



## 5.3 Biological Resources

---



## 5.3 BIOLOGICAL RESOURCES

This section describes the existing biological resources on the project site, and the potential adverse impacts associated with implementation of the proposed Serrano Summit Area Plan and Tentative Tract Map 17331. Review and analysis of compliance with all Federal, State, and local regulations and policies regarding biological resources have also been conducted. This section is largely based upon the biological assessments of the project site, which were conducted in 2008 and 2011.

The 2008 biological assessments were conducted for two study areas, by two consultants, as follows:

### Planning Areas 13 and 17 (PAs 13 and 17) – PCR Services Corporation

- *Results of the Biological Constraints Analysis Conducted for the 19.7-Acre Proposed City Hall and Park Project Site*, May 27, 2008;
- *Investigation of Jurisdictional Wetlands and Waters of the U.S. Lake Forest City Hall Project Site*, May 29, 2008;
- *Spring 2008 Sensitive Plant Surveys for the 19.7-Acre Proposed City Hall and Park Project Site*, August 26, 2008;
- *Results of Focused Least Bell's Vireo Surveys for the 19.7-Acre Proposed City Hall and Park Project Site*, August 26, 2008;
- *Results of the Focused Coastal California Gnatcatcher Surveys for the 19.7-Acre Proposed City Hall and Park Project Site*, September 2, 2008; and
- *Results of Focused Southwestern Willow Flycatcher Surveys for the 19.7-Acre Proposed City Hall and Park Project Site*, September 9, 2008.

### IRWD Area (Balance of the project site) - Harmsworth Associates

- *Biological Report for the Lake Forest IRWD Site*, September 2008; and
- *California Gnatcatcher Report for the Lake Forest IRWD Site*, September 2008.

The 2011 biological assessment was conducted for the project site in its entirety (*Serrano Summit Biological Surveys*, July 15, 2011).

For purposes of the analyses presented below, these reports shall be collectively referred to as the Biological Reports. Site-specific assessments from 2008 shall refer to the relevant study area (i.e., PAs 13 and 17 or IRWD Area), as appropriate. The Biological Reports are included in their entirety in Appendix 12.6, *Biological Resources Reports/Surveys*.

### 5.3.2 EXISTING SETTING

#### VEGETATION AND HABITATS

Table 5.3-1, *Habitat Type and Vegetation Communities*, outlines the habitat types that are present on the project site, in addition to the developed/disturbed areas. As indicated in Table 5.3-1, coastal sage scrub is a Target Habitat and coast live oak woodland is a Covered Habitat under the Natural Community Conservation Plan and Habitat Conservation Plan (NCCP/HCP).



**Table 5.3-1  
 Habitat Type and Vegetation Communities**

Habitat Type/ Vegetation Community	NCCP	IRWD Study Area	Planning Areas 13 and 17	Total
Grassland (Ruderal)	Not Covered	3.8	3.3	7.1
Coastal Sage Scrub (CSS)	Target	12.4		12.4
• Native		8.6		8.6
• Restored			1.4	1.4
• Buckwheat Scrub			4.7	4.7
• Mixed Scrub			0.2	0.2
• Mixed Scrub/Mulefat Scrub				
Scrub Oak Chapparral	Not Covered	0.4	0.2	0.6
Riparian	Not Covered	1.0	0.8	1.8
• Mulefat Scrub			0.3	0.3
• Disturbed Mulefat Scrub			2.5	2.5
• Red Willow/Arroyo Willow Riparian Forest				
Woodland Communities	Covered	0.4	0.1	0.5
• Coast Live Oak Woodland			0.3	0.3
• Freemont's Cottonwood/Mixed Scrub			0.4	0.4
• Disturbed Freemont's Cottonwood			0.2	0.2
• Mexican Elderberry Woodland				
Disturbed	Not Covered	39.7		39.7
Developed	Not Covered	14.9	0.8	15.7
Disturbed Mixed Scrub	Not Covered		3.9	3.9
Ornamental	Not Covered		0.6	0.6
Tamarisk	Not Covered		0.1	0.1
<b>Total</b>		<b>81.2</b>	<b>19.7</b>	<b>100<sup>1</sup></b>
1. Difference in total site acreage is due to number rounding.				
Sources:				
<ul style="list-style-type: none"> <li>• Harmsworth Associates, <i>Biological Report for the Lake Forest IRWD Site</i>, September 2008; and</li> <li>• PCR Services Corporation, <i>Results of the Biological Constraints Analysis Conducted for the 19.7-Acre Proposed City Hall and Park Project Site</i>, May 27, 2008.</li> </ul>				

### IRWD Study Area

Figure 3 of the Harmsworth Associates September 2008 Report illustrates the vegetation types that are present on the IRWD study area. As illustrated on Figure 3, the IRWD study area consists primarily of developed and disturbed areas, including the existing/former IRWD facilities, roads, ornamental landscaping, and fallow agricultural land. Interspersed among the developed areas are re-vegetated slopes and ornamental landscaping, some of which include native vegetation (mapped as restored coastal sage scrub). Small areas of native coastal sage scrub, chaparral, and oak woodland habitats are located on-site. The habitat types (and developed/disturbed areas) that are present on the IRWD study area are outlined in [Table 5.3-1](#) and further described below.

Grasslands (Ruderal). No native grasslands occurred on the IRWD study area. The few areas mapped as grassland consisted of recently disturbed areas dominated by ruderal species. Ruderal vegetation occurred on the northwest side of the administration building. This area had been graded and was bare ground with a few scattered weeds; a small patch of vegetation, including one coast



live oak, remained for ornamental purposes. To the northeast of the graded area in the southern portion of the site, a triangular shaped area was dominated by ruderal species with scattered natives, including ripgut brome (*Bromus diandrus*), burweed (*Ambrosia acanthicarpa*), goldenbush (*Isocoma menziesii*), telegraph weed (*Heterotheca grandiflora*), summer mustard (*Hirschfeldia incana*), and doveweed (*Eremocarpus setigerus*).

Native Coastal Sage Scrub. Coastal sage scrub (CSS) is a diverse community forming many associations determined by soil factors, fire, and topography. It is a community of low growing, soft, woody, drought-deciduous subshrubs and herbaceous plants that grow in thin rocky soils. Scrub vegetation at the IRWD Study area varied between relatively moist (mesic) and relatively dry (xeric) sites. Mesic sites generally occurred in microhabitats characterized by north-facing slopes and in small drainages and xeric habitats occurred in the remaining areas on ridges and south-facing slopes. These mesic microsites included such vegetation as lemonadeberry (*Rhus integrifolia*) and toyon (*Heteromeles arbutifolia*). Xeric scrub habitats were comprised of various proportions of California sagebrush (*Artemisia californica*), bush buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), coast prickly pear cactus (*Opuntia littoralis*) and coastal cholla (*Opuntia prolifera*). Some of the scrub was disturbed and contained significant amounts of mustards (*Brassica* spp. and *Hirschfeldia incana*), invasive grasses (*Bromus* spp.), and artichoke thistle (*Cynara cardunculus*).

Native CSS onsite refers to naturally occurring vegetation, as compared to areas restored or revegetated with CSS species. The composition and quality of the various native CSS vegetation patches onsite reflected historical disturbances, local slope conditions, local aspect, and proximity to irrigation features. Native CSS was largely restricted to the western boundary of the site and represented the highest quality vegetation onsite. This area contained the greatest diversity of shrub species, presumably due to the lack of disturbance and presence of steep slopes. Typical representatives of mature, diverse CSS occurred in this patch including black sage, California buckwheat, California sagebrush, Mexican elderberry (*Sambucus mexicana*), prickly pear cactus and coastal cholla. The presence of prickly pear cactus and coastal cholla here is of marked interest as these species are important habitat components for the coastal cactus wren (*Campylorhynchus brunneicapillus*).

Restored Coastal Sage Scrub. Restored CSS refers to any areas supporting CSS that is not naturally occurring, and includes areas where CSS species were planted or seeded and disturbed areas where some CSS species are returning. Restored CSS occurs on cut and fill slopes adjacent developed facilities, on slopes and along edges of parking lots and on other areas that were disturbed in the past.

The restored CSS include a mix of native species, exotic landscaped species and weedy ruderal species. In many cases the areas were sparsely vegetated and in some cases are artificially irrigated. CSS species in these areas included purple sage (*Salvia leucophylla*), coyote brush (*Baccharis pilularis*), California encelia (*Encelia californica*), California sagebrush, black sage (*Salvia mellifera*), deerweed (*Lotus scoparius*) but also coast live oak (*Quercus agrifolia*), lemonadeberry (*Rhus integrifolia*) and toyon (*Heteromeles arbutifolia*) dominated some areas. Mulefat (*Baccharis salicifolius*), pampas grass (*Cortaderia* sp.), tamarisk (*Tamarix* sp.), cottonwood (*Populus* sp.), exotic trees and non-native annuals and grasses also occurred in many of the restored CSS areas.



Chaparral (Scrub Oak Chaparral). The term chaparral applies to a variety of vegetation associations made up of sclerophyllous shrubs that occur on relatively xeric sites. Chaparral is defined as those habitats where more than 50 percent of the shrub cover comprise chaparral species. Most species are adapted to repeated fires and stump sprouting. One chaparral subtype occurred on the IRWD study area: Scrub Oak Chaparral.

One small patch of scrub oak chaparral occurred on the IRWD study area, dominated by scrub oak (*Quercus berberidifolia*) and lemonadeberry (*Rhus integrifolia*). Understory species in this chaparral community included black sage, heart-leaved penstemon (*Keckiella cordifolia*), poison oak (*Toxicodendron diversilobum*), manroot (*Marah macrocarpa*), Mexican elderberry (*Sambucus mexicana*) and California encelia (*Encelia californica*).

Riparian (Non-jurisdictional Mulefat Scrub). Riparian habitats consist of trees, shrubs, or herbs that occur along watercourses and water bodies. The vegetation is adapted to flooding and soil saturation during at least a portion of the growing season. The Orange County GIS Habitat Classification System defines a number of different riparian sub-associations including, Mulefat scrub.

Non-jurisdictional Mulefat Scrub occurred in several small isolated locations on the IRWD study area, near irrigation systems, where water collected in low areas, or was channelized by earthen or concrete V-ditches or other topographic features. Mulefat scrub (*Baccharis salicifolius*) dominated these areas. Associated species included CSS shrubs and non-native herbs and grasses. None of the mulefat scrub onsite was associated with a streambed or lake and was not part of any area that would be jurisdictional to the United States Army Corps of Engineers (ACOE) 404 or California Department of Fish and Game (CDFG) 1600 programs. Hence, these areas are termed Non-jurisdictional Mulefat Scrub to differentiate from areas supporting Mulefat Scrub that are jurisdictional to these agencies.

Woodland (Coast Live Oak Woodland). Woodland habitats consist of multilayered vegetation with tree canopy cover between 20 and 80 percent. One woodland type, Coast Live Oak Woodland, occurred on the IRWD study area. To the west of the subsurface water tanks was a small patch of coast live oak woodland. Understory species included coast goldenbush (*Isocoma menziesii*) and non-native grasses.

Disturbed. Disturbed areas are characterized as recently cleared areas lacking vegetation, such as actively farmed areas that are frequently disked. Extensive disturbed areas comprised the large open areas in the north-central portion of the site, and the flat terraced areas southeast of the administration building. These flat areas were recently disked and generally devoid of vegetation. Weedy species were evident along the edges of these cleared areas including tree tobacco (*Nicotiana glauca*), telegraph weed (*Heterotheca grandiflora*) and Russian thistle (*Salsola tragus*). These disturbed areas are regularly disked.

Developed. Developed includes developed areas and ornamental landscaping. The developed areas included the Administration Building, various above and below ground water tanks, filtration plant facilities, and parking lots. Ornamental landscaping occurred throughout the IRWD study area, especially in the southern end. Roses and other ornamental plantings occupied the raised beds in



the parking-lot, and eucalyptus, pines, sycamores, and London Plane trees were scattered around the developed areas. The moderate sized areas above the buried tank locations in the southeastern portion of the IRWD study area supported mowed ruderal vegetation, but were mapped as developed. Ornamental plantings were also intermixed with native species such as that which occurred on a steep slope in the southwestern portion of the site. The dense southwest-facing slope was comprised of an overstory of eucalyptus, oleander and olive trees, but with an understory of CSS species. This area was considered developed/ornamental.

### **Planning Areas 13 and 17**

Figure 3 of the PCR May 27, 2008 Report illustrates the vegetation types that are present on PAs 13/17. As illustrated on Figure 3, PAs 13/17 contain a variety of plant communities, as well as developed areas, disturbed areas, and ornamental communities. The habitat types (and developed/disturbed areas) that are present on PAs 13/17 are outlined in [Table 5.3-1](#) and further described below.

**Buckwheat Scrub.** Buckwheat Scrub is characterized by nearly monotypic stands of California buckwheat (*Eriogonum fasciculatum*). This community occurs throughout the foothills and mountains of Orange County and is most often found on slopes that have been disturbed within the last 10 years. California buckwheat was the dominant plant species observed within this community. Additional species observed in sparse amounts included native white sage (*Salvia apiana*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), mule fat (*Baccharis salicifolia*), California bush sunflower (*Encelia californica*), and non-native horehound (*Marrubium vulgare*), and tocalote (*Centaurea melitensis*). This area appears to have been planted on PAs 13/17 and irrigation lines are still present although no evidence of watering was observed.

**Mixed Scrub.** Mixed scrub is usually dominated by an even mix of various sage scrub species. Dominant species found within the community on-site include native black sage, California sagebrush, and California buckwheat. Additional species observed included native mule fat, coyote brush (*Baccharis pilularis*), deerweed (*Lotus scoparius*), our Lord's candle (*Yucca whipplei*), California bush sunflower, wishbone bush (*Mirabilis californica*), California sun cup (*Camissonia bistorta*), California croton (*Croton californicus*), purple sage (*Salvia leucophylla*), poison oak (*Toxicodendron diversilobum*), wild cucumber (*Marah macrocarpa*), orange bush monkey-flower (*Mimulus aurantiacus*), chaparral mallow (*Malacothamnus fasciculatus*), and non-native shortpodded mustard (*Hirshfeldia incana*), foxtail chess (*Bromus madritensis*), and tree tobacco (*Nicotiana glauca*).

**Mixed Scrub/Mule Fat Scrub.** Mixed scrub/mule fat scrub contains a similar vegetation composition to mixed scrub and mule fat scrub combined. Dominant species observed within this community on PAs 13/17 included mule fat, California sagebrush, and California bush sunflower. Additional species observed included short-podded mustard. This community is present within a basin in the northeastern portion of PAs 13/17.

**Coast Live Oak Woodland.** Coast live oak woodland is dominated by coast live oak with a poorly developed shrub layer. This plant community typically occurs on north-facing slopes and shaded ravines. Coast live oak (*Quercus agrifolia*) was the dominant plant species observed within this



community. Additional species observed included foxtail chess and California sagebrush. This plant community occupies a small eastern portion of PAs 13/17.

Fremont Cottonwood/Mixed Scrub. Fremont cottonwood/mixed scrub is present along slopes in the southern portion and on the southeastern edge of PAs 13/17. This community consists of mixed scrub species interspersed with several Fremont cottonwood trees (*Populus fremontii*), and a few coast live oak trees. Additional species observed included toyon (*Heteromeles arbutifolia*) and lemonadeberry (*Rhus integrifolia*).

Mexican Elderberry Woodland. Mexican elderberry woodland is characterized by an open woodland of Mexican elderberry (*Sambucus mexicana*) that dominates the surrounding vegetation, both structurally and by biomass. It is commonly found on stream benches and lower slopes above streams. Mexican elderberry woodland occupies the northeastern portion of PAs 13/17.

Scrub Oak Chaparral. Scrub oak chaparral is typically characterized as a dense, evergreen chaparral dominated by scrub oak (*Quercus berberidifolia*). This community occurs in more mesic areas than many other chaparrals and often occurs at slightly higher elevations. Plant species observed within this community on-site included scrub oak with understory species such as native California sagebrush and non-native short-podded mustard and tocalote. There is scrub oak chaparral within the eastern portion of PAs 13/17.

