

5.3 Biological Resources

The section analyzes the Proposed Project's impacts on the various biological resources located in and surrounding the Project Site. This section is based on the "Biological Technical Report for the 504-Acre Esperanza Hills Specific Plan Property" dated March 2013 (revised June 2013, July 2013, and November 2013), prepared by Glenn Lukos Associates, Inc. (Appendix D to this DEIR). Field studies were conducted for the Proposed Project and off-site areas as listed below. Study results and analysis are included in Section 5.3.4, Project Impacts Prior to Mitigation (beginning on page 5-139).

- The Project Site, outlined in black on Exhibit 5-23 – Vicinity Map, consists of approximately 468.9-acre area.
- The off-site impact area, outlined in red on Exhibit 5-23, consists of an additional 35.26 acres outside the Project Site on which off-site improvements required for the implementation of the Proposed Project will be constructed. These off-site improvements include access roads and utility connections.
- The Study Area consists of the Project Site, and the off-site impact area and covers approximately 504.20 acres. Surveys for biological resources were conducted over the entire 504.20-acre Study Area. Refer to Exhibit 5-23.

An initial round of surveys was conducted in spring of 2007, with additional surveys conducted during spring of 2008 and spring of 2010, following the 2008 Freeway Complex Fire. Finally, reconnaissance-level surveys were conducted in spring and winter 2012 and spring, winter, and summer 2013 to update conditions on the site from those observed in 2010.

Acronyms used in this section:

ACOE	U.S. Army Corps of Engineers
BCC	Birds of Conservation Concern
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDDB	California Nature Diversity Database
CRPR	California Rare Plant Ranks
DEIR	Draft Environmental Impact Report
FESA	Federal Endangered Species Act
FPS	Fully Protected Species
HOA	homeowners' association
MBTA	Migratory Bird Treaty Act
OHWM	Ordinary High Water Mark
PCE	Primary Constituent Element
RWQCB	Regional Water Quality Control Board
SSC	Species of Special Concern
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey

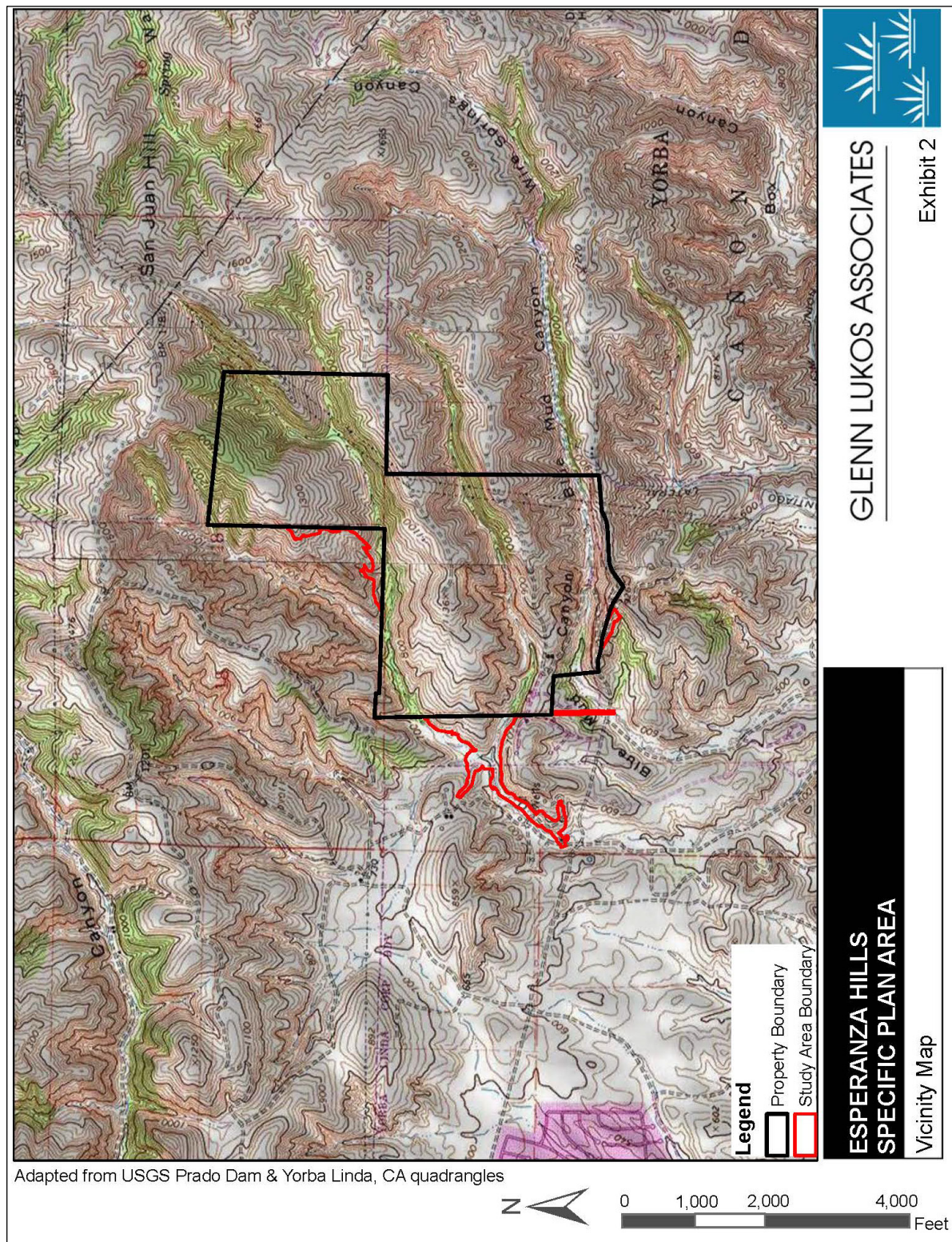


Exhibit 5-23 – Vicinity Map

The field studies focused on a number of primary objectives that would comply with CEQA requirements: 1) general reconnaissance surveys and vegetation mapping according to the Orange County Habitat Classification System); 2) general floristic surveys; 3) general wildlife surveys; 4) habitat assessments for special-status plants; 5) habitat assessments and focused surveys for special-status animals; 6) delineation of state and federal waters, including wetlands and riparian areas, and 7) a protocol of focused gnatcatcher survey conducted from May to June 2013. Observations of all plant and wildlife species were recorded during each of the above-mentioned survey efforts. The Biological Technical Report is included as Appendix D of this DEIR.

The table below provides a summary of studies conducted in the Study Area.

Table 5-3-1 Site Surveys, 2007-2013

Survey Date	Survey Type	Weather
March 20, 2007	California gnatcatcher survey #1	Overcast
March 26, 2007	Vegetation mapping; Focused plant survey	Clear skies
March 27, 2007	California gnatcatcher survey #2	Scattered clouds
April 3, 2007	California gnatcatcher survey #3	Overcast
April 4, 2007	Vegetation mapping; Focused plant survey	Clear skies
April 10, 2007	Least Bell's Vireo survey #1; California gnatcatcher survey #4	Isolated clouds
April 17, 2007	California gnatcatcher survey #5	Clear skies
April 20, 2007	Least Bell's Vireo survey #2	Overcast
April 30, 2007	Least Bell's Vireo survey #3	Overcast
May 4, 2007	Vegetation mapping; Focused plant survey	Clear skies
May 9, 2007	California gnatcatcher survey #6	Overcast
May 11, 2007	Least Bell's Vireo survey #4	Clear skies
May 21, 2007	Least Bell's Vireo survey #5; Willow flycatcher survey #1	Overcast, isolated rain showers
May 31, 2007	Least Bell's Vireo survey #6	Overcast
June 1, 2007	Willow flycatcher survey #2	Overcast
June 10, 2007	Least Bell's Vireo survey #7	Overcast
June 29, 2007	Willow flycatcher survey #3	Clear skies
July 3, 2007	Vegetation mapping; Focused plant survey	Clear skies
July 8, 2007	Willow flycatcher survey #4	Clear skies
July 13, 2007	Least Bell's Vireo survey #8; Willow flycatcher survey #5	Scattered clouds
August 17, 2007	Jurisdictional Delineation	Clear skies
August 21, 2007	Jurisdictional Delineation Focused plant survey	Clear skies
August 22, 2007	Jurisdictional Delineation	Clear skies
March 22, 2008	Focused plant survey	Clear skies
May 24, 2008	Focused plant survey	Overcast
February 27, 2010	Avian Survey	Overcast
July 28, 2012	Avian Survey	Clear skies
December 28, 2012	Vegetation Mapping	Clear skies
January 9, 2013	Jurisdictional Delineation Vegetation Mapping	Clear skies
January 11, 2013	Jurisdictional Delineation Vegetation Mapping	Clear skies
February 7, 2013	Jurisdictional Delineation Vegetation Mapping	Overcast
February 11, 2013	Jurisdictional Delineation Vegetation Mapping	Overcast
February 22, 2013	Jurisdictional Delineation	Clear skies
May 9, 2013	California gnatcatcher survey #6	Isolated clouds
May 16, 2013	California gnatcatcher survey #6	Overcast
May 23, 2013	California gnatcatcher survey #6	Overcast
May 30, 2013	California gnatcatcher survey #6	Overcast
June 6, 2013	California gnatcatcher survey #6	Overcast
June 13, 2013	California gnatcatcher survey #6	Overcast
July 12, 2013	Jurisdictional Delineation	Scattered clouds

The Study Area drainages are identified by Drainage Areas A through G as depicted on Exhibit 5-24 – Study Area Drainages. These drainages are further discussed in Section 5.8, Hydrology and Water Quality (beginning on page 5-341 of this DEIR).

After a habitat assessment was conducted through the studies detailed above, a literature search for special status plant species was conducted. Species were evaluated based on three factors: 1) species identified by the California Nature Diversity Database (CNDDDB) and the California Native Plant Society as occurring (either currently or historically) on or in the vicinity of the property, 2) any other special status plants that are known to occur within the vicinity of the property, or for which potentially suitable habitat occurs on-site, and 3) previous botanical reports from studies conducted on the property.

Based on sufficient habitat, several plants were targeted for focused plant surveys during the 2007 and 2010 field seasons. These include Allen's pentachaeta, Brand's phacelia, Braunton's milk-vetch, Catalina mariposa lily, chaparral nolina, intermediate mariposa lily, many-stemmed dudleya, Robinson's peppergrass, small flowered microseris, small-flowered morning glory, southern California walnut, and vernal barley. Table 4-2 of the Biological Technical Report (Appendix D of this DEIR) provides a list of special-status plants evaluated for the Study Area.

5.3.1 Existing Conditions

The Study Area consists of a diverse range of habitat use types, including coastal sage scrub, chaparral, and riparian habitats, as well as disturbed habitats such as ruderal vegetation and disturbed/developed land. The southern portion of the Study Area contains oil wells, oil extraction equipment, and service roads. Due to the high human use of the southern portion of the Study Area, there is a predominance of non-native vegetation and disturbed lands when compared to the relatively undisturbed northern portion of the Study Area.

The Study Area is dominated by ridges and associated canyons that support riparian habitat. Four drainages occur on the Project Site, as depicted on the U.S. Geological Survey (USGS) topographic map and shown on Exhibit 5-23 (page 5-92). Elevation for the Study Area ranges from approximately 550 feet above mean sea level (AMSL) at the southwest boundary to 1,540 feet AMSL at the north boundary. The Study Area is bordered by Blue Mud Canyon and Stonehaven Drive to the south, Chino Hills State Park to the north and east, and the proposed Cielo Vista project and residential areas adjacent to San Antonio Road to the west. The property immediately north, east, and west of the Study Area is partially open space and residential development, while property bordering the southern boundary is residential development.

This section describes the existing condition of plants and animals found or potentially found on the Study Area prior to and after the 2008 Freeway Complex Fire with respect to federal, state, and county regulations for biological resources.

2. Plant Communities

a. Conditions Pre- and Post-Freeway Complex Fire

The 2008 Freeway Complex Fire burned the entire Project Site. Prior to 2008, the coastal sage scrub habitats within the Study Area exhibited a diverse suite of species. The disturbed coastal sage scrub within the Study Area supported a similar species composition with a substantial component of non-native plant shrubs and herbaceous species. Additionally, the Study Area supported numerous blue elderberry, coast live oak, and California black walnut trees, many of which were damaged and a few of which were killed by the fire. Finally, the riparian canopy species (e.g., black willow, red willow, arroyo willow, and mulefat) observed at Drainages G and F were burned, which substantially narrowed the band of native riparian trees and large shrubs associated with these drainages; however, by the summer of 2013, when jurisdictional delineation was updated, the riparian habitat was largely recovered.

Post-fire succession varies among habitat types, with some habitats exhibiting signs of reverting to their pre-fire condition, which will still require a number of years. Other habitats may never return to their pre-fire condition and instead may transition to a new habitat type, such as coastal sage scrub converting to non-native grassland. Under either scenario, the early post-fire successional stage consists of fire-following species that require the seed bank (seeds that are dormant in the soil) to be heated/ burned, and/or weedy species that are able to quickly reproduce and fill the open niches left by the destroyed vegetation. The Study Area is currently in an early post-fire successional stage, and habitat recovery will vary according to a number of factors. It is presumed that the habitats within the Study Area will return to pre-fire conditions eventually; however, such conversion will take one to two decades. Individual trees, including upland and, to a lesser extent, riparian species, killed by the fire will not regrow, and recruitment and growth of new saplings to maturity will take several years. Additionally, given that locally dominant patches of bush mallow were present on the Project Site prior to the fire, it is possible that not all coastal sage scrub colonized by bush mallow post-fire will revert to coastal sage scrub. Site visits in spring 2010, spring 2012, and winter, spring, and summer 2013 confirmed that, while vegetation in some areas was following a typical trajectory for recovery, many of the affected areas remain dominated by bush mallow.

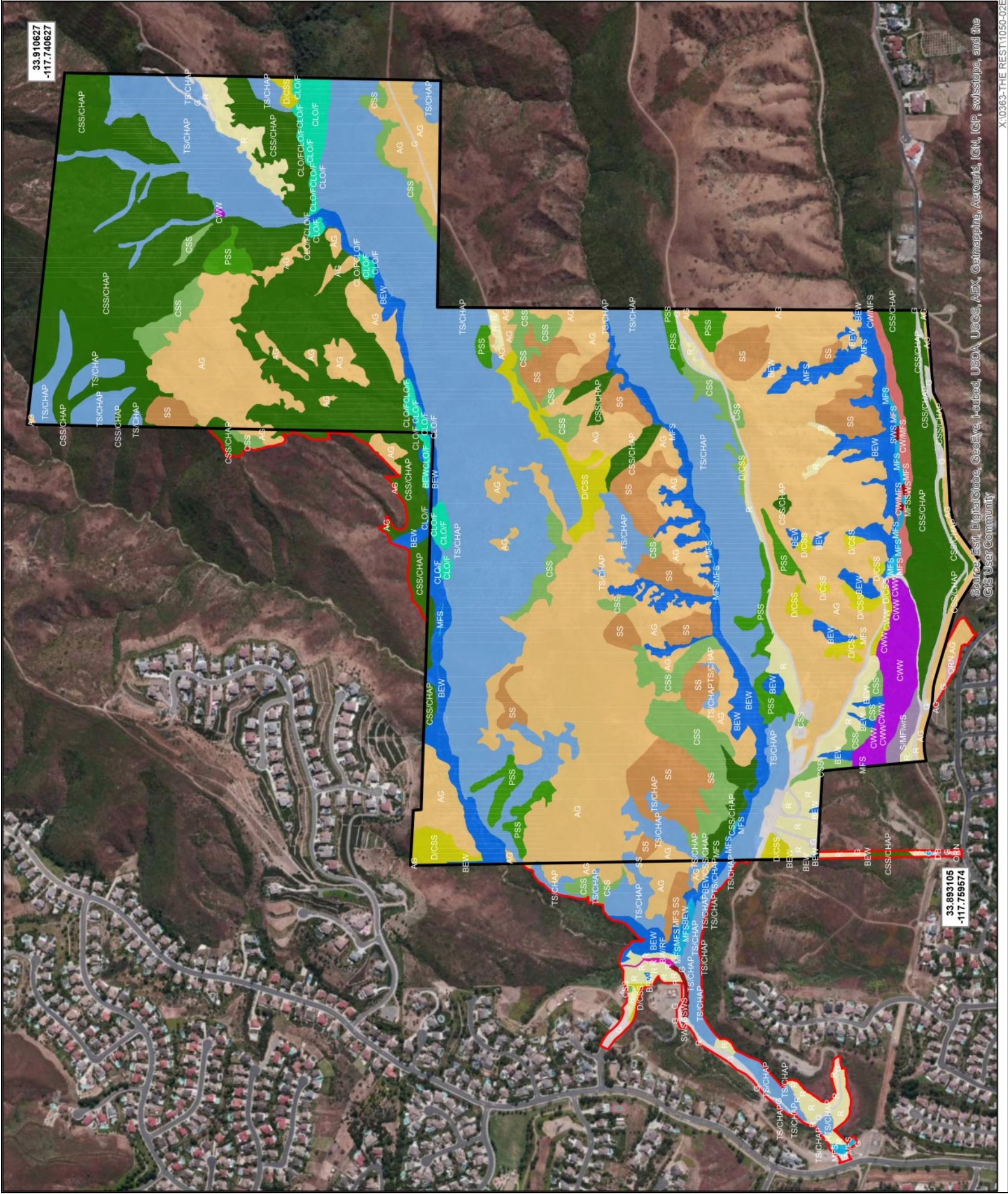
b. Vegetation

Sixteen associations were identified within eight vegetation/land use types. Table 5-3-2 below provides a summary of vegetation types/land uses and the corresponding acreage. Exhibit 5-25 – Vegetation Map provides locations that correspond with the table below. Photographs depicting the various vegetation types are found as Exhibit 4, Site Photographs, in the Biological Technical Report in Appendix D of this DEIR. As already noted, the 2008 Freeway Complex Fire burned the Study Area. Habitat recovery varies according to a number of factors. The habitat mapping depicted on Exhibit 5-25 is generally consistent with vegetation/land use types present prior to the 2008 Freeway Complex Fire, as it is presumed that most habitats will eventually recover to pre-fire conditions. The descriptions of each vegetation/land use type in Table 5-3-2 detail pre-fire conditions.

Table 5-3-2 Summary of Vegetation/Land Use Types for Study Area

Vegetation/Land Use Type	Total in Study Area (acres)	Percent of Total Study Area
Coastal Sage Scrub	45.88	9.1
California Sagebrush Scrub	24.21	4.8
Disturbed California Sagebrush Scrub	10.32	2.0
Purple Sage Scrub	10.14	2.0
Sagebrush-Monkeyflower Scrub	1.21	0.2
Ecotonal Habitats	129.45	25.7
Coastal Sage /Chaparral Ecotone	95.02	18.9
Sumac Savannah	34.43	6.8
Chaparral Habitats	124.38	24.7
Toyon/Sumac Chaparral	122.63	24.3
Sumac/Elderberry Chaparral	1.75	0.3
Woodland Habitats	36.61	7.3
California Walnut Woodland	6.37	1.3
Blue Elderberry Woodland	23.88	4.7
Southern Coast Live Oak Forest	6.36	1.3
Riparian Habitats	5.34	1.0
Mulefat Scrub	1.93	0.3
Black Willow Riparian Forest	0.19	0.3
California Walnut/Mulefat Scrub	2.70	0.5
Southern Willow Scrub	0.52	0.1
Grassland Habitats	136.10	27.0
Annual Grassland	136.10	27.0
Disturbed Habitats	15.93	3.2
Ruderal	15.93	3.2
Developed Land	10.51	2.0
Graded Areas/Paved Roads	10.17	2.0
Ornamental Vegetation	0.28	0.1
Detention Basin	0.06	0.01
Total Vegetation/Land Use Acreage	504.20	100

Note: Data reflects pre-2008 Freeway Complex Fire conditions



Source: Esri, DigitalGlobe, GeoEye, iSat, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

X:\0363\THE REST\1050-02\ESPE\1050-02_GIS_FINAL_USE_THIS_FOLDER\Vegetation\GIS1050-2_VegetationLayout.mxd

- Legend**
- Property Boundary
 - Study Area Boundary
 - AG, Annual grassland
 - BEW, Blue elderberry woodland
 - BW/RF, Black willow riparian forest
 - CLO/F, Coast live oak forest
 - CSS, California sagebrush scrub
 - CSS/CHAP, Sage scrub-chaparral ecotone
 - CW/MFS, California walnut-mulefat scrub
 - CWW, California walnut woodland
 - D/CSS, disturbed California sagebrush scrub
 - DB, Detention Basin
 - G, Graded
 - MFS, Mulefat scrub
 - ORN, Ornamental
 - PSS, Purple sage scrub
 - R, Ruderal
 - SMF/lwrS, Sagebrush-monkey flower scrub
 - SS, Sumac savannah
 - SWS, Southern willow scrub
 - TS/CHAP, Toyon-sumac chaparral



1 inch = 700 feet

Aerial Photo: ESRI Basemaps Bing Hybrid
Reference Elevation Datum: State Plane 6 NAD 83
Map Prepared by: K. Kartunen, GLA
Date Prepared: May 10, 2013

**ESPERANZA HILLS
SPECIFIC PLAN AREA**

Vegetation Map

GLENN LUKOS ASSOCIATES

Exhibit 3

Exhibit 5-25– Vegetation Map

1. **Coastal Sage Scrub Habitats** – Prior to the 2008 Freeway Complex Fire, coastal sage scrub habitat occupied approximately 45.88 acres of the Study Area. Four associations (plant communities) of coastal sage scrub were identified: California sagebrush scrub, disturbed California sagebrush scrub, purple sage scrub, and sagebrush-monkey flower scrub. A brief description of each association in the pre-fire conditions is provided below and includes acreages and the dominant plant species observed along with description in the current post-fire conditions.

- a. **California Sagebrush Scrub** - Approximately 24.21 acres of the Study Area supported California sagebrush scrub. The majority of the California sagebrush scrub was identified in the southeastern portion of the Study Area; however, smaller areas of California sagebrush scrub were found throughout. The California sagebrush scrub on-site was commonly observed adjacent to areas supporting non-native/native grasslands. Surveys in 2007, prior to the 2008 Freeway Complex Fire, found that the dominant plant species observed within the California sagebrush scrub consists of California sagebrush and black sage, and occasional individuals of California buckwheat, Menzies' goldenbush, and California encelia. The understory includes non-native grasses and herbs, including red brome, ripgut, and tocalote.

Surveys in April 2012 and January through June 2013 found that the majority of California sagebrush scrub was dominated by bush mallow, which occurs in near monocultural stands (areas vegetated with only a single plant species) on large portions of the site. Currently, areas previously mapped as California sagebrush scrub are largely dominated by bush mallow, laurel sumac (which has re-sprouted following the fire), and deer weed (another fire follower).

- b. **Disturbed California Sagebrush Scrub** - Approximately 10.32 acres of the Study Area supported disturbed California sagebrush scrub. The disturbed California sagebrush scrub is similar in composition to the California sagebrush scrub, except that the diversity of native species is lower and the number of non-native species is higher. Disturbed California sagebrush scrub was found throughout the entire Study Area and was commonly observed adjacent to areas supporting non-native/native grasslands. During surveys conducted in 2007, prior to the 2008 Freeway Complex Fire, the dominant plant species observed within the disturbed California sagebrush scrub consisted of California sagebrush, black sage, California buckwheat, and California encelia. The disturbed California sagebrush scrub contains a large non-native component that includes grasses such as ripgut grass, soft chess, and red brome.

Surveys in April 2012 and January 2013 found that the majority of disturbed California sagebrush scrub was dominated by bush mallow, which occurs in near-monocultural stands on large portions of the site. Over time, the abundance of bush mallow will diminish with a corresponding increase in species that were dominant in the pre-fire condition; however, such conversion will take one to two decades. Currently, areas previously mapped as disturbed California sagebrush scrub are largely dominated by bush mallow, laurel sumac and deer weed.

- c. **Purple Sage Scrub** - Approximately 10.14 acres of the Study Area supported purple sage scrub, all of which occurred on-site. The purple sage scrub was observed in the southern portion of the Project Site with the exception of one polygon in the northern portion. The purple sage scrub observed on-site was commonly found adjacent to California sagebrush scrub, coastal sage scrub/chaparral ecotone, and toyon/sumac chaparral. During surveys conducted in 2007, prior to the 2008 Freeway Complex Fire, the dominant plant species observed within the purple sage scrub consisted mostly of purple sage. Other components of the purple sage scrub included white sage, giant wildrye, bush lupine, black sage, coyote bush, poison oak, and fuchsia flowered gooseberry. The purple sage scrub contained scattered blue elderberry, toyon, and lemonade berry.

Surveys in April 2012 and January through June 2013 found that the majority of purple sage scrub was dominated by bush mallow, which occurs in near monocultural stands on large portions of the site. Over time, the abundance of bush mallow will diminish with a corresponding increase in species that were dominant in the pre-fire condition; however, such conversion will take one to two decades. Currently, areas previously mapped as purple sage scrub are largely dominated by bush mallow.

- d. **Sagebrush-Monkeyflower Scrub** - Approximately 1.21 acres of the Study Area supported sagebrush-monkeyflower scrub, all of which occurred on-site. The sagebrush-monkeyflower scrub was observed on north-facing slopes within the southern portion of the Study Area in close proximity to the coastal sage/chaparral ecotone.

Prior to the 2008 Freeway Complex Fire, the dominant plant species observed within the sagebrush-monkeyflower scrub were California sagebrush, bush monkeyflower, Menzies' goldenbush, giant wildrye, poison oak, purple sage, fuchsia-flowered gooseberry, and black sage. The sagebrush-monkeyflower scrub contained scattered blue elderberry, some of which were killed by the fire. A number of the elderberry trees that were killed by the fire have not regenerated,

while toyon and lemonade berry, which re-sprout following fire, are recovering. A significant portion of this habitat is now dominated by bush mallow.

2. **Ecotonal Habitats** - Ecotonal habitats (areas of transition between two plant communities) occupy approximately 129.45 acres of the Project Site. Two associations were identified: coastal sage scrub/chaparral, and sumac savannah. A brief description of each association is provided below. Following the 2008 Freeway Complex Fire, these habitats, much like the coastal sage scrub associations, support a significant component of bush mallow.

- a. **Coastal Sage Scrub/Chaparral** - Approximately 95.02 acres of the Study Area supported coastal sage scrub /chaparral ecotone. This ecotone was commonly observed on north-facing slopes but was observed on all aspects throughout the entire Project Site. This ecotone is difficult to define, as it contains elements from coastal sage scrub and chaparral.

Prior to the 2008 Freeway Complex Fire, the dominant plant observed within the coastal sage scrub/chaparral ecotone consisted of laurel sumac, toyon, lemonade berry, and blue elderberry. The stands of chaparral were intermixed with areas containing coastal sage scrub species, which consists of black sage, purple sage, chaparral bush mallow, coyote bush, California sagebrush, giant wildrye, and Menzies' goldenbush. Surveys in April 2012 and January through June 2013 found this habitat dominated by bush mallow, with the majority of blue elderberry killed by the fire, and the laurel sumac re-sprouted.

- b. **Sumac Savannah** - Approximately 34.43 acres of the Study Area supported sumac savannah. The sumac savannah was commonly observed on south-facing slopes within areas supporting non-native/native grasslands. Areas mapped as sumac savannah contain the same understory species as the non-native/native grasslands but have a scattered cover of laurel sumac with occasional individuals of blue elderberry.

The dominant species observed within sumac savannah consist of laurel sumac, and various native and non-native grassland and ruderal species including ripgut grass, soft chess, foxtail grass, purple needlegrass, tree tobacco, horehound, Italian wildrye, English wildrye, Russian thistle, summer mustard, black mustard, slender wild oats, common wild oats, dove weed, telegraph weed, and sweet fennel. Most individuals of laurel sumac have re-sprouted following the fire, and this community is generally consistent in species composition with the pre-fire conditions.

3. **Chaparral Habitats** - Chaparral habitats occupied approximately 124.38 acres of the Study Area. Two associations were identified: toyon/sumac chaparral and sumac/elderberry chaparral. A brief description of each association is provided below.
 - a. **Toyon/Sumac Chaparral** - Approximately 122.63 acres of the Study Area supported toyon/sumac chaparral. This community was commonly observed on the north-facing slopes of the Study Area. Prior to the 2008 Freeway Complex Fire, the toyon/sumac community was characterized by a dominance of evergreen chaparral species including toyon, laurel sumac, lemonade berry, holly-leaved redberry, blue elderberry, poison oak, and southern honeysuckle. Following the fire, these areas exhibit dense areas of bush mallow with toyon and laurel sumac recovering due to the ability to re-sprout following fire. Additionally, most of the blue elderberry trees were damaged, and some were killed by the fire.
 - b. **Sumac/Elderberry Chaparral** – Approximately 1.75 acres of the Study Area support sumac/elderberry chaparral. This community occurs along Drainage D, where it intergrades with blue elderberry woodland and is differentiated from the blue elderberry woodland by a clear dominance of the laurel sumac. Other species include the bush mallow and a variety of non-native grasses and forbs (broad leaf herbs).
4. **Woodland Habitats** - Woodland habitats occupy approximately 36.61 acres of the Study Area. Three woodland associations were identified: California walnut woodland, blue elderberry woodland, and southern coast live oak forest. A brief description of each association is provided below and includes acreages and the dominant plant species observed.
 - a. **California Walnut Woodland** - Prior to the 2008 Freeway Complex Fire, approximately 6.37 acres of the Study Area supported California walnut woodland, all of which occurred on-site. This community was observed in the southern portion of the Study Area, is restricted to Blue Mud Canyon, and was closely associated with California sagebrush-monkeyflower scrub, blue elderberry woodland, and the coastal sage scrub /chaparral ecotone. The California walnut woodland is considered a special-status habitat by California Department of Fish and Wildlife (CDFW). Prior to the fire, the California walnut woodland within the Study Area was dominated by the California walnut. Other species associated with this community consist of giant wildrye, bush monkeyflower, laurel sumac, toyon, lemonade berry, poison oak, chaparral nightshade, coyote bush, purple sage, and less commonly California sagebrush. The majority of the walnut trees within the Study Area burned in the 2008

Freeway Complex Fire, and based on surveys in January through June 2013, many appear to have been damaged, and a few killed by the fire, with the damaged trees exhibiting some signs of regrowth, including some crown sprouting. Additionally, bush mallow now dominates some portions of this habitat, and toyon and laurel sumac have re-sprouted.

- b. **Blue Elderberry Woodland** - Prior to the 2008 Freeway Complex Fire, approximately 23.88 acres of the Study Area supported blue elderberry woodland. This community was commonly observed on the lower slopes of hillsides, within the drier reaches of the riparian areas, and on terraces adjacent to drainage courses. Component species within blue elderberry woodland include blue elderberry, albeit at a low density of approximately 10 trees per acre, laurel sumac, which is often co-dominant or dominant in these areas, coyote bush, giant wildrye, poison oak, California walnut (restricted to Blue Mud Canyon and limited areas along Drainage D), sweet fennel, southern honeysuckle, poison hemlock, chaparral nightshade, stinging nettle, and fuchsia flowered gooseberry. The blue elderberry woodland is considered a special-status habitat by CDFW although it is not clear that, as currently listed in the CNDDDB, it would apply to the blue elderberry habitat on the site. For additional discussion refer to Section 5.3.1.3, Special Status Habitats (page 5-109).

Based on surveys conducted in January 2013, it appears that greater than half of the blue elderberry trees on the site were damaged. A smaller number were killed by the 2008 Freeway Complex Fire, especially those within the lower and off-site portions of the canyon that contain Drainage D, where it appears that the majority of the elderberry trees were damaged by the fire. These areas now support dense stands of bush mallow with individuals of re-sprouting laurel sumac and toyon. Many of the damaged elderberry trees have also begun to re-sprout. Nevertheless, this community was substantially degraded by the fire.

- c. **Southern Coast Live Oak Forest** - Prior to the 2008 Freeway Complex Fire approximately 6.36 acres of the Study Area was vegetated with southern coast live oak forest. Based on surveys in January of 2013, it is estimated that approximately 50% of the oak trees were killed by the fire, with about 50% of the oaks exhibiting partial re-sprouting and otherwise in poor condition. The southern coast live oak forest is dominated by coast live oak. Other plant species within this community consisted of blue elderberry (most of which were damaged, and a few killed, by the fire) along with laurel sumac, holly-leaved redberry, and giant wildrye, which have re-

sprouted since the fire, and sweet fennel, a non-native invasive species that has proliferated since the fire.

A very small portion of the southern coast live oak forest occurs within the jurisdictional boundaries of the CDFW pursuant to §1600 of the *California Fish and Game Code*; however, the majority of this vegetation type occurs outside the CDFW jurisdiction and is not considered a riparian habitat.

5. **Riparian Habitats** - Prior to the 2008 Freeway Complex Fire, riparian habitats occupied approximately 5.34 acres of the Study Area. Four associations were identified: mulefat scrub, black willow riparian forest, southern willow scrub, and California walnut/mulefat scrub. The 2008 Freeway Complex Fire burned a significant portion of the riparian vegetation, and although it is recovering, the widths of the swath of riparian trees and shrubs associated with each drainage area are roughly half of what they were in their pre-fire condition, and many areas are now dominated instead by poison hemlock and tree tobacco. A brief description of each association is provided below and includes acreages and the dominant plant species observed.
 - a. **Mulefat Scrub** - Approximately 1.93 acres of the Study Area supported mulefat scrub. This community was observed in localized patches along drainages. This community was mapped in the southeastern portion of the Project Area and is commonly intermixed with black willow riparian forest and blue elderberry woodland. Prior to the fire, the mulefat scrub community was dominated by mulefat, blue elderberry, poison oak, California walnut, coyote bush, chaparral bush mallow, poison hemlock, sweet fennel, giant wildrye, common cocklebur, common sow thistle, mugwort, stinging nettle, rabbitsfoot grass, and common celery.

Since the fire, the mulefat has partially returned, but many areas previously vegetated with mulefat are now stands of dense poison hemlock and tree tobacco. Additionally, the blue elderberry and California walnut were damaged, and a few killed by the fire, but the damaged trees are beginning to re-sprout.
 - b. **Black Willow Riparian Forest** - Prior to the 2008 Freeway Complex Fire, approximately 0.19 acre of the Study Area supported black willow riparian forest, all of which was located outside the Project Site. The black willow riparian forest was mapped in the southeastern portion of the Study Area adjacent to residential housing and existing oil facilities. Much of the black willow riparian forest was associated with drainages and was considered to be CDFW jurisdictional, as discussed in Section 5.3.2, Regulatory Setting. Other areas of black willow riparian forest were outside the bed and banks of the drainage

features, and therefore outside CDFW jurisdictional boundaries. Prior to the fire, the black willow riparian forest was dominated by black willow, red willow, arroyo willow, blue elderberry, mulefat, poison oak, poison hemlock, castor bean, fuchsia flowered gooseberry, mugwort, hoary nettle, stinging nettle, sweet fennel, prickly sow thistle, yerba mansa, and water cress.

Following the fire, the willows have largely recovered, although some areas previously vegetated with willows are now stands of dense poison hemlock and tree tobacco. Additionally, individuals of blue elderberry and California walnut were damaged or killed by the fire, though as observed, many have re-sprouted and exhibit signs of regrowth and recovery.

- c. **Southern Willow Scrub** - Prior to the 2008 Freeway Complex Fire, approximately 0.52 acre of the Study Area was dominated by southern willow scrub. This community was mapped in the eastern portion of Blue Mud Canyon (Drainage F) and the southern portion of Drainage D. Southern willow scrub is classified as a sensitive natural community by CDFW. These relatively small areas of southern willow scrub contained dense thickets of willow species, including arroyo willow, in addition to mulefat, and blue elderberry. Understory species include poison oak and California mugwort.

Following the fire, the willows and mulefat have partially returned, but many areas previously vegetated with willows and mulefat are now stands of dense poison hemlock and tree tobacco. Additionally, many individuals of blue elderberry were killed or damaged by the fire, though as observed, many have re-sprouted and exhibit signs of regrowth and recovery.

- d. **California Walnut/Mulefat Scrub** - Prior to the 2008 Freeway Complex Fire, approximately 2.70 acres of the Study Area supported California walnut/mulefat scrub. This community was mapped within Blue Mud Canyon (Drainage F) in the southeastern portion of the Project Site. The California walnut/mulefat scrub was dominated by California walnut and mulefat. Other plant species within this community were poison oak, hoary nettle, blue elderberry, toyon, and holly-leaved redberry. Following the fire, the mulefat has partially returned, but many areas previously vegetated with mulefat are now stands of dense poison hemlock and tree tobacco. Additionally, the blue elderberry and the California walnut were largely damaged or killed by the fire, though as observed, many have re-sprouted and exhibit signs of regrowth and recovery.

6. **Grassland Habitats** - Grassland habitat occupies approximately 136.10 acres of the Study Area. One association was identified: annual grasslands. A brief description of the non-native/native grassland habitat is provided below.

Annual Grassland - Approximately 136.10 acres of the Study Area supports annual grassland. This community was mapped on hilltops, ridgelines, and south-facing slopes throughout the Project Site. The annual grassland community is dominated by non-native grasses. Many of the non-native grasses found on-site are considered to be a naturalized species in southern California. Dominant grasses include ripgut brome, soft chess, Italian wildrye, English wildrye, fox-tail grass, African fountain grass, slender wild oats, and common wild oats. Dominant forbs mapped in the annual grassland community are Russian thistle, summer mustard, black mustard, tocalote, bur clover, horehound, and telegraph weed. The species composition of the annual grasslands was largely unchanged by the 2008 Freeway Complex Fire.

7. **Disturbed Habitats** - Disturbed habitats occupy approximately 15.93 acres of the Study Area. One association was identified: ruderal vegetation. A brief description of provided below.

Ruderal Vegetation - Approximately 15.93 acres of the Study Area consists of ruderal vegetation. The majority of ruderal vegetation was mapped in the southern portion of the Study Area. A small area of ruderal vegetation was mapped in the northeast portion of the Project Site. This vegetation type was typically observed adjacent to roads and oil extraction equipment, and less commonly adjacent to riparian areas. The dominant ruderal vegetation consists of summer mustard, black mustard, tree tobacco, horehound, calabazilla, Russian thistle, wild radish, salt heliotrope), telegraph weed, tocalote, and artichoke thistle.

8. **Developed Land** - Approximately 10.51 acres of the Study Area consists of developed lands. A brief description of the developed lands within the Project Site is provided below.

- a. **Graded Areas** - Approximately 10.17 acres of the Study Area consists of graded areas. Areas within the Study Area mapped as graded consist of dirt roads and pads for oil equipment. The majority of the areas mapped as graded were observed in the southern portion of the Study Area. Two areas containing service roads used to maintain power lines were mapped in the northeastern portion of the Project Site. Although vegetation was not commonly associated with the graded areas, numerous ruderal species were observed adjacent to the service roads and within the oil pad areas.

- b. **Ornamental Vegetation** - Approximately 0.28 acre of the Study Area supports ornamental vegetation, all of which occurs off-site. One small area of ornamental vegetation was observed in the eastern portion of the Study Area adjacent to residential housing. The ornamental vegetation observed on-site consists of Aleppo pine, acacia, Hottentot fig, sweet alyssum, Peruvian pepper tree, and myoporum.
- c. **Detention Basin** - Approximately 0.06 acre of the off-site portion of the Study Area consists of a constructed earthen detention basin vegetated with species including rabbitsfoot grass, bristly ox-tongue, water beard grass and southern cattail. The basin is owned by the Metropolitan Water District and appears to be subject to regular maintenance.

3. Special Status Habitats

Three special status plant communities were observed within the Study Area: southern willow scrub, California walnut woodland, and blue elderberry woodland. Refer to Exhibit 5-25 – Vegetation Map (page 5-99 above) for locations of these special status habitats.

Global and state rankings refer to the relative rarity of vegetation types as classified by the CDFW. Vegetation types are ranked on a scale of 1 to 5, with 1 being the most rare/insecure and 5 being the least. Rankings of 1 and 2 generally indicate a high to moderate degree of rarity/insecurity, a ranking of 3 indicates a low degree of rarity/insecurity, and ranks of 4 or 5 indicate that populations are secure and not rare. The global rank is an overall ranking throughout the range of the vegetation type, while the state rank refers to the relative rarity in California only. The second number, Threat Code Extension, after the state rank is the threat rank, with .1 being very threatened, .2 being threatened, and .3 meaning no threats are known. A detailed description of California Rare Plant Ranks (CRPR) and Threat Code Extensions is provided in the Biological Technical Report (Appendix D in this DEIR) along with Table 3-1, California Rare Plant Ranks 1,2,3, and 4, and Threat Code Extensions. Rank and threat code are provided below for each special status habitat.

It should be noted that for the Study Area, none of the coastal sage scrub habitat types, which include California sagebrush scrub (G5S5), disturbed California sagebrush scrub (G5S5), purple sage scrub (G4S4), and sagebrush-monkeyflower scrub (G5S5), are considered special status, both because the global and state rankings indicate that they are secure and not rare, and because they generally exhibit a high degree of disturbance resulting from the 2008 Freeway Complex Fire.

a. California Walnut Woodland

California walnut woodland was observed within the Study Area and occurs in one contiguous polygon in the southern portion of the Study Area; however, the majority of the trees were damaged, and a few killed, by the 2008 Freeway Complex Fire. Approximately 6.37 acres of California walnut woodland was observed within the Study Area. California walnut woodland has a global ranking of G2 and a state ranking of S2.1, indicating that between 2,000 and 10,000 acres of this habitat remain throughout its global and state range, and that it is “very threatened.” Although a substantial number of the walnut trees within the Study Area were damaged, the walnut woodland is showing signs of recovery and is treated as a special-status habitat, even with the loss of function associated with fire.

b. Southern Willow Scrub

Southern willow scrub was observed in three small areas within the eastern portion of Blue Mud Canyon (Drainage F). Approximately 0.52 acre of southern willow scrub was observed. Southern willow scrub has a global ranking of G3 and a state ranking of 2.1, indicating that between 10,000 and 50,000 acres of this habitat occur within its global range and that between 2,000 and 10,000 acres of this habitat remain within its state range, and that it is “very threatened.”

c. Blue Elderberry Woodland

Blue elderberry woodland was observed within the Study Area and occurs on the lower slopes of hillsides and within the drier sections of the riparian areas; however, large numbers of the trees were damaged, and a few killed, by the 2008 Freeway Complex Fire (Exhibit 5-25 – Vegetation Map, page 5-99 above). Approximately 23.88 acres of blue elderberry woodland was observed within the Study Area. Blue elderberry woodland has a global ranking of G3 and a state ranking of S3, indicating that between 10,000 and 50,000 acres of this habitat remain throughout its global and state range.

Currently, the CNDDB does not include a description of this habitat. Blue elderberry is a common shrub or small tree that occurs in a large variety of habitats throughout its range and most certainly occupies well over 50,000 acres when the variety of habitats it occupies is taken into account. The CNDDB currently lists the following:

Sambucus nigra (Blue elderberry stands) Alliance G3 S3 *63.410.00
Elderberry Savanna G2 S2.1 CTT63440CA²
Sambucus nigra *63.410.01
Sambucus nigra - *Heteromeles arbutifolia* *63.410.03
Sambucus nigra / *Leymus condensatus* *63.410.02

² According to Holland (1986) Elderberry savannah occurs in northern California, in the Sacramento and northern San Joaquin valleys, extending as far south as Merced County. This community does not occur in southern California.

As noted in the description above, the blue elderberry on the site occurs in low to moderated densities with laurel sumac as co-dominant or in some cases in larger numbers than the elderberry. While both toyon (*H. arbutifolia*) and giant wild rye are present, they are not dominants or co-dominants and only in very limited numbers in this habitat on the site. Because there are no monocultural (single species) stands of blue elderberry on the site and because the habitat is generally co-dominated or dominated by species such as laurel sumac, it is not clear that this habitat should be treated as a special-status habitat. Nevertheless, impacts to this community, though highly degraded will be treated as significant and mitigated accordingly.

4. Special Status Plants Observed

Special-status plants were evaluated for the Study Area through habitat assessments and focused surveys to determine whether suitable habitat was present to support the species. Three special status plant species were observed within the Study Area during 2010 surveys: Braunton's milk-vetch, Catalina mariposa lily, and intermediate mariposa lily. One special status plant species, southern California walnut, was observed within the Study Area during the 2007, 2010, 2012, and 2013 survey seasons. Two special status plant species, Catalina mariposa lily and small flowered microseris, were documented within the Study Area during botanical surveys conducted by Campbell BioConsulting, Inc. from 1997 to 2002 (Exhibit 5-26 – Special Status Biological Resources Map).

All five special-status plants are discussed in detail below.

1. Braunton's milk-vetch (*Astragalus brauntonii*) is a perennial herb designated as a CRPR List 1B.1 species, is federally listed as endangered, and is not state listed. The species is known to occur in Los Angeles, Orange, Riverside, and Ventura counties. Braunton's milk-vetch occurs mainly in chaparral, coastal scrub, and valley and foothill grasslands in recently burned or disturbed areas in sandstone soil with carbonate layers from 4 to 640 meters in elevation. Approximately 400 individuals of Braunton's milk-vetch were detected during focused surveys in 2010. A survey conducted on January 9, 2013 found many of the dried remains of the plants still intact; however, all individuals of this short-lived perennial had expired.
2. Catalina mariposa lily (*Calochortus catalinae*) is a perennial herb designated as a CRPR List 4 species but is not federally or state listed. This species is known from Los Angeles, Ventura, and Orange counties as well as the Channel Islands. Catalina mariposa lily occurs mostly in open grasslands and has been documented in the Chino-Puente Hills. Surveys completed from 1997 to 2002 by Campbell BioConsulting reported observing approximately 445 Catalina mariposa lilies scattered throughout the site. Catalina lily plants were also observed during 2010 surveys. During 2007 surveys, when many dried capsules believed to be remnants

from previous years' Catalina lily blooms were observed in grassland areas within the northern portion of the Study Area, negative survey results were thought to be an outcome of the extreme dry conditions experienced throughout southern California, and it was predicted that the 445 plants reported by Campbell BioConsulting thought to be dormant on-site would most likely flower during a later season in wetter conditions. 2010 survey results are evidence of the accurate prediction that the Study Area will support Catalina mariposa lily during non-drought conditions.

3. Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*) is a bulbiferous herb designated as a CRPR List 1B.2 species but is not federally or state listed. This species is found in Los Angeles, Orange, Riverside, and San Bernardino counties. Intermediate mariposa lily occurs mainly in chaparral, coastal scrub, and valley and foothill grasslands in rocky, calcareous soils from 345 feet to 2,805 feet in elevation. Approximately 326 individuals of intermediate mariposa lily were detected during focused surveys in 2010.
4. Southern California walnut (*Juglans californica*) is a perennial deciduous tree species designated as a CRPR List 4 species but is not federally or state listed. Woodlands dominated by southern California walnut are designated as "rare" by CDFW. This species is endemic to California and is known to occur in Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, and Ventura counties in chaparral, coastal sage scrub, and in coast live oak woodland from 164 feet to 2,953 feet in elevation. Southern California walnut was detected during focused surveys in 2007. However, the 2008 Freeway Complex Fire damaged a large percentage of the walnut trees, and killed a few, within the Study Area.
5. Small flowered microseris (*Microseris douglasii* var. *platycarpa*) is an annual herb designated as a CRPR List 4 species (plants of limited distribution) but is not federally or state listed. Small flowered microseris is known in Los Angeles, Riverside, and Orange counties and is restricted to clay soils. During focused surveys conducted by Campbell BioConsulting in 1998, 10 individuals of small flowered microseris were observed. These plants were located along the old Edison spur road, approximately 75 feet west to the Southern California Edison 500 kV towers. No small flowered microseris were observed during the 2007 or 2010 surveys. The negative survey results in 2007 are thought to be an outcome of the extreme dry conditions experienced throughout southern California that year, and the 10 plants reported by Campbell BioConsulting were thought to be dormant on-site and would most likely flower when wetter conditions were present. However, small flowered microseris was not detected in 2010, and has not been detected in any surveys since, so it is not known if the population is surviving in the Study Area.

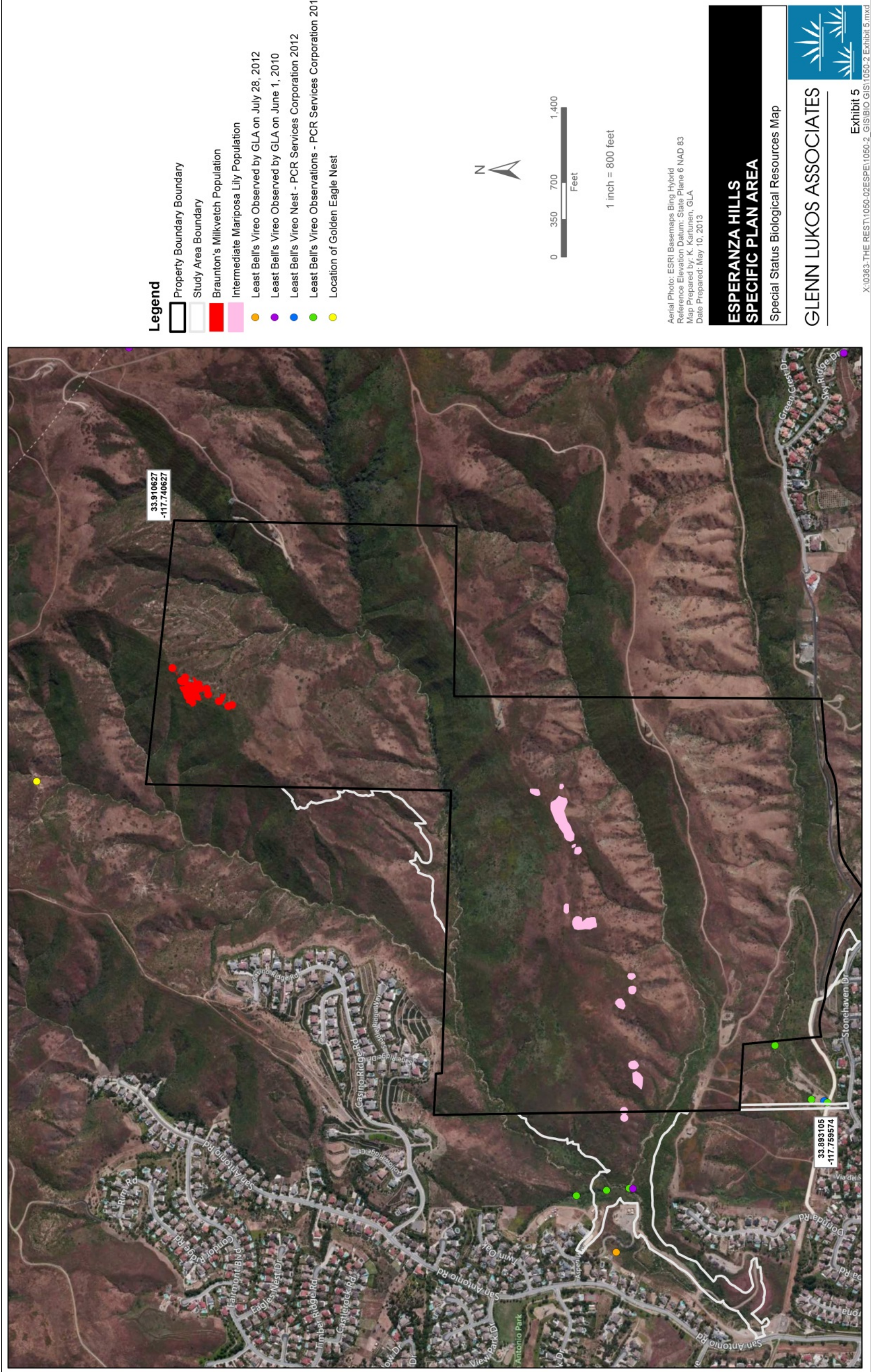


Exhibit 5-26– Special Status Biological Resources Map

5. Wildlife

a. Special Status Wildlife

Species were evaluated based on two factors, including: 1) species identified by the CNDDDB as occurring (either currently or historically) on or in the vicinity of the property, and 2) any other special status animals that are known to occur within the vicinity of the property, or for which potentially suitable habitat occurs on-site. Table 4-3 of the Biological Technical Report (Appendix D of this DEIR) provides a list of special-status animals evaluated for the Study Area with information on species name, status, habitat requirements, and potential for occurrence. The following is a summary of the special status animal evaluation results.

1. **Special-Status Birds** – Focused surveys were conducted for three special status birds with the potential to occur on-site: coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher. The three special status birds are discussed below.
 - a. **Coastal California Gnatcatcher Survey Results** - Glen Lukos Associates (GLA) biologists detected no California gnatcatchers on the Project Site during any of the surveys from 2008 through the winter of 2013. However, to ensure that gnatcatchers were not on-site, a focused protocol gnatcatcher survey was completed in 2013. As noted in the vegetation descriptions above, the coastal sage scrub on the site is heavily dominated by black and purple sage and is suboptimal for the gnatcatcher, thus explaining the lack of detection over this fairly large site. The complete coastal California gnatcatcher survey report is provided as Appendix C of the Biological Technical Report in Appendix D of this DEIR. In addition, focused surveys for the coastal California gnatcatcher during the 2002 survey season conducted by Campbell BioConsulting Inc. had negative results, and no gnatcatchers were observed in other site visits from 2006 through 2013, or in any studies conducted by other biologists for adjacent properties, as noted in the Biological Technical Report.
 - b. **Least Bell's Vireo Survey Results** - GLA biologists did not observe least Bell's vireo during focused surveys in 2007; however, this species was observed feeding during other biological surveys in 2010 and 2012 at the west end of the Study Area in the location and immediate vicinity of potential off-site impacts. Additionally, PCR Services Corporation (PCR), a biological consulting firm, observed least Bell's vireo, including one least Bell's vireo nest, during 2012 focused surveys at the adjacent Cielo Vista property, as noted in the Biological Technical Report.
 - c. **Southwestern Willow Flycatcher Survey Results** - GLA biologists detected two willow flycatchers during the second willow flycatcher

survey period (June 1, 2007) on the Project Site. Because willow flycatchers were not detected during the last three surveys, results indicate that these willow flycatchers were migrants and did not attempt to establish nesting territories on-site. Based on these studies, GLA concluded that the Project Site is not occupied by the endangered southwestern willow flycatcher. The complete southwestern willow flycatcher survey report is found as Appendix D of the Biological Technical Report in Appendix D of this DEIR. GLA's conclusions took into account a focused survey for the southwestern willow flycatcher during the 2002 survey season conducted by Campbell BioConsulting Inc., which also determined that no willow flycatcher were present.

2. **Special-Status Wildlife – Observed** - Ten special status wildlife species, as designated by CDFW and/or USFWS, were observed within the Study Area: Cooper's hawk, golden eagle, grasshopper sparrow, least Bell's vireo, northern harrier, peregrine falcon, sharp-shinned hawk, southern California rufous-crowned sparrow, yellow-breasted chat, and yellow warbler. These ten special status animal species are discussed in detail below.
 1. Cooper's hawk (*Accipiter cooperii*) is a CDFW-designated Watch List species when nesting. This species occurs primarily in riparian areas and oak woodlands, and most commonly in moist upland canyons. This species is also known to use urban areas, occupying trees among residential and commercial development and using utility poles as perches. Cooper's hawk was observed foraging within the Study Area, and has low potential to nest within the off-site riparian areas. No nests have ever been observed on the Study Area.
 2. Golden eagle (*Aquila chrysaetos*) is a CDFW-designated Watch List species when nesting and wintering, and is a Fully Protected Species (FPS). This species occurs in rolling foothills, mountain areas, sage-juniper flats, and deserts, and winters and nests in cliff-walled canyons. A golden eagle was seen foraging on-site, and a nest was observed north of the site on a cliff face within Chino Hills State Park prior to the 2008 Freeway Complex Fire. However, no suitable nesting or wintering habitat is present on-site, as there are no cliff faces within the site that provide suitable platforms for nesting. The location of the observed golden eagle nest is depicted on Exhibit 5-26 – Special Status Biological Resources Map (page 5-113). A subsequent visit to the former location of the nest in May 2013 revealed that the nest is no longer active, and GLA biologists concluded that it was probably destroyed in the 2008 Freeway Complex Fire.

3. Grasshopper sparrow (*Ammodramus savannarum*) is a CDFW-designated Species of Special Concern (SSC) when nesting. It occurs in dense grasslands on rolling hills and lowland plains, in valleys, and on hillsides on lower mountain slopes. This species favors native grasslands with a mix of grasses, forbs, and scattered shrubs, and is loosely colonial when nesting. A single grasshopper sparrow was observed within the Study Area near eastern boundary by GLA in 2013, with additional individuals observed outside the eastern Study Area boundary.
4. Least Bell's vireo (*Vireo bellii pusillus*) is a state and federally listed endangered species. It occurs in dense riparian habitats with a stratified canopy, including southern willow scrub, mulefat scrub, and riparian forest. GLA biologists did not observe least Bell's vireo during focused surveys in 2007; however, this species was observed feeding during other biological surveys in 2010. Additionally, this species was detected by PCR Services Corporation during surveys in 2012 within the off-site impact areas on the proposed Cielo Vista project. The areas of observed least Bell's vireo are depicted on Exhibit 5-26 – Special Status Biological Resources Map (page 5-113).
5. Northern harrier (*Circus cyaneus*) is CDFW SSC when nesting, but is a common, often abundant, winter visitor throughout California from September through April. Characteristically, this hawk inhabits marshlands, coastal salt water and freshwater, but often forages over grasslands and fields. It glides and flies low over open habitats searching for prey. Northern harrier was observed foraging on-site, but would not nest on-site, as this species is not known to breed in southern California.
6. Peregrine falcon (*Falco peregrinus*) is a CDFW-designated FPS and a USFWS-designated Bird of Conservation Concern (BCC). In California this species inhabits coastal areas and inland mountains. This species is a very uncommon breeding resident and uncommon as a migrant or as a winter resident. Peregrine falcon was seen foraging on-site; however, no suitable sites for nesting occur on the site.
7. Sharp-shinned hawk (*Accipiter striatus*) is a CDFW Watch List species. This species occurs in southern California as a wintering species, foraging in woodlands and scrub habitats. Sharp-shinned hawk was observed foraging on-site and would only occur as a winter visitor, as this species does not breed in southern California.

8. Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) is a CDFW Watch List species. This subspecies of the rufous-crowned sparrow is a resident species of southern California on the slopes of the Transverse and Coastal ranges from Los Angeles County south to Baja California Norte, and occurs on grass-covered hillsides, coastal sage scrub, and chaparral. Southern California rufous-crowned sparrow was detected foraging on-site.
 9. Yellow-breasted chat (*Icteria virens*), which is a CDFW Species of Concern, is a migratory songbird that breeds in riparian habitats in southern California. This species exhibits habitat requirements similar to least Bell's vireo. Suitable habitat typically consists of multi-layered riparian scrub or willow woodland corridors along flowing streams. The yellow breasted chat was not detected during 2007 or 2010 surveys. However, this species was detected by PCR during surveys in 2012 within the off-site impact areas.
 10. Yellow warbler (*Setophaga petechia*), which is a CDFW SSC and a USFWS BCC, is a migratory songbird that breeds in riparian habitats in southern California. This species exhibits habitat requirements similar to the yellow-breasted chat and the least Bell's vireo. Suitable habitat typically consists of multi-layered riparian scrub or willow woodland corridors along flowing streams. The yellow warbler was observed in the western portion of the Study Area during focused surveys for special-status riparian birds.
3. **Special-Status Wildlife – Potential to Occur but Not Detected** - Special Status Wildlife Species with the potential to occur on-site were evaluated based on the presence of potentially suitable habitat (e.g., California sagebrush scrub, chaparral, and riparian). These species were not detected during habitat assessments, biological surveys, and vegetation mapping as listed in Exhibit 5-26– Special Status Biological Resources Map (page 5-113 above) but are discussed here in more detail.
1. Coast horned lizard is designated as a CDFW SSC, but is not federally or state listed. This species inhabits coastal sage scrub and chaparral habitats associated with sandy, rocky, or shallow soils that support native harvester ants. The San Diego horned lizard has never been detected on-site.
 2. Coast patch-nosed snake has been designated a CDFW SSC. This snake inhabits sandy flats and rocky open areas in coastal sage scrub and chaparral. The coast patch-nosed snake has never been detected on-site.
 3. Loggerhead shrike is a CDFW SSC and a USFWS BCC that occurs in open fields with scattered trees, open woodland, and scrub. This

species is fairly common throughout open habitats in southern California. The loggerhead shrike has never been detected on-site.

4. Long-eared owl, which is a CDFW SSC, is a resident that breeds in riparian habitats and oak thickets in southern California. The long-eared owl has never been detected on-site.
5. Northern red-diamond rattlesnake is designated as a CDFW SSC but is not federally or state listed. This species occurs in chaparral, woodland, grassland, and desert areas from San Bernardino County southward along both sides of the peninsular ranges and Santa Ana Mountains to Baja California. This species uses rocks, rodent burrows, and dense vegetation for cover. The northern red-diamond rattlesnake has never been detected on-site.
6. Orange-throated whiptail is a CDFW SSC. This lizard is known from coastal sage scrub, chaparral, and valley-foothill hardwood habitats of San Bernardino, Riverside, Los Angeles, Orange, and San Diego counties. It prefers washes and other sandy areas with patches of brush and rocks. The orange-throated whiptail has never been detected on-site.
7. Pallid bat is a CDFW SSC. Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of coast redwoods and giant sequoias, bole cavities of oaks, exfoliating Ponderosa pine and valley oak bark, deciduous trees in riparian areas, and fruit trees in orchards), and various human structures such as bridges (especially wooden and concrete girder designs), barns, porches, bat boxes, and human-occupied as well as vacant buildings. They forage over open shrub-steppe grasslands, oak savannah grasslands, open Ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards. This species is not expected to roost within the Study Area, but may occasionally occur for foraging only. The pallid bat has never been detected on-site.
8. Prairie falcon is a CDFW FPS and a USFWS BCC. This species nests in cliffs or rocky outcrops, forages in open valleys and agricultural fields, and is known from desert and arid interior areas of coastal counties, but is an uncommon resident in southern California. The prairie falcon has never been detected on-site.
9. Vaux's swift, which is a CDFW SSC, is a migratory songbird that breeds in old-growth forests in the Sierra Nevada and from northern California to Washington. This species feeds on insects on the wing, typically over lakes, rivers, or riparian areas. The Vaux's swift has never been detected on-site.

10. Western mastiff bat is a CDFW SSC. Western mastiff bat is primarily a cliff-dwelling species, where maternity colonies of 30 to several hundred (typically fewer than 100) roost generally under exfoliating rock slabs (e.g., granite, sandstone, or columnar basalt). It has also been found in similar crevices in large boulders and buildings. Roosts are generally high above the ground, usually allowing a clear vertical drop of at least three meters below the entrance for flight. In California, it is most frequently encountered in broad open areas. Its foraging habitat includes dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas. This species is not anticipated to roost within the Study Area but has a low potential to occur for foraging only. The western mastiff bat has never been detected on-site.
11. Western yellow bat is a CDFW SSC. Individuals usually roost in trees, hanging from the underside of a leaf. They are commonly found in the southwestern United States roosting in the skirt of dead fronds in native and non-native palm trees, and have also been documented roosting in cottonwood trees. At least some individuals or populations may be migratory, although some individuals appear to be present year-round, even in the northernmost portion of their range. Capture sites are often associated with natural and non-natural water features in open grassy areas and scrub, as well as canyon and riparian situations. Captures are also reported over swimming pools, lawns in residential areas, and orchards. This species may forage within the Study Area, but is not expected to roost. The western yellow bat has never been detected on-site.
6. **Raptor Use** - The Study Area provides potentially suitable foraging and breeding habitat for a number of raptor species, including special status raptors. However, there was no evidence of nesting raptors on the site, and raptor foraging was not observed to be common on the site, with the exception of foraging by red-tailed hawks, which regularly visit the site. Although a few special status species were observed foraging within the Study Area, including Cooper's hawk, golden eagle, northern harrier, peregrine falcon, and sharp-shinned hawk, foraging by these species was infrequent, and the Study Area does not provide an important location for raptor foraging, especially given that raptors can utilize the extensive habitat at the adjacent Chino Hills State Park.
7. **Nesting Birds – Existing Conditions** - The Study Area supports trees, shrubs, and ground cover that provide suitable habitat for nesting migratory birds. Impacts to nesting birds are prohibited under the Migratory Bird Treaty Act (MBTA) and the *California Fish and Game Code*.

8. **Wildlife Movement – Existing Conditions** - The Study Area contains habitat that supports a number of species of invertebrates, amphibians, reptiles, birds, and mammals, and movement on a local scale occurs throughout the surrounding vicinity as well as within the Study Area. The home range and average dispersal distance of many of these species may be entirely contained within the Study Area and its immediate vicinity, although individuals may occasionally move outside the Study Area to expand or disperse from their natal territories.
 - a. **Regional Wildlife Movement** - From a regional perspective for wildlife movement, the Study Area abuts an area of privately owned open space along the western boundary of the Study Area, and is contiguous with open space connecting to Chino Hills State Park (to the north and east). The Study Area is situated immediately south and west of Chino Hills State Park, and 1.5 miles north of the Santa Ana River. The Study Area is also 4.5 miles north of Warner and Conrock Basins (Orange County Water District recharge facilities), 4.5 miles southeast of the Carbon Canyon Dam, and 5.4 miles northwest of Sierra Peak (Cleveland National Forest). Due to the past urbanization of the region, large open space areas in the immediate vicinity of the Study Area are limited to Chino Hills State Park and the Santa Ana River. The Study Area is bounded by residential development to the south. Residential development also exists to the west by a narrow area of open space, which is proposed as a residential development known as Cielo Vista. Thus, the Study Area serves as a “dead end” or “cul-de-sac” for the movement of larger mammals that require larger home range areas and dispersal distances or dense vegetative cover from the north and east through the Study Area, but no movement of large species with large ranges would occur to/from the south and west due to existing urban development. However, smaller, urban-adapted species (e.g., raccoon, skunk, coyote, and birds) are expected to move through the Study Area. Although the Study Area provides habitat for small wildlife and may support movement on a local scale, it does not function as a regional wildlife movement corridor, because it does not connect two or more habitat patches due to the surrounding development.
 - b. **Chino Hills State Park Wildlife Corridors** - The Chino Hills State Park General Plan (1999) includes a lengthy discussion of wildlife corridors within Chino Hills State Park north of the Study Area. As stated in the General Plan, there are three importation corridors that connect Chino Hills State Park with adjacent projected open space: Coal Canyon, Sonome and Tonner Canyons, and the Prado Basin.
 1. The Coal Canyon Corridor connects Chino Hills State Park and surrounding Puente-Chino Hills on the north to the Cleveland

National Forest and the Santa Ana Mountains on the south. This corridor extends roughly west to southeast within Chino Hills State Park boundaries through Brush and Water Canyons. It does not traverse the Study Area nor does it connect the Study Area to adjacent habitat areas.

2. The Sonome and Tonner Canyon corridors link Chino Hills State Park with open space areas in Puente and Whittier Hills north and west of Chino Hills State Park. These corridors also do not traverse the Study Area or connect it to adjacent habitat areas.
 3. The Prado Basin corridor links Chino Hills State Park with habitat within Prado Basin and the upper reaches of the Santa Ana River to the east. Again, this corridor does not traverse the Study Area or connect it to adjacent habitat areas.
9. **Coastal California Gnatcatcher Critical Habitat Area** - The Study Area falls entirely within Unit 9 of the existing critical habitat for coastal California gnatcatcher designated by the USFWS. However, no coastal California gnatcatcher were detected within the Study Area during multiple protocol surveys dating from March 2007 through June 2013 as shown in Exhibit 5-26 – Special Status Biological Resources Map (page 5-113) or on prior focused coastal California gnatcatcher studies dating back to 2002. Additionally, primary constituent elements (PCEs) for coastal California gnatcatcher are severely reduced or lacking due to the high degree of disturbance to coastal sage scrub habitats following the 2008 Freeway Complex Fire.
10. **Jurisdictional Delineation of Wetlands and Waters of the United States – Existing Conditions** – Potential jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils, and hydrology. Suspected wetland habitats within the Study Area were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1997 “Wetlands Delineation Manual,” the 2008 “Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region,” and the 2008 “Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.” The USDA Natural Resources Conservation Service (NRCS) indicates the soil types occurring in the Study Area as depicted on Exhibit 5-27 – Soils Map. None of the soil units are identified as hydric in the NRCS publication, “Hydric Soils of the United States,” or in the local hydric soils list for Orange County, California.

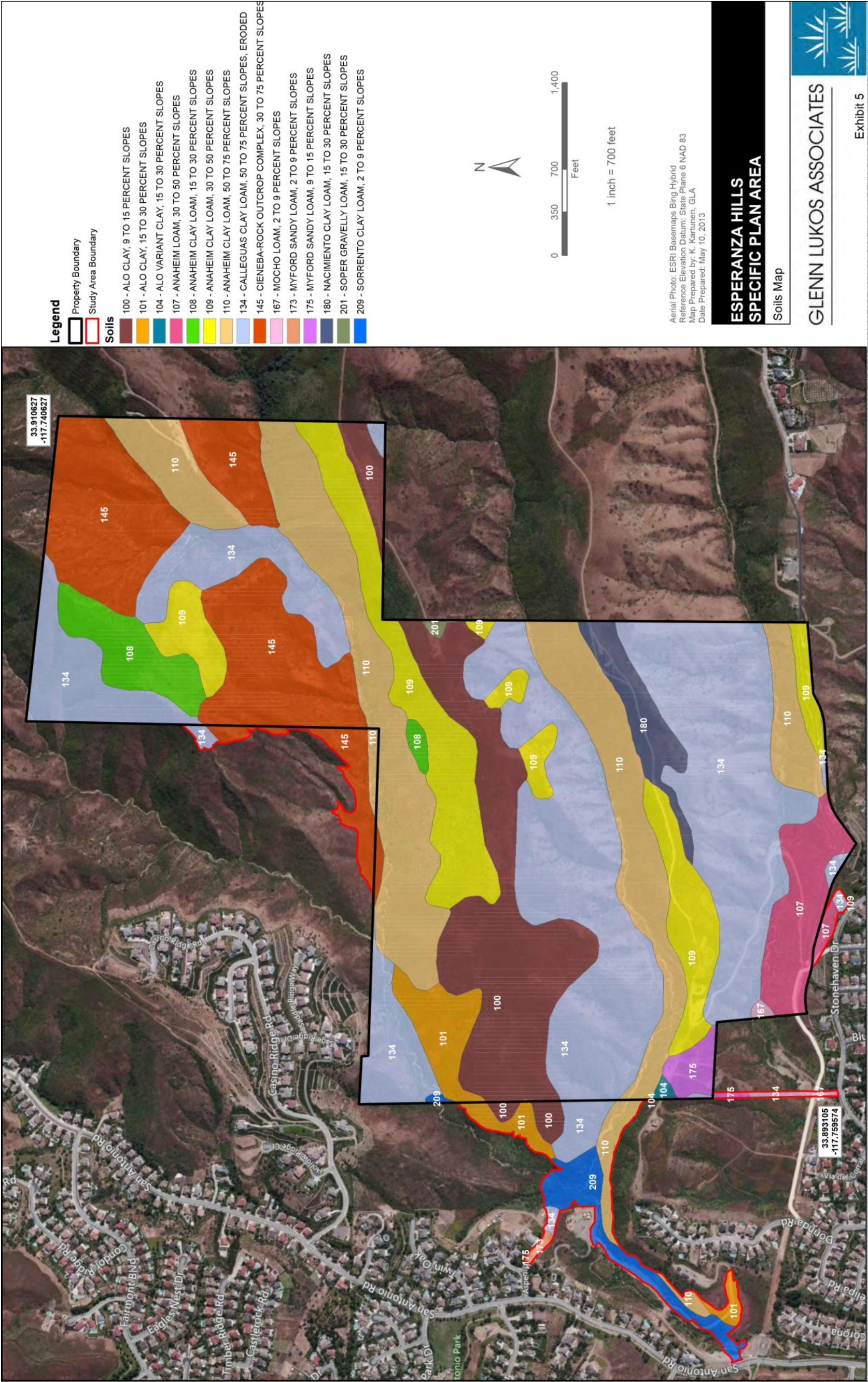


Exhibit 5-27 – Soils Map

- a. Corp Jurisdiction - The Study Area contains 2.08 acres of waters, of which 0.19 acres consist of wetlands. All of the drainages, with the exception of Drainage G and the off-site portion of Drainage D, which exhibit intermittent flows, are ephemeral, meaning that they are non-relatively permanent waters (non-RPWs). There are seven main drainage systems within the Project Area (A through G). Drainages D, E, F, and G and their tributaries are the main features on-site. All of these drainages exhibit signs of an OHWM, which is 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, and/or the presence of litter and debris. The drainages potentially subject to U.S. Corps of Engineers (ACOE) jurisdiction are depicted on Exhibit 5-28 – ACOE Jurisdictional Delineation Map.

A summary of ACOE jurisdiction of drainage areas in the Study area is below in Table 5-3-3 below.

Table 5-3-3 Total ACOE Jurisdiction

Drainage	Total Study Area			
	Non-Wetlands Waters (acres)	Wetlands (acres)	ACOE Jurisdiction (acres)	Linear Length (feet)
A	0.12	0.0	0.12	3,630
B	0.01	0.0	0.01	281
C	0.001	0.0	0.001	14
D	0.61	0.13	0.74	9,409
E	0.47	0.0	0.47	7,563
F	0.68	0.02	0.70	6,076
G	0.0	0.04	0.04	187
Total	1.89	0.19	2.08	27,161

1. Drainage A - ACOE jurisdiction associated with Drainage A totals approximately 5,227 square feet (0.12 acre), none of which consists of wetlands. Drainage A is located in the northeastern portion of the Project Area and is tributary to Drainage D, which traverses the site and then exits the property to the southwest. Drainage A flows from north to south for approximately 3,630 linear feet before confluence with Drainage D. The OHWM associated with this drainage system varies in width from one to two feet. Drainage A exhibits an OHWM that is indicated by the presence of shelving, debris wrack, and/or destruction of terrestrial vegetation.

The banks of Drainage A are generally vegetated with toyon-sumac chaparral. In general Drainage A is characterized by a dominance of evergreen chaparral species, including toyon,

laurel sumac, lemonade berry, holly-leaved redberry, poison oak, and southern honeysuckle.

2. Drainage B - ACOE jurisdiction within the Study Area associated with Drainage B totals approximately 436 square feet (0.01 acre), all of which occur on-site. None of Drainage B consists of wetlands. From where it enters the site, Drainage B flows from the north to south for approximately 281 linear feet to the confluence with Drainage D. The OHWM associated with this drainage system varies in width from one to two feet and is indicated by the presence of shelving, debris wrack, and/or destruction of terrestrial vegetation.

In general, Drainage B is characterized by a dominance of bush mallow, coyote bush, laurel sumac, giant wild rye, poison oak, sweet fennel, southern honeysuckle, poison hemlock, chaparral nightshade, stinging nettle, and fuchsia flowered gooseberry.

3. Drainage C - ACOE jurisdiction associated with Drainage C totals approximately 44 square feet (0.001 acre), none of which consist of wetlands. Drainage C is located in the northwestern portion of the Project Area and is tributary to Drainage D as noted above. This drainage system flows from the north to south for approximately ± 415 linear feet, straddling the property line such that only 14 linear feet are actually located within the Study Area. The OHWM in this drainage system averages approximately two feet in width. Drainage C exhibits an OHWM that is indicated by the presence of shelving, debris wrack, and/or destruction of terrestrial vegetation.

The banks of Drainage C generally support a mix of native scrub species and herbaceous weedy species including laurel sumac, poison oak, sweet fennel, southern honeysuckle, poison hemlock, chaparral nightshade, and California sagebrush.

4. Drainage D - ACOE jurisdiction associated with Drainage D within the Study Area totals approximately 0.74 acre, of which approximately 0.13 acre consists of wetlands. Drainage D is located in the north-central portion of the Project Site and traverses the site flowing east to west before exiting the property at the western edge of the site and extending to the limits of the Study Area at San Antonio Road. This Drainage extends for 9,409 linear feet through the Study Area. The OHWM in this drainage system varies in width from one to five feet within the project boundaries. Drainage D exhibits an OHWM that is indicated by the presence of shelving, debris wrack, and/or destruction of terrestrial vegetation.

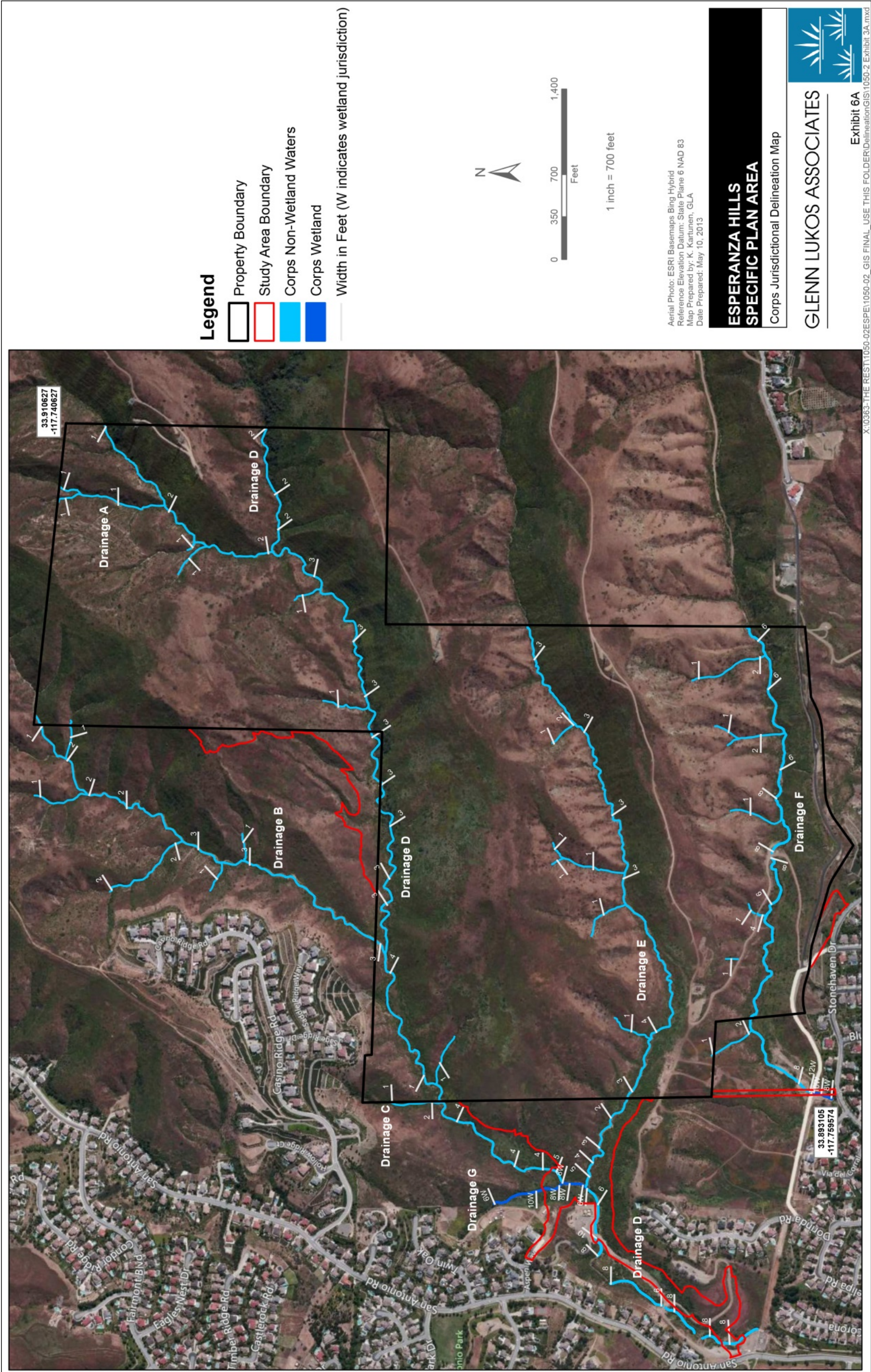


Exhibit 5-28– ACOE Jurisdictional Delineation Map

Drainage D generally contains coast live oak riparian forest as well as several small areas of mulefat scrub. The extreme southern portion of Drainage D, which is within off-site portions of the Study Area, is characterized by black willow riparian forest. In general, Drainage D is characterized by a dominance of bush mallow, coyote bush, laurel sumac, giant wildrye, poison oak, sweet fennel, southern honeysuckle, poison hemlock, chaparral nightshade, mulefat, coast live oak, stinging nettle, and fuchsia flowered gooseberry. Within the southernmost portion of Drainage D, black willow and arroyo willow with areas immediately adjacent exhibit high levels of disturbance due to dense stands of non-native species such as poison hemlock that is mixed with other non-native invasive species such as castor bean and tree tobacco.

The reach of Drainage D in the vicinity of the off-site access road right-of-way connection to San Antonio Road consists of an intermittent drainage that varies in width from eight to ten feet with an earthen bank and bottom that exhibits small cobbles. The channel is mostly unvegetated, with limited small patches of southern cattail, and non-natives such white watercress and African umbrella sedge. The banks support southern arroyo willow forest dominated by black willow, occasional arroyo willow, and mulefat. Large areas of the bank and adjacent terrace exhibit substantial disturbance and are dominated by non-natives such as poison hemlock, castor bean, summer mustard, sweet fennel, and tree tobacco.

5. Drainage E - ACOE jurisdiction associated with Drainage E totals approximately 0.47 acre, none of which consists of wetlands. Drainage E is located in the southern portion of the Project Area and converges with Drainage G, as noted above. This drainage system flows from east to west for approximately 7,563 linear feet before its confluence with Drainage G. The OHWM varies in width from one to five feet as indicated by the presence of shelving, debris wrack, and/or destruction of terrestrial vegetation.

The banks of Drainage E are vegetated with scrub and non-native grasses including bush mallow, a few surviving blue elderberry, coyote bush, laurel sumac, giant wild rye, poison oak, sweet fennel, poison hemlock, chaparral nightshade, mulefat, and fuchsia flowered gooseberry.

6. Drainage F (Blue Mud Canyon) - ACOE jurisdiction associated with Drainage F totals approximately 0.70 acre), of which 0.02 acre consists of wetlands. The ACOE jurisdictional wetland associated with Drainage F is within the off-site portion of the Study Area and is associated with a small debris basin. Drainage F is located in the southern portion of the Project Area and extends from the east to west for approximately 6,076 linear feet before exiting the Study Area at the southwest corner. The OHWM in this drainage system, including on-site and off-site sections, varies in width from 1 to 25 feet. Drainage F exhibits an OHWM that is indicated by the presence of shelving, debris wrack, and/or destruction of terrestrial vegetation.

Drainage F is generally vegetated with mulefat scrub, remnant California walnut woodland (most were killed by the 2008 Freeway Complex Fire), California walnut woodland/mulefat scrub, and limited amounts of blue elderberry woodland (also largely killed by the fire). In general Drainage F is characterized by a dominance of bush mallow, limited areas of Arroyo willow, mulefat, coyote bush, laurel sumac, giant wildrye, poison oak, sweet fennel, stinging nettle, and fuchsia flowered gooseberry.

7. Drainage G - ACOE jurisdiction associated with Drainage G is all in the off-site portion of the Study Area and could be affected by development of an emergency access road connecting to the existing Aspen Way cul-de-sac. Drainage G totals approximately 0.04 acre, all of which consists of jurisdictional wetlands. Drainage G is located in the western portion of the Study Area. The drainage flows from the north to south for approximately 187 linear feet and is tributary to Drainage D, which is noted above. The OHWM in this drainage system varies in width from six to ten feet. Drainage G supports an OHWM consisting of shelving, debris wracks, and/or destruction of terrestrial vegetation. It should be noted that the primary hydrological input for Drainage G is constant, year-round urban runoff flows from the residential development immediately west of Drainage G located off San Antonio Road, which supports the riparian forest habitat and wetlands downstream of the urban runoff discharge point.

Drainage G is generally vegetated with black willow riparian forest. In general Drainage G is characterized by a dominance of black willow, arroyo willow, mulefat, common celery, sweet

fennel, blue elderberry, coyote bush, mugwort, and poison hemlock.

b. Regional Water Quality Control Board – Santa Ana Region Jurisdiction

None of the on-site drainages were determined to be intrastate/isolated waters outside ACOE jurisdiction; therefore, these drainages do not need to be addressed separately pursuant to the Porter-Cologne Water Quality Control Act and are therefore not subject to Section 401 certification by the Regional Board.

c. California Department of Fish and Wildlife Jurisdiction

CDFW jurisdiction associated with the Study Area totals approximately 4.15 acres, of which 2.57 acres consist of vegetated riparian habitat. All of the drainage systems support the presence of a bed, a bank, and/or a channel. Descriptions of CDFW jurisdictional areas and associated vegetation drainage are listed above and for further details in the Biological Technical Report (Appendix D of this DEIR). Table 5-3-4 below summarizes CDFW jurisdiction for on-site and off-site areas. The boundaries of CDFW jurisdiction are depicted on Exhibit 5-29 – CDFW Jurisdictional Delineation Map.

Table 5-3-4 Total CDFW Jurisdiction within the Study Area

Drainage	Total Study Area			
	Unvegetated Drainage (acres)	Riparian Drainage (acres)	Total CDFW Jurisdiction (acres)	Linear Length (feet)
A	0.12	0.0	0.12	3,630
B	0.01	0.0	0.01	281
C	0.001	0.0	0.001	14
D	0.41	1.89	2.30	9,409
E	0.42	0.13	0.55	7,563
F	0.62	0.51	1.13	6,076
G	0.0	0.04	0.04	187
Total	1.58	2.57	4.15	27,160

5.3.2 Regulatory Setting

The Proposed Project is subject to state and federal regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including: state- and federally listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands and areas of riparian habitat; other special-status species that are not listed as threatened or endangered by the state or federal governments; and other special-status vegetation communities.

The following is a discussion of the federal and state endangered species acts as they apply to the Proposed Project.

1. Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 defines an endangered species as “any species that is in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as “any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Under provisions of the FESA³ it is unlawful to “take” any listed species. “Take” is defined in as: “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”⁴ Further, the United States Fish and Wildlife Service (USFWS), has interpreted the terms “harm” and “harass” to include certain types of habitat modification that result in injury to or death of species as forms of “take.” However, these interpretations are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

2. California Endangered Species Act

The California Endangered Species Act (CESA) defines an “endangered species” as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.” The state defines a “threatened species” as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not currently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this section. Any animal determined as rare on or before January 1, 1985 is a threatened species.” “Candidate species” are defined as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list.” Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the CDFW. Unlike the FESA, the CESA does not list invertebrate species.

³ *United States Code*, Title 16 §1531

⁴ Federal Endangered Species Act, *United States Code*, Title 16, §1532(19)

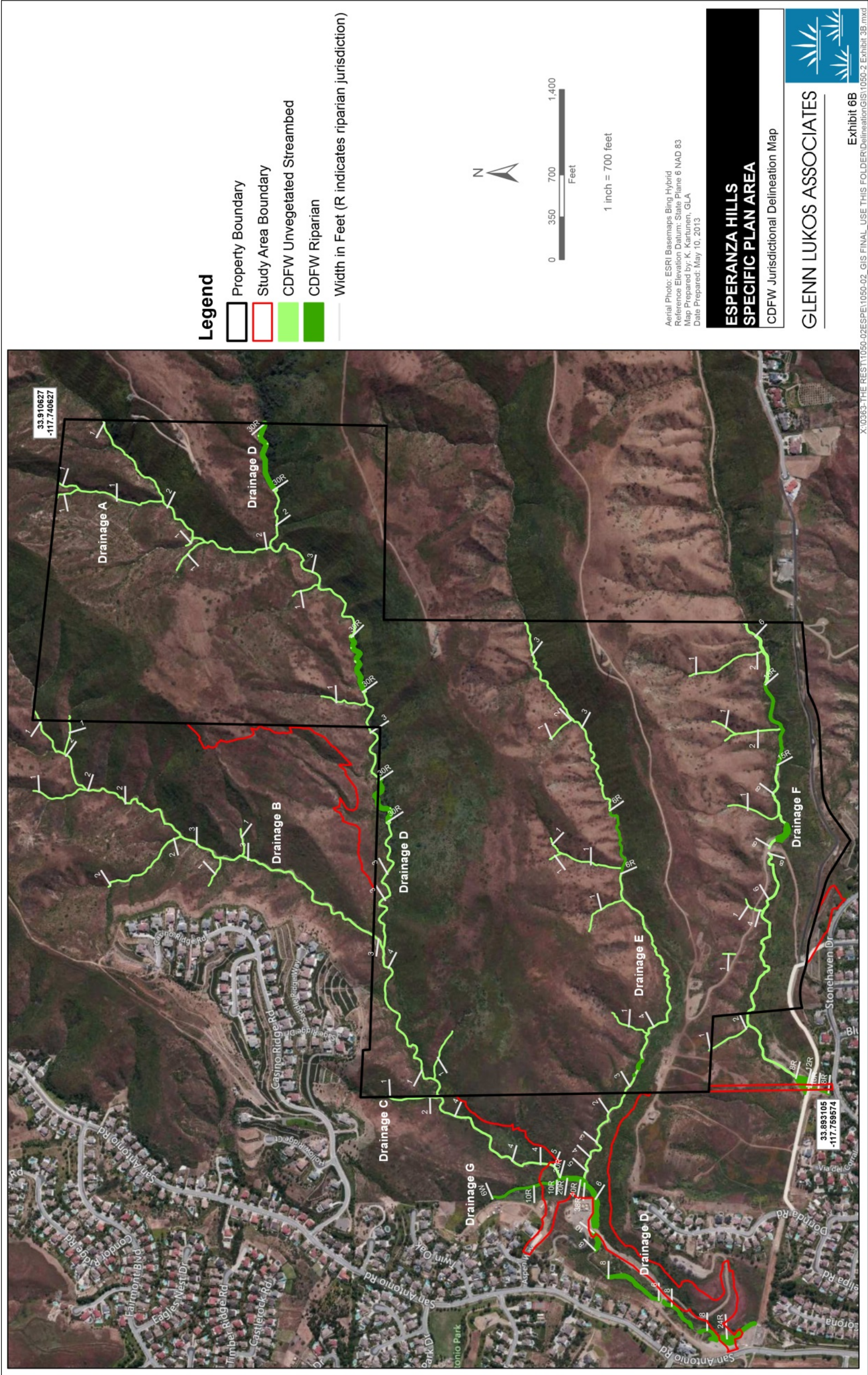


Exhibit 5-29– CDFW Jurisdictional Delineation Map

California Fish and Game Code, Article 3, §§2080-2085, addresses the taking of threatened, endangered, or candidate species by stating; “No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided.” Under the CESA, “take” is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Exceptions authorized by the state to allow “take” require permits or memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. *California Fish and Game Code*, §1901 and §1913 provide that notification is required prior to disturbance.

3. State and Federal Take Authorizations for Listed Species

Federal or state authorizations of impacts to or incidental take of a listed species by a private individual or other private entity would be granted in one of the following ways:

- Section 7 of the FESA stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat.⁵
- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCP) pursuant to Section 10(a) of the FESA. Upon development of an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the Project Applicant and the reasons such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan.
- Sections 2090-2097 of the CESA require that the state lead agency consult with the CDFW on projects with potential impacts on state-listed species. These provisions also require the CDFW to coordinate consultations with USFWS for actions involving federally listed as well as state-listed species. In certain circumstances, Section 2080.1 of the *California Fish and Game Code* allows the CDFW to adopt the federal incidental take statement or the 10(a) permit as its own based on its findings that the federal permit adequately protects the species under state law.

⁵ 16 U.S.C. §1536(a)(2)

4. Coastal California Gnatcatcher Critical Habitat Area

The Study Area falls entirely within Unit 9, one of 15 geographic units of a 513,650-acre area that covers areas of Los Angeles, Orange, Riverside, San Bernardino, and San Diego counties, of the existing critical habitat for coastal California gnatcatcher designated by the USFWS. Critical habitat identifies specific areas that are essential to the conservation of a listed species and, with respect to areas within the geographic range occupied by the species that may require special management considerations or protection. The PCEs for the coastal California gnatcatcher are those habitat components that are essential for the primary biological needs of foraging, nesting, rearing of young, intra-species communication, roosting, dispersal, genetic exchange, or sheltering. All areas designated as critical habitat for the coastal California gnatcatcher contain one or more of the PCEs. Critical Habitat designations do not apply to private property; however, where “federalization” of a project occurs through involvement of a federal agency, the Critical Habitat designation would apply to the federal action. In this instance, the potential federal action would be the issuance of a Section 404 permit from the ACOE authorizing the discharge of fill into the drainages during project grading. If the ACOE asserts jurisdiction over some or all of the drainages, a Section 7 Consultation with USFWS could be required between the ACOE and the USFWS with the Project Applicant involved as an interested party, if the ACOE determines that the project would result in “adverse modification” of critical habitat. If such consultation should occur, and the USFWS finds that the Proposed Project would result in adverse modification of Critical Habitat, the USFWS would likely require mitigation for impacts to coastal sage scrub and potentially to chaparral and riparian habitats, all of which are considered PCEs for the California gnatcatcher, or physical and biological features of a landscape that a species needs to survive and reproduce. The extent of the mitigation would be based on the extent of coastal sage scrub and other areas that potentially meet the PCE definitions for coastal California gnatcatcher.

5. Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, the ACOE regulates the discharge of dredged and/or fill material into waters of the United States. The term “waters of the United States” is defined in ACOE regulations⁶ as:

- (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (2) All interstate waters including interstate wetlands;
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:

⁶ *Code of Federal Regulations*, Title 33, §328.3(a)

- (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
- (ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or
- (iii) Which are used or could be used for industrial purpose by industries in interstate commerce...
- (4) All impoundments of waters otherwise defined as waters of the United States under the definition;
- (5) Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;
- (6) The territorial seas;
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section.

Pursuant to Section 404 of the Clean Water Act, the term “wetlands” (a subset of “waters of the United States”) is defined as “those 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.”⁷ The methodology set forth in the ACOE’s 1987 Wetland Delineation Manual and the Arid West Supplement generally requires that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics.

6. California Department of Fish and Wildlife (CDFW)

Pursuant to the *California Fish and Game Code*,⁸ the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. CDFW defines a “stream” (including creeks and rivers) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation.” CDFW’s definition of “lake” includes “natural lakes or manmade reservoirs.”

CDFW jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFW jurisdictional limits closely mirror those of the ACOE. Exceptions are CDFW’s exclusion of isolated wetlands (those not associated with a river, a stream, or a lake), the addition of artificial stock ponds and irrigation ditches constructed on uplands, and the addition of riparian habitat supported by a river, a stream, or a lake regardless of the riparian area’s federal wetland status.

⁷ *Code of Federal Regulations*, Title 33, §328.3(b)

⁸ *California Fish and Game Code*, Division 2, Chapter 6, §§1600-1603

7. Regional Water Quality Control Board

All of the drainages within the Study Area are tributary to downstream navigable waters and as such are subject to Regional Water Quality Control Board (Regional Board) jurisdiction under Section 401 of the Clean Water Act, pursuant to the California Porter-Cologne Water Quality Control Act. There are no isolated drainages within the Study Area.

5.3.3 Thresholds of Significance

Environmental impacts relative to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, *California Public Resources Code* §21001(c). Accordingly, the California Legislature has established it to be the policy of the State of California:

Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities...

For the purposes of this DEIR, the thresholds of significance for evaluating project impacts on biological resources are based upon the CEQA checklist of the County of Orange. The project would result in a significant impact if it would:

- a) 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 Wildlife or U.S. Fish and Wildlife Service.
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
- c) 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.
- d) 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.
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.3.4 Project Impacts Prior to Mitigation

The following discussion examines the potential impacts to plant and wildlife resources that may occur as a result of implementation of the Proposed Project. Project-related impacts can occur in two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification, or disturbance of plant communities, which in turn, directly affects the flora and fauna of those habitats. Direct impacts also include the destruction of individual plants or wildlife, which may also directly affect regional population numbers of a species or result in the physical isolation of populations, thereby reducing genetic diversity and population stability.

Other impacts, such as loss of foraging habitat, can occur, although these areas or habitats are not directly removed by project development – i.e., indirect impacts. Indirect impacts can also involve the effects of increases in ambient levels of noise or light, unnatural predators (e.g., domestic cats and other non-native animals), competition with exotic plants and animals, and increased human disturbance such as hiking and dumping of green waste on-site. Indirect impacts may be associated with the subsequent day-to-day activities associated with such things as project build-out, including increased traffic use, permanent concrete barrier walls or chain link fences, and exotic ornamental plantings that provide a local source of seed, which may be short-term and long-term in their duration. These impacts are commonly referred to as “edge effects” and may result in a slow replacement of native plants by exotics, changes in the behavioral patterns of wildlife, reduced wildlife diversity, and abundances in habitats adjacent to project sites. The potential for significant adverse effects, either directly or through habitat modifications, on any special-status plant, animal, or habitat that could occur as a result of project development are discussed below.

Two options for roadway access to the Proposed Project have been designed.

1. Option 1 would provide a primary connection going south to Stonehaven Drive following an existing dirt road that has been used for oil well and utility access purposes. A separate ingress/egress road for emergency purposes only would extend south along the western edge of the project through the adjacent Cielo Vista property.
2. Option 2 would provide a primary connection going west from the site to Aspen Way, which then connects to San Antonio Road. Option 2 provides a separate ingress/egress exit for emergency purposes only, exiting south from the Proposed Project to Stonehaven Drive and following the existing road currently used for oil well and utility access purposes.

Each option has a unique impact footprint due to the different grading designs. This analysis presents Option 1 and Option 2 as they differ. It is anticipated that the Proposed Project will obtain permits from the following regulatory agencies: ACOE, Section 404 Permit; CDFW, 1600 Permit; and County of Orange/RWQCB, National Pollution Discharge Elimination System (NPDES) Permit.

1. Impact to Vegetation Associations

a. Option 1

Permanent impacts to vegetation communities associated with Option 1 account for approximately 336.50 acres of the Study Area. Table 5-3-5 below summarizes permanent and temporary impacts associated with Project implementation.

Table 5-3-5 Summary of Impacts to Vegetation Associations/Cover Types, Option 1

Vegetation/Land Use Type	Total in Study Area (acres)	Total Impacts (acres)	Percent Impacted (%)
Coastal Sage Scrub	45.88	33.35	73
California Sagebrush Scrub	24.21	20.20	83
Disturbed California Sagebrush Scrub	10.32	5.61	54
Purple Sage Scrub	10.14	7.53	74
Sagebrush-Monkeyflower Scrub	1.21	0.01	1
Ecotonal Habitats	129.45	90.68	70
Coastal Sage Scrub/Chaparral Ecotone	95.02	65.42	69
Sumac Savannah	34.43	25.26	73
Chaparral Habitats	124.38	87.01	70
Toyon/Sumac Chaparral	122.63	85.26	70
Sumac/Elderberry Chaparral	1.75	1.75	100
Woodland Habitats	36.61	17.46	47
California Walnut Woodland	6.37	0.48	8
Blue Elderberry Woodland	23.88	11.37	48
Southern Coast Live Oak Forest	6.36	5.61	88
Riparian Habitats	5.34	0.29	5
Mulefat Scrub	1.93	0.24	12
Black Willow Riparian Forest	0.19	0.0	0
California Walnut/Mulefat Scrub	2.70	0.05	2
Southern Willow Scrub	0.52	0.0	0
Grassland Habitats	136.10	98.21	72
Annual Grassland	136.10	98.21	72
Disturbed Habitats	15.93	4.12	26
Ruderal	15.93	4.12	26
Developed Land	10.51	5.38	51
Graded Areas/Paved Roads	10.17	5.04	50
Ornamental Vegetation	0.28	0.28	100
Detention Basin	0.06	0.06	100
Total Vegetation/Land Use Acreage	504.20	336.50	67

b. Option 2

Permanent impacts to vegetation communities associated with Option 2 account for approximately 340.19 acres of the Study Area. Table 5-3-6 below summarizes permanent and temporary impacts associated with Project implementation.

Table 5-3-6 Summary of Impacts to Vegetation Associations/Cover Types, Option 2

Vegetation/Land Use Type	Total in Study Area (acres)	Total Impacts (acres)	Percent Impacted (%)
Coastal Sage Scrub	45.88	33.12	72
California Sagebrush Scrub	24.21	21.06	87
Disturbed California Sagebrush Scrub	10.32	4.51	44
Purple Sage Scrub	10.14	7.53	74
Sagebrush-Monkeyflower Scrub	1.21	0.02	2
Ecotonal Habitats	129.45	91.07	70
Coastal Sage Scrub/Chaparral Ecotone	95.02	65.24	69
Sumac Savannah	34.43	25.83	75
Chaparral Habitats	124.38	90.40	73
Toyon/Sumac Chaparral	122.63	88.65	72
Sumac/Elderberry Chaparral	1.75	1.75	100
Woodland Habitats	36.61	19.46	53
California Walnut Woodland	6.37	0.22	3
Blue Elderberry Woodland	23.88	13.63	57
Southern Coast Live Oak Forest	6.36	5.61	89
Riparian Habitats	5.34	0.983	18
Mulefat Scrub	1.93	0.79	41
Black Willow Riparian Forest	0.19	0.19	100
California Walnut/Mulefat Scrub	2.70	0.003	0.1
Southern Willow Scrub	0.52	0	0
Grassland Habitats	136.10	96.23	71
Annual Grassland	136.10	96.23	71
Disturbed Habitats	15.93	4.68	29
Ruderal	15.93	4.68	29
Developed Land	10.51	4.24	40
Graded Areas/Paved Roads	10.17	3.90	36
Ornamental Vegetation	0.28	0.28	100
Detention Basin	0.06	0.06	100
Total Vegetation/Land Use Acreage	504.20	340.183	67

2. Impacts to Special-Status Habitats

a. Option 1

1. California Walnut Woodland - Under Option 1, approximately 0.48 acre of the 6.37 acres of California walnut woodland would be impacted. The California walnut woodland within the Study Area was burned in the 2008 Freeway Complex Fire, and a majority of the walnut trees were damaged and a few were killed by the fire. As such, the habitat within the Study Area is highly disturbed and does not exhibit habitat values typical of intact California walnut woodland. Nevertheless, because this habitat is a

G2S2, impacts to this habitat associated with Option 1 would be significant without mitigation.

2. Southern Willow Scrub - Under Option 1, southern willow scrub would be fully avoided, and as such no significant impacts to southern willow scrub would be associated with Option 1.
3. Blue Elderberry Woodland - Under Option 1, approximately 13.63 acres of the 23.88 acres of blue elderberry woodland would be impacted. The Blue elderberry woodland within the Study Area was burned in the 2008 Freeway Complex Fire. More than half the elderberry trees were damaged and many were killed by the fire. It is not clear that the CNDDDB ranking of G3S3 applies to the blue elderberry habitat on the Study Area, and while this habitat type is relatively secure as a G3S3 species (low degree of rarity globally and not threatened at the state level, and that more than half of the elderberry trees are dead or damaged, impacts associated with Option 1 would be significant before mitigation.

As noted above in Section 5.3.1.3, Special Status Habitats (page 5-109), none of the coastal sage scrub habitat types, which include California sagebrush scrub (G5S5), disturbed California sagebrush scrub (G5S5), purple sage scrub (G4S4), and sagebrush-monkeyflower scrub (G5S5), are considered special status both because the global and state rankings indicate that they are secure and not rare, and because they generally exhibit a high degree of disturbance resulting from the Freeway Complex Fire. As such, impacts associated with Option 1 would be less than significant.

b. Option 2

1. California Walnut Woodland - Under Option 2, approximately 0.22 acre of the 6.37 acres of California walnut woodland would be impacted. The California walnut woodland within the Study Area was burned in the 2008 Freeway Complex Fire, and a majority of the walnut trees were damaged, and a few were killed by the fire. As such, the walnut woodland within the Study Area is highly disturbed and does not exhibit habitat values typical of intact California walnut woodland. Nevertheless, because this habitat is a G2S2, impacts to this habitat associated with Option 2 would be potentially significant without mitigation.
2. Southern Willow Scrub - Under Option 2, southern willow scrub would be fully avoided, and as such no significant impacts to southern willow scrub would be associated with Option 2.
3. Blue Elderberry Woodland - Under Option 2, approximately 18.33 acres of the 31.28 acres of blue elderberry woodland would be impacted. The blue elderberry woodland within the Study Area was burned in the 2008 Freeway Complex Fire, and more than half the elderberry trees were killed

or damaged by the fire. It is not clear that the CNDDDB ranking of G3S3 applies to the blue elderberry habitat in the Study Area, and while this habitat type is relatively secure as a G3S3 species (low degree of rarity globally and not threatened at the state level), and that more than half the elderberry trees were damaged or killed, impacts associated with Option 2 would be significant without mitigation.

As noted above in Section 5.3.1.3, Special Status Habitats (page 5-109), none of the coastal sage scrub habitat types, which include California sagebrush scrub (G5S5), disturbed California sagebrush scrub (G5S5), purple sage scrub (G4S4), and sagebrush-monkeyflower scrub (G5S5), are considered special status both because the global and state rankings indicate that they are secure and not rare, and because they generally exhibit a high degree of disturbance resulting from the Freeway Complex Fire. As such, impacts associated with Option 2 would be less than significant.

3. Impacts to Special-Status Plant Resources

As previously stated, five special status plant species – Braunton's milk-vetch, Catalina mariposa lily, intermediate mariposa lily, southern California walnut, and small flowered microseris – were documented within the Study Area (refer to Exhibit 5-30 – Vegetation Map, Option 1 Impact Map and Exhibit 5-31– Vegetation Map, Option 2 Impact Map. Impacts to these species are the same for Option 1 and Option 2, and are discussed below.

1. Braunton's milk-vetch (*Astragalus brauntonii*) is a perennial herb designated as a CRPR List 1B.1 species (plant seriously endangered in California), and is federally listed as endangered. Approximately 400 individuals of Braunton's milk-vetch were detected during focused surveys in 2010, all of which would be impacted by Option 1 and Option 2 as. As Braunton's milk-vetch is a CRPR List 1B.1 species (plants that are seriously rare, threatened, or endangered in California and elsewhere, with over 80% of occurrences threatened/high degree and immediacy of threat), and is federally listed as endangered, impacts would be potentially significant without mitigation.
2. Catalina mariposa lily (*Calochortus catalinae*) is a perennial herb designated as a CRPR List 4 species (plant of limited distribution/a watch list) but is not federally or state listed. This species is known from Los Angeles, Ventura, and Orange counties, as well as the Channel Islands. Surveys completed from 1997 to 2002 by Campbell BioConsulting reported observing approximately 445 Catalina mariposa lilies scattered throughout the site. Catalina lily plants were also observed by GLA during 2010 surveys. Under Option 1 and Option 2, Catalina mariposa lily would be impacted. However, given that Catalina mariposa lily is a List 4 species, impacts to 445 plants would not constitute a substantial adverse effect, and therefore would be less than significant.

3. Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*) is a bulbiferous herb designated as a CRPR List 1B.2 species (plant fairly endangered in California and elsewhere, with 20-80 percent of occurrences threatened). Approximately 326 individuals of intermediate mariposa lily were detected during focused surveys in 2010, all of which would be impacted by Option 1 and Option 2. Because intermediate mariposa lily is a CRPR List 1B.2 species, impacts would be potentially significant without mitigation.
4. Southern California walnut (*Juglans californica*) is a perennial deciduous tree species designated as a CRPR List 4 species (plant of limited distribution/watch list) but is not federally or state listed. Southern California walnut was detected during focused surveys in 2007. However, the majority of the walnut trees within the Study Area were damaged, and a few were killed, in the 2008 Freeway Complex Fire. Impacts to the dead and damaged trees would not be significant. Under Option 1 or Option 2, some live trees may be impacted; however, given that southern California walnut is a List 4 species, impacts to the remaining live and damaged trees would not constitute a substantial adverse effect, and therefore would be less than significant.
5. Small flowered microseris (*Microseris douglasii* var. *platycarpa*) is an annual herb designated as a CRPR List 4 species (plants of limited distribution/watch list). During focused surveys conducted by Campbell BioConsulting in 1998, 10 individuals of small flowered microseris were observed. These plants were located along the old Edison spur road, approximately 75 feet west to the SCE 500-kV towers. No small flowered microseris were observed during the 2007 or 2010 surveys. Given that the 10 individuals detected in 1998 were not detected during multiple subsequent surveys, and that impacts to 10 individuals of a CRPR List 4 would not constitute a substantial adverse effect, under Option 1 or Option 2, any potential impacts to small-flowered microseris would be less than significant.

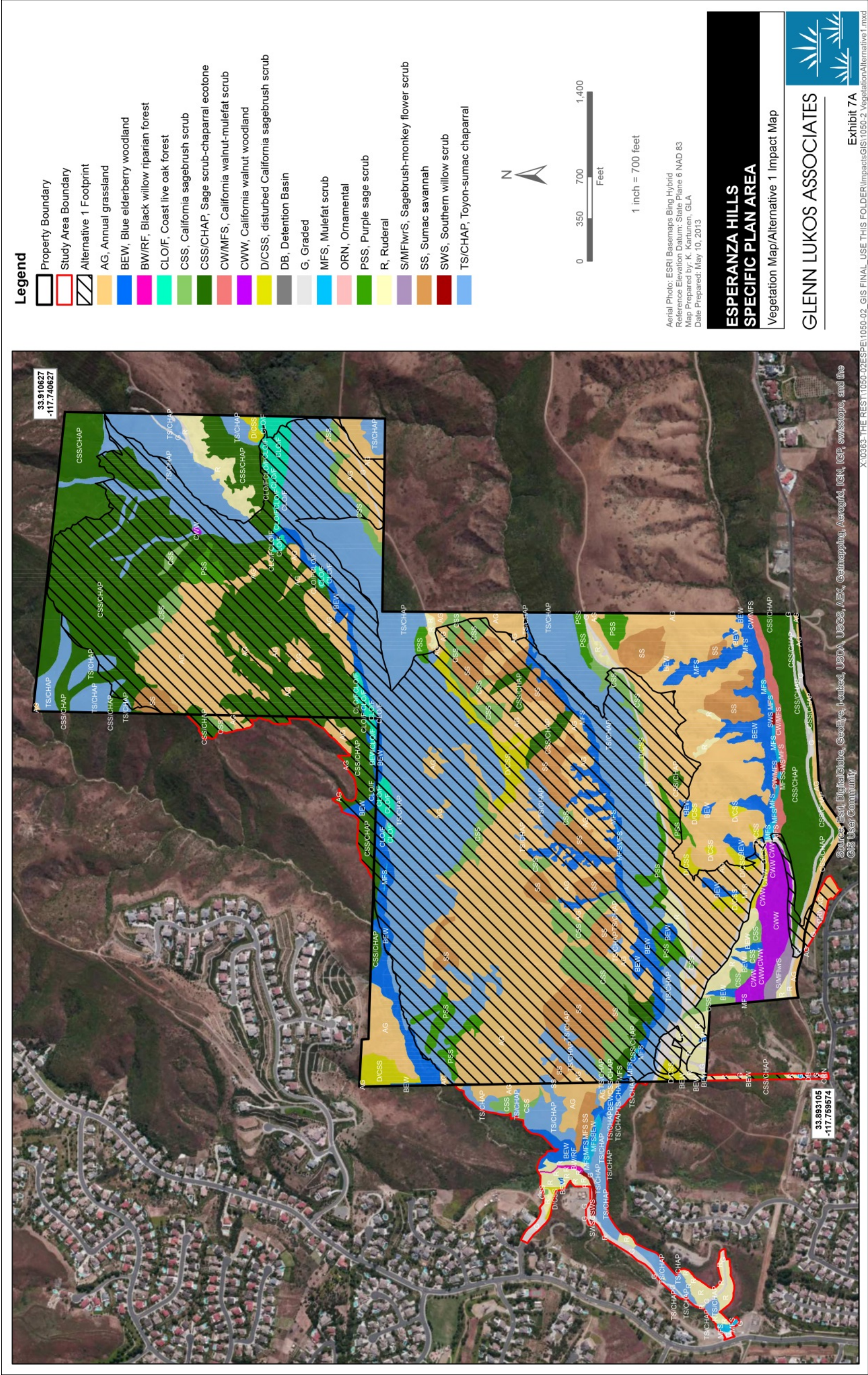


Exhibit 5-30– Vegetation Map, Option 1 Impact Map

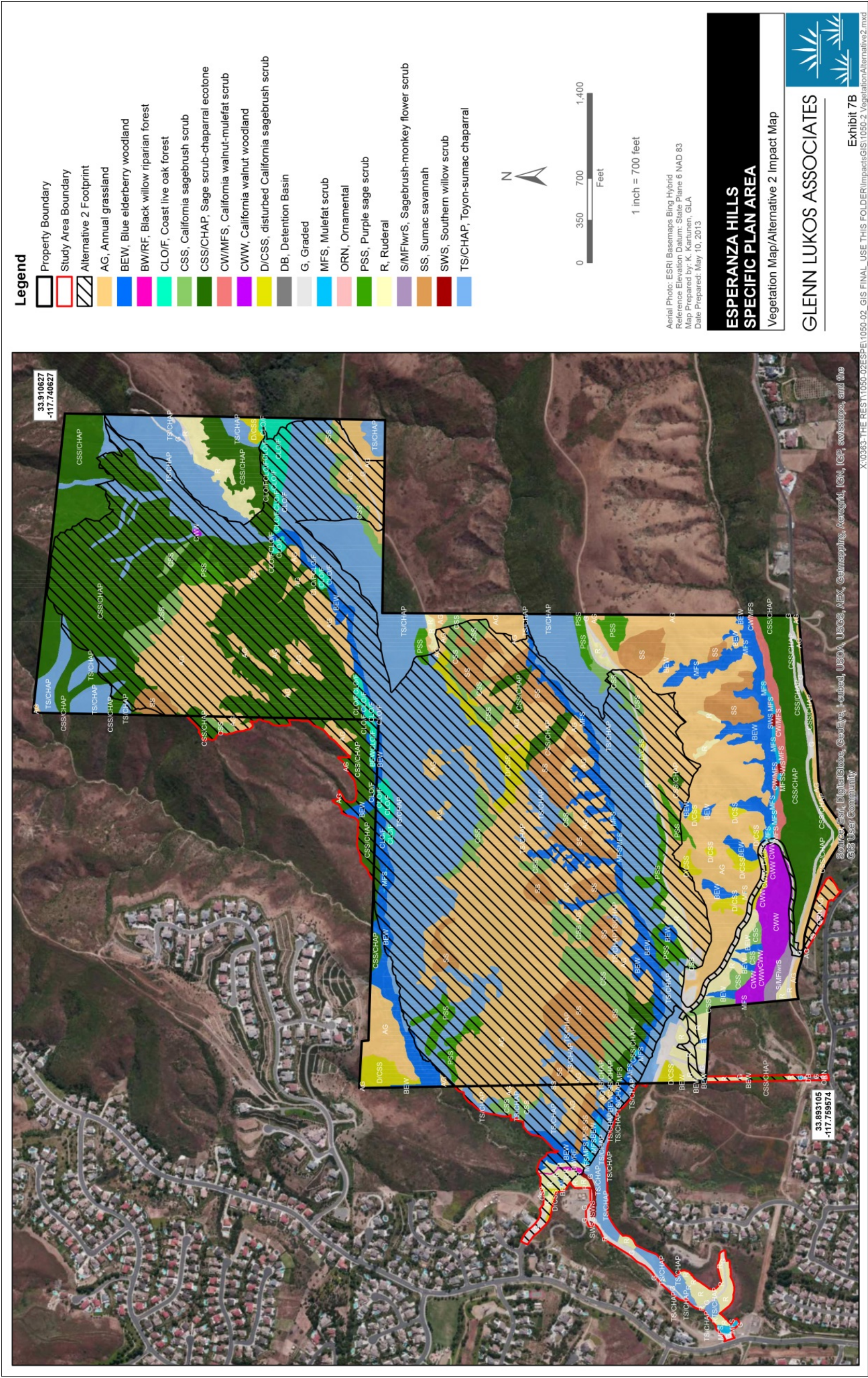


Exhibit 5-31 – Vegetation Map, Option 2 Impact Map

4. Impacts to Special Status Wildlife Resources

The following is a summary of project impacts to special status wildlife resources for Option 1 and Option 2.

1. Cooper's hawk is a CDFW-designated Watch List species when nesting. In undeveloped areas, this species occurs primarily in riparian areas and oak woodlands, and most commonly in montane canyons. This species is also frequently found in suburban and urban areas, occupying trees among residential and commercial development and using utility poles as perches. Cooper's hawk was observed foraging within the Study Area, and has potential to nest within the riparian areas within the Study Area, although no nests were observed during any biological surveys. Impacts to potential riparian foraging and nesting area for Cooper's hawk associated with Option 1 and Option 2 are minimal. Given that Cooper's hawk is a relatively common urban-adapted species, is only a Watch List species (which denotes a lower level of rarity than a CDFW SSC), and thrives in developed areas, such impacts would not constitute a substantial adverse effect, and would be less than significant.
2. Golden eagle is a CDFW-designated Watch List species when nesting and wintering, and is also an FPS. This species occurs in rolling foothills, mountain areas, sage-juniper flats, and deserts, and winters and nests in cliff-walled canyons. Golden eagle was seen foraging on-site, but was not observed nesting or wintering within the Study Area. Although a nest was observed north of the site on a cliff face within Chino Hills State Park, which nest has been determined to have been abandoned or destroyed in the 2008 Freeway Complex Fire, no suitable nesting or wintering habitat is present within the Study Area, as there are no cliff faces or cliff-walled canyons within the Study Area. As there is no potential for golden eagle to breed or winter within the Study Area, impacts to this species associated with Option 1 and Option 2 would be less than significant.
3. Grasshopper sparrow is a CDFW SSC when nesting. It occurs in dense grasslands on rolling hills, lowland plains, in valleys, and on hillsides on lower mountain slopes. This species favors native grasslands with a mix of grasses, forbs, and scattered shrubs, and is loosely colonial when nesting. A single grasshopper sparrow was observed within the Study Area near the eastern boundary by GLA in 2013, with additional individuals observed outside the eastern Study Area boundary. Given that the grasshopper sparrow is a relatively common species in southern California grasslands, and that potential impacts would be very limited as the species was only detected on one occasion on the eastern Study Area boundary, such impacts would not constitute a substantial adverse effect, and would be less than significant.
4. Least Bell's vireo is a state and federally listed endangered species. It occurs in dense riparian habitats with a stratified canopy, including southern willow scrub,

mule fat scrub, and riparian forest. GLA biologists did not observe least Bell's vireo during focused surveys in 2007; however, this species was observed opportunistically during other biological surveys in 2010. Additionally, this species was detected by PCR during surveys in 2012 within the off-site impact areas as depicted by Exhibit 5-26 – Special Status Biological Resources Map (page 5-113 above).

Under Option 1, riparian vegetation occupied by least Bell's vireo at the southern edges of the Study Area would be subject to off-site impacts for project construction. Approximately 0.24 acre of mulefat scrub vegetation occupied by least Bell's vireo associated with Blue Mud Canyon (Drainage F) at the southern edge of the Study Area would be impacted (see Table 5-3-5, Summary of Impacts to Vegetation Associations/Cover Types, Option 1 (page 5-140). The least Bell's vireo is state and federally listed; therefore, direct impacts to this species, including riparian vegetation associated with breeding territories, would be potentially significant.

Under Option 2, riparian vegetation occupied by least Bell's vireo at the southern edge of the Study Area associated with Blue Mud Canyon (Drainage F) and at the drainage on the western edge of the Study Area (Drainage G) would be subject to off-site impacts for project construction. Approximately 0.79 acre of mulefat scrub and 0.19 acre of black willow riparian forest vegetation occupied by least Bell's vireo would be impacted (see Table 5-3-6, Summary of Impacts to Vegetation Associations/Cover Types, Option 2 (page 5-141). As least Bell's vireo is state and federally listed, direct impacts to this species, including riparian vegetation associated with breeding territories, would be potentially significant.

5. Northern harrier is CDFW SSC when nesting, but is a common, often abundant, winter visitor throughout California from September through April. Characteristically, this hawk inhabits marshlands, coastal salt water and freshwater, but often forages over grasslands and fields. It glides and flies low over open habitats searching for prey. Northern harrier was observed foraging on-site, but would not nest on-site as this species is not known to breed in southern California. As northern harrier does not breed on-site, impacts to this species associated with Option 1 and Option 2 would be less than significant.
6. Peregrine falcon is a CDFW FPS and a USFWS-designated BCC when nesting. In California this species inhabits coastal areas and inland mountains. This species is a very uncommon breeding resident and uncommon as a migrant or as a winter resident. Peregrine falcon was seen foraging on-site; however, no suitable sites for nesting occur on the site. As peregrine falcon does not breed on-site, impacts to this species associated with Option 1 and Option 2 would be less than significant.
7. Sharp-shinned hawk, which is a CDFW Watch List species, was observed foraging on-site and would only occur as a winter visitor, as this species does not

breed in southern California. As sharp-shinned hawk is considered a CDFW Watch List species only when nesting, and sharp-shinned hawk does not breed on-site, impacts to this species associated with Option 1 and Option 2 would be less than significant.

8. Yellow-breasted chat, which is a CDFW SSC, is a migratory songbird that breeds in riparian habitats in southern California. This species exhibits habitat requirements similar to least Bell's vireo. Suitable habitat typically consists of multi-layered riparian scrub or willow woodland corridors along flowing streams. The yellow breasted chat was not detected during 2007 or 2010 surveys. However, this species was detected by PCR during surveys in 2012 within the off-site impact areas.

Although yellow-breasted chat is classified as a CDFW SSC, this species is very common in willow riparian habitat in southern California. As impacts to potential riparian foraging and nesting area for yellow-breasted chat associated with Option 1 and Option 2 are minimal (0.29 of the 5.34 acres of riparian habitat that could potentially be used by this species within the Study Area for Option 1 and 0.983 of the 5.34 acres of riparian habitat that could potentially be used by this species within the Study Area for Option 2, and given that this species frequently occurs in such habitat, impacts would not constitute a substantial adverse effect, and would be less than significant.

9. Southern California rufous-crowned sparrow is