yarrow, chamise, hoary-leaf lilac, and a variety of annuals and bulbs. Excellent examples of coastal sage scrub occur in upper Placerita Canyon watershed and on the ridgeline to the north, along the Santa Clara River just east of Sand Canyon, and in San Francisquito Canyon.

Alluvial fan sage scrub, sometimes also known as floodplain sage scrub, generally consists of a mixture of shrubs which colonize and persist within infrequently scoured and flooded terrain such as floodplains, alluvial plains, or along seasonal streams. The dominant shrub in most washes is scalebroom, but Great Basin sage brush, rabbitbrush, and foothill yucca also usually occur in the habitat type, and may be dominant depending upon substrates and subsurface hydrology. This vegetation type is common throughout the alluvial plains and washes in the SEA, forming particularly high diversity stands along the southern margin of the river at Acton, on uplands east of the Sand Canyon confluence, along the dry reaches of the river in Santa Clarita, and in lower San Francisquito Canyon. Extensive stands of Great Basin sagebrush-dominated alluvial scrub occur around Acton and in the Kentucky Springs portion of the SEA.

Native grassland communities consist of low, herbaceous vegetation dominated by grasses, with native formations generally mixed with native bulbs and other herbaceous species, often intermixed with naturalized annual taxa. There are representatives of native grasslands scattered within the SEA, most notably patches of different needlegrass species and melic grasses on clay soils in Placerita Canyon, on slope wetlands and around oaks on the ridge north of Placerita, and on less-disturbed xeric slopes in the eastern portion of the SEA. Seeps in chaparral often support homogeneous stands of giant rye; other native grasses occur sporadically within most natural habitats along the Santa Clara River basin.

Non-native grassland consists of invasive annual grasses that are primarily of Mediterranean origin. Dominant species within this "community," which is a ruderal formation and not a true habitat or community, include oats, bromes, foxtail chess, and other grasses, along with wild mustards and other disturbance-favored "weedy" taxa. Non-native grasslands and other ruderal formations are the dominant understory on most disturbed substrates, particular grazed areas.

Disturbed or barren areas either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found within the SEA includes non-native and native grasses and "weedy"

herbaceous species, including doveweed, mustards, wire lettuce, sow thistle, telegraph weed, Russian thistle, dock, yellow star thistle, Australian saltbush, and cocklebur. Disturbed areas occur throughout the SEA on fallow agricultural sites, disked fields, abandoned pastures, residential development, paved road margins, fire breaks, dirt access roads, trails, and other similarly disturbed areas.

### *Wildlife*

Wildlife within the SEA is extremely diverse and abundant, commensurate with extensive acreages of natural open space and great diversity of habitat types, within the river channels and on the surrounding uplands. While a few wildlife species may be entirely dependent upon or obligate within a single vegetative community, the mosaic of vegetation communities within the area and adjoining uplands constitutes a continuum of functional ecosystems. These ecosystems support a wide variety of wildlife species, within the SEA boundaries and as a part of the regional ecosystem.

Analysis of invertebrates on any given site generally is limited by a lack of specific data, but the size of the SEA and diversity of habitats present are considered sufficient to support healthy populations of a very large number of invertebrate species, probably in excess of 2,500 species. The riparian formations, wetlands, and aquatic habitats within the SEA support diverse faunas of arthropods, including native fairy shrimp, crane flies, blackflies and other aquatic dipterans, stoneflies, caddisflies, and dobsonflies, water boatmen, giant water bugs, ground beetles, diving beetles, and tiger beetles. Terrestrial insects abound around riparian corridors and in scrub habitats, and are particularly abundant in oak-dominated habitats. Insect orders very well-represented taxonomically, and with some habitat specialization within the Santa Clara River SEA include Orthoptera, Neuroptera, Coleoptera, Diptera, Hymenoptera, and Lepidoptera.

Amphibians are abundant and relatively diverse within moister woodland areas, along montane canyon bottoms, in riparian areas, and within surface water features of the SEA. The overall riparian systems of the Santa Clara River basin support abundant populations of Pacific and California chorus frogs, western toad, western spadefoot toad, bullfrog, and African clawed frog (the latter two species are non-native), and in San Francisquito Canyon, California red-legged frog and southwestern arroyo toad. Arboreal, painted, and garden slender salamanders also are present within mesic habitats in the SEA.

Open scrub, chaparral and alluvial fan habitats support diverse reptile populations, and the overall herpetofauna of the SEA would encompass numerous lizard species, along with southwestern pond turtle in Agua Dulce and Bear canyons. Yucca night lizard, side-blotched lizard, western fence lizard, western skink, San Diego alligator lizard, coastal western whiptail, San Diego horned lizard, desert

horned lizard, silvery legless lizard and San Diego desert banded gecko all would be expected within the SEA.

The SEA also supports a robust snake fauna, including western blind snake, coachwhip (“red racer”), chaparral whipsnake, coastal patch-nosed snake, California rosy boa, San Diego gopher snake, glossy snake, California kingsnake, mountain kingsnake, long-nosed snake, night snake, California lyre snake, California black-headed snake, two-striped garter snake, San Bernardino ring-necked snake, southern Pacific rattlesnake.

Bird diversity within the SEA is related to habitat opportunities for year-round residents, seasonal residents, migrating raptors, and song birds. Coastal sage scrub and chaparral host a suite of birds typical of such sites at lower elevations over most of the coastal slopes of Southern California. The most productive sites for resident coastal sage scrub and chaparral birds are around riparian and freshwater systems, which also attract large numbers of migrants during Spring and Fall. Coastal sage and chaparral birds resident or breeding within the SEA includes Southern California (ashy) rufous-crowned sparrow, Bell’s sparrow, black-chinned sparrow, lark sparrow, lazuli bunting, California gnatcatcher, California quail, greater roadrunner, spotted towhee, California towhee, California thrasher, phainopepla, northern mockingbird, and Anna’s, Costa’s, and black-chinned hummingbirds. Oak woodlands and riparian areas support many more species; notable species consist of the summer tanager, Bullock’s oriole, black-headed grosbeak, band-tailed pigeon, western wood pewee, several swallow species, western yellow-billed cuckoo, willow flycatcher, and least Bell’s vireo. Species associated with ruderal sites and grasslands include western meadowlark, California horned lark, and savannah and grasshopper sparrows. Birds of prey (including common migrants) observed within the SEA include red-shouldered hawk, red-tailed hawk, Cooper’s hawk, sharp-shinned hawk, Swainson’s hawk, merlin, American kestrel, northern harrier, white-tailed kite, prairie falcon, and golden eagle. Resident owl species within the SEA boundaries include barn owl, great horned owl, long eared owl, and California spotted owl.

Native mammal diversity within the SEA is considerable. These include bats (at least seven species), rodents (at least four species of deer mice, two species of woodrat, Beechey ground squirrel, western gray squirrel, and more), two types of rabbits and one hare, broad-handed mole, long-tailed weasel, American badger, spotted and striped skunks, raccoon, gray fox, bobcat, coyote, mountain lion, and mule deer. Black bear also occur within the SEA boundaries, at least occasionally, but the San Gabriel Mountains population was introduced for game use, and this species is not native within the SEA.

### ***Wildlife Movement***

Historically (and prehistorically) the riparian corridor along the Santa Clara River has served as the primary east-west linkage between the Pacific coastline, coast ranges, interior ranges, high desert and southern Sierra (via the Tehachapi range). Animals moving through the Santa Clara drainage had unobstructed passage along the river and within the riparian systems between the coastal lowlands of Ventura and the Mojave Desert, with tributary routes extending south into the San Gabriel range, northward via Castaic, Bouquet and San Francisquito tributaries over the Transverse range and into the San Joaquin Valley, west into the central coast ranges, or east through the Tehachapi mountains and into the southern Sierra Nevada. The present configuration of the tributary drainages has impinged upon connectivity from the Santa Clarita Valley to the north, but the Santa Clara River remains relatively intact and open. The SEA embraces the river corridor and the linkage zones considered essential to insuring connectivity and resource values within the historic movement zones for all of the wildlife species present within the Los Angeles County portion of the Santa Clara River.

### ***Sensitive Biological Resources***

Sensitive biological resources are habitats or individual species which have been afforded special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise of concern; this is principally due to the species' declining or limited distribution or population sizes, usually resulting from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, that have been afforded special recognition.

### ***Sensitive Plant Communities/Habitats***

This report/description supports several habitat types considered sensitive by resource agencies, namely the CDFG [California Natural Diversity Database (CNDDDB)] because of their scarcity and support of a number of state and federally listed endangered, threatened, and rare vascular plants, as well as sensitive bird and reptile species. These communities include: bigcone spruce-canyon oak forest, coast live oak riparian forest, southern willow scrub, southern cottonwood-willow riparian woodland, sycamore-alder woodland, freshwater marsh, alluvial fan sage scrub, native grassland, and vernal pool. These communities or closely related designations are considered highest-inventory priority communities by the CDFG, indicating that they are declining in acreage throughout their range due to land use changes.

### *Sensitive Species*

Sensitive species include those listed, or candidates for listing by the USFWS, CDFG, and CNPS. These species include, but are not limited to, Nevin's barberry, spreading navarretia, slender-horned spineflower, California Orcutt grass, Riverside fairy shrimp, unarmored threespine stickleback, Santa Ana sucker, arroyo southwestern toad, California red-legged frog, southwestern pond turtle, California horned lizard, San Diego mountain king snake, two-striped garter snake, California condor, Swainson's hawk, White-tailed kite, California gnatcatcher, least Bell's vireo, and ringtail cat. In addition, the SEA identifies other species observed, recorded in the CNDDDB, or reported in previous documentation as observed within or in the immediate vicinity of the SEA.

### **Santa Susana Mountains/Simi Hills**

#### *General*

The Santa Susana Mountains/Simi Hills Significant Ecological Area (SEA) is located northwest of the San Fernando Valley within unincorporated areas of Los Angeles County and an incorporated area of the City of Los Angeles west of Chatsworth. The area is south of State Route 126 (SR-126) and the Santa Clara River, west of the Golden State Freeway (Interstate 5), and includes much of the Santa Susana Mountains in the north, the Santa Susana Pass, Chatsworth Reservoir, and the eastern portion of the Simi Hills in the south.

#### *Description*

The Santa Susana Mountains/Simi Hills SEA includes a variety of topographic features; the northern portion of the SEA encompasses Oat Mountain and much of the Santa Susana Mountains from the Los Angeles County line east to Interstate 5. Portions of many of the canyons associated with the Santa Susana Mountains and Oat Mountain are also included such as Salt Canyon, Potrero Canyon, Pico Canyon, Towsley Canyon, El Toro Canyon, Sulphur Canyon, Devil Canyon, Ybarra Canyon, Browns Canyon, Bee Canyon, and Mormon Canyon. Several blue-line streams occur within these canyons and support many natural springs. The north slopes of the Santa Susana Mountains are within the Santa Clara River watershed which drains the Los Padres National Forest to the north, the Angeles National Forest to the northeast and east, and the Santa Susana Mountains to the south and southeast. The remainder of the SEA is within the Los Angeles River watershed. The majority of the land in the SEA is natural open space with very sparse disturbances in the form of ranches, oil wells, and unimproved access roads. The SEA consists of east-west and northwest trending primary ridges and north-south trending secondary ridges. The peak of Oat Mountain represents the highest point in the SEA at 3,747 feet above mean sea level

(MSL). The open space within the SEA supports a variety of communities but is dominated by chaparral, oak woodlands, coastal sage scrub, bigcone spruce-canyon oak woodland, and grasslands. The creeks and canyons support riparian scrub and woodland communities. At its southern end, the SEA includes the eastern portion of the Simi Hills including the east-facing slopes descending from Chatsworth Peak. Chatsworth Reservoir forms a portion of the south boundary and is currently dry except for a small detention basin north of the reservoir.

### *Vegetation*

The plant communities within the Santa Susana Mountains/Simi Hills SEA are composed of numerous plant species. These plant species are adapted to a Mediterranean climate with a cool, wet season followed by a hot, dry season. Due to the topographic complexity and combination of coastal and desert influences, the SEA supports a wide diversity of plant species.

Plant communities within the SEA were classified using standard methodology and terminology. Most of the communities discussed in this study correspond directly with those listed in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1992 update). Other communities are named based on dominant species within them and/or commonly used terminology. Descriptions and general locations of each plant community present within the SEA are given below. These include chaparral, coastal sage scrub, alluvial scrub, coast live oak woodlands, valley oak woodland, mainland cherry forest, non-native grassland, native grassland, southern willow scrub, southern cottonwood-willow riparian forest, and disturbed communities.

Chaparral consists of a broad mix of evergreen species and generally occurs below 5,000 feet in Southern California. Dominant species consist of broad-leaved or needle-leaved sclerophyllous (hard-leaved) shrubs, forming a dense, impenetrable cover with little or no understory growth. The understory typically consists of a considerable accumulation of leaf litter. In areas of less dense shrub cover, the understory consists of non-native grasses and other annual forbs. Dominant species include chamise, laurel sumac, hoary-leaved ceanothus, woolly-leaved ceanothus, and toyon. Chaparral is the dominant plant community within the SEA and covers many of the steep slopes and hillsides in the upper elevations.

Coastal sage scrub communities consist of drought-deciduous, low, soft-leaved shrubs and herbs on gentle to steep slopes under 3,000 feet in elevation. Several dominant species may occur within scrub communities, with some areas overwhelmingly dominated by one or two species. Dominant species include California sagebrush, California buckwheat, California bush sunflower, purple sage, and

deerweed. Coastal sage scrub is found at the lower elevations within the SEA on drier south-facing slopes, but can also be found on the north-facing slopes and canyon of the Santa Susana Mountains.

Alluvial scrub consists of a mixture of shrubs that colonize sandy-gravelly flood deposited soils within intermittent creeks, arroyos, and drier terraces in large washes. This community intergrades with sage scrub communities and riparian communities and, therefore, occurs adjacent to these communities. Dominant species include Great Basin sagebrush, scalebroom, big saltbush, and squaw bush. Alluvial scrub is predominately found at the northern end of the SEA in Salt Canyon.

Coast live oak woodlands commonly occur along drainages that experience at least a seasonal flow or in other areas under mesic conditions. Soil structure and soil moisture are the most important limiting factors for the survival of oak woodlands; soils must be deep, uncompacted, fertile, well-aerated, and well-drained. This community is dominated by coast live oak. If sufficient groundwater is present, western sycamores, usually associated with riparian habitats, may also occur in the oak woodland. Oak woodlands occupy areas within the canyons and drainages of the SEA.

Valley oak woodland is an open-canopy woodland found on deep, well-drained alluvial soils below 2,000 feet. This community is almost exclusively dominated by valley oak with a grassy understory to form a savannah-like community. This community is located in small pockets in the eastern portion of the SEA.

Mainland cherry forest is not well described but is typically composed of tall stands of hollyleaf cherry on rocky, dry, north-facing slopes. Within the SEA, coast live oak is co-dominant within this community and can be found in canyons in the northern portion of the study area. This community can also be found in association with alluvial scrub in the northwestern portion of the study area as it approaches the Santa Clara River.

Grassland communities consist of low, herbaceous vegetation that are dominated by grasses but generally also harbor native forbs and bulbs as well as naturalized annual forbs. Topographic factors that contribute to grassland presence include gradual slopes or flat areas with deep, well-developed soils in areas below 3,000 above MSL. The species richness of grassland communities is dependent upon a number of land use factors, including intensity and duration of natural or anthropogenic disturbances such as grazing. Heavily grazed grasslands have a lower species richness. **Non-native grassland** consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include slender wild oat, wild oat, ripgut brome, and foxtail chess.

Native grassland is often associated with coastal sage scrub and is found in pockets in close proximity to coastal sage scrub and non-native grassland. This community consists of at least ten percent cover of

native purple needlegrass. The remaining vegetative cover is made up of non-native grasses found in annual grassland and a variety of annual, wild flowers such as golden stars and blue-eyed grass. Small patches of native grassland can be found scattered throughout the SEA mostly in openings in coastal sage scrub and mixed with non-native grasslands.

Southern willow scrub is a riparian community occurring within and adjacent to water courses. The vegetation within this community is adapted to seasonal flooding. Southern willow scrub is characterized by dense, broad leafed, winter-deciduous riparian thickets dominated by one or more willow species. Most stands are too dense to allow understory development. The dominant species of this community within the SEA is arroyo willow, red willow, and black willow, with less common associates including mule fat. This community occurs in segments along portions of the intermittent drainages within the SEA.

Southern cottonwood-willow riparian forest consists of an open, broad-leaved, winter-deciduous riparian forest dominated by Fremont cottonwood, black cottonwood, and several willow species including arroyo willow and red willow. This community occupies much of the Santa Clara River adjacent to the northern boundary of the SEA and also occurs within the larger, intermittent and perennial drainages within the SEA.

Disturbed or barren areas either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found on site include non-native grasses and a high proportion of weedy species, including tocalote, telegraph weed, tree tobacco, doveweed, black mustard, and thistle species. Several disturbed areas occur scattered throughout the SEA and take the form of residential developments, highways, fire breaks, dirt access roads, trails, transmission poles, and other similarly disturbed areas.

### *Wildlife*

Wildlife within the SEA is generally diverse and abundant due to the large acreage of natural open space and the diversity of habitat types. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all the vegetation communities within the area and adjoining areas constitutes a functional ecosystem for a variety of wildlife species. This applies to the SEA and the regional ecosystem.

The analysis of invertebrates in this study is difficult due to the lack of data, although limited studies have been conducted. The SEA is believed to support healthy populations of a diverse assortment of countless invertebrate species. Amphibian populations are generally restricted in semi-arid and arid habitats but may be particularly abundant where riparian areas occur. The SEA is likely to support a

variety of amphibians in abundance within wetland areas along the major canyon bottoms and the moister oak woodland areas. Many essential reptilian habitat characteristics such as open habitats that allow free movement and high visibility and small mammal burrows for cover and escape from predators and extreme weather are present within the SEA. These characteristics as well as the variety of habitat types present are likely to support a wide variety of reptilian species.

The scrubland, woodland, riparian, and grassland habitats in the SEA provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, the SEA encompasses many year-round water sources, abundant raptor foraging, perching, and nesting habitat. The combination of these resources as well as the mosaic of many community types provides for an unusually high diversity of bird species. Several of these species may use this SEA as their only consistent occurrence in the southeastern portion of the county.

Not unlike other taxonomic groups, mammal populations within the SEA are diverse and reflective of the diversity of habitat types. Unlike many other inland hills within the Los Angeles Basin, this SEA is large enough to support relatively stable large mammal populations despite the urban surroundings.

#### ***Wildlife Movement***

The Santa Susana Mountains/Simi Hills SEA includes several important linkages for wildlife movement. The Simi Hills and Santa Susana Mountains provide a vast open space corridor to foster wildlife movement between the Santa Monica Mountains to the south, San Gabriel Mountains to the east, and Los Padres National Forest to the north. Dense, natural habitat associated with the majority of the study area provides excellent opportunities for concealment and water sources while the grasslands provide an abundance of prey.

#### ***Sensitive Biological Resources***

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise sensitive; this is due to the species' declining or limited distribution or population sizes, usually resulting from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, that have been afforded special recognition.

### *Sensitive Plant Communities/Habitats*

This report/description supports several habitat types considered sensitive by resource agencies, namely the CDFG [California Natural Diversity Data Base (CNDDDB)], because of their scarcity and support of a number of state and federally listed endangered, threatened, and rare vascular plants, as well as several sensitive bird and reptile species. These communities include coastal sage scrub, alluvial scrub, valley oak woodland, mainland cherry woodland, native grassland, southern willow scrub, and cottonwood-willow riparian forest which occur throughout the area. These communities or closely related designations are considered highest-inventory priority communities by the CDFG, indicating that they are experiencing a decline throughout their range.

### *Sensitive Species*

Sensitive species include those listed, or candidates for listing by the USFWS, CDFG, and CNPS. Species which have been recorded within the SEA as well as those reasonably expected to occur include, but are not limited to, Lyon's pentachaeta, Nevin's barberry, Braunton's milk vetch, slender-horned spineflower, arroyo southwestern toad, California red-legged frog, California condor, Swainson's hawk, white-tailed kite, and southwestern willow flycatcher. The table includes locations of sensitive species observed, recorded in the CNDDDB, or reported in previous documentation as observed within or in the immediate vicinity of the SEA.

## **Valley Oaks Savannah**

### *General*

The Valley Oaks Savannah SEA is located northeast of the Santa Susana Mountains and west of the Angeles National Forest, approximately 1 mile south of the Santa Clara River and one mile north of Pico Canyon. The SEA is bordered on the east by Interstate 5 and is situated between Valencia Boulevard and McBean Parkway. To the west, the SEA is bordered by the foothills of the Santa Susana Mountains which are dominated by chaparral.

### *Description*

The Valley Oaks Savannah SEA is almost completely undisturbed except for a few dirt roads. The majority of the vegetation on the site consists of a valley oaks savannah containing over 1,000 trees. Other vegetation on the site includes coastal sage scrub and non-native grasses.

### *Vegetation*

Due to its small size, vegetation within the Valley Oaks Savannah SEA is limited to a few community types. All plant species observed or recorded in previous documentation within the study area are indicated in the Comprehensive Floral & Faunal Compendium of the SEA User Guide. Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section of this document.

Plant communities within the SEA were classified using standard methodology and terminology. Most of the communities discussed in this study correspond directly with those listed in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1992 update). Other communities are named based on dominant species within them and/or commonly used terminology. Descriptions and general locations of the each plant community present within the SEA including coastal sage scrub, valley oak woodland, non-native grassland, and disturbed are given below.

Coastal sage scrub communities consist of drought-deciduous, low, soft-leaved shrubs and herbs on gentle to steep slopes under 3,000 feet in elevation. Several dominant species may occur within scrub communities and some areas may be overwhelmingly dominated by one or two species. Dominant species include California sagebrush, California buckwheat, chaparral mallow, purple sage, coast goldenbush, and California-astor.

Valley oak savannah is an open woodland community dominated by the broad-leaved, winter-deciduous valley oak with scattered coast live oaks in some areas. The oak trees form an open savannah with an understory that is dominated by California buckwheat and non-native grasses. This community occupies a majority of the site.

Grassland communities consist of low, herbaceous vegetation that are dominated by grasses but generally also harbor native forbs and bulbs as well as naturalized annual forbs. Topographic factors that contribute to grassland presence include gradual slopes or flat areas with deep, well developed soils in areas below the 3,000-foot elevation. Non-native grassland consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include slender wild oat, wild oat, ripgut brome, and foxtail chess along with scattered coastal sage scrub species. This community type occurs along the western portion of the north boundary of the SEA.

Disturbed or barren areas either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found on site include non-native grasses and a high proportion of weedy species,

including tocalote, telegraph weed, tree tobacco, doveweed, black mustard, and thistle species. The primary disturbed area within this SEA is dirt roadways.

### *Wildlife*

The relatively small size of the SEA and the limited variety of vegetation types is unlikely to support a large diversity of wildlife. However, acorns within the valley oak savannah provide a valuable food source for a variety of wildlife. Furthermore, the mature trees are an important source of nesting and roosting habitat for birds and other arboreal vertebrates. While some wildlife species are entirely dependent on a single vegetative community, the mosaic of vegetation communities within adjoining areas constitutes a functional ecosystem for a variety of wildlife species, both within the SEA and as part of the regional ecosystem.

The analysis of invertebrates in this study is severely limited due to the lack of data. However, due to the undisturbed nature of the SEA, it is likely to support healthy populations of many invertebrate species. Amphibians may not be abundant due to the lack of water in the SEA, however, shaded areas within the woodland may be moist enough to allow for a few species to occupy the site. Reptilian diversity within the SEA is highest within patches of coastal sage scrub and may be abundant due the presence of alluvial wash habitat on adjacent property.

The scrubland, woodland, and grassland habitats in and adjacent to the SEA provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, the SEA contains abundant raptor foraging, perching, and nesting habitat. Mammal populations within the SEA respond favorably to these habitats. Not unlike other taxonomic groups, mammal populations within the SEA are limited by acreage but are likely to utilize the area frequently.

All wildlife species previously recorded, as well as those expected to occur, within the study area are indicated in the Comprehensive Floral & Faunal Compendium of the SEA User Guide. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed below in the Sensitive Biological Resources section.

### *Wildlife Movement*

Wildlife movement within the Valley Oaks Savannah SEA is limited to local movement of foraging animals. Although the SEA does not support regional corridors itself, adjacent lands to the west and northwest may be important linkages for wildlife movement to and from the Santa Susana Mountains

and the Santa Clara River. The location of the SEA, therefore, may be important secondarily as a corridor buffer and/or adjacent foraging grounds.

### *Sensitive Biological Resources*

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise principally due to the species' declining or limited population sizes, usually resulting from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, that have been afforded special recognition.

### *Sensitive Plant Communities/Habitats*

The Valley Oaks Savannah SEA supports two habitat types considered sensitive by resource agencies, namely California Department of Fish and Game (CDFG), because of either their scarcity or support of a number of state and federally listed endangered, threatened, and rare vascular plants, as well as several sensitive bird and reptile species. These communities are valley oak woodland and coastal sage scrub. These communities or closely related designations are considered highest-inventory priority communities by the CDFG, indicating that they are experiencing a decline throughout their range.

### *Sensitive Species*

Sensitive species include those listed, or candidates for listing by USFWS, CDFG, and CNPS (particularly List 1A, 1B, and 2). These sensitive species include, but are not limited to, San Diego coast horned lizard, sharp-shinned hawk, and Cooper's hawk.

## **Habitat Connectivity**

Habitat connectivity is an umbrella term referring to all of the factors relating to integration of habitats within an ecosystem. Wildlife corridors and habitat linkages are features that promote habitat connectivity. Wildlife corridors are typically discrete linear features within a landscape that are constrained by development or other non-habitat areas. Habitat linkages are networks of corridors and larger natural open space areas that encompass an adequate diversity and acreage of useable habitats to provide long-term resilience of ecosystems against the detrimental effects of habitat fragmentation. The fragmentation of open-space areas by urbanization creates isolated "islands" of wildlife habitat. In the

absence of habitat linkages that allow movement to adjoining open-space areas, various studies have concluded that many wildlife and plant species would not likely persist over time in fragmented or isolated habitat areas because they prohibit the movement of new individuals and genetic information among areas where they may be periodically displaced by natural or human-caused disturbances such as disease, fire, flood, etc.<sup>5</sup>

Habitat linkages mitigate the effects of this fragmentation by (1) allowing plant and animal species to disperse between remaining habitat areas, thereby permitting at-risk populations to maintain sustainable levels of genetic variability; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) causing population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

South Coast Missing Linkages is an inter-agency effort to identify and conserve the highest priority linkages in the South Coast Ecoregion<sup>6</sup>. Partners in the effort include South Coast Wildlands, National Park Service, U.S. Forest Service, California State Parks, The Wildlands Conservancy, The Resources Agency, California State Parks Foundation, The Nature Conservancy, Santa Monica Mountains Conservancy, Resources Legacy Foundation, Conservation Biology Institute, San Diego State University Field Stations Program, Environment Now, Mountain Lion Foundation, and the Zoological Society of San Diego's Conservation and Research for Endangered Species, among others. The South Coast Missing Linkages project has developed a comprehensive plan for a regional network that would maintain and restore critical habitat linkages between existing open space reserves.<sup>7</sup> The County's Planning Area contains portions of three linkages identified in the Missing Linkages project: the Santa Monica-Sierra Madre Connection, the Sierra Madre-Castaic Connection, and the San Gabriel-Castaic Connection.

The Santa Clara River Enhancement and Management Plan Study (SCREMP) identified several key movement corridors within the County Planning Area. These corridors are generally located in undisturbed canyon and riverine stream habitat areas. The preservation of these areas is essential for maintaining the wildlife diversity within the County Planning Area.

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<sup>5</sup> Robert H. MacArthur & Edward O. Wilson. 1967. *The Theory of Island Biogeography*. Princeton University Press. Michael E. Soule, ed. 1987. *Viable populations for conservation*. Cambridge University Press.

<sup>6</sup> The "South Coast Ecoregion" extends approximately from Point Conception, California, to El Rosario, Baja California Norte, and includes the intervening portions of the Coast, Transverse, and Peninsular Mountain Ranges and all land seaward of those ranges.

<sup>7</sup> South Coast Wildlands. 2008. South Coast Missing Linkages: A Wildland Network for the South Coast Ecoregion. Produced in cooperation with partners in the South Coast Missing Linkages Initiative. Available online at <http://www.scwildlands.org>.

The Santa Monica Mountains Conservancy (SMMC) and the Mountain Recreation and Conservation Authority have also identified wildlife corridors in the Santa Clarita Valley. These corridors include Elsmere Canyon, Towsley Canyon, Weldon/Bee Canyon, crossings along SR-14 near Whitney Canyon and crossings between Canyon Country and Sulphur Springs.

Elsmere Canyon is an integral part of the Rim of the Valley Trail Corridor and Wildlife Corridor, linking the Santa Clarita Woodlands, Whitney, and Placerita Canyons. The Rim of the Valley Trail Corridor traverses the Santa Monica, Santa Susana, and San Gabriel Mountains. The Rim of the Valley Trail System is described in **Section 3.16, Parks and Recreation**.

As mitigation for impacts related to high occupancy vehicle lanes proposed along SR-14 between Newhall Avenue and Sand Canyon Road, the San Gabriel/Santa Susana Wildlife Corridor and Open Space Acquisition Project identified key wildlife linkage corridors within this area. The corridors include the Whitney Canyon Movement Route and the highway underpass known as the Los Pinetos undercrossing. These corridors link significant coastal scrub, oak woodland, and riparian woodland and scrub habitats.

## **REGULATORY FRAMEWORK**

### **Federal Statutes**

#### ***Migratory Bird Treaty Act of 1918***

The Migratory Bird Treaty Act (16 U.S. Code 703-712) makes it unlawful to "take" (kill, harm, harass, etc.) any migratory bird listed in Title 50, Code of Federal Regulations, including their nests, eggs, or products. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, and many other species.

#### ***Federal Endangered Species Act of 1973***

Section 3 of the federal Endangered Species Act (ESA) defines an Endangered species as any species or subspecies "in danger of extinction throughout all or a significant portion of its range." A Threatened species is defined as any species or subspecies of fish, wildlife, or plants "likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range." Threatened or Endangered species and their critical habitat are designated through publication of a final rule in the Federal Register. Designated Endangered and Threatened animal species are fully protected from "take" unless an applicant has an incidental take permit issued by the U.S. Fish and Wildlife Service (USFWS) under Section 10 or incidental take statement issued under Section 7 of the ESA. A take is defined as the killing, capturing, or harassing of a species. Proposed Endangered or Threatened species or their critical

habitat are those for which a proposed regulation, but no final rule, has been published in the Federal Register.

### ***Clean Water Act Section 404, Jurisdictional Waters***

The U.S. Army Corps of Engineers (USACE), pursuant to Section 404 of the Clean Water Act regulates discharges into "waters of the United States." While the streams on within the area meet the definition of waters of the U.S., they do not meet the criteria for federal jurisdiction set by the U.S. Supreme Court, in that they are not navigable and are not tributary to any navigable waters. In addition, these streams have no connection to interstate commerce outside of the specific uses precluded by the Supreme Court regarding the Migratory Bird amendment. While verification of the lack of jurisdiction should be ascertained with the USACE, there is not federal authority under the Clean Water Act.

## **State Regulations**

### ***California Endangered Species Act***

The California Endangered Species Act (CESA) declares that deserving plant or animal species will be given protection by the state because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the state. CESA establishes that it is state policy to conserve, protect, restore, and enhance endangered species and their habitats. Under state law, plant and animal species may be formally designated as Rare, Threatened, or Endangered through official listing by the California Fish and Game Commission. Listed species are given greater attention during the land use planning process by local governments, public agencies, and landowners than are species that have not been listed.

On private property, Endangered plants may also be protected by the Native Plant Protection Act (NPPA) of 1977. Threatened plants are protected by CESA, and Rare plants are protected by the NPPA. However, CESA authorizes that "Private entities may take plant species listed as Endangered or Threatened under the ESA and CESA through a federal incidental take permit issued pursuant to Section 10 of the ESA, if the CDFG certifies that the incidental take statement or incidental take permit is consistent with CESA."<sup>8</sup> In addition, the CEQA<sup>9</sup> requires disclosure of any potential impacts to listed species and alternatives or mitigation that would reduce those impacts.

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<sup>8</sup> California Endangered Species Act, 14 CCR 670.5

<sup>9</sup> Public Resources Code, sections 21000 et seq.

### ***California Environmental Quality Act–Treatment of Listed Plant and Animal Species***

ESA and CESA protect only those species formally listed as Threatened or Endangered (or Rare in the case of the state list). Section 15380 of the *State CEQA Guidelines* independently defines "Endangered" species of plants or animals as those whose survival and reproduction in the wild are in immediate jeopardy and "Rare" species as those who are in such low numbers that they could become Endangered if their environment worsens. Therefore, a project normally will have a significant effect on the environment if it will substantially affect a Rare or Endangered species of animal or plant or the habitat of the species. The significance of impacts to a species under CEQA must be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof.

#### ***State of California – Section 1602 of the California Fish and Game Code.***

Streambeds and other drainages that occur within the County Planning Area are subject to regulation by the CDFG. The CDFG considers most drainages to be "streambeds" unless it can be demonstrated otherwise. A stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel with banks and supports fish or other aquatic life. This includes watercourses having a surface or sub-surface flow that supports, or has supported, riparian vegetation. CDFG jurisdiction typically extends to the edge of the riparian canopy, and therefore, usually encompasses a larger area than USACE jurisdiction.

#### ***State of California – Porter Cologne Water Quality Control Act***

The State Water Quality Control Board has ruled after the U.S. Supreme Court decisions to reduce the federal jurisdiction over Waters of the U.S., that the state would require that a Waste Discharge Report be required for any discharge of waste, including fill, into "waters of the state," other than those projects requiring a federal Section 404 permit and the state's Section 401 Certification of the federal permit, under the authority of the Porter Cologne Act. This essentially extends the state's assumption of the NPDES program, by modifying the definition of waste. The Regional Water Quality Control Board is responsible for issuing Waste Discharge Permits.

#### ***State of California – Sections 3503, 3503.5, and 3800 of the California Fish and Game Code***

These sections of the Fish and Game Code prohibit the destruction bird nests and eggs (Section 3503), and the take of birds of prey (Section 3503.5) and nongame birds (Section 3800). Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered "take." Such a take would also violate Federal law protecting migratory birds.

Incidental Take Permits (i.e., Management Agreements) are required from the CDFG for projects that may result in the incidental take of species listed by the State of California as Endangered, Threatened, or candidate species. The permits require that impacts to protected species be minimized to the extent possible and mitigated to a level of insignificance.

## **Local**

### ***Tree Ordinances***

Los Angeles County implements an Oak Tree Ordinance that applies to all unincorporated areas of Los Angeles County, and requires that a person shall not cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of any tree of the oak tree genus without first obtaining a permit. This applies generally to trees that are 25 inches or more in circumference (8 inches in diameter) on any lot or parcel of land within the unincorporated area of Los Angeles County, or (b) any tree that has been provided as a replacement tree unless an oak tree permit is first obtained. "Damage," includes any act causing or tending to cause injury to the root system or other parts of a tree, including, but not limited to, burning, application of toxic substances, operation of equipment or machinery, or by paving, changing the natural grade, trenching or excavating within the protected zone of an oak tree. Walnut, sycamore, and Joshua trees are also regulated by ordinance in Los Angeles County.

In addition to the County's ordinance, the City of Santa Clarita's Oak Tree Preservation ordinance (Section 17.17.090 C of the Uniform Development Code) requires the preservation of all healthy oak trees, including scrub oaks, within the City, unless compelling reasons justify the cutting, pruning, encroachment, and/or removal of such trees. Additionally, the Ordinance states that no person shall cut, prune, remove, relocate, endanger, damage, or encroach into the protected zone of any oak on any public or private property within the City except in accordance with the conditions of a valid oak tree permit issued by the City. This generally applies to trees that are 6 inches or more in circumference (2 inches in diameter).

### ***Open Space Acquisition Plan***

The City of Santa Clarita 2002 Open Space Acquisition Plan (OSAP) represents the City's ongoing efforts to preserve and protect open space in the Santa Clarita Valley. Through the creation of a systematic and objective mechanism for evaluating open space, this plan will:

1. Assist in the creation of a "green belt" surrounding the City of Santa Clarita to improve and expand wildlife habitat and corridors.

2. Provide a framework for the City to evaluate, acquire, and maintain the most beneficial parcels within and surrounding the City of Santa Clarita for preservation as open space.

## THRESHOLDS OF SIGNIFICANCE

### Methodology

This biological resources impacts analysis is conducted at a programmatic level rather than a project level, and therefore is primarily qualitative. Subsequent discretionary permits issued under the proposed Area Plan will be required to comply with the policies of the plan and may require additional coordination with resource agencies (USFWS, CDFG, USACE, etc.) on a project-by-project basis to determine specific mitigation requirements for impacts on resources under their purview.

Direct impacts of a proposed project on biological resources can take several forms, but typically involve the loss, modification, or disturbance of natural habitat (i.e., plant communities or other naturally occurring areas) which in turn, directly affects plant and wildlife species dependent on that habitat.

### State CEQA Guidelines

Significant impacts on biological resources posed by the proposed Area Plan were determined from criteria stated in *State CEQA Guidelines* (CELSOC 2008). Appendix G (Environmental Checklist) of the *State CEQA Guidelines* states that a project could have a significant impact on biological resources if it would:

- 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 CDFG or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS;
- have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- 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; or

- conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation plan, or other approved local, regional, or State Habitat Conservation plan.

An evaluation of whether an impact on biological resources would be “substantial,” and, therefore, a significant impact, must consider both the resource itself and the significance threshold criteria being evaluated. For example, because most plant and animal species are dependent on native habitats to satisfy various life cycle requirements, a habitat-based approach that addresses the overall biological value of a particular vegetation community or habitat area is appropriate when determining whether or not alteration of that habitat will substantially affect special-status species, sensitive habitats, wetlands, or movement corridors. The relative biological value of a particular habitat area—its functions and values—can be determined by such factors as disturbance history, biological diversity, its importance to particular plant and wildlife species, its uniqueness or sensitivity status, the surrounding environment and the presence or absence of special-status resources.

However, direct impacts to specific plant and wildlife resources (e.g., active nests and individual plants and animals) are also evaluated and discussed when impacts to these resources, in and of themselves, could be considered significant or conflict with local, state, and federal statutes or regulations. The significance of direct impacts to individuals or populations of plant and animal species takes into consideration the number of individual plants or animals potentially affected, how common or uncommon the species is both on the project site and from a regional perspective and the species’ sensitivity status according to resource agencies. These factors are evaluated based on the results of biological surveys and studies, results of literature and database reviews, discussions with biological experts, and established and recognized ecological and biodiversity theory and assumptions.

For the purposes of this impact analysis, “special-status species” refers to the following:

- Officially listed by California or the Federal Government as Endangered, Threatened, or Rare;
- A candidate for state or federal listing as Endangered, Threatened, or Rare;
- Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the *State CEQA Guidelines*; these taxa may indicate “none” under listing status, but note that all CNPS List 1 and 2 and some List 3 plants may fall under Section 15380 of *State CEQA Guidelines*.
- A Bureau of Land Management, U.S. Fish and Wildlife Service, or U.S. Forest Service Sensitive Species;
- Taxa listed in the CNPS Inventory of Rare and Endangered plants of California;
- Taxa considered by the CDFG to be a Species of Special Concern (SSC);

- Taxa that are biologically rare, very restricted in distribution, declining throughout their range, or have a critical, vulnerable stage in their life cycle that warrants monitoring;
- Population(s) in California that may be peripheral to the major portion of a taxon's range but are threatened with extirpation in California;
- Taxa closely associated with a habitat that is declining in California at a significant rate (e.g., wetlands, riparian, vernal pools, old growth forests, desert aquatic systems, native grasslands, valley shrubland habitats, etc.); and
- Taxa designated as a special-status, sensitive, or declining species by other state or federal agencies, or non-governmental organization (NGO).

## IMPACT ANALYSIS

This impact analysis section evaluates the potential effects of the proposed Area Plan policies on biological resources within the County's Planning Area using the *State CEQA Guidelines* threshold of significance.

**Impact 3.7-1:**                    **There will be a potentially significant impact 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 CDFG or USFWS.**

The proposed Area Plan would limit development in designated SEAs by requiring that development is sited and designed to account for and be highly compatible with resources in the SEAs. Specific development standards shall be identified to limit the types of land use, density, building location and size, roadways and other infrastructure, landscape, drainage, and other elements to assure the protection of the critical and important plant and animal habitats of each SEA. In general, the principle shall be to minimize the intrusion and impacts of development in these areas with sufficient setbacks, or buffers, to adequately protect the resources (**Policy 3.2.4**).

At least 92 special-status species have been reported from the County's Planning Area, and all natural or semi-natural habitat types within the County's Planning Area may potentially support one or more of these species. Each habitat type within the County's Planning Area will be potentially impacted to some degree by implementation of the proposed Area Plan, and therefore, implementation of the proposed Area Plan may result in the potential direct mortality of individuals of candidate, sensitive, or special-status species or loss of habitat occupied by such species. Implementation of the Area Plan may therefore have a substantial adverse effect, either directly or through habitat modifications, on species identified as

candidate, sensitive, or special-status in local or regional plans, policies, or regulations or by the CDFG or USFWS. This impact is considered to be significant at the plan level. The proposed policies focus primarily on avoidance and minimization of impacts to habitats, and also provide for the acquisition of habitats in cooperation with conservation groups, as stated in the policies discussed below.

The concentration of development in previously disturbed areas, and the requirements that natural areas be adequately buffered from development, and that natural site elements be preserved (**Policies CO 3.1.1, 3.1.2, and 3.1.6**) will act to discourage sprawling development patterns, thereby reducing human encroachment into special-status species habitats. Proper documentation of biological resources, disclosure of the potential impacts of development (**Policy CO 3.1.3**) and public education on the biological attributes of the Valley (**Policies CO 3.7.1 and CO 3.7.2**) will encourage informed decision making and project planning. Protection of wetlands and woodlands, state and federal-listed species habitats, and habitats within SEAs and along the Santa Clara River and its tributaries (**Policies CO 3.2.1 through 3.2.4, and CO 3.3.1**) will also help to preserve habitats required by a large suite of special status species.

Coordination with the US Forest Service, adoption of its principles for forest management, maintenance of the rural character of areas adjacent to the National Forest, and cooperation with the Forest Service in future planning efforts (**Policies CO 3.4.1 through 3.4.4**); as well as maintenance of a circum-Valley greenbelt, preservation of the Santa Clara River and major tributaries, acquisition of natural open space for the preservation of habitat linkages, fostering of partnerships with conservation groups and regulatory agencies, and securing of funding for open-space management and protection (**Policies CO 10.1.1, 10.1.2, 10.1.3, 10.1.11, 10.1.12, 10.1.14**), will encourage the preservation of core habitats and populations within larger expanses of natural open space and riparian networks at the periphery of development.

Minimization of edge effects such as light trespass, urban runoff, and un-controlled off-road vehicle use (**Policies CO 3.6.1, 3.6.2, and 3.6.3**) will encourage the viability of open space directly adjacent to the developed environment, which often may abut special-status species habitats such as the Santa Clara River. Likewise, maintenance and enhancement of the urban forest (**Policies CO 3.5.1, 3.5.2, and 3.5.3**) may help provide additional habitat value for numerous bird species, including special-status species such as Lawrence's goldfinch and Cooper's hawk, dependant on oak-based resources for shelter and foraging opportunities.

### ***Proposed Area Plan Policies***

The full wording of the above-referenced policies is provided below. These proposed Area Plan policies directly or indirectly address the mortality of individuals of special-status species or loss of habitat occupied by such species.

- Policy CO 3.1.1:** On the Land Use Map and through the development review process, concentrate development into previously developed or urban areas to promote infill development and prevent sprawl and habitat loss, to the extent feasible.
- Policy CO 3.1.2:** Avoid designating or approving new development that will adversely impact wetlands, floodplains, threatened or endangered species and habitat, and water bodies supporting fish or recreational uses, and establish an adequate buffer area as deemed appropriate through site specific review.
- Policy CO 3.1.3:** On previously undeveloped sites (“greenfields”), identify biological resources and incorporate habitat preservation measures into the site plan, where appropriate. (This policy will generally not apply to urban infill sites, except as otherwise determined by the reviewing agency).
- Policy CO 3.1.6:** On development sites, preserve and enhance natural site elements including existing water bodies, soil conditions, ecosystems, trees, vegetation and habitat, to the extent feasible.
- Policy CO 3.2.1:** Protect wetlands from development impacts, with the goal of achieving no net loss (or functional reduction) of jurisdictional wetlands within the planning area.
- Policy CO 3.2.2:** Ensure that development is located and designed to protect oak, sycamore, and other significant indigenous woodlands. (Guiding Principle #9)
- Policy CO 3.2.3:** Ensure protection of any endangered or threatened species or habitat, in conformance with State and federal laws.
- Policy CO 3.2.4:** Protect biological resources in the designated Significant Ecological Areas (SEAs) through the siting and design of development which is highly compatible with the SEA resources. Specific development standards shall be identified to control the types of land use, density, building location and size, roadways and other infrastructure, landscape, drainage, and other elements to assure the protection

of the critical and important plant and animal habitats of each SEA. In general, the principle shall be to minimize the intrusion and impacts of development in these areas with sufficient controls to adequately protect the resources. (Guiding Principle #10)

**Policy CO 3.3.1:** Protect the banks and adjacent riparian habitat along the Santa Clara River and its tributaries, to provide wildlife corridors.

**Policy CO 3.4.1:** Coordinate with the United States Forest Service on discretionary development projects that may have impacts on the National Forest.

**Policy CO 3.4.2:** Consider principles of forest management in land use decisions for projects adjacent to the National Forest, including limiting the use of invasive species, discouraging off-road vehicle use, maintaining fuel modification zones and fire access roads, and other measures as appropriate, in accordance with the goals set forth in the Angeles National Forest Land Management Plan.

**Policy CO 3.4.3:** On the Land Use Map, maintain low density rural residential and open space uses adjacent to forest land, and protect the urban-forest interface area from overdevelopment.

**Policy CO 3.4.4:** Participate as a stakeholder in planning efforts by the United States Forest Service for land uses within the National Forest, providing input as appropriate.

**Policy CO 3.5.1:** Continue to plant and maintain trees on public lands and within the public right-of-way to provide shade and walkable streets, incorporating measures to ensure that roots have access to oxygen at tree maturity, such as use of porous concrete.

**Policy CO 3.5.2:** Where appropriate, promote planting of trees that are native or climactically appropriate to the surrounding environment, emphasizing oaks, sycamores, maple, walnut, and other native species in order to enhance habitat, and discouraging the use of introduced species such as eucalyptus, pepper trees, and palms except as ornamental landscape features.

**Policy CO 3.5.3:** Pursuant to the requirements of the Zoning Ordinance, protect heritage oak trees that, due to their size and condition, are deemed to have exceptional value to the community.

- Policy CO 3.6.1:** Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort; reduce unnecessary lighting for landscaping and architectural purposes, and encourage reduction of lighting levels during non-business nighttime hours.
- Policy CO 3.6.2:** Reduce impervious surfaces and provide more natural vegetation to enhance microclimates and provide habitat. In implementing this policy, consider the following design concepts:
- Consideration of reduced parking requirements, where supported by a parking study and/or through shared use of parking areas;
  - Increased use of vegetated areas around parking lot perimeters; such areas should be designed as bioswales or as otherwise determined appropriate to allow surface water infiltration;
  - Use of connected open space areas as drainage infiltration areas in lieu of curbed landscape islands, minimizing the separation of natural and landscaped areas into isolated “islands”;
  - Breaking up large expanses of paving with natural landscaped areas planted with shade trees to reduce the heat island effect, along with shrubs and groundcover to provide diverse vegetation for habitat.
- Policy CO 3.6.3:** Restrict use of unauthorized off-road vehicles within sensitive habitat areas through signage, fencing, or other means as appropriate.
- Policy CO 3.7.1:** Support the public education programs offered at the Placerita Canyon Nature Center and Ed Davis Park (Sonia Thompson Nature Center).
- Policy CO 3.7.2:** Seek opportunities for partnerships with schools, non-profit organizations, and volunteers, to increase public access to and information about natural areas.
- Policy CO 10.1.1:** Provide and protect a natural greenbelt buffer area surrounding the entire Santa Clarita Valley, which includes the Angeles National Forest, Santa Susana, San Gabriel, and Sierra Pelona Mountains, as a regional recreational, ecological, and aesthetic resource. (Guiding Principle #5)

- Policy CO 10.1.2:** The Santa Clara River corridor and its major tributaries shall be preserved as open space to accommodate storm water flows and protect critical plant and animal species, as follows: (Guiding Principle #6)
- a. Uses and improvements within the corridor shall be limited to those that benefit the community's use of the river in its natural state.
  - b. Development on properties adjacent to, but outside of the defined primary river corridor shall be:
    - i. Located and designed to protect the river's water quality, plants, and animal habitats by controlling the type and density of uses, drainage runoff (water treatment) and other relevant elements; and
    - ii. Designed to maximize the full range of river amenities, including views and recreational access, while minimizing adverse impacts to the river.
- Policy CO 10.1.3:** Through dedications and acquisitions, obtain open space needed to preserve and protect wildlife corridors and habitat, which may include land within SEA's, wetlands, woodlands, water bodies, and areas with threatened or endangered flora and fauna.
- Policy CO 10.1.11:** Partner with conservation agencies and other entities to acquire and maintain open space, combining funding and other resources for joint-use projects, where appropriate.
- Policy CO 10.1.12:** Identify, pursue, and ensure adequate funding sources to maintain open space areas.
- Policy CO 10.1.14:** Protect open space from human activity that may harm or degrade natural areas, including but not limited to off road motorized vehicles, vandalism, campfires, overuse, pets, noise, excessive lighting, dumping, or other similar activities.

### ***Effectiveness of the Proposed Area Plan Policies***

The proposed Area Plan Policies do not provide a mechanism for the compensation of lost habitats when avoidance or minimization of impacts is considered to be infeasible, nor do they mitigate for the direct mortality of individuals of listed, proposed, or candidate species. Implementation of the proposed Area Plan policies and mitigation measures **MM 3.7-1** through **3.7-3** are proposed to reduce these impacts. **MM 3.7-1** requires preparation of biological site survey reports prepared by a qualified biological

consultant for proposed projects. **MM 3.7-2** addresses direct mortality of special-status species loss through construction activities. **MM 3.7-3** addresses impacts on sensitive habitats from implementation of the proposed Area Plan through land acquisition.

Although the loss of sensitive habitats may be compensated for through land acquisition, the loss of special-status species would remain significant since special-status species are dependant on a variety of habitat types, not all of which are necessarily sensitive, such as annual grassland and various common scrub and chaparral types. Consequently, the conversion of all types of currently undeveloped wildlife habitat to Residential, Commercial and Industrial uses permitted under the Area Plan would result in impacts to special-status species that will remain significant at the plan level.

### **Plan to Plan Analysis**

Both the proposed Area Plan and the existing Area Plan contain policies that address the loss of habitat. Development allowed in both the existing and proposed Area Plans would result in similar significant impacts to special status species at the plan level.

**Impact 3.7-2:                    There will be a potentially significant effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS.**

Sensitive terrestrial communities reported to the CNDDDB in the Planning Area include southern California threespine stickleback stream, Riversidian alluvial fan sage scrub, valley needlegrass grassland, canyon live oak ravine forest, southern coast live oak riparian forest, southern cottonwood willow riparian forest, southern mixed riparian forest, southern riparian forest, southern riparian scrub, southern sycamore alder riparian woodland, southern willow scrub, California walnut woodland, valley oak woodland, mainland cherry forest, and vernal pools.

The proposed Area Plan would preserve the Santa Clara River corridor and its major tributaries as open space to accommodate storm water flows and protect critical plant and animal species (riparian vegetation, fish, etc.). Uses and improvements within the river and its major tributaries would be sited and designed to protect the river's water quality, plants, and animal habitats, controlling the type and density of uses, drainage runoff (water treatment), and other relevant elements.

The proposed Area Plan would require that development is located and designed to protect oak and other significant indigenous woodlands, and that biological resources in the designated SEAs are protected through the siting and design of development to account for and be highly compatible with

these resources. Specific development standards shall be identified to control the types of land use, density, building location and size, roadways and other infrastructure, landscape, drainage, and other elements to assure the protection of the critical and important plant and animal habitats of each SEA. In general, the principle shall be to minimize the intrusion and impacts of development in these areas with sufficient setbacks, or buffers, to adequately protect the resources.

Nevertheless, recreational access and necessary infrastructural improvements (bridges, storm drains, etc.) within and immediately adjacent to riverine habitats will be allowed under the Area Plan, and Urban Residential, Commercial, and Industrial land uses adjacent to the Santa Clara River SEA may potentially impact riparian habitat and other sensitive natural communities. Implementation of the Area Plan may therefore have a substantial adverse effect on riparian habitat and other sensitive natural communities identified in local or regional plans, policies, or regulations or by the CDFG, USACE or USFWS. This impact would be considered significant at the plan level.

The proposed policies of the Area Plan focus primarily on avoidance and minimization of impacts to habitats. The concentration of development in previously disturbed areas, and the requirements that natural areas be adequately buffered from development, and that natural site elements be preserved (**Policies CO 3.1.1, 3.1.2, and 3.1.6**) will act to discourage sprawling development patterns, thereby reducing human encroachment into sensitive habitats. Proper documentation of biological resources and disclosure of the potential impacts of development (**Policy CO 3.1.3**) and public education on the biological attributes of the Valley (**Policies CO 3.7.1 and CO 3.7.2**) will encourage informed decision making and project planning. Protection of sensitive wetland and woodland habitats, state and federal-listed species habitats, and habitats within SEAs and along the Santa Clara River and its tributaries (**Policies CO 3.2.1, 3.2.2, 3.2.3, and 3.2.4, 3.3.1**) will also help to preserve those habitats within the Planning Area. Restoration of habitats, use of native species in landscaping plans, proper implementation of protective measures during construction, limited use of turf grass on development sites, and integration of design features that promote tree health (**Policies CO 3.1.4, 3.1.7, and 3.1.9**) will encourage relatively high ecological function of semi-natural habitats otherwise potentially degraded by development.

Coordination with the US Forest Service, adoption of its principles for forest management, maintenance of the rural character of areas adjacent to the National Forest, and cooperation with the Forest Service in future planning efforts (**Policies CO 3.4.1 through 3.4.4**); as well as maintenance of a circum-Valley greenbelt, preservation of the Santa Clara River and major tributaries, acquisition of natural open space for the preservation of habitat linkages, fostering of partnerships with conservation groups and regulatory agencies, securing funding for open-space management and protection (**Policies CO 10.1.1,**

10.1.2, 10.1.3, 10.1.11, 10.1.12, 10.1.14), will encourage the preservation of core habitats within larger expanses of natural open space and riparian networks at the periphery of development.

Management of a healthy urban forest and minimization of edge effects such as light trespass, urban runoff, un-controlled off-road vehicle use, invasive species (**Policies CO 3.5.1, CO 3.5.2, CO 3.5.3, CO 3.6.1 through 3.6.5**) will encourage the viability of open space directly adjacent to the developed environment, which often may abut special-status species habitats such as the Santa Clara River.

### ***Proposed Area Plan Policies***

The full wording of the above-referenced policies is provided below if not already given in a previous section. These proposed plan policies will directly or indirectly address the adverse effects of development on riparian habitat and other sensitive natural communities.

**Policy CO 3.1.4:** For new development on sites with degraded habitat, include habitat restoration measures as part of the project development plan, where appropriate.

**Policy CO 3.1.7:** Limit the use of turf-grass on development sites and promote the use of native or adapted plantings to promote biodiversity and natural habitat.

**Policy CO 3.1.9:** During construction, ensure preservation of habitat and trees designated to be protected through use of fencing and other means as appropriate, so as to prevent damage by grading, soil compaction, pollution, erosion or other adverse construction impacts.

**Policy CO 3.6.4:** Provide public information and support with demonstration sites at County facilities on gardening and landscaping techniques to reduce spread of invasive species and pollution from pesticides and fertilizers that threaten natural ecosystems.

**Policy CO 3.6.5:** Ensure revegetation of graded areas and slopes adjacent to natural open space areas with native plants (consistent with fire prevention requirements).

### ***Effectiveness of the Proposed Area Plan Policies***

The policies do not provide a mechanism for the compensation of lost habitats when avoidance or minimization of impacts is considered to be infeasible. In conjunction with the proposed Area Plan policies, mitigation measure **MM 3.7-1** is proposed to prioritize preservation of habitat types that are

particularly at risk in the region, in order to reduce impacts to riparian and other sensitive habitats to a level that is less than significant at the plan level.

### Plan to Plan Analysis

Both the proposed Area Plan and the existing Area Plan do not contain policies that address the compensation for lost habitats when avoidance is considered infeasible. However, the proposed Area Plan proposes mitigation that would reduce impacts to less than significant. Therefore impacts would be less under the proposed Area Plan.

**Impact 3.7-3:                    There will be a potentially significant effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.**

The proposed plan would preserve as open space the Santa Clara River corridor and its major tributaries to accommodate storm water flows and protect critical plant and animal species (riparian vegetation, fish, etc.), and development on properties adjacent to, but outside of the defined primary river corridor, shall be located and designed to protect the river's water quality, plants, and animal habitats, controlling the type and density of uses, drainage runoff (water treatment), and other relevant elements. Nevertheless, because the identification of federally protected wetlands is a procedure that is conducted during the planning and analysis of specific development projects, it is not currently known where all of the federally protected wetlands within the County's Planning Area may be. Thus, federally protected wetlands outside of the primary river corridor may potentially be impacted by development, and implementation of the plan may therefore have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. This impact would be significant at the plan level.

The proposed policies focus primarily on avoidance and minimization of impacts to habitats. The concentration of development in previously disturbed areas, and the requirements that natural areas be adequately buffered from development, and that natural site elements be preserved (**Policies CO 3.1.1, 3.1.2, and 3.1.6**) will act to discourage sprawling development patterns, thereby reducing human encroachment into undeveloped wetland areas. Proper documentation of biological resources and disclosure of the potential impacts of development (**Policy CO 3.1.3**) and public education on the biological attributes of the Valley (**Policies CO 3.7.1 and CO 3.7.2**) will encourage recognition of wetland

values during project planning and review and informed decision making. Protection of sensitive wetland and woodland habitats, state and federal-listed species habitats, and habitats within SEAs and along the Santa Clara River and its tributaries (**Policies CO 3.2.1, 3.2.2, 3.2.3, and 3.2.4, 3.3.1**) will also help to protect wetland habitats within the Planning Area. Use of native species in landscaping plans, proper implementation of protective measures during construction, and integration of design features that discourage excessive runoff from developed areas (**Policies CO 3.1.5, 3.1.7, and 3.1.9**) will encourage relatively equivalent function of mitigation habitats.

Minimization of edge effects such as urban runoff, un-controlled off-road vehicle use, and invasive species (**Policies CO 3.6.2, 3.6.3, 3.6.4, 3.6.5**) will encourage the viability of natural and created wetland areas directly adjacent to the developed environment.

### ***Proposed Area Plan Policies***

The full wording of the above-referenced policies is provided below if not already given in a previous section. These proposed Area Plan policies will directly or indirectly address the adverse effect of development on federally protected wetlands.

**Policy CO 3.1.5:** Promote the use of site-appropriate native or adapted plant materials, and prohibit use of invasive or noxious plant species in landscape designs.

### ***Effectiveness of the Proposed Area Plan Policies***

In combination with requirements for Section 404 permitting, the proposed policies summarized above will reduce impacts resulting from implementation of the plan to a level that is less than significant at the plan level. Thus no significant impacts to jurisdictional wetlands are anticipated and no mitigation is proposed.

### **Plan to Plan Analysis**

Both the proposed Area Plan and the existing Area Plan contain policies that address the loss of wetland habitat. Development allowed in both the existing and proposed Area Plans would be subject to the requirements for Section 404 permitting, reducing impacts to less than significant. Impacts would be similar between the two plans.

**Impact 3.7-4:** **There will be a potentially significant impact if the proposed Area Plan will interfere 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.**

The County's proposed Area Plan would preserve as a regional recreational, ecological, and aesthetic resource, the natural buffer area surrounding the entire Valley, including areas within the Angeles National Forest and Santa Susanna, San Gabriel, and Sierra Pelona Mountains. The plan would also preserve as open space the Santa Clara River corridor and its major tributaries to protect critical plant and animal species. Development within designated SEAs would be sited and designed with sufficient setbacks, or buffers, to adequately protect the resources therein.

Despite these protections, portions of the Santa Monica-Sierra Madre Connection, the Sierra Madre-Castaic Connection, and the San Gabriel-Castaic Connection<sup>10</sup> would be potentially impacted by development allowed under the proposed Area Plan. This impact would be potentially significant, as these linkages are all that remain in terms of viable linkages providing for the exchange of individuals and genetic information among populations in the core habitat areas of the of the Santa Monica, Sierra Madre, Castaic, and the San Gabriel Mountains that may otherwise become isolated if the linkages are severed. Implementation of the plan may therefore interfere substantially with the movement of native resident or migratory fish and wildlife species and with established native resident or migratory wildlife corridors, and may impede the use of native wildlife nursery sites. This impact is significant at the plan level.

The proposed policies summarized in this section provide for the acquisition of habitats in cooperation with conservation groups, and provide for the identification and protection of at least one designated wildlife corridor linking the two units of the Angeles National Forest through the Valley. The concentration of development in previously disturbed areas, and the requirements that natural areas be adequately buffered from development, and that natural site elements be preserved (**Policies CO 3.1.1, 3.1.2, and 3.1.6**) will act to discourage sprawling development patterns, thereby encouraging the continued value of the natural areas within and around the Valley to function as conduits for genetic exchange and individual movement. Proper documentation of biological resources, disclosure of the potential impacts of development (**Policy CO 3.1.3**) and public education on the biological attributes of the Valley (**Policies CO 3.7.1 and CO 3.7.2**) will encourage project planning that accommodates species movement requirements as well as informed decision making.

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<sup>10</sup> Penrod, K, C Cabañero, P Beir, C Luke, W Spencer, and E Rubin. 2004. South Coast Missing Linkages Project: A Linkage Design for the San Gabriel – Castaic Connection. South Coast Wildlands, Idyllwild, CA. Available online at <http://www.scwildlands.org>.

Protection of sensitive wetland and woodland habitats, state and federal-listed species habitats, and habitats within SEAs and along the Santa Clara River and its tributaries (**Policies CO 3.2.1, 3.2.2, 3.2.3, and 3.2.4, 3.3.1**) will also help to preserve linkage functions within those communities for aquatic and riparian-obligate species. Restoration of habitats, use of native or adapted species in landscaping plans, and the promotion of a high ratio of open space to developed area (**Policies CO 3.1.4, 3.1.5, 3.1.7, and 3.1.10**) will encourage the use of semi-natural habitats by human-tolerant native species adjacent to development.

Extension of the Rim of the Valley trail system, protection of one or more arms of the San Gabriel – Castaic Connection, maintenance of the Santa Clarita Woodlands Park, and encouragement of connectivity between open space area in site design (**Policy CO 3.3.2, 3.3.3, 3.3.4, and 3.3.5**); as well as maintenance of a circum-Valley greenbelt, preservation of the Santa Clara River and major tributaries, acquisition of natural open space for the preservation of habitat linkages, maintenance of canyons and ridgelines as open space, fostering of partnerships with conservation groups and regulatory agencies, securing funding for open-space management and protection (**Policies CO 10.1.1, 10.1.2, 10.1.3, 10.1.5, 10.1.11, 10.1.12, 10.1.14**), will encourage the preservation of core habitats within larger expanses of natural open space and riparian networks at the periphery of development.

Minimization of edge effects such as light trespass, urban runoff, un-controlled off-road vehicle use, invasive species (**Policies CO 3.6.1, 3.6.2, 3.6.3, 3.6.5**) will encourage the viability of open space directly adjacent to the developed environment, which often may abut special-status species habitats such as the Santa Clara River.

### ***Proposed Area Plan Policies***

The full wording of the above-referenced policies is provided below if not already given in a previous section. These proposed Area Plan policies will directly or indirectly address the adverse effects of development on the movement of native resident or migratory fish and wildlife species, native resident or migratory wildlife corridors, and native wildlife nursery sites.

**Policy CO 3.1.10:** To the extent feasible, encourage the use of open space to promote biodiversity.

**Policy CO 3.3.2:** Cooperate with other responsible agencies to protect, enhance, and extend the Rim of the Valley trail system through Elsmere and Whitney Canyons, and other areas as appropriate, to provide both recreational trails and wildlife corridors linking the Santa Susana and San Gabriel Mountains.

- Policy CO 3.3.3:** Identify and protect one or more designated wildlife corridors linking the Los Padres and Angeles National Forests through the Santa Clarita Valley (the San Gabriel-Castaic connection).
- Policy CO 3.3.4:** Support the maintenance of Santa Clarita Woodlands Park, a critical component of a cross-mountain range wildlife habitat corridor linking the Santa Monica Mountains to the Angeles and Los Padres National Forests.
- Policy CO 3.3.5:** Encourage connection of natural open space areas in site design, to allow for wildlife movement.
- Policy CO 10.1.5:** Maintain open space corridors along canyons and ridgelines as a way of delineating and defining communities and neighborhoods, providing residents with access to natural areas, and preserving scenic beauty.

### ***Effectiveness of the Proposed Area Plan Policies***

The proposed policies do not provide for the compensation of lost wildlife movement opportunities or nursery sites when avoidance or minimization of impacts is considered to be infeasible. Loss of connectivity between the two units of the Angeles National Forest would not be compensated for since the intervening habitats would be the only ones which would provide the necessary avenues of exchange. Therefore, this potential loss would not be adequately mitigated, and the impact of development would remain significant in the event that avoidance of impacts to habitat linkages arising from said development is considered infeasible.

### **Plan to Plan Analysis**

Both the proposed Area Plan and the existing Area Plan contain policies that address the movement of wildlife. Nonetheless, impacts to said open space corridors with development allowed by both Plans would result in significant impacts. Impacts to movement corridors under both plans would be similar.

**Impact 3.7-5:                    There will be a potentially significant conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.**

The County's proposed Area Plan would protect oak and other significant indigenous woodlands and would protect biological resources in the designated SEAs through the siting and design of development to account for and be highly compatible with these resources. Additionally, the proposed Area Plan does not incorporate any changes to the Los Angeles County Oak Tree Ordinance or to the City of Santa

Clarita's Oak Tree Preservation ordinance. These ordinances are applied on a project-specific basis regardless of underlying land-use regulations. Furthermore, the proposed Area Plan incorporates a new set of policies for the protection of biological resources to which new developments would be required to conform. Therefore, the County's proposed Area Plan would not conflict with the implementation of local protective policies and ordinances.

### **Plan to Plan Analysis**

Both the proposed Area Plan and the existing Area Plan contain policies that address the preservation of oak trees. Impacts to oak trees under both plans would be similar.

**Impact 3.7-6:**                    **There will be a potentially significant conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation plan, or other approved local, regional, or State Habitat Conservation plan.**

The County's Planning Area contains areas designated or proposed as critical habitat for unarmored threespine stickleback, arroyo toad, California red-legged frog, coastal California gnatcatcher, California condor, and least Bell's vireo, and specific development projects would be subject to consultation with the U.S. Fish and Wildlife Service if impacts to any of these species were to result from project implementation involving a federal action. However, it does not contain any areas falling within the purview of an adopted Habitat Conservation Plan, Natural Community Conservation plan, or other approved local, regional, or State Habitat Conservation Plan. Implementation of the plan would therefore not conflict with the provisions of such a conservation plan.

### **Plan to Plan Analysis**

The County's Planning Area does not contain any areas that contain an adopted Habitat Conservation Plan, Natural Community Conservation plan, or other approved local, regional, or State Habitat Conservation Plan. Consequently, there would be no impacts under the existing or proposed Plans.

## **MITIGATION FRAMEWORK**

Implementation of the following mitigation measures would reduce biological impacts related to direct mortality of special-status species and on sensitive habitats to a less than significant level.

**MM 3.7-1:**                    Biological site survey reports shall include an analysis of the potential for a proposed project to result in direct mortality of individuals of listed, proposed, or candidate

species, losses of habitats occupied by such species, and losses of opportunity for habitat connectivity.

Reports must be prepared by qualified biological consultants. Reports must include specific information regarding site location, on-site and surrounding biological resources, observed and detected species, site photographs, vegetation map, literature sources, timing of surveys, project footprint, anticipated project impacts, proposed mitigation measures, and additional recommended surveys.

**MM 3.7-2:** If special-status species may potentially be subject to direct loss through implementation of construction activities, mitigation measures proposed as part of biological site survey reports shall include a requirement for preconstruction special-status species surveys, followed by measures to ensure avoidance, relocation or safe escape of special-status species from construction activity, whichever action is the most appropriate. If special-status species are found to be brooding, denning, nesting, etc. on site during the preconstruction survey, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate off-site habitat areas. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume.

**MM 3.7-3:** Impacts on sensitive habitats resulting from implementation of the Area Plan shall be compensated for through the acquisition of lands described in **Policies CO 10.1.3, CO 10.1.11 and CO 10.1.12**. Said acquisition shall prioritize habitat types that are particularly at risk in the region. At risk habitats include but are not limited to waterways, wetlands and vernal pools; alluvial scrub; native grasslands; savannas, woodlands and forests; holly-leaf cherry and Great basin sagebrush associations; and rocklands.

## **SIGNIFICANCE OF IMPACTS WITH MITIGATION FRAMEWORK**

Potentially significant impacts associated with the County's proposed Area Plan are those relating to:

- special-status species,
- sensitive natural communities,
- federally protected wetlands, and

- wildlife movement and nursery sites.

The proposed Area Plan policies address:

- avoidance and minimization of impacts on habitats
- provisions for the acquisition of habitats in cooperation with conservation groups
- provisions for no net loss of jurisdictional wetlands within the Planning Area
- provisions for the identification and protection of at least one designated wildlife corridor linking the two units of the Angeles National Forest through the Valley

The proposed policies do not:

- provide a mechanism for the compensation of lost habitats when avoidance or minimization of impacts is considered to be infeasible;
- mitigate for the direct mortality of individuals of listed, proposed, or candidate species; or
- provide for the compensation of lost wildlife movement opportunities or nursery sites when avoidance or minimization of impacts is considered to be infeasible.

In combination with the requirements for Section 404 permitting, the proposed policies would reduce impacts on Federally protected wetlands resulting from implementation of the Area Plan to a level that is less than significant.

In conjunction with the proposed Area Plan policies, the proposed mitigation measures would reduce impacts related to direct mortality of special-status species and on sensitive habitats to a level that is less than significant at the plan level. Impacts on special-status species would remain significant due to the amount of wildlife habitat loss that would be allowed under the Area Plan, which would not necessarily be compensated for due to the non-sensitive nature of many of the habitats utilized by special-status species (i.e., annual grassland and various scrub and chaparral types).

Additionally, impacts on wildlife movement opportunities could not be compensated for, given the loss of connectivity among core habitat areas within the Santa Monica, Santa Susana, Sierra Madre, Castaic, and San Gabriel Mountains. Therefore this potential loss would remain significant in the event that avoidance of impacts to habitat linkages arising from said development is considered infeasible.