Mule Fat Scrub (Riparian). Mule fat scrub consists of dense stands of mule fat with scattered willows commonly present. This community typically occupies intermittent streambeds or disturbed areas within drainages and washes. Mule fat was the dominant species observed within this community on-site. Additional species observed included native Mexican elderberry and non-native tamarisk (*Tamarix ramosissima*) and short-podded mustard. The community occurs within two basins in the central and western portions of PAs 13/17 and on the eastern edge of the drainage in the northeastern portion.

Red Willow/Arroyo Willow Riparian Forest. Red willow/arroyo willow riparian forest consists of a closed canopy of red willow (*Salix laevigata*) and arroyo willow (*Salix lasioloepis*) in arborescent form. This community typically occurs on floodplains along major streams and rivers. Shrubs are sparse under the tree canopy. Red willow and arroyo willow were the dominant species observed within this community on PAs 13/17. Several coast live oak trees were also present within this community. Additional species observed included native mule fat and poison oak, and non-native giant reed (*Arundo donax*).

Disturbed/Fremont Cottonwood. Disturbed/Fremont cottonwood occurs along a slope on the southeastern edge of PAs 13/17. This community is characterized by a greater than 20 percent cover of non-native species interspersed with several Fremont cottonwood trees and a few coast live oak trees. Non-native species observed within this community included short-podded mustard, tree tobacco, tocalote, yellow sweetclover (*Melilotus officinalis*), and poison hemlock (*Conium maculatum*). A sparse cover of additional native species present within this community included toyon and western ragweed (*Ambrosia psilostachya*).



Disturbed/Mixed Scrub and Disturbed/Mule Fat Scrub. Disturbed/mixed scrub and disturbed/mule fat scrub contain a similar vegetation composition to mixed scrub and mule fat scrub, except non-native species constitute greater than 20 percent of the vegetative cover. Disturbed/mixed scrub occupies a portions of PAs 13/17. Disturbed/mule fat scrub occupies a small area at the base of a trail within the eastern portion of PAs 13/17.

Ornamental. Several areas of ornamental vegetation occur within PAs 13/17. Ornamental species observed included eucalyptus (*Eucalyptus* sp.) and pine (*Pinus* sp.) with an understory of predominantly non-native vegetation including red-stemmed filaree (*Erodium cicutarium*) and shortpodded mustard. In addition to the eucalyptus and pine trees, scattered native coast live oak and Fremont cottonwood trees that appear to have been planted are present. Areas of ornamental vegetation occupy the eastern and southern portions of PAs 13/17.

Ruderal. Ruderal areas are dominated by non-native weedy species that readily colonize disturbed ground. Plant species observed within the ruderal areas on PAs 13/17 include short-podded mustard, castor bean (*Ricinus communis*), foxtail chess, tocalote, yellow sweetclover, and poison hemlock. In addition, a sparse amount of native western ragweed occurs within the ruderal areas on PAs 13/17.

Tamarisk. Tamarisk stand is characterized by nearly monotypic stands of tamarisk, and this community occupies the northern portion of PAs 13/17. Other species observed within this community on-site included white sage and California sagebrush.

Other Areas. Developed areas within PAs 13/17 consist of paved pathways.

## **SPECIAL STATUS PLANTS, WILDLIFE, AND HABITATS**

Special status species include those that are listed as rare, threatened, or endangered by either the CDFG or the United States Fish and Wildlife Service (USFWS); species that are candidates for either Federal or State listing; species designated as “fully protected” or “Species of Special Concern” by CDFG; and other species that are tracked by the California Natural Diversity Data Base (CNDDDB), but that do not fall into any of the other categories mentioned above. The special status species discussed below are listed as Federal or State Endangered or Threatened or California Species of Special Concern. These species have been afforded special recognition by local, State, or federal resource conservation agencies and organizations, principally due to the species’ declining or limited population sizes usually resulting from habitat loss. Also discussed are habitats that are unique, of relatively limited distribution, or are of particular value to wildlife.

### **Special Status Habitats**

CNDDDB and NCCP/HCP. The project site supports plant communities that are considered sensitive by the CDFG’s CNDDDB, due to their scarcity and/or because they support vascular plants and animals that are listed as endangered, threatened, or rare under the Federal Endangered Species Act (FESA) and/or California Endangered Species Act (CESA). The communities that are declining in acreage throughout their range because of land use changes are considered communities of highest inventory priority by the CDFG. The communities that are considered sensitive by the



CDFG's CNDDDB that are present on the project site are Fremont cottonwood/mixed scrub and red willow/arroyo willow riparian forest; refer to [Table 5.3-1](#). Additionally, coastal sage scrub is considered a sensitive habitat due to potential to support numerous threatened, endangered, or rare species, and has been acknowledged as such by its inclusion in the NCCP/HCP, which was designed to conserve, protect, and enhance this particular habitat and the botanical and wildlife species that occupy it. CSS supports a diverse fauna, including many species that are in decline.

**Critical Habitat.** The term “critical habitat” applies to areas designated by the USFWS to be of biological importance to Federally-listed species. Critical habitat is represented by a specific geographic area that is considered to be essential for the conservation of a threatened or endangered species and, as such, may require special management and long-term protection. Areas that are not presently occupied by a Federally-listed species may be considered as critical habitat as such habitat may be necessary for the recovery of the species. An area is designated as “critical habitat” following publication of a proposed Federal regulation in the Federal Register and receipt and consideration of public comments on the proposal. The final boundaries of the critical habitat area are published in the Federal Register.

Federal agencies are required to consult with the USFWS on actions they carry out, fund, or authorize in order to ensure that such actions will not result in the destruction or adverse modification of established critical habitat. As such, areas designated as critical habitat are provided protection for the long-term conservation of the species; however, a critical habitat designation has no effect on actions where a Federal agency is not involved (i.e. federal funding or permitting).

There is no designated or proposed critical habitat within the project boundaries.

### **Special Status Plant Species**

[Table 5.3-2, \*Special Status Plant Species Known to Occur in the Project Vicinity\*](#), outlines the 47 special status plant species known to occur in the project vicinity, and provides information on their status, relationship to NCCP, habitat, likelihood of occurrence, and focused survey requirements. As indicated in [Table 5.3-2](#), of the 47 special status plant species known to occur in the project vicinity, 40 were identified as having some (medium or high) potential to occur on the project site.

### **IRWD Study Area**

As indicated in [Table 5.3-2](#), nine (9) of the 47 special status plant species known to occur in the project vicinity were identified as having some (i.e., medium or high) potential to occur on the IRWD study area. None of the plant species are Federal/State listed threatened/endangered species. A total of 38 of the 47 special status plant species known to occur in the project vicinity were identified as having unlikely or no potential to occur on the IRWD study area.



**Table 5.3-2  
Special Status Plant Species Known to Occur in the Project Vicinity**

Scientific Name FAMILY	Common Name	Status	NCCP	Comments/Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Focused Survey Conducted
<i>Brodiaea filifolia</i> LILIACEAE	Thread-leaved Brodiaea	Fed: FT State: SE CNPS: 1B	NC	Bulbiferous herb occurs on clay, or silty alkaline substrates on edges of vernal pools, valley and foothill grasslands, coastal sage scrub, chaparral, and cismontane woodlands, below 2,000 feet. Blooms March through June.	Unlikely	No; Not warranted	Medium	Yes; Not detected	Yes; Not detected
<i>Calochortus catalinae</i> LILIACEAE	Catalina Mariposa Lily	Fed: None State: None CNPS: 4.2	C	Bulbiferous herb. Blooms May through June in heavy soils, open grassy slopes and opening in brush in chaparral, coastal sage scrub, and valley and foothill grassland from 15 to 700 meters.	Low	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Calochortus weedii</i> var. <i>intermedius</i> LILIACEAE	Intermediate (Foothill) Mariposa Lily	Fed: None State: None CNPS: 1B.2	CC	Bulbiferous herb blooms from May through July on dry rocky open slopes and hills in chaparral, coastal sage scrub, valley and foothill grassland from 100 to 855 meters.	Medium	No	Medium	Yes; Not detected	Yes; Not detected
<i>Caulanthus simulans</i> BRASSICACEAE	Payson's Jewel Flower	Fed: None State: None CNPS: 4.2	NC	Annual herb found in chaparral and coastal scrub with sandy or granitic soils from 90 to 2,200 meters. Blooms from March through May.	Medium	No	Medium	Yes; Not detected	Yes; Not detected
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> ERICACEAE	Summer Holly	Fed: None State: None CNPS: 1B.2	NC	Evergreen shrub occurs in chaparral and cismontane woodland from 30 to 550 meters. Blooms April through June.	Unlikely	Yes; Not detected	Medium	Yes; Not detected	No; Previously conducted
<i>Convolvulus simulans</i> CONVOLVULACEAE	Small-flowered morning-glory	Fed: None State: None CNPS: 4.2	NC	Annual herb occurs from Baja north to San Luis Obispo County and inland to Riverside and Kern Counties, on wet clay, serpentine seeps and ridges, near rock outcrops, south-facing slopes in shallow or clay soils on edges of coastal sage scrub and perennial grasslands. Blooms March through June.	Unlikely	No; Not warranted	Unlikely	No; Not warranted	Yes; Not detected
<i>Dichondra occidentalis</i> CRASSULACEAE	Western dichondra	Fed: None State: None CNPS: 4.2	NC	Rhizomatous herb is a fire follower, occurs in rock outcrops, under shrubs in loamy alluvium and gravelly clay loam in southern mixed chaparral, Diegan sage scrub, oak woodland and grasslands. Blooms January through July. From 50 to 500 meters.	Medium	No	Medium	Yes; Not detected	Yes; Not detected



**Table 5.3-2 [continued]**  
**Special Status Plant Species Known to Occur in the Project Vicinity**

Scientific Name <i>FAMILY</i>	Common Name	Status	NCCP	Comments/Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Focused Survey Conducted
<i>Dudleya multicaulis</i> CRASSULACEAE	Many Stemmed Dudleya	Fed: None State: None CNPS: 1B.2	NC, Species of Interest	Perennial herb flowers from April through July. Microhabitat is rocky outcrops, clay soil in chaparral, coastal sage scrub, valley and foothill grassland.	Unlikely	No; Not warranted	Medium	Yes; Not detected	Yes; Not detected
<i>Harpagonella palmeri</i> BORAGINACEAE	Palmer's grapplinghook	Fed: None State: None CNPS: 4.2	NC	Moderate potential to occur. Occurs on clay soils, dry slopes and mesas in coastal sage scrub openings and grasslands from 20 to 955 meters. Flowers March to April. More readily found after fires.	Low	No; Not warranted	Unlikely	No; Not warranted	No; Not warranted
<i>Horkelia cuneata ssp. puberula</i> ROSACEAE	Mesa Horkelia	Fed: None State: None CNPS: 1B.1	NC	Perennial herb found in dry sandy soils in the outer coast ranges in chaparral, coastal scrub, and cismontane woodland in sandy or gravelly soils. Blooms from February through July from 70 to 810 meters.	Medium	No	Medium	Yes; Not detected	Yes; Not detected
<i>Imperata brevifolia</i> POACEAE	California Satintail	Fed: None State: None CNPS: 2.1	NC	Rhizomatous herb found in chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps, and riparian scrub below 500 meters. Flowers from September through May.	Unlikely	Yes; Not detected	Medium	Yes; Not detected	No; Previously conducted
<i>Lepechinia cardiophylla</i> LAMIACEAE	Heart-Leaved Pitcher Sage	Fed: None State: None CNPS: 2.1	C	Aromatic shrub occurs in chaparral, closed-cone coniferous forest and cismontane woodland from 520 to 1,370 meters. Blooms from April through July.	Unlikely	Yes; Not detected	Medium	Yes; Not detected	No; Previously conducted
<i>Lepidium virginicum var. robinsonii</i> BRASSICACEAE	Robinson's peppergrass	Fed: None State: None CNPS: 1B.2	NC	Annual herb grows in openings of coastal sage and chaparral, typically away from the coast. Few recent collections of these species from cismontane southern California. Blooms January through July below 885 meters.	Medium	No	Medium	Yes; Not detected	Yes; Not detected
<i>Microseris douglasii ssp. platycarpha</i> ASTERACEAE	Small- flowered Microseris	Fed: None State: None CNPS: 4.2	NC	Annual herb blooms from March through May on clay soils in coastal sage scrub, valley and foothill grasslands, and cismontane woodland habitats from 15 to 1,070 meters.	Unlikely	No; Not warranted	Unlikely	No; Not warranted	No; Not warranted



**Table 5.3-2 [continued]  
Special Status Plant Species Known to Occur in the Project Vicinity**

Scientific Name <i>FAMILY</i>	Common Name	Status	NCCP	Comments/Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Focused Survey Conducted
<i>Mondarella hypoleuca ssp. lanata</i> LAMIACEAE	Felt-Leaved Monardella	Fed: None State: None CNPS: 1B.2	NC	Rhizomatous herb found in chaparral and cismontane woodland from 300 to 1,575 meters. Blooms from June through August.	Unlikely	Yes; Not detected	Medium	Yes; Not detected	No; Previously conducted
<i>Mondarella macrantha ssp. hallii</i> LAMIACEAE	Hall's Monardella	Fed: None State: None CNPS: 1B.3	NC	Rhizomatous herb found in chaparral, broadleaf upland forest, lower montane coniferous forest and cismontane woodland from 730 to 2,195 meters. Blooms from June through August.	Unlikely	Yes; Not detected	Medium	Yes; Not detected	No; Previously conducted
<i>Nolina cismontana</i> LILIACEAE	Chaparral beargrass	Fed: None State: None CNPS: 1B.2	NC	Evergreen shrub distributed from western Ventura County south through Simi Hills, Santa Ana Mountains to the foothills of Palomar and Cuyamaca Mountains in San Diego County. Blooms from April through June.	Unlikely	Yes; Not detected	Medium	Yes; Not detected	Yes; Not detected
<i>Pentachaeta aurea</i> ASTERACEAE	Golden- flowered Pentachaeta	Fed: None State: None CNPS: 1B.1	NC	Annual herb occurs in Los Angeles, Orange, Riverside, San Bernardino, San Diego Counties, Baja California. Habitat includes cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Blooms March through June from 75 to 520 meters.	Medium	No	Unlikely	No; Not warranted	Yes; Not detected
<i>Piperia cooperi</i> ORCHIDACEAE	Chaparral rein orchid	Fed: None State: None CNPS: 4.2	NC	Perennial herb occurs in chaparral, cismontane woodland, valley and foothill grassland from 15 to 1,585 meters. Blooms March through June.	Low	No; Not warranted	Unlikely	No; Not warranted	Yes; Not detected
<i>Polygala cornuta var. fishiae</i> POLYGALACEAE	Fish's Milkwort	Fed: None State: None CNPS: 4.3	NC	Deciduous shrub occurs in Los Angeles, Orange, Riverside, Santa Barbara, San Diego, Ventura, Baja California in chaparral, cismontane woodland, and riparian woodland. Blooms May through August from 100 to 100 meters.	Low	Yes; Not detected	Unlikely	No; Not warranted	No; Not warranted
<i>Pseudognaphalium leucocephalum</i> ASTERACEAE	White-Rabbit tobacco	Fed: None State: None CNPS: 2.2	NC	Perennial herb occurs in sandy or gravelly soil in coastal scrub, chaparral, riparian woodland, and cismontane woodland below 2,000 meters. Blooms from July through December.	Medium	Yes; Not detected	Medium	Yes; Not detected	No; Previously conducted



**Table 5.3-2 [continued]**  
**Special Status Plant Species Known to Occur in the Project Vicinity**

Scientific Name <i>FAMILY</i>	Common Name	Status	NCCP	Comments/Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Focused Survey Conducted
<i>Quercus dumosa</i> FAGACEAE	Nuttall's scrub oak	Fed: None State: None CNPS 1B.1	C	Evergreen shrub occurs in sandy soils in coastal scrub, chaparral and closed cone coniferous forest from 15 to 800 meters. Flowers from February through April.	Medium	Yes; Not detected	Medium	No	Yes; Not detected
<i>Romneya coulteri</i> PAPAVERACEAE	Coulter's Matilija Poppy	Fed: None State: None CNPS: 4.2	C	Rhizomatous herb occurs in Los Angeles, Orange, Riverside, San Diego in chaparral, coastal scrub / often in burns. Blooms March through July. Easy to identify year round.	Low	Yes; Not detected	Unlikely	No; Not warranted	No; Previously conducted
<i>Satureja chandleri</i> LAMIACEAE	San Miguel Savory	Fed: None State: None CNPS 1B.2	NC	Small shrub occurs in chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grasslands in rocky, gabbroic or metovolcanic soils from 120 to 1,075 meters. Blooms from May through July.	Unlikely	Yes; Not detected	Medium	Yes; Not detected	No; Previously conducted
<i>Senecio aphanactis</i> ASTERACEAE	Rayless raywort	Fed: None State: None CNPS 2.2	NC	Annual herb occurs in coastal sage scrub from Contra Costa County to Baja California from 15 to 800 meters. Known from lower Hicks Canyon and UCI ecological preserve. Blooms January through April.	Medium	No	Medium	Yes; Not detected	No
<i>Symphotrichum defoliatum</i> SUNFLOWER	San Bernardino aster	Fed: None State: None CNPS 1B.2	NC	Meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, and grassland; occurs in vernal mesic grassland or near ditches, streams, and springs in disturbed areas.	Unlikely	Yes; Not detected	Medium	Yes; Not detected	No; Previously conducted
<i>Cupressus forbesii</i> CYPRESS	Tecate cypress	Fed: None State: None CNPS 1B.1	C	Closed-cone coniferous forest, chaparral; occurs primarily on north-facing slopes and groves often associated with chaparral.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Centromadia parryi</i> ssp. <i>Australis</i> SUNFLOWER	southern tarplant	Fed: None State: None CNPS 1B.1	NC	Margins of marshes and swamps, valley and foothill grassland; often occurs in disturbed sites near the coast and in alkaline soils with salt grass.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted



**Table 5.3-2 [continued]**  
**Special Status Plant Species Known to Occur in the Project Vicinity**

Scientific Name <i>FAMILY</i>	Common Name	Status	NCCP	Comments/Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Focused Survey Conducted
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i> SUNFLOWER	Orcutt's pincushion	Fed: None State: None CNPS 1B.1	NC	Coastal bluff scrub, coastal dunes.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Helianthus nuttallii</i> ssp. <i>Parishii</i> SUNFLOWER	Los Angeles Sunflower	Fed: None State: None CNPS 1A	NC	Marshes and swamps (coastal salt and freshwater).	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Lasthenia glabrata</i> ssp. <i>Coulteri</i> SUNFLOWER	Coulter's goldfields	Fed: None State: None CNPS 1B.1	NC	Coastal salt marshes and swamps, playas, vernal pools.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Verbesina dissita</i> SUNFLOWER	Crownbeard	Fed: FT State: ST CNPS 1B.2	NC	Maritime chaparral (mainly) and coastal scrub; occurs on steep, rocky, primarily north-facing slopes within 1.5 miles of the ocean.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Aphanisma blitoides</i> GOOSEFOOT	Aphanisma	Fed: None State: None CNPS 1B.2	NC	Coastal bluff scrub, coastal dunes, coastal scrub.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Atriplex coulteri</i> GOOSEFOOT	Coulter's saltbush	Fed: None State: None CNPS 1B.2	NC	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland/ alkaline or clay.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Atriplex pacifica</i> GOOSEFOOT	South coast saltscale	Fed: None State: None CNPS 1B.2	NC	Coastal bluff scrub, coastal dunes, coastal scrub, playas.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted



**Table 5.3-2 [continued]  
Special Status Plant Species Known to Occur in the Project Vicinity**

Scientific Name <i>FAMILY</i>	Common Name	Status	NCCP	Comments/Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Focused Survey Conducted
<i>Atriplex parishii</i> GOOSEFOOT	Parish's brittlescale	Fed: None State: None CNPS 1B.1	NC	Chenopod scrub, playas, vernal pools.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Atriplex serenana</i> var. <i>davidsonii</i> GOOSEFOOT	Davidson's saltscale	Fed: None State: None CNPS 1B.2	NC	Coastal bluff scrub, coastal scrub/alkaline.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Suaeda esteroa</i> GOOSEFOOT	Estuary seablite	Fed: None State: None CNPS 1B.2	NC	Coastal salt marshes and swamps.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i> STONECROP	Santa Monica Mountains dudleya	Fed: None State: None CNPS 1B.2	C	Chaparral and coastal scrub; occurs in canyons on sedimentary conglomerates, primarily on north facing slopes.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Dudleya stolonifera</i> STONECROP	Laguna Beach dudleya	Fed: None State: None CNPS 1B.1	C	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/rocky.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Dudleya viscida</i> STONECROP	sticky dudleya	Fed: None State: None CNPS 1B.2	NC	Coastal scrub, coastal bluff scrub, and chaparral; occurs on north and south-facing cliffs and banks.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Euphorbia misera</i> SPURGE	Cliff spurge	Fed: None State: None CNPS 2.2	C	Coastal bluff scrub, coastal scrub/rocky.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted



**Table 5.3-2 [continued]**  
**Special Status Plant Species Known to Occur in the Project Vicinity**

Scientific Name <i>FAMILY</i>	Common Name	Status	NCCP	Comments/Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Focused Survey Conducted
<i>Nama stenocarpum</i> WATERLEAF	Mud nama	Fed: None State: None CNPS 2.2	NC	Marshes and swamps; occurs on lake shores, river banks, and intermittently wet areas.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Phacelia suaveolens</i> ssp. <i>keckii</i> WATERLEAF	Santiago Peak phacelia	Fed: None State: None CNPS 1B.3	NC	Closed-cone coniferous forest and chaparral in open areas and sometimes along creeks. Lowest recorded occurrence is 1,799 feet above msl.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Sidalcea neomexicana</i> MALLOW	Salt Spring checkerbloom	Fed: None State: None CNPS 2.2	NC	Alkali playas, brackish marshes, chaparral, coastal scrub, lower montane coniferous forest, and Mojavean Desert scrub in alkali springs and marshes.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Chorizanthe parryi</i> var. <i>fernandina</i> BUCKWHEAT	San Fernando Valley spineflower	Fed: None State: None CNPS 1B.1	NC	Coastal scrub on sandy soils.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<i>Nemacaulis denudata</i> var. <i>denudata</i> BUCKWHEAT	coast woolly-heads	Fed: None State: None CNPS 1B.2	NC	Coastal dunes.	Unlikely	No; Not warranted	Medium	Yes; Not detected	No; Previously conducted
<p><u>Key to Status</u>            Fed = Federal            FE = Federal Endangered            FT = Federal Threatened            FPE = Federally proposed for listing as endangered            FPT = Federally proposed for listing as threatened            FC = Federal candidate species            FSC = Federal special concern species            State = State of California            SE = State endangered            ST = State threatened            SCE = State candidate for listing as endangered            (footnotes continued on following page)</p>									



**Table 5.3-2 [continued]  
Special Status Plant Species Known to Occur in the Project Vicinity**

Scientific Name <i>FAMILY</i>	Common Name	Status	NCCP	Comments/Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Occurrence On-site <sup>4</sup>	Focused Survey Conducted	Focused Survey Conducted
<i>(footnotes continued from previous page)</i>									
SCT = State candidate for listing as threatened SC = State species of concern FP = Fully protected species None = No federal or state listing  <u>Key to NCCP Status</u> Target Species = T Covered Species = CS Conditionally Covered Species = CCS Non-Covered Species = NCS  <u>Key to Occurrence On-Site:</u> Potential = Could occur due to presence of suitable habitat on-site but Unlikely = probably does not occur due to limited suitable habitat on-site and/or not detected Low = possible but unlikely to occur on-site Medium = could occur on-site High = probably does occur on-site but not recorded during recent surveys									
Sources: <i>Results of the Biological Constraints Analysis Conducted for the 19.7-Acre Proposed City Hall and Park Project Site</i> (PCR Services Corporation, May 27, 2008); <i>Spring 2008 Sensitive Plant Surveys for the 19.7-Acre Proposed City Hall and Park Project Site</i> (PCR Services Corporation, August 26, 2008); and <i>Biological Report for the Lake Forest IRWD Site</i> (Harmsworth Associates, September 2008).									



Focused surveys of the IRWD study area were conducted during the September 2008 initial site assessment for the following 12 special status plant species:

- California satintail (*Imperata brevifolia*);
- Chaparral beargrass (*Nolina cismontana*);
- Coulter's Matilija poppy (*Romneya coulteri*);
- Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*);
- Fish's milkwort (*Polygala cornuta* var. *Fishiae*);
- Hall's Monardella (*Monardella macrantha* ssp. *hallii*);
- Heart-leaved pitcher sage (*Lepechinia cardiophylla*);
- Nuttall's scrub oak (*Quercus dumosa*); and
- San Bernardino Aster (*Symphotrichum defoliatum*);
- San Miguel Savory (*Satureja chandleri*);
- Summer holly (*Comarostaphylis diversifolia*); and
- White-rabbit tobacco (*Pseudognaphalium leucocephalum*).

Of these 12 special status plant species, only Nuttall's scrub oak and White-Rabbit tobacco were identified as having some (medium) potential to occur on the IRWD study area. None of these special status plant species for which focused surveys were specifically conducted were detected during the September 2008 surveys of the IRWD survey area.

As of 2008, focused surveys had not been conducted for the following special status plant species identified as having some (medium or high) potential to occur on the IRWD study area:

- Golden-flowered pentachaeta (*Pentachaeta aurea*);
- Intermediate (Foothill) mariposa lily (*Calochortus weedii* var. *intermedius*);
- Mesa horkelia (*Horkelia cuneata* ssp. *Puberula*);
- Payson's jewel flower (*Caulanthus simulans*);
- Rayless raywort (*Senecio aphanactis*);
- Robinson's peppergrass (*Lepidium virginicum* var. *Robinsonii*); and
- Western dichondra (*Dichondra occidentalis*).

Focused surveys are not warranted for special status plant species identified as having unlikely or no potential to occur on the IRWD study area.

### Planning Areas 13 and 17

As indicated in Table 5.3-2, 40 of the 47 special status plant species known to occur in the project vicinity were identified as having some (i.e., medium or high) potential to occur on PAs 13/17. Only one of the plant species, the Thread-leaved Brodiaea (*Brodiaea filifolia*), is a Federally listed threatened species and State listed endangered species. Seven (7) of the 47 special status plant species known to occur in the project vicinity were identified as having no (i.e., unlikely) potential to occur on PAs 13/17.



Collectively, the 2008 survey dates encompassed the flowering periods of all 40 endangered, threatened, and sensitive plants potentially occurring on PAs 13/17, except Nuttall's scrub oak (*Quercus dumosa*), which is a conspicuous tree/shrub that can be distinguished from the common scrub oak (*Quercus berberidifolia*) using vegetative characteristics. None of the special status plant species for which focused surveys were specifically conducted were detected during the August 2008 surveys of PAs 13/17.

Focused surveys are not warranted for special status plant species identified as having unlikely or no potential to occur on PAs 13/17. As of 2008, a focused survey had not been conducted for only one special status plant species (Nuttall's scrub oak (*Quercus dumosa*)), which was identified as having medium potential to occur on PAs 13/17.

#### Project Site (In its Entirety)

Focused surveys of the project site in its entirety were conducted for the following special status plant species on June 24 and 30, 2011:

- Chaparral beargrass (*Nolina cismontana*);
- Chaparral rein orchid (*Piperia cooperi*);
- Golden-flowered pentachaeta (*Pentachaeta aurea*);
- Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*);
- Many-stemmed dudleya (*Dudleya multicaulis*);
- Mesa horkelia (*Horkelia cuneata* ssp. *puberula*);
- Nuttall's scrub oak (*Quercus dumosa*);
- Payson's jewel flower (*Caulanthus simulans*);
- Robinson's peppergrass (*Lepidium virginicum* var. *robinsonii*);
- Small-flowered morning-glory (*Convolvulus simulans*);
- Thread-leaved brodiaea (*Brodiaea filifolia*); and
- Western dichondra (*Dichondra occidentalis*).

None of the special status plant species for which focused surveys were specifically conducted were detected during the June 2011 surveys of the project site.

One special status plant species, San Diego marsh elder (*Iva hayesiana*) was observed onsite. Approximately 70 individuals of San Diego marsh elder (California native Plant Society [CNPS] List 2.2) were observed onsite; refer to Figure 2 of the 2011 Harmsworth Associates Report. Individuals were concentrated near sprinkler heads along access roads in the western region of the site, suggesting they may have been planted for landscaping purposes.

#### Conclusion

As indicated in [Table 5.3-2](#), focused surveys have been conducted (in 2008 and 2011) for 39 of the 40 special status plant species identified as having some (medium or high) potential to occur on the project site. None of the special status plant species for which focused surveys were specifically conducted were detected during the 2008 and 2011 surveys of the project site.



A focused survey of the IRWD study area has not been conducted for Rayless raywort (*Senecio aphanactis*), which was identified as having medium potential to occur on the site. Given, the potential exists for this special status plant species to be present on the IRWD study area, a focused survey is warranted to confirm its presence or absence. It is noted, a focused survey of PAs 13/17 was conducted in 2008 for Rayless raywort and the species was not detected.

### Special Status Wildlife Species

Table 5.3-3, *Special Status Wildlife Species Known to Occur in the Project Vicinity*, outlines the 45 special status wildlife species known to occur in the project vicinity, and provides information on their status, relationship to NCCP, habitat, likelihood of occurrence, and focused survey requirements. Three (3) State/Federally listed threatened/endorsed/endangered wildlife species were identified as having some potential to occur within the project site. As indicated in Table 5.3-3, of the 45 special status wildlife species known to occur in the project vicinity, 38 were identified as having some potential to occur on the project site.

#### IRWD Study Area

As indicated in Table 5.3-3, 36 of the 47 special status wildlife species known to occur in the project vicinity were identified as having some potential to occur on the IRWD study area. The following two wildlife species are Federal/State listed: American peregrine falcon (*Falco peregrinus anatum*) is a State endangered species; and coastal California gnatcatcher (*Poliopitila californica californica*) is a Federally threatened species. Eleven (11) of the 47 special status wildlife species known to occur in the project vicinity were identified as having no (i.e., unlikely) potential to occur on the IRWD study area.

The following four (4) special status wildlife species were detected during the September 2008 assessment of the IRWD study area:

- California horned lark (*Eremophila alpestris actia*);
- Coastal California gnatcatcher (*Poliopitila californica californica*);
- Cooper's hawk (*Accipiter cooperi*); and
- Merlin (*Falco columbarius*).

The California horned lark breeds and forages in open habitats, including grasslands and agricultural areas and are particularly fond of ruderal, grazed, mowed and other degraded grasslands, where dense cover of annual and perennial grasses are lacking. A few horned larks were documented in the disturbed bare ground in the central portion of the project site.

Two pairs of coastal California gnatcatcher and an additional unpaired juvenile gnatcatcher were detected onsite during the September 2008 site assessment; refer to the coastal California gnatcatcher focused survey discussion below.



**Table 5.3-3  
Special Status Wildlife Species Known to Occur in the Project Vicinity**

Scientific Name	Common Name	Status	NCCP	Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site	Focused Survey Conducted	Occurrence On-site	Focused Survey Conducted	Focused Survey Conducted
<b>Amphibians</b>									
<i>Spea hammondi</i>	western spadefoot toad	Fed: None State: None DFG: CSC CNDDB Ranked	C	grassland, open habitats with sandy or gravelly soil; temporary rainpools for breeding	Unlikely	No; Not warranted	Unlikely	No; Not warranted	No; Not warranted
<b>Reptiles</b>									
<i>Phrynosoma coronatum (blainvillei)</i>	Coast (San Diego) horned lizard	Fed: None State: None DFG: CSC CNDDB Ranked	C	sandy washes and open sandy areas within coastal sage scrub, grassland, chaparral, oak and riparian woodland	Potential	No	Potential	No	Yes; Not detected
<i>Eumeces skiltonianus interparietalis</i>	Coronado skink	Fed: None State: None DFG: CSC CNDDB Ranked	C	mesic areas of coastal sage scrub, chaparral, grasslands and woodlands; heavily forested areas and dense brush avoided	Potential	No	Unlikely	No; Not warranted	Yes; Not detected
<i>Cnemidophorus tigris stejnegeri</i>	coastal western whiptail	Fed: None State: None CNDDB Ranked	C	semiarid habitats with open sparsely vegetated areas, scrub, chaparral, grassland and woodland habitats	Potential	No	Unlikely	No; Not warranted	Yes; Not detected
<i>Cnemidophorus hyperytha</i>	orange-throated whiptail	Fed: None State: None DFG: CSC CNDDB Ranked	T	open, sparsely covered land, often with well-drained sandy or loose soils in coastal sage scrub, grassland, chaparral, oak woodland and riparian habitats	Potential	Yes; Not detected	Potential	No	Yes; Not detected
<i>Anniella pulchra pulchra</i>	silvery legless lizard	Fed: None State: None DFG: CSC CNDDB Ranked	NC	chaparral, oak woodland, coastal sage scrub	Potential	No	Unlikely	No; Not warranted	Yes; Not detected
<i>Charina trivirgata roseofusca</i>	coastal rosy boa	Fed: None State: None CNDDB Ranked	C	Occurs in coastal areas, occurs in rocky chaparral-covered hillsides and canyons	Potential	No	Unlikely	No; Not warranted	Yes; Not detected



**Table 5.3-3 [continued]**  
**Special Status Wildlife Species Known to Occur in the Project Vicinity**

Scientific Name	Common Name	Status	NCCP	Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site	Focused Survey Conducted	Occurrence On-site	Focused Survey Conducted	Focused Survey Conducted
<i>Salvadora hexalepis virgulata</i>	coast patch-nosed snake	Fed: None State: None DFG: CSC CNDDDB Ranked	NC	associated with brushy or shrubby vegetation	Potential	No	Potential	No	Yes; Not detected
<i>Crotalus ruber ruber</i>	northern red-diamond rattlesnake	Fed: None State: None DFG: CSC CNDDDB Ranked	C	chamise, coastal sage scrub, desert slope scrub and other habitats with heavy brush associated large rocks or boulders	Potential	No	Potential	No	Yes; Not detected
<i>Taricha torosa torosa</i>	Coast Range newt	Fed: None State: None DFG: CNDDDB Ranked	NC	--	Unlikely	No; Not warranted	Potential	No	Yes; Not detected
<i>Thamnophis hammondi</i>	Two-striped garter snake	Fed: None State: None DFG: CNDDDB Ranked	NC	--	Unlikely	No; Not warranted	Potential	No	Yes; Not detected
<b>Birds</b>									
<i>Circus cyaneus</i>	Northern harrier	Fed: None State: None DFG: CSC CNDDDB Ranked	C	Grassland, marshes, agricultural land, open areas in scrub and chaparral; ground or shrub nesting	Potential, foraging only	Yes; Not detected	Potential	No	Yes; Not detected
<i>Elanus leucurus</i>	White-tailed kite	Fed: None State: None DFG: FP CNDDDB Ranked	NC	Forages in grasslands; nests and roosts in oak and riparian woodland	Potential; foraging only	Yes; Not detected	Potential	No	Yes; Not detected



**Table 5.3-3 [continued]**  
**Special Status Wildlife Species Known to Occur in the Project Vicinity**

Scientific Name	Common Name	Status	NCCP	Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site	Focused Survey Conducted	Occurrence On-site	Focused Survey Conducted	Focused Survey Conducted
<i>Accipiter striatus</i>	Sharp-shinned hawk	Fed: None State: None DFG: WL CNDDDB Ranked	C	Wide variety of habitats used by wintering and migrating birds, but mostly associated with woodland and scrubland; breeds in mountains	Potential; foraging only	Yes; Not detected	Unlikely	No; Not warranted	Yes; Not detected
<i>Accipiter cooperi</i>	Cooper's hawk	Fed: None State: None DFG: WL CNDDDB Ranked	NC	Mature forests, open woodlands, wood edges, river groves, riparian woodland	Potential; foraging only	Yes; Detected foraging	Unlikely	No; Not warranted	Yes; Not detected
<i>Buteo regalis</i>	ferruginous hawk	Fed: None State: None DFG: WL FW: BCC CNDDDB Ranked	NC	Plains, prairies, grasslands	Potential; foraging only	Yes; Not detected	Unlikely	No; Not warranted	Yes; Not detected
<i>Aquila chrysaetos</i>	Golden eagle	Fed: None State: None DFG: FP FW: BCC CNDDDB Ranked	CC	Open mountains, foothills, plains, open country	Potential; foraging only	Yes; Not detected	Potential	No	Yes; Not detected
<i>Falco columbarius</i>	Merlin	Fed: None State: None DFG: WL CNDDDB Ranked	NC	Nests in open woodlands, savanna, does not breed in southern California, woodlands, open areas in winter, migration	Potential; foraging only	Yes; Detected foraging	Unlikely	No; Not warranted	Yes; Not detected
<i>Falco peregrinus anatum</i>	American peregrine falcon	Fed: None State: SE DFG: FP FWS: BCC CNDDDB Ranked	C	Nest on cliffs or rock outcroppings, usually near water; forages over open country (grassland, scrub, marshes)	Potential; foraging only	Yes; Not detected	Potential, foraging only	No	Yes; Not detected



**Table 5.3-3 [continued]  
Special Status Wildlife Species Known to Occur in the Project Vicinity**

Scientific Name	Common Name	Status	NCCP	Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site	Focused Survey Conducted	Occurrence On-site	Focused Survey Conducted	Focused Survey Conducted
<i>Athene cunicularia</i>	Burrowing owl	Fed: None State: None DFG: CSC FWS: BCC CNDDDB Ranked	NC	Grasslands, farmland and other open habitats	Potential	Yes; Not detected	Unlikely	No; Not warranted	Yes; Not detected
<i>Asio flammeus</i>	Short-eared owl	Fed: None State: None DFG: CSC CNDDDB Ranked	NC	Grasslands	Potential, foraging only	Yes; Not detected	Unlikely	No; Not warranted	Yes; Not detected
<i>Asio otus</i>	long-eared owl	Fed: None State: None DFG: CSC CNDDDB Ranked	NC	widespread forager; nests in dense woodlands	Potential, foraging only	Yes; Not detected	Potential	No	Yes; Not detected
<i>Selasphorus rufus</i>	rufous hummingbird	Fed: None State: None FWS: BCC CNDDDB Ranked	NC	Found in a wide variety of habitats that provide nectar-producing flowers; uses valley foothill and riparian woodland, various chaparral habitats and montane meadows. Takes nectar from many species of flowering plants; also eats insects, spiders and tree sap.	Potential	No	Unlikely	No; Not warranted	Yes; Not detected
<i>Eremophila alpestris actia</i>	California horned lark	Fed: None State: None DFG: WL CNDDDB Ranked	NC	Open areas with little or no ground cover, such as grassland or ruderal vegetation	Potential	No- but detected	Unlikely	No; Not warranted	No- but detected
<i>Campylorhynchus brunneicapillus</i>	Coastal cactus wren	Fed: None State: None DFG: CSC CNDDDB Ranked	T	cactus patches and yucca within coastal sage scrub and chaparral habitats	Potential	Yes; Not detected	Unlikely	No; Not warranted	No; Not warranted



**Table 5.3-3 [continued]  
Special Status Wildlife Species Known to Occur in the Project Vicinity**

Scientific Name	Common Name	Status	NCCP	Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site	Focused Survey Conducted	Occurrence On-site	Focused Survey Conducted	Focused Survey Conducted
<i>Poliotila californica californica</i>	Coastal California gnatcatcher	Fed: FT State: None DFG: CSC CNDDB Ranked	T	coastal sage scrub	Potential	Yes; Detected	Moderate Potential	Yes; Detected	No- but detected
<i>Lanius ludovicianus</i>	loggerhead shrike	Fed: None State: None DFG: CSC FWS: BCC CNDDB Ranked	NC	grassland, scrub and other open habitats with perching structures; nests in trees and shrubs	Potential	No	Unlikely	No; Not warranted	Yes; Not detected
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	Fed: None State: None DFG: WL CNDDB Ranked	C	grass covered hillsides in coastal sage scrub and chaparral	Potential	Yes; Not detected	Unlikely	No; Not warranted	Yes; Not detected
<i>Carduelis lawrencei</i>	Lawrence's goldfinch	Fed: None State: None FWS: BCC CNDDB Ranked	NC	Breeds in open oak or other arid woodland and chaparral, near water, in southern California, occurs in desert riparian, palm oasis, pinyon-juniper, and lower montane habitats. Winters erratically in southern coastal lowlands and Colorado River Valley; can be common locally.	Potential	No	Unlikely	No; Not warranted	Yes; Not detected
<i>Empidonas traillii extimus</i>	Southwestern willow flycatcher	Fed: FE State: SE CNDDB Ranked	CC	--	Unlikely	No; Not warranted	Potential	Yes; Not detected; however, one migrant male willow fly-catcher was detected.	No; Not warranted.
<i>Icteria virens</i>	Yellow-breasted chat	Fed: None State: None DFG: CNDDB Ranked	NC	--	Unlikely	No; Not warranted	Potential	No- but detected	Yes; Not detected



**Table 5.3-3 [continued]**  
**Special Status Wildlife Species Known to Occur in the Project Vicinity**

Scientific Name	Common Name	Status	NCCP	Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site	Focused Survey Conducted	Occurrence On-site	Focused Survey Conducted	Focused Survey Conducted
<i>Vireo bellii pusillus</i>	Least Bell's vireo	Fed: FE State: SE DFG: CNDDB Ranked	CC	dense riparian willow thickets	Unlikely	No; Not warranted	Moderate Potential	Yes; Not detected	No; Not warranted
<i>Dendroica petechia</i>	Yellow warbler	Fed: None State: None DFG: CSC	NC	--	Unlikely	No; Not warranted	Potential	No- but detected	No- but detected
<b>Mammals</b>									
<i>Macrotus californicus</i>	California leaf-nosed bat	Fed: None State: None DFG: CSC WBWG: High priority CNDDB Ranked	NC	roosts in caves or old mines	Potential	No	Unlikely	No; Not warranted	Yes; Not detected
<i>Lasiurus blossevilli</i>	Western red bat	Fed: None State: None DFG: CNDDB Ranked	NC	--	Unlikely	No; Not warranted	Potential	No	Yes; Not detected
<i>Nyctinomops macrotis</i>	Big free-tailed bat	Fed: None State: None DFG: CNDDB Ranked	NC	--	Unlikely	No; Not warranted	Potential	No	Yes; Not detected
<i>Antrozous pallidus</i>	Pallid bat	Fed: None State: None DFG: CSC WBWG: High priority CNDDB Ranked	NC	coastal sage scrub, oak woodland and chaparral; roosts in caves, mines, rock crevices, trees and buildings	Potential	No	Potential	No	Yes; Not detected



**Table 5.3-3 [continued]  
Special Status Wildlife Species Known to Occur in the Project Vicinity**

Scientific Name	Common Name	Status	NCCP	Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site	Focused Survey Conducted	Occurrence On-site	Focused Survey Conducted	Focused Survey Conducted
<i>Myotis yumanensis</i>	Yuma myotis	Fed: None State: None WBWG: Medium priority CNDDDB Ranked	NC	Large colonies, caves, tunnels and buildings in arid areas, forages over water	Potential	No	Unlikely	No: Not warranted	Yes: Not detected
<i>Eumops perotis californicus</i>	(California) Western mastiff bat	Fed: None State: None DFG: CSC WBWG: High priority CNDDDB Ranked	NC	widespread forager; roosts in cliffs and buildings	Potential	No	Potential	No	Yes: Not detected
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	Fed: None State: None DFG: CSC CNDDDB Ranked	NC	coastal sage scrub, grassland and chaparral	Potential	Yes: Not detected	Unlikely	No: Not warranted	Yes: Not detected
<i>Chaetodipus fallax fallax</i>	Northwestern San Diego pocket mouse	Fed: None State: None DFG: CSC CNDDDB Ranked	NC	coastal sage scrub, grassland and chaparral	Potential	No	Unlikely	No: Not warranted	Yes: Not detected
<i>Perognathus longimembris pacificus</i>	Pacific pocket mouse	Fed: FE State: ESA: CESA:None DFG: CSC CNDDDB Ranked	CC	Ranges from the vicinity of Marina del Rey in Los Angeles south along the immediate coast to the Mexican border. All definite historical localities are within 4km from the ocean and at elevations of 600 feet or less. Currently known from four locations, including the Dana Point Headlands and three locations on Camp Pendleton. This pocket mouse frequents sandy soils with sparse vegetation cover. All potential pocket mouse habitat in the Coastal/Central NCCP/HCP Subregion has been mapped and	Unlikely	No: Not warranted	Unlikely	No: Not warranted	Yes: Not detected



**Table 5.3-3 [continued]  
 Special Status Wildlife Species Known to Occur in the Project Vicinity**

Scientific Name	Common Name	Status	NCCP	Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site	Focused Survey Conducted	Occurrence On-site	Focused Survey Conducted	Focused Survey Conducted
				none occurs within the project site (County of Orange, Environmental Management Agency (1995a).					
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	Fed: None State: None DFG: CSC CNDDB Ranked	NC	inhabits open ground with fine sandy soils fine, sandy soils, may be restricted to lower elevation grassland and coastal sage scrub	Potential	No	Unlikely	No; Not warranted	Yes; Not detected
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	Fed: None State: None DFG: CSC CNDDB Ranked	C	cactus patches and rock outcroppings in coastal sage scrub	Potential	Yes; Not detected	Potential	No	Yes; Not detected
<i>Onychomys torridus ramona</i>	Ramona grasshopper mouse	Fed: None State: None DFG: CSC CNDDB Ranked	NC	annual grassland and coastal sage scrub	Potential	No	Unlikely	No; Not warranted	Yes; Not detected
<i>Taxidea taxus</i>	American badger	Fed: None State: None DFG: CSC CNDDB Ranked	NC	widespread in natural habitats	Potential	No	Unlikely	No; Not warranted	Yes; Not detected
Definitions – (see Department of Fish and Game web page <a href="http://www.dfg.ca.gov/whdab/html/cnddb.html">http://www.dfg.ca.gov/whdab/html/cnddb.html</a> for details) ESA = Federal Endangered Species Act FE = federal endangered FT = federal threatened FPE = federally proposed for listing as endangered FPT = federally proposed for listing as threatened FC = federal candidate species CESA = California Endangered Species Act SE = state endangered ST = state threatened SCE = state candidate for listing as endangered SCT = state candidate for listing as threatened (footnotes continued on following page)									



**Table 5.3-3 [continued]  
Special Status Wildlife Species Known to Occur in the Project Vicinity**

Scientific Name	Common Name	Status	NCCP	Habitat	IRWD Study Area (2008 Reports)		Planning Areas 13/17 (2008 Reports)		Entire Project Site (2011 Report)
					Occurrence On-site	Focused Survey Conducted	Occurrence On-site	Focused Survey Conducted	Focused Survey Conducted
<i>(footnotes continued from previous page)</i>									
DFG = Department of Fish and Game CSC = California species of special concern FP = fully protected species  WL = Watch list CNDDDB ranked = species listed under the states CNDDDB program FWS = Fish and Wildlife Service BCC = Birds of Conservation Concern Watch List = list of sensitive species WBWG = The Western Bat Working Group High Priority = list of species at high risk Local concern = species that is in decline in local area NCCP = County of Orange Central and Coastal Subregion C = covered species CC = conditionally covered species NC = not covered species - - = information not provided									
Source: <i>Results of the Biological Constraints Analysis Conducted for the 19.7-Acre Proposed City Hall and Park Project Site</i> (PCR Services Corporation, May 27, 2008); <i>Spring 2008 Sensitive Plant Surveys for the 19.7-Acre Proposed City Hall and Park Project Site</i> (PCR Services Corporation, August 26, 2008); and <i>Biological Report for the Lake Forest IRWD Site</i> (Harmsworth Associates, September 2008).									



The Cooper's hawk occur in mature forests, open woodlands, wood edges, river groves and riparian woodland. The majority of Cooper's hawk nests are located in small groves of oak trees but dense stands of mature willows are also used. A single Cooper's hawk was detected foraging onsite but suitable nesting sites do not exist at IRWD study area.

Merlin nest in open woodlands and savanna but forage in a wide variety of habitats including woods, scrub, chaparral and open areas. A single Merlin was detected foraging onsite.

Focused surveys were conducted in September 2008 for the following two (2) special status wildlife species having some potential to occur on the IRWD study area:

- Coastal cactus wren (*Campylorhynchus brunneicapillus*); and
- Coastal California gnatcatcher (*Poliophtila californica californica*).

Coastal Cactus Wren and Coastal California Gnatcatcher Focused Surveys. Two pairs of California gnatcatcher and an additional unpaired juvenile gnatcatcher for which focused surveys were specifically conducted were detected during the September 2008 surveys of the IRWD study area. One pair occurred in the coastal sage scrub on the western edge of the IRWD study area, a second pair occurred in the south near the water tanks, and unpaired juvenile gnatcatcher occurred in the narrow strip of coastal sage scrub along the IRWD study area's eastern boarder; refer to Figure 3 of the Harmsworth Associates September 2008 Report. Coastal California gnatcatcher is Federally threatened species and an NCCP/HCP Target Species.

No coastal cactus wrens for which focused surveys were specifically conducted were detected during the September 2008 surveys of the IRWD study area.

Also during the 2008 focused gnatcatcher and wren surveys, information on the distribution and status of the following special status wildlife species that utilize CSS was collected:

- American peregrine falcon (*Falco peregrinus anatum*);
- Bell's sage sparrow (*Amphispiza belli belli*);
- Burrowing owl (*Athene cunicularia*);
- Cooper's hawk (*Accipiter cooperi*);
- Ferruginous hawk (*Buteo regalis*);
- Golden eagle (*Aquila chrysaetos*);
- Long-eared owl (*Asio otus*);
- Northern harrier (*Circus cyaneus*);
- Merlin (*Falco columbarius*);
- Orange-throated whiptail (*Cnemidophorus hyperythrus*);
- San Diego black-tailed jackrabbit (*Lepus californicus*);
- San Diego desert woodrat (*Neotoma lepida intermedia*);
- San Diego horned lizard (*Phrynosoma coronatum blainvillei*);
- Sharp-shinned hawk (*Accipiter striatus*);
- Short-eared owl (*Asio flammeus*);
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*); and
- White-tailed kite (*Elanus leucurus*).



Of these 17 special status wildlife species, the following two (2) were detected during the September 2008 coastal California gnatcatcher and coastal cactus wren surveys of the IRWD study area:

- Cooper's hawk (*Accipiter cooperi*); and
- Merlin (*Falco columbarius*).

None of the remaining 15 special status wildlife species were detected during the September 2008 coastal California gnatcatcher and coastal cactus wren surveys of the IRWD study area.

As of 2008, focused surveys had not been conducted for the following 18 special status wildlife species identified as having potential to occur on the IRWD study area:

- American badger (*Taxidea taxus*);
- California leaf (nosed) bat (*Macrotus californicus*);
- California (Western) mastiff bat (*Eumops perotis californicus*);
- Coast patch-nosed snake (*Salvadora hexalepis virgulata*);
- Coast (San Diego) horned lizard (*Phrynosoma coronatum blainvillei*);
- Coastal rosy boa (*Charina trivirgata roseofusca*);
- Coastal western whiptail (*Cnemidophorus tigris stejnegeri*);
- Coronado skink (*Eumeces skiltonianus interparietalis*);
- Lawrence's goldfinch (*Carduelis lawrencei*);
- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*);
- Loggerhead shrike (*Lanius ludovicianus*);
- Northern red-diamond rattlesnake (*Crotalus ruber ruber*);
- Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*);
- Ramona grasshopper mouse (*Onychomys torridus Ramona*);
- Rufous hummingbird (*Selasphorus rufus*);
- Silvery legless lizard (*Anniella pulchra pulchra*);
- Pallid bat (*Antrozous pallidus*); and
- Yuma myotis (*Myotis yumanensis*).

### Planning Areas 13 and 17

As indicated in [Table 5.3-3](#), 21 of the 47 special status wildlife species known to occur in the project vicinity were identified as having potential to occur on PAs 13/17. The following four wildlife species are Federal/State listed: American peregrine falcon (*Falco peregrinus anatum*) is a State endangered species; Coastal California Gnatcatcher (*Poliopitila californica californica*) is a Federally threatened species; Southwestern willow flycatcher (*Empidonas traillii extimus*) is a Federal and State endangered species; and Least Bell's vireo (*Vireo bellii pusillus*) is a Federal and State endangered species. The American peregrine falcon would only utilize PAs 13/17 by passing through and would not nest on-site (due to the lack of suitable nesting habitat). Twenty-six (26) of the 47 special status wildlife species known to occur in the project vicinity were identified as having no (i.e., unlikely) potential to occur on PAs 13/17.



Focused surveys were conducted in 2008 for the following three special status wildlife species having potential to occur on PAs 13/17:

- Least Bell's vireo (*Vireo bellii pusillus*);
- Coastal California gnatcatcher (*Polioptila californica californica*); and
- Southwestern willow flycatcher (*Empidonas traillii extimus*).

Least Bell's Vireo Surveys. No Least Bell's vireos for which focused surveys were specifically conducted were detected during the August 2008 surveys of PAs 13/17. However, the following four (4) special status wildlife species were detected during the August 2008 Least Bell's vireo surveys of PAs 13/17:

- Coastal California gnatcatcher (*Polioptila californica californica*);
- Willow flycatcher (*Empidonas traillii extimus*);
- Yellow-breasted chat (*Icteria virens*); and
- Yellow warbler (*Dendroica petechia*).

The Coastal California gnatcatcher is a Federally threatened species, California Species of Special Concern (SSC), and NCCP/HCP Target Species. The willow flycatcher is a state endangered species. The yellow warbler and yellow-breasted chat are both state Species of Special Concern (SSC).

Coastal California Gnatcatcher Surveys. One pair of coastal California gnatcatchers for which focused surveys were specifically conducted were detected during the September 2008 surveys of PAs 13/17. This pair occurred primarily within the central portion of PAs 13/17, but was also observed within the eastern and northern portions. The pair was first detected on June 4, 2008 and was observed on all of the following surveys. The pair was observed utilizing mixed scrub, mixed scrub/mule fat scrub, mule fat scrub, and buckwheat scrub habitats; refer to Figure 4 of the PCR September 2, 2008 Report. This map depicts a polygon that includes the locations of all observations of coastal California gnatcatchers within PAs 13/17.

The following two (2) special status wildlife species were also detected during the September 2008 coastal California gnatcatcher surveys of PAs 13/17:

- Yellow-breasted chat (*Icteria virens*); and
- Yellow warbler (*Dendroica petechia*).

Southwestern Willow Flycatcher Surveys. No southwestern willow flycatchers for which focused surveys were specifically conducted were detected during the September 2008 surveys of PAs 13/17. However, one male willow flycatcher (*Empidonax traillii*), which is listed as State endangered, was observed during a previous survey. Because it was not heard during subsequent surveys, it is considered to be a migrant.

The American peregrine falcon would only utilize PAs 13/17 by passing through and would not nest on-site (due to the lack of suitable nesting habitat). Therefore, a focused survey of PAs 13/17 for the American peregrine falcon is not warranted. Additionally, yellow-breasted chat and yellow



warbler were observed on PAs 13/17 during site surveys. Therefore, the presence of these two species has been confirmed and focused surveys are not warranted.

As of 2008, focused surveys had not been conducted for the following 15 special status wildlife species identified as having potential to occur on PAs 13/17:

- Big free-tailed bat (*Nyctinomops macrotis*);
- California (Western) mastiff bat (*Eumops perotis californicus*); and
- Coast patch-nosed snake (*Salvadora hexalepis virgulata*);
- Coast range newt (*Taricha torosa torosa*);
- Coast (San Diego) horned lizard (*Phrynosoma coronatum blainvillei*);
- Golden eagle (*Aquila chrysaetos*);
- Long-eared owl (*Asio otus*);
- Northern harrier (*Circus cyaneus*);
- Northern red-diamond rattlesnake (*Crotalus ruber ruber*);
- Orange-throated whiptail (*Cnemidophorus hyperythra*);
- Pallid bat (*Antrozous pallidus*);
- San Diego desert woodrat (*Neotoma lepida intermedia*);
- Two-striped garter snake (*Thamnophis hammondi*);
- Western red bat (*Lasiurus blossevilli*); and
- White-tailed kite (*Elanus leucurus*).

#### Project Site (In its Entirety)

Focused surveys of the project site in its entirety were conducted for the following special status wildlife species on June 22, 24, and 30, 2011:

- American badger (*Taxidea taxus*);
- American peregrine falcon (*Falco peregrinus anatum*);
- Bell's sage sparrow (*Amphispiza belli belli*);
- Big free-tailed bat (*Nyctinomops macrotis*);
- Burrowing owl (*Athene cunicularia*);
- California leaf-nosed bat (*Macrotus californicus*);
- California (Western) mastiff bat (*Eumops perotis californicus*);
- Coast (San Diego) horned lizard (*Phrynosoma coronatum blainvillei*);
- Coast patch-nosed snake (*Salvadora hexalepis virgulata*);
- Coast Range newt (*Taricha torosa torosa*);
- Coastal rosy boa (*Charina trivirgata roseofusca*);
- Coastal western whiptail (*Cnemidophorus tigris stejnegeri*);
- Cooper's hawk (*Accipiter cooperi*);
- Coronado skink (*Eumeces skiltonianus interparietalis*);
- Ferruginous hawk (*Buteo regalis*);
- Golden eagle (*Aquila chrysaetos*);
- Lawrence's goldfinch (*Carduelis lawrencei*);
- Loggerhead shrike (*Lanius ludovicianus*);
- Long-eared owl (*Asio otus*);



- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*);
- Merlin (*Falco columbarius*)
- Northern harrier (*Circus cyaneus*);
- Northern red-diamond rattlesnake (*Crotalus ruber ruber*);
- Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*);
- Orange-throated whiptail (*Cnemidophorus hyperythra*);
- Pallid bat (*Antrozous pallidus*);
- Ramona grasshopper mouse (*Onychomys torridus Ramona*);
- Rufous hummingbird (*Selasphorus rufus*);
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)
- San Diego desert woodrat (*Neotoma lepida intermedia*);
- Sharp-shinned hawk (*Accipiter striatus*)
- Short-eared owl (*Asio flammeus*)
- Silvery legless lizard (*Anniella pulchra pulchra*);
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*);
- Two-striped garter snake (*Thamnophis hammondi*);
- Western mastiff bat (*Eumops perotis californicus*);
- Western red bat (*Lasiurus blossevillei*);
- White-tailed kite (*Elanus leucurus*);
- Yellow-breasted chat (*Icteria virens*); and
- Yuma myotis (*Myotis yumanensis*).

None of these special status wildlife species for which focused surveys were specifically conducted were detected during the June 2011 surveys. However, the following three special status wildlife species were detected onsite during the 2011 surveys:

- Coastal California gnatcatcher (*Poliophtila californica californica*);
- California horned lark (*Eremophila alpestris actia*); and
- Yellow warbler (*Dendroica petechia brewsteri*).

Two pairs of gnatcatchers and a single male gnatcatcher were detected onsite during the 2011 survey, as illustrated on Figure 3 of the 2011 Harmsworth Report; refer to [Appendix 12.6](#). These were in similar locations as detected during the 2008 surveys. A flock of California horned larks were detected during the 2011 survey, in the disturbed area at the central portion of the site, as they were during the 2008 surveys. Two pairs of yellow warbler were detected during the 2011 survey in the riparian woodland along Serrano Creek, in an area proposed for open space; refer to Figure 3 of the 2011 Harmsworth Report.

### Conclusion

As indicated in [Table 5.3-3](#), focused surveys have been conducted (in 2008 and 2011) for all special status wildlife species identified as having some potential to occur on the project site. The following species were observed on the project site:

- California horned lark (*Eremophila alpestris actia*);
- Coastal California gnatcatcher (*Poliophtila californica californica*);



- Cooper's hawk (*Accipiter cooperi*);
- Merlin (*Falco columbarius*);
- Southwestern willow flycatcher (*Empidonas traillii extimus*);
- Yellow breasted chat (*Icteria virens*).
- Yellow warbler (*Dendroica petechia brewsteri*).

Only the coastal California gnatcatcher is an NCCP/HCP Target Species. None of the remaining species are NCCP/HCP covered species. It is noted, the Southwestern willow flycatcher is a subspecies of the willow flycatcher. The Southwestern willow flycatcher is an NCCP (Conditionally Covered) Species (and Federal and State endangered species). Because it is impossible to distinguish between the two species in the field, the single male flycatcher detected onsite is assumed to be the Southwestern willow flycatcher for analysis purposes.

## JURISDICTIONAL WETLANDS AND WATERS

The Biological Reports included a delineation of jurisdictional waters to determine the location and extent of any areas under the jurisdiction of the ACOE and/or the Santa Ana Regional Water Quality Control Board (RWQCB). The purpose of the study is to delineate jurisdictional waters of the U.S. (including wetlands) and waters of the State on PAs 13/17.

### IRWD Study Area

No areas subject to the ACOE 404 or CDFG 1600 programs occur on the IRWD study area. As previously noted, a few areas of Non-jurisdictional Mulefat Scrub occurred in small isolated locations onsite near irrigation systems, where water collected in low areas, or was channelized by earthen or concrete V-ditches or other topographic features. All of these areas were artificially created and were not associated with a natural drainage, streambed, lake, or Waters of the U.S. None of the Non-jurisdictional Mulefat Scrub areas were subject to the ACOE 404 or CDFG 1600 programs.

### Planning Areas 13 and 17

The ACOE regulates the “discharge of dredged or fill material” into waters of the U.S., which includes all waters currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce; waters subject to the ebb and flow of the tide; all interstate waters; all other waters, including intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce; or any other waters that are part of a tributary system to interstate waters or to navigable waters of the U.S., pursuant to provisions of Section 404 of the Clean Water Act (CWA).

The RWQCB regulates “discharging waste, or proposing to discharge waste, within any region that could affect waters of the State, pursuant to provisions of the Porter-Cologne Water Quality Control Act. Waters of the State are defined as “any surface water or groundwater, including saline waters, within the boundaries of the State.”



The CDFG regulates activities which “will substantially divert, obstruct, or substantially change the natural flow or bed, channel or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit.” The CDFG takes jurisdiction to the top of bank of the stream, or the limit of the adjacent riparian vegetation when present.

As indicated in the Investigation of Jurisdictional Wetlands and Waters of the U.S. Lake Forest City Hall Project Site (Jurisdictional Investigation), PAs 13/17 were investigated to determine the presence or absence of ACOE, RWQCB, and/or CDFG jurisdiction. Serrano Creek is located to the east of the project site. The eastern portion of PA 13, adjoining Serrano Creek, would be designated and preserved as open space (Lot O). However, one drainage feature (Drainage A) and one associated tributary (Tributary A1) were identified in PA 13 (in the northeastern portion); refer to Exhibit 5.3-1, Jurisdictional Features. These on-site drainages are tributary to Serrano Creek to the east. No drainage features were identified on the remainder of the project site.

### Drainage A and Tributary A1

Drainage A and Tributary A1 were delineated as jurisdictional “waters of the U.S.” under Section 404 and 401 of the CWA, as well as State regulations, and are therefore regulated by all three agencies (ACOE, RWQCB, and CDFG). The on-site jurisdictional resources delineated within Drainage A and Tributary A1 total approximately 1,015 linear feet of streambed; refer to Table 5.3-4, Jurisdictional Drainage Systems and Associated Wetlands.

**Table 5.3-4  
 Jurisdictional Drainage Systems and Associated Wetlands**

Name	Length (feet)	Average Width (feet)			Area (acres) <sup>1</sup>			Nature
		ACOE/RWQCB	Wetlands	CDFG	ACOE/RWQCB	Wetlands	CDFG	
A	811	3-5	4-20	25-75	0.077	0.206	1.859	Perennial
A1	204	2-18	-	2-18	0.005	-	0.050	Ephemeral
TOTALS	1,015	-	-	-	0.082	0.206	1.909	-
Notes:								
1. ACOE/RWQCB “waters of the U.S.”/“waters of the State” acreages are included within the acreages for Wetlands and are not additive. ACOE/RWQCB “waters of the U.S.”/“waters of the State” and Wetlands are included within the acreages of CDFG and the areas are not additive.								
Source: PCR services Corporation, <i>Investigation of Jurisdictional Wetlands and Waters of the U.S. Lake Forest City Hall Project Site</i> , May 2008.								

Drainage A (Perennial, Wetlands). Drainage A consists of a north/south flowing perennial drainage. The drainage is a small, well defined feature, confined within a small, topographically distinct riparian corridor located along the floor of a small valley. Flows originate from a distinct groundwater spring or discharge at the drainage’s northern extent. These perennial flows are likely supported by natural groundwater and augmented by the irrigation associated with surrounding development. Additionally, the system hydrology is further supplemented from seasonal surface runoff, including sheet flow from the surrounding valley, and stormwater runoff from Indian Ocean Drive collected in the on-site concrete V-ditch. Drainage A is approximately 818 linear feet in length on-site, and exits the study area via a culvert under the Serrano Creek Trail. Drainage A subsequently flows off-site into Serrano Creek to the southeast.



Source: PCR Services Corporation, 2008.

NOT TO SCALE



08/11 • JN 10-107199

SERRANO SUMMIT AREA PLAN 2009-01 AND  
TENTATIVE TRACT MAP NO. 17331  
ENVIRONMENTAL IMPACT REPORT

## Jurisdictional Features

Exhibit 5.3-1



Tributary A1 (Ephemeral). Tributary A1 is a small confined, ephemeral feature that carries stormwater runoff down the steep northern slope into Drainage A. Tributary A1 is a generally well defined erosional feature with a channel that ranges from one to 20 feet wide, with one- to two-foot high vertical earthen banks. Tributary A1 is approximately 204 linear feet in length on-site and flows into Drainage A near its northern extent.

### **Jurisdictional Waters of the U.S.**

Army Corps of Engineers/Regional Water Quality Control Board. Drainage A encompasses 0.077 acre of ACOE/RWQCB jurisdictional waters of the U.S./waters of the State. Drainage A also contains 0.206 acre of ACOE/RWQCB jurisdictional wetlands. Wetlands are defined by the Clean Water Act as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.” It is noted that the area delineated as jurisdictional wetlands includes both the delineated jurisdictional waters of the U.S./waters of the State (0.077 acre) and bordering vegetated wetlands (0.129 acre), for a total of 0.206 acre of ACOE/RWQCB jurisdictional area within Drainage A. Tributary A1 was mapped to contain 0.005 acre of ACOE/RWQCB jurisdictional waters of the U.S./waters of the State. No wetlands are present within Tributary A1.

California Department of Fish and Game. Drainage A encompasses 1.859 acre of CDFG jurisdictional streambed and associated riparian habitat. Tributary A1 contains 0.050 acre of CDFG jurisdictional streambed and associated riparian habitat.

## **WILDLIFE MOVEMENT CORRIDORS AND LINKAGES**

The terms “wildlife corridors” and “linkages” are based upon fundamental ecological concepts, but can be easily misinterpreted. The following definitions are intended to provide a working understanding of corridors and linkages.

**Wildlife corridors** are areas which animals can use to move from one patch of suitable habitat to another. These areas would be expected to have the least habitat fragmentation relative to surroundings areas. A wildlife corridor establishes connectivity for animals to move, live, reproduce and respond to functional ecological processes during the course of a year to several years. The quality and functionality of a particular wildlife corridor varies from species to species.

**Wildlife crossings** are generally small, narrow wildlife corridors that allow wildlife to pass through an obstacle or barrier such as a roadway to reach another patch of habitat. Wildlife crossings are manmade and include culverts, drainage pipes, underpasses, tunnels, and, more recently, crossings created specifically for wildlife movement over or under highways.

Both wildlife crossings and wildlife corridors function to prevent habitat fragmentation that would result in the loss of species that require large contiguous expanses of unbroken habitat and/or that occur in low densities.



**Linkages** are areas that provide for long term movement or interaction of wildlife to maintain natural evolutionary and ecological patterns. Linkages are fundamental for gene flow and large scale ecological processes. These areas are usually defined by the zones of “least resistance” for the genes of a given species to move or “flow” between core reserve populations.

#### **IRWD Study Area**

No wildlife corridors or linkages are known to occur at the IRWD study area.

#### **IRWD Study Area**

No wildlife corridors or linkages are known to occur at the IRWD study area.

#### **Planning Areas 13 and 17**

Serrano Creek flows along the eastern side of PAs 13/17. This water course provides connectivity or is adjacent to other greenbelt or open space areas, and accordingly, is considered a wildlife corridor.

### **5.3.2 REGULATORY FRAMEWORK**

Threatened and endangered species are listed by the USFWS and CDFG. In California, three agencies generally regulate activities within inland streams, wetlands, and riparian areas: ACOE; the CDFG; and the RWQCB. The ACOE Regulatory Branch regulates activities pursuant to Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. The CDFG regulates activities under CDFG Code Sections 1600-1607. The RWQCB regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Act.

### **FEDERAL**

#### **Federal Endangered Species Act**

The FESA of 1973 (50 CFR 17) is intended to protect plants and animals that have been identified as being at risk of extinction and classified as either threatened or endangered. FESA also regulates the “taking” of any endangered fish or wildlife species, per Section 9 of the Act. A responsible agency or individual landowners are required to submit to a formal consultation with the USFWS to assess potential impacts to listed species as the result of a development project, pursuant to FESA Sections 7 and 10. The USFWS is required to make a determination as to the extent of impact to a particular species a project would have. If it is determined that potential impacts to a species would likely occur, measures to avoid or reduce such impacts must be identified.

#### **Federal Clean Water Act**

##### Section 404

The ACOE maintains regulatory authority over the discharge of dredged or fill material into the waters of the United States, pursuant to Section 404 of the CWA. The ACOE and United States Environmental Protection Agency (EPA) defines “fill material” as any “material placed in waters of



the United States where the material has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of the waters of the United States.” Fill material may include sand, rock, clay, construction debris, wood chips, or other similar “materials used to create any structure or infrastructure in the waters of the United States.” The term “waters of the United States” includes the following:

- All waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide;
- Wetlands;
- All waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds; the use, degradation or destruction of which could affect interstate or foreign commerce;
- All impoundments of water mentioned above;
- All tributaries of waters mentioned above;
- Territorial seas; and,
- All wetlands adjacent to the waters mentioned above.

In the absence of wetlands, the ACOE’s jurisdiction in non-tidal waters extends to the ordinary high water mark (OHWM), which is defined as “...*that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area (33 CFR 328.3(e)).*”

Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands are jointly defined by the ACOE and EPA as “*those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3(b)).*”

On January 9, 2001, the U.S. Supreme Court issued the decision, Solid Waste Agency of Northern Cook County v. U.S. Army Corp of Engineers et al. As a result of this case, the scope of the ACOE’s Section 404 CWA regulatory permitting program was limited, restricting ACOE’s jurisdictional authority over isolated, non-navigable, intrastate waters that are not tributary or adjacent to navigable waters or tributaries (i.e., wetland conditions). The Supreme Court held that Congress did not intend for isolated, non-navigable water conditions to be covered within Section 404 of the CWA, as they are not considered to be true “waters of the U.S.”

#### Section 401

The RWQCB is the primary agency responsible for protecting water quality in California. The RWQCB regulates discharges to surface waters under the Federal CWA and the California Porter-Cologne Water Quality Control Act. The RWQCB’s jurisdiction extends to all waters of the State and to all waters of the United States, including wetlands (isolated and non-isolated conditions).



Through 401 Certification, Section 401 of the CWA allows the RWQCB to regulate any proposed Federally-permitted activity that may affect water quality. Such activities include the discharge of dredged or fill material, as permitted by the ACOE, pursuant to Section 404 of the CWA. The RWQCB is required to provide “certification that there is reasonable assurance that an activity which may result in the discharge to waters of the United States will not violate water quality standards,” pursuant to Section 401. Water Quality Certification must be based on the finding that proposed discharge will comply with applicable water quality standards, of which are given as objectives in each of the RWQCB’s Basin Plans.

In addition, pursuant to the Porter-Cologne Water Quality Control Act, the State is given authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. As such, any person proposing to discharge waste into a water body that could affect its water quality must first file a Report of Waste Discharge if a Section 404 does not apply. “Waste” is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

## **STATE**

### **California Endangered Species Act**

The CESA of 1984, in combination with the California Native Plant Protection Act of 1977, regulates the listing and take of plant and animal species designated as endangered, threatened, or rare within the State. The State of California also lists Species of Special Concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. The CDFG is given the responsibility by the State to assess development projects for their potential to impact listed species and their habitats. State listed special-status species are also addressed through the issuance of a 2081 permit (Memorandum of Understanding).

### **California Fish and Game Code**

Within the State of California, fish, wildlife, and native plant resources are protected and managed by the CDFG. The Fish and Game Commission and/or the CDFG are responsible for issuing permits for the take or possession of protected species. The following sections of the Code address the protected species: Section 3511 (birds); Section 4700 (mammals); Section 5050 (reptiles and amphibians); and, Section 5515 (fish).

### **California Department of Fish and Game Lake and Streambed Alteration Agreements**

Historically, the State of California regulated activities in rivers, streams, and lakes pursuant to *California Fish and Game Code* Sections 1600-1607; however, on January 1, 2004, legislation went into effect that repealed Fish and Game Code Sections 1600-1607 and instead, added *Fish and Game Code* Sections 1600-1616. This action eliminated the separation between private/public notifications (previously 1601/1603). Section 1602 of the *Fish and Game Code* requires any person, state, or local governmental agency, or public utility to notify the CDFG before commencing any activity that would result in one or more of the following:



- Substantially obstruct or divert the natural flow of a river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or,
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

*Fish and Game Code* Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes within the State of California. While the jurisdictional limits are similar to the limits defined by ACOE regulations, CDFG jurisdiction includes riparian habitat supported by a river, stream, or lake with or without the presence or absence of saturated soil conditions or hydric soils. CDFG jurisdiction generally includes to the top of bank of the stream, or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Any project that occurs within or in the vicinity of a river, stream, lake, or their tributaries typically requires notification of the CDFG, including rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life, and watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.

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

The Federal Migratory Bird Treaty Act (MBTA) was originally drafted to end the commercial trade in bird feathers popular in the latter part of the 1800s. The MBTA makes it illegal to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers, nests, eggs, or other avian products. The USFWS is responsible for enforcing the MBTA.

### **California Environmental Quality Act**

In addition to specific Federal and State statutes for the protection of threatened and endangered species, *California Environmental Quality Act (CEQA) Guidelines* Section 15380(b) provides that a species not listed on the Federal or State list of protected species may be considered rare or endangered if it can be shown that the species meets certain specified criteria. Modeled after definitions in the FESA and the section of the *California Fish and Game Code* dealing with rare or endangered plants and animals, these criteria are given in *CEQA Guidelines* Section 15380(b). The effect of Section 15380(b) is to require public agencies to undertake reviews to determine if projects would result in significant effects on species not listed by either the USFWS or CDFG (i.e., candidate species). Through this process, agencies are provided with the authority to protect additional species from the potential impacts of a project until the appropriate government agencies have an opportunity to designate the species as protected, if deemed appropriate.

## **COUNTY OF ORANGE CENTRAL AND COASTAL SUBREGION NATURAL COMMUNITY CONSERVATION PLAN AND HABITAT CONSERVATION PLAN**

The Natural Community Conservation Act (the Act), codified at Fish and Game Code Sections 2800-2840, authorizes the preparation of NCCPs to protect natural communities and species, while allowing a reasonable amount of economic development. The NCCP/HCP for the County of



Orange Central and Coastal Subregion was reviewed and approved by the CDFG and USFWS in 1996. The Subregion is a 208,000-acre area that includes the central portion of Orange County, including the area from the coastline inland to Riverside County, and from the mouth of the Santa Ana River (Costa Mesa) to the mouth of San Juan Creek (Dana Point). The project site is located within the NCCP/HCP's Central and Coastal Subregion, and more specifically located within the Central Subarea.<sup>1</sup>

The NCCP/HCP is intended to address protection and management of CSS habitat and CSS-obligate species, and other covered habitats and species, and mitigate anticipated impacts to those habitats and species, on a programmatic, sub-regional level, rather than on a project-by-project, single species basis. The City of Lake Forest, as well as 12 additional cities, participate in the implementation of the NCCP/HCP and are signatories to the NCCP/HCP Implementation Agreement (IA).

### Participating and Non-Participating Landowners

Two categories of landowners are identified by the NCCP/HCP: *Participating Landowners*; and *Non-Participating Landowners*. Each of these categories is offered different endangered species habitat mitigation opportunities.

**Participating Landowners** are those public and private landowners contributing significant land/funding toward implementation of the Reserve System and adaptive management program. For these landowners, development activities and uses that are addressed by the NCCP/HCP are considered fully mitigated under the NCCP Act, the FESA and the CESA for impacts to habitat occupied by listed and other species "identified" by the NCCP/HCP. Implementation of the NCCP/HCP under the terms of the IA means that no additional mitigation will be required of Participating Landowners for impacts to Identified Species and their habitat, or for species residing in specified non-coastal sage scrub habitats (referred to as "covered habitats"). The project Applicant (i.e., IRWD) is a Participating Landowner.<sup>2</sup>

**Non Participating Landowners** are other landowners within the subregion that are not contributing either significant land to the Reserve System or funding for the adaptive management program. The NCCP/HCP provides these non-participating landowners with a different mitigation option recognizing that they are required under current law to assure that impacts to listed species resulting from activities on their lands are fully mitigated consistent with CESA and FESA. These non-participating landowners may satisfy the requirements of CESA and FESA with respect to listed CSS species covered under the NCCP/HCP in any of the following ways:

1. Onsite avoidance of Take;
2. Satisfaction of applicable CESA and FESA provisions under the consultation and permit provisions of these statutes; or

---

<sup>1</sup> R.J. Meade Consulting, Inc., *County of Orange Central & Coastal Subregion Natural Community Conservation Plan & Habitat Conservation Plan, Map Section, Figure 12: Proposed Habitat Reserve System*, July 17, 1996.

<sup>2</sup> R.J. Meade Consulting, Inc., *County of Orange Central & Coastal Subregion Natural Community Conservation Plan & Habitat conservation Plan, Parts I & II: NCCP/HCP*, Page ES-7 July 17, 1996.



3. Payment of a Mitigation Fee to the non-profit management corporation, as provided for in the NCCP/HCP.

The property proposed for development is owned by the IRWD, which is a Participating Landowner, as noted above. However, IRWD acquired the property after the NCCP/HCP was completed in 1996.<sup>3</sup> Therefore, impacts to Covered Habitats other than CSS, if any, would not be covered by the NCCP/HCP for this project. Because the City of Lake Forest is a participating jurisdiction that is signatory to the NCCP/HCP, the project is eligible to use the in-lieu Mitigation Fee to address impacts to CSS occupied by the coastal California gnatcatcher (*Poliioptila californica californica*) (gnatcatcher), if any.

### NCCP/HCP Key Components

The NCCP/HCP is primarily intended to protect and manage habitat supporting a broad range of plant and animal species that are found within the Central and Coast Subregions. To this end, the NCCP/HCP creates a subregional Habitat Reserve System and implements a coordinated program to manage biological resources within the habitat reserve. The Habitat Reserve System and Adaptive Management Program are key NCCP/HCP components, among others.

The Habitat Reserve System encompasses over 37,000 acres for the protection of covered species and habitats. The Reserve will include significant areas of 12 of the 13 major habitat types located within the subregion, as outlined in HCCP/NCCP Table 1-ES, *Habitat Reserve Vegetation and Target Species*. The project site is not located within the Habitat Reserve.<sup>4</sup> The project site is located within an Impact Area, where impacts to species and habitats receiving regulatory coverage under the NCCP/HCP would be authorized.

The NCCP/HCP includes a comprehensive habitat management program designed to protect the biological resources within the Reserve over the long-term. Under the Adaptive Management Program, management actions within the Reserve will be monitored closely and modified (adapted) over time to respond to new scientific information, and changing conditions and habitat needs.

### Species and Habitats Covered Under the NCCP/HCP

The subregional reserve design process for the Central and Coastal Subregion focused on protection CSS habitat and three designated “target species”: coastal California gnatcatcher; coastal cactus wren; and orange-throated whiptail lizard. Although designed for the three target species, the Reserve System also provides significant levels of protection for a much broader range of habitats and species than just CSS and the three target species.

The NCCP/HCP provides regulatory coverage for CSS and a total of 39 individual species; refer to NCCP/HCP Table 2-ES, *Target and Identified Species Receiving Regulatory Coverage Under the NCCP/HCP*. The 39 species receiving regulatory coverage include the three target species, six additional federally-

<sup>3</sup> Written Correspondence: Karen A Goebel, Assistant Field Supervisor, United States Department of the Interior Fish and Wildlife Service, May 23, 2011.

<sup>4</sup> R.J. Meade Consulting, Inc., *County of Orange Central & Coastal Subregion Natural Community Conservation Plan & Habitat Conservation Plan, Map Section, Figure 12: Proposed Habitat Reserve System*, July 17, 1996.



listed species, and 30 other “identified” species that are not currently listed under either the CESA or FESA, however, are found within the subregional CSS habitat. All 39 of the “target” and “identified” species would be treated as if they were listed. Under the NCCP/HCP, regulatory coverage means that future Incidental Take of “target” and “identified” species would be permitted for new development (planned activities) addressed by the NCCP/HCP, and that no additional habitat mitigation for such Incidental Take under CESA and FESA would be required by local, state, or federal agencies over and above the mitigation provided for by the NCCP/HCP. For “Conditionally Covered” species, additional mitigation measures have been specified in the IA.

In addition to the regulatory coverage for Incidental Take of CSS habitat and the 39 Target and Identified Species, the NCCP/HCP addresses other species located within specified habitats outside the habitat Reserve System. These habitat types are referred to as “Covered Habitats” and include the following: oak woodlands; Tecate cypress forest; cliff and rock; and chaparral (only within the Coastal Subarea).

## **CITY OF LAKE FOREST DEVELOPMENT CODE – TREE PRESERVATION**

City of Lake Forest Municipal Code (LFMC) Chapter 6.20, *Regulations Pertaining to Conversion, Maintenance, and Removal of Eucalyptus Trees*, is known as the Lake Forest Eucalyptus Tree Conservation Ordinance. This Ordinance is intended to control the infestation of the eucalyptus longhorn borer by regulating the maintenance of eucalyptus trees in a healthy and nonhazardous condition through good arboricultural practices and prohibiting the transportation and cutting of eucalyptus trees or logs during the period of April 1st through October 31st without a City permit. Pursuant to LFMC Section 6.20.025, *Permit Required to Prune and Transport Eucalyptus Trees*, during the period from April 1st through October 31st of each year (“restricted period”), it is unlawful for any person to prune, cut branches from, top, or cut down any eucalyptus tree on public property within the City or to transport on the City's streets or highways any logs, branches, or trunk of any eucalyptus tree, unless a eucalyptus tree cutting permit has been obtained from the City.

### **5.3.3 IMPACT THRESHOLDS AND SIGNIFICANCE THRESHOLD CRITERIA AND METHODOLOGY**

The issues presented in the Initial Study Environmental Checklist (Appendix G of the *CEQA Guidelines*) have been utilized as thresholds of significance in this Section. Accordingly, biological resources impacts resulting from the implementation of the proposed project may be considered significant if they would result in the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Services.



- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Services.
- 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.
- Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

*CEQA Guidelines* Section 15065(a), *Mandatory Findings of Significance*, states that a project may have a significant effect on the environment if it would have "... the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species ..."

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would substantially diminish, or result in the loss of, an important biological resource or those that would obviously conflict with local, State, or Federal resource conservation plans, goals, or regulations. Impacts are sometimes locally adverse but not significant because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis.

*CEQA Guidelines* Section 15380, *Endangered, Rare or Threatened Species*, states that a lead agency can consider a non-listed species to be Rare, Threatened, or Endangered for the purposes of CEQA, if the species can be shown to meet the criteria in the definition of Rare, Threatened, or Endangered. For the purposes of this discussion, the current scientific knowledge on the population size and distribution for each special status species was considered according to the definitions for Rare, Threatened, and Endangered listed in CEQA Guidelines Section 15380.

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.



## 5.3.4 IMPACTS AND MITIGATION MEASURES

### SPECIAL STATUS SPECIES

**BIO-1 PROJECT IMPLEMENTATION COULD HAVE AN ADVERSE EFFECT, EITHER DIRECTLY OR THROUGH HABITAT MODIFICATIONS, ON SPECIES IDENTIFIED AS A CANDIDATE, SENSITIVE, OR SPECIAL STATUS.**

#### *Impact Analysis:*

### SPECIAL STATUS PLANT SPECIES

As indicated in [Table 5.3-2](#), focused surveys have been conducted (in 2008 and 2011) for 39 of the 40 special status plant species identified as having some (medium or high) potential to occur on the project site. None of the special status plant species for which focused surveys were specifically conducted were detected during the 2008 and 2011 surveys of the project site. Therefore, project implementation would result in less than significant impacts regarding these 39 special status plant species and no further analysis is required.

Although the San Diego marsh elder was observed during the 2011 surveys, any direct impacts resulting from project implementation would be less than significant, given this species was likely planted for landscaping purposes and does not exist in a natural condition (i.e., occurs on a slope adjacent to sprinkler heads, as opposed to a typical riparian/wetland area). Therefore, project implementation would result in less than significant impacts regarding the San Diego marsh elder and no further analysis is required.

A focused survey of the IRWD study area has not been conducted for Rayless raywort (*Senecio aphanactis*), which was identified as having medium potential to occur on the site. Given, the potential exists for this special status plant species to be present on the IRWD study area, a focused survey is warranted to confirm its presence or absence. Mitigation Measure BIO-1 requires that the Applicant conduct a focused survey for Rayless raywort on the IRWD study area. Rayless raywort is a CNPS 1B.2 species, however, is not an NCCP-covered species. If this special status plant species is observed during the focus surveys, then compliance with Mitigation Measure BIO-2 would be required. Mitigation Measure BIO-2 would require adherence to requirements of the FESA or CESA, as applicable. If the species is not protected under FESA or CESA, but is otherwise protected through another regulatory requirement, the Applicant would be required to provide suitable replacement habitat at a minimum ratio of 1:1. The Applicant may also be required to prepare a mitigation plan to demonstrate that appropriate long-term habitat management is provided. The mitigation plan must be prepared in consultation with and receive the approval of the agency regulating the species or habitat. The mitigation plan should provide among other things, biological monitoring during grading activities and fencing of any area that would not be disturbed. With implementation of Mitigation Measure BIO-2 requiring compliance with FESA/CESA, potential impacts to this special status plant species (i.e., Rayless raywort) would be reduced to less than significant levels.



Overall, with implementation of Mitigation Measures BIO-1 (and potentially Mitigation Measure BIO-2, as necessary), project implementation would not result in substantial adverse effects on any plant species identified as a candidate, sensitive, or special status species.

## SPECIAL STATUS WILDLIFE SPECIES

As indicated in [Table 5.3-3](#), focused surveys have been conducted (in 2008 and 2011) for all special status wildlife species identified as having some potential to occur on the project site. The following species were observed on the project site:

- California horned lark (*Eremophila alpestris actia*);
- Coastal California gnatcatcher (*Poliophtila californica californica*);
- Cooper's hawk (*Accipiter cooperi*);
- Merlin (*Falco columbarius*);
- Southwestern willow flycatcher (*Empidonas traillii extimus*);
- Yellow breasted chat (*Icteria virens*).
- Yellow warbler (*Dendroica petechia brewsteri*).

Additionally, as discussed above in [Section 5.3.2, Existing Setting](#), the single male flycatcher (*Empidonas traillii*) detected onsite is assumed to be the Southwestern willow flycatcher (*Empidonas traillii extimus*), for analysis purposes.

The coastal California gnatcatcher is an NCCP/HCP Target Species and the Southwestern willow flycatcher is an NCCP Identified (Conditionally Covered) Species. None of the remaining species are NCCP/HCP covered species. Impacts to coastal California gnatcatcher would require compliance with Mitigation Measure BIO-3, which specifies that compliance with the NCCP and its associated IA would be required. Options to mitigate the loss of coastal California gnatcatcher, a Target Species, include payment of an in-lieu fee. Project-related impacts to coastal California gnatcatcher, which receives regulatory coverage under the NCCP, would be considered mitigated to a less than significant level following compliance with Mitigation Measure BIO-3.

Impacts to Southwestern willow flycatcher would also require compliance with Mitigation Measure BIO-3. Mitigation for the loss of Southwestern willow flycatcher, a Conditionally Covered Species, involves preparation of a mitigation plan, in coordination with USFWS, CDFG, and the NCCP Non-Profit Corporation (i.e., the City). Project-related impacts to Southwestern willow flycatcher, which receives regulatory coverage under the NCCP, would be considered mitigated to a less than significant level following compliance with Mitigation Measure BIO-3. It is noted, only migrants occur onsite and their impacted habitat (i.e., riparian) is of lesser long-term conservation value, which would be mitigated at a 1:1 ratio, as discussed under Impact Statement BIO-2 below.

Although, a single Cooper's hawk and a single Merlin were detected foraging on the project site, suitable nesting sites do not exist at the project site. Therefore, less than significant impacts would occur in this regard. Additionally, California horned lark, yellow breasted chat, and yellow warbler were observed on the project site. Therefore, compliance with Mitigation Measure BIO-2 would be required. Mitigation Measure BIO-2 requires adherence to requirements of the FESA or CESA, if applicable. If the species is not protected under FESA or CESA, but is otherwise protected through



another regulatory requirement, the Applicant would be required to provide suitable replacement habitat at a minimum ratio of 1:1. The Applicant may also be required to prepare a mitigation plan to demonstrate that appropriate long-term habitat management is provided.

Overall, with implementation of Mitigation Measures BIO-2 and BIO-3, project development would not result in substantial adverse effects on any wildlife species identified as a candidate, sensitive, or special status species.

## PROJECT ALTERNATIVE

The Project Alternative's development footprint would be the same as the proposed project. Therefore, the Project Alternative's impacts upon wildlife species identified as a candidate, sensitive, or special status species would be as described above for the proposed project. With implementation of Mitigation Measures BIO-1 (and potentially Mitigation Measure BIO-2, as necessary), the Project Alternative would not result in substantial adverse effects on any plant or wildlife species identified as a candidate, sensitive, or special status species.

### *Mitigation Measures:*

- BIO-1 Prior to the issuance of a grading permit, the Applicant shall conduct biological field surveys of the IRWD study area for Rayless raywort (*Senecio aphanactis*), a special status wildlife species that was not surveyed in the *Biological Reports*. Surveys shall be conducted in accordance with current California Department of Fish and Game (CDFG) or United States Fish and Wildlife Services (USFWS) survey protocols for the target species by a qualified biologist or botanist, in order to determine their presence or absence at the project site. (Source: OSA PEIR Mitigation Measure MM 3.4-1)
- BIO-2 Prior to the issuance of a grading permit, the Applicant shall, in an area where a species or habitat is not covered by the Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) has been identified, comply with the requirements of the Federal Endangered Species Act (FESA) or California Endangered Species Act (CESA), if applicable. If the species or habitat is not protected under FESA or CESA, but is otherwise protected through the Migratory Bird Treaty Act or other similar regulatory act requirement, the Applicant shall provide suitable replacement habitat at a minimum of 1:1, and shall prepare and submit a mitigation plan for City approval that demonstrates that the replacement habitat is protected in perpetuity and that appropriate long-term habitat management is provided. The mitigation plan shall be prepared in consultation with and receive the approval of the agency regulating the species or habitat (i.e., USFWS, CDFG, and the NCCP Non-Profit Corporation (i.e., the City)). The mitigation plan shall include the following, at minimum: detailed habitat impacts; mitigation acreage (1:1 ratio); mitigation location (i.e., where the proposed conservation or restoration will occur); the acreage of conservation or restoration that will be conducted; and how many trees/plants will be planted or translocated (when mitigating impacts to trees or rare plants); a planting plan and seed mixes; five-year maintenance and monitoring plans; source(s) of long-term site funding; conservation easements (if any); biological monitoring during grading activities; and fencing of any habitat area that



would not be disturbed by construction. (Source: OSA PEIR Mitigation Measure MM 3.4-3)

BIO-3 Prior to the issuance of a grading permit, the Applicant shall conform and comply with the applicable requirements of the Natural Community Conservation Plan and Habitat Conservation Plan (NCCP/HCP) for the County of Orange Central and Coastal Subregion, including the payment of the appropriate in-lieu fee, or existing IRWD non-reserve banked acreage as applicable, to mitigate for the loss of coastal sage scrub and any other NCCP/HCP covered habitat and species observed on the project site.

For impacts to a Conditionally Covered Species (i.e., Southwestern willow flycatcher (*Empidonas traillii extimus*)), the Applicant shall prepare a mitigation plan. The mitigation plan shall be developed in coordination with USFWS, CDFG, and the NCCP Non-Profit Corporation (i.e., the City), and approved by the USFWS. The mitigation plan shall, at minimum:

- Address design modifications and other onsite measures that are consistent with the project's purposes, minimize impacts, and provide appropriate feasible protections;
- Provide for compensatory habitat restoration/enhancement activities at an appropriate location (which may include land in the Reserve system or other open space) and which may include planting of riparian trees and shrubs and/or cowbird trapping;
- Provide for monitoring and Adaptive Management of habitat, within the Reserve system including cowbird trapping, consistent with Chapter 5 of the NCCP/HCP.

The Applicant shall also demonstrate to the satisfaction of the Director of Development Service compliance with the following NCCP/HCP construction impact avoidance measures or such measure in effect at the time of construction:

1. To the maximum extent practicable, no grading of coastal sage scrub habitat that is occupied by nesting gnatcatchers shall occur during the breeding season (February 15 through July 15). It is expressly understood that this provision and the remaining provisions of these "construction-related minimization measures," are subject to public health and safety considerations. These considerations include unexpected slope stabilization, erosion control measures, and emergency facility repairs. In the event of such public health and safety circumstances, landowners or public agencies/utilities will provide United States Fish and Wildlife Services/California Department of Fish and Game (USFWS/CDFG) with the maximum practicable notice (or such notice as is specified in the NCCP/HCP) to allow for capture of gnatcatchers, and any other coastal sage scrub Identified Species that are not otherwise flushed and shall carry out the following measures, to the extent practicable, in the context of the public health and safety considerations.



2. Prior to the commencement of grading operations or other activities involving significant soil disturbance, all areas of coastal sage scrub habitat to be avoided under the provisions of the NCCP/HCP, shall be identified with temporary fencing or other markers clearly visible to construction personnel. Additionally, prior to the commencement of grading operations or shall be conducted to locate gnatcatchers within 100 feet of the outer extent of projected soil disturbance activities and the locations of any such species shall be clearly marked and identified on the construction/grading plans.
3. A monitoring biologist, acceptable to USFWS/CDFG will be on site during any clearing of coastal sage scrub. The landowner or relevant public agency/utility will advise USFWS/CDFG at least seven (7) calendar days (and preferably 14 calendar days) prior to the clearing of any habitat occupied by Identified Species to allow USFWS/CDFG to work with the monitoring biologist in connection with bird flushing/capture activities. The monitoring biologist shall flush identified Species (avian or other mobile Identified Species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. If birds cannot be flushed, they shall be captured in mist nets, if feasible, and relocated to areas of the site to be protected or to the NCCP/HCP Reserve System. It shall be the responsibility of the monitoring biologist to assure that Identified bird species will not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis.
4. Following the completion of initial grading/earth movement activities, all areas of coastal sage scrub habitat to be avoided by construction equipment and personnel shall be marked with temporary fencing or other appropriate markers clearly visible to construction personnel. No construction access, parking, or storage of equipment or materials shall be permitted within such marked areas.
5. Coastal sage scrub identified in the NCCP/HCP for protection and located within the likely dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on the leaves as recommended by the monitoring biologist. (Source: OSA PEIR Mitigation Measure MM 3.4-2)

*Level of Significance:* Less than significant.

## **SENSITIVE VEGETATION COMMUNITIES/HABITATS**

### **BIO-2 IMPLEMENTATION OF THE PROPOSED PROJECT COULD HAVE AN ADVERSE EFFECT ON A SENSITIVE VEGETATION COMMUNITY, INCLUDING RIPARIAN HABITAT.**

*Impact Analysis:* As outlined in [Table 5.3-1](#), the sensitive vegetation communities occurring on the project site include: coastal sage scrub (CSS); oak woodland; and riparian (i.e., mulefat scrub and red willow/arroyo willow riparian forest). CSS is a covered habitat, which would be covered by the NCCP/HCP for impacts resulting from the proposed project. Impacts to CSS would require



compliance with Mitigation Measure BIO-3, which specifies that compliance with the NCCP and its associated IA would be required. Options to mitigate the loss of CSS include payment of an in-lieu fee. Project-related impacts to CSS, which receives regulatory coverage under the NCCP would be considered mitigated to a less than significant level following compliance with Mitigation Measure BIO-3.

Oak woodlands is a covered habitat under the NCCP/HCP. Although the IRWD is a Participating Landowner, they acquired the property after the NCCP/HCP was completed in 1996. Therefore, impacts to Covered Habitats other than CSS, (i.e., oak woodlands) would not be covered by the NCCP/HCP for this project. Additionally, impacts to arroyo willow riparian forest would not be covered by the NCCP/HCP. Implementation of Mitigation Measure BIO-2 would require that the Applicant comply with the FESA or CESA, if applicable. Impacts to the sensitive habitats (i.e., oak woodlands and riparian (i.e., mulefat scrub and red willow/arroyo willow riparian forest) would be mitigated to less than significant following compliance with Mitigation Measure BIO-2. The Applicant would be required to provide suitable replacement habitat at a minimum ratio of 1:1, and prepare and submit a habitat-specific mitigation plan that demonstrates that the replacement habitat is protected in perpetuity and that appropriate long-term habitat management is provided. The plan would detail the habitat impacts, mitigation acreage (1:1 ratio), mitigation location, planting plan and seed mixes, five-year maintenance and monitoring plans, long-term site funding, and conservation easements.

Overall, with implementation of Mitigation Measures BIO-2 and BIO-3, the project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS. Refer to Impact Statement BIO-3 for a discussion of impacts to jurisdictional riparian vegetation.

## **PROJECT ALTERNATIVE**

The Project Alternative's development footprint would be the same as the proposed project. Therefore, the Project Alternative's impacts upon riparian habitat or other sensitive natural community would be as described above for the proposed project. With implementation of Mitigation Measures BIO-2 and BIO-3, the Project Alternative would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS.

***Mitigation Measures:*** Refer to Mitigation Measures BIO-2 and BIO-3, above.

***Level of Significance:*** Less than significant.

## **WETLANDS AND JURISDICTIONAL WATERS**

### **BIO-3 PROJECT IMPLEMENTATION COULD HAVE AN ADVERSE EFFECT ON FEDERALLY PROTECTED WETLANDS.**

**Impact Analysis:** No areas subject to the ACOE 404 or CDFG 1600 programs occur on the IRWD study area, therefore, project implementation would result in no impact in this regard.



One drainage feature (Drainage A) and one associated tributary (Tributary A1) were identified in PA 13 (in the northeastern portion); refer to [Exhibit 5.3-1](#). These on-site drainages are tributary to Serrano Creek to the east. No drainage features were identified on the remainder of the project site. The on-site jurisdictional resources delineated within Drainage A and Tributary A1 total approximately 1,015 linear feet of streambed.

### **Army Corps of Engineers/Regional Water Quality Control Board**

Drainage A encompasses 0.077 acre of ACOE/RWQCB jurisdictional waters of the U.S./waters of the State. Drainage A also contains 0.206 acre of ACOE/RWQCB jurisdictional wetlands. The area delineated as jurisdictional wetlands includes both the delineated jurisdictional waters of the U.S./waters of the State (0.077 acre) and bordering vegetated wetlands (0.129 acre), for a total of 0.206 acre of ACOE/RWQCB jurisdictional area within Drainage A. Tributary A1 was mapped to contain 0.005 acre of ACOE/RWQCB jurisdictional waters of the U.S./waters of the State. No wetlands are present within Tributary A1.

Drainage A and Tributary A1 are located in PA 13 (which involves a Civic Center (under the proposed project) or residential uses (under the project alternative). Therefore, development of this portion of the project site would require the disturbance of both Drainage A and Tributary A1, which total 0.082 acre of ACOE/RWQCB jurisdictional waters of the U.S./waters of the State, and 0.206 acres of ACOE/RWQCB jurisdictional wetlands. Thus, the Applicant would be required to obtain the appropriate permits from the ACOE and RWQCB prior to approval of grading plans (Mitigation Measure BIO-4). With implementation of Mitigation Measure BIO-4, impacts in this regard would be reduced to less than significant levels.

### **California Department of Fish and Game**

Drainage A encompasses 1.859 acre of CDFG jurisdictional streambed and associated riparian habitat. Tributary A1 contains 0.050 acre of CDFG jurisdictional streambed and associated riparian habitat.

Drainage A and Tributary A1 are located in PA 13 (which is proposed for development, as described above). Therefore, development of this portion of the project site would require the disturbance of both Drainage A and Tributary A1, which total 1.909 acres of CDFG jurisdictional streambed and associated riparian habitat. Thus, the Applicant would be required to obtain the appropriate permits from the CDFG prior to approval of grading plans (Mitigation Measure BIO-4). With implementation of Mitigation Measure BIO-4, impacts in this regard would be reduced to less than significant levels.

Overall, upon compliance with the recommended Mitigation Measure BIO-4, the project would not result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means.



## PROJECT ALTERNATIVE

The Project Alternative's development footprint would be the same as the proposed project. Therefore, the Project Alternative's impacts upon federally protected wetlands would be as described above for the proposed project. With implementation of Mitigation Measure BIO-4, the Project Alternative would not result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means.

### *Mitigation Measures:*

BIO-4 Prior to the approval of grading plans, the Applicant would be required to prepare an application for fill of waters subject to the Army Corps of Engineers (ACOE) jurisdiction. If appropriate, a streambed alteration agreement shall be obtained from California Department of Fish and Game (CDFG). The Applicant shall submit an application to the Regional Water Quality Control Board (RWQCB) for a waste discharge requirement or waiver of waste discharge requirement. The Applicant shall also consider any other permits from the ACOE, CDFG, RWQCB, or any other applicable regulatory agency that may be necessary. (Source: OSA PEIR Mitigation Measure MM 3.4-4)

*Level of Significance:* Less than significant impact.

## WILDLIFE MOVEMENT CORRIDORS AND MIGRATORY BIRDS

**BIO-4 IMPLEMENTATION OF THE PROPOSED PROJECT COULD INTERFERE WITH THE MOVEMENT OF A NATIVE RESIDENT OR MIGRATORY SPECIES OR DISTURB AN ESTABLISHED WILDLIFE CORRIDOR.**

### *Impact Analysis:*

#### **Wildlife Movement Corridors**

Serrano Creek flows along the eastern side of PAs 13/17. This water course provides connectivity or is adjacent to other greenbelt or open space areas, and accordingly, is considered a wildlife corridor. The OSA PEIR recognizes that Serrano Creek has the potential to allow for wildlife movement.<sup>5</sup> Implementation of the OSA PEIR Mitigation Measure 3.4-5 would minimize the fragmentation of habitat and wildlife movement corridors through specific design features to maintain connectivity between remaining open spaces. These features include greenbelts and other wildlife movement corridors through the OSA's proposed developments, creek setbacks and wildlife friendly stream crossings (bridges instead of culverts), and installation of wildlife-friendly landscaping (native vegetation). Any nighttime lighting would be focused away from greenbelts and riparian corridors to preserve the nighttime integrity of these movement corridors.

<sup>5</sup> EIP Associates, *City of Lake Forest Opportunities Study Draft Program Environmental Impact Report Volume I*, Page 3.4-42, May 23, 2008.



Although portions of the Serrano Creek corridor are located within the project site along the eastern boundary, this area is proposed as open space and would be preserved upon project implementation. The proposed park use at the southeastern portion of the project site would only include passive uses and is not anticipated to impact the movement of wildlife along Serrano Creek. Therefore, a less than significant impact would occur, as the project would not 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.

### **Migratory Birds**

According to the *Biological Reports*, the project site has the potential to support migratory bird species, including both raptor and songbird species. Disturbing or destroying active nests is a violation of the Federal Migratory Bird Treaty Act. Nesting activity typically occurs from mid-February to mid-August. The removal of vegetation during the breeding season is considered a potentially significant impact. Therefore, the project would be required to comply with Mitigation Measure BIO-5. Mitigation Measure BIO-5 would be accomplished in one of two ways. First, efforts would be made to schedule all vegetation removal activities outside the nesting season (typically February 15 to August 15) to avoid potential impacts to nesting birds. This would ensure that no active nests would be disturbed and that habitat removal could proceed rapidly. Secondly, if initial vegetation removal occurs during the nesting season, all suitable habitat would be thoroughly surveyed for the presence of nesting birds by a qualified biologist before commencement of clearing. If any active nests are detected, a buffer of at least 100 feet (300 feet for raptors) would be delineated, flagged, and avoided until the nesting cycle is complete as determined by the biological monitor to minimize impacts. Therefore, with implementation of Mitigation Measure BIO-5, impacts to migratory birds would be reduced to less than significant levels.

### **PROJECT ALTERNATIVE**

The development footprint of the Project Alternative would be the same as the proposed project. Therefore, the Project Alternative's impacts upon wildlife movement corridors would be as described above for the proposed project. Implementation of the Project Alternative would not interfere substantially with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Similarly, the Project Alternative's impacts upon migratory birds would be as described above for the proposed project. With implementation of Mitigation Measure BIO-5, the Project Alternative would not interfere substantially with the movement of any native resident or migratory fish or wildlife species.

### ***Mitigation Measures:***

BIO-5 To the extent feasible, all vegetation removal activities shall be scheduled outside the nesting season (typically February 15 to August 15) to avoid potential impacts to nesting birds. However, if initial vegetation removal occurs during the nesting season, all suitable habitat shall be thoroughly surveyed for the presence of nesting birds by a qualified biologist prior to commencement of clearing. If any active nests are detected, a buffer of at least 100 feet (300 feet for raptors) shall be delineated, flagged, and avoided until the nesting cycle is complete as determined by the biological monitor to minimize impacts. (Source: OSA PEIR Mitigation Measure MM 3.4.2)



*Level of Significance:* Less than significant.

## LOCAL POLICY/ORDINANCE CONSISTENCY

### **BIO-5 IMPLEMENTATION OF THE PROPOSED PROJECT COULD CONFLICT WITH A LOCAL POLICY OR ORDINANCE PROTECTING BIOLOGICAL RESOURCES.**

**Impact Analysis:** The project may require the pruning, cutting, removal, or transportation of eucalyptus trees. With adherence to LFMC Chapter 6.20, the project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. A less than significant impact would occur in this regard.

### **PROJECT ALTERNATIVE**

The Project Alternative's development footprint would be the same as the proposed project. Therefore, the Project Alternative's impacts involving eucalyptus trees would be as described above for the proposed project. With adherence to LFMC Chapter 6.20, the Project Alternative would not conflict with any local policies or ordinances protecting biological resources.

*Mitigation Measures:* No mitigation is required.

*Level of Significance:* Not Applicable.

## COUNTY OF ORANGE CENTRAL AND COASTAL SUBREGION NATURAL COMMUNITY CONSERVATION PLAN AND HABITAT CONSERVATION PLAN (NCCP/HCP)

### **BIO-6 IMPLEMENTATION OF THE PROPOSED PROJECT COULD CONFLICT WITH THE PROVISIONS OF THE COUNTY OF ORANGE CENTRAL AND COASTAL SUBREGION NCCP/HCP.**

**Impact Analysis:** The Biological Reports identify the project site to be located within the boundaries of the NCCP/HCP, and specifically within the NCCP/HCP's Central Subarea. Also, the project site is within an NCCP Impact Area. The purpose of an NCCP/HCP is to protect natural communities and species, while allowing a reasonable amount of economic development. As stated in Impact Statements BIO-1 and BIO-2, coastal sage scrub and the California gnatcatcher, NCCP/HCP Target Habitat and Species, occur on the project site, among other NCCP Identified Habitats and Species. As the project would result in disturbance to these species and their habitats, the NCCP/HCP would require an in-lieu fee payment (Mitigation Measure BIO-3). Thus, following compliance with the conditions of the NCCP/HCP and IA (Mitigation Measure BIO-3), all direct, indirect, and cumulative impacts to CSS and NCCP/HCP covered species resulting from project development would be considered fully mitigated. Therefore, with implementation of Mitigation Measure BIO-3, the project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.



## PROJECT ALTERNATIVE

The Project Alternative's development footprint would be the same as the proposed project. The Project Alternative would similarly disturb coastal sage scrub and the California gnatcatcher, NCCP/HCP Target Habitat and Species, among other NCCP Identified Habitats and Species. Following compliance with the conditions of the NCCP/HCP and IA (Mitigation Measure BIO-3), the Project Alternative's direct, indirect, and cumulative impacts to CSS and NCCP/HCP covered species would be considered fully mitigated. Therefore, with implementation of Mitigation Measure BIO-3, the Project Alternative would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

**Mitigation Measures:** Refer to Mitigation Measure BIO-3 above.

**Level of Significance:** Not Applicable.

### 5.3.5 CUMULATIVE IMPACTS

#### ● IMPLEMENTATION OF THE PROPOSED PROJECT AND CUMULATIVE DEVELOPMENT COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO BIOLOGICAL RESOURCES.

**Impact Analysis:** Cumulative biological impacts are primarily analyzed in terms of consistency with the County of Orange Central and Coastal Subregion NCCP/HCP. The NCCP/HCP is intended to address protection and management of CSS habitat and CSS-obligate species, and other covered habitats and species, and mitigate anticipated impacts to those habitats and species, on a programmatic, sub-regional level, rather than on a project-by-project, single species basis. The City of Lake Forest, as well as 12 additional cities, participate in the implementation of the NCCP/HCP and are signatories to the NCCP/HCP IA. The project is concluded to be consistent with the NCCP/HCP, as concluded in Impact Statement BIO-6 above. As such, the project's impacts to biological resources, which consider the NCCP/HCP's conservation objectives, were anticipated in the NCCP/HCP EIR/EIS.<sup>6</sup> Implementation of the proposed project would be consistent with the analysis presented in the Final EIR/EIS, and would result in no greater impacts to biological resources than previously identified.

The cities within jurisdiction of the NCCP/HCP, including the City of Lake Forest, approved the NCCP/HCP and are local Permittees under the NCCP/HCP. The USFWS and CDFG issued take permits under the FESA and CESA. As such, the local Permittees (including the City of Lake Forest) have the authority to meet the Federal and State endangered species and conservation planning obligations for their respective jurisdictions. The local Permittees, including the City of Lake Forest, would be responsible for ensuring that all development proposed within jurisdiction of the NCCP/HCP is consistent with the NCCP/HCP requirements. The NCCP/HCP, Permits, and

---

<sup>6</sup> County of Orange, *County of Orange Central & Coastal Subregion Natural Conservation Plan & Habitat Conservation Plan Part III: Joint Programmatic EIR/EIS*, May 1996.



IA would serve as guiding documents for the implementation of the conservation goals and land use planning parameters required by the local Permittees.

As with the proposed project, all future development within the County of Orange Central and Coastal Subregion would undergo environmental and design review on a project-by-project basis, in order to evaluate potential impacts to biological resources and ensure consistency with the NCCP/HCP. Future development in the Subregion with potential to impact biological resources would also be required to comply with the established Federal and State regulatory framework. The cumulative biological impacts associated with project implementation and other development in the subregion would be less than significant by adherence to and/or compliance with the specified Mitigation Measures and NCCP/HCP. Cumulative impacts to biological resources within the County of Orange Central and Coastal Subregion are currently being mitigated on a project-by-project basis and in accordance with the NCCP/HCP process. Therefore, project implementation would not result in cumulatively considerable impacts to biological resources.

## **PROJECT ALTERNATIVE**

The Project Alternative's development footprint would be the same as the proposed project. Therefore, the Project Alternative's cumulative impacts involving biological resources would be as described above for the proposed project. The Project Alternative is concluded to be consistent with the NCCP/HCP, as concluded in Impact Statement BIO-6 above. As with the proposed project, the Project Alternative and all future development within the County of Orange Central and Coastal Subregion would undergo environmental and design review on a project-by-project basis, in order to evaluate potential impacts to biological resources and ensure consistency with the NCCP/HCP. The cumulative biological impacts associated with implementation of the Project Alternative and other development in the subregion would be less than significant by adherence to and/or compliance with the specified Mitigation Measures and NCCP/HCP.

***Mitigation Measures:*** No mitigation measures are required.

### ***Level of Significance After Mitigation:***

*Overall Cumulative Impact* – Less Than Significant Impact.

*Project Cumulative Contribution* – Less Than Significant Impact.

## **5.3.6 SIGNIFICANT UNAVOIDABLE IMPACTS**

Biological impacts associated with implementation of the proposed project (and Project Alternative) would be less than significant by adherence to and/or compliance with the recommended mitigation measures and the County of Orange Central and Coastal Subregion NCCP/HCP. No significant unavoidable impacts to biological resources would occur as a result of project implementation.



This page intentionally left blank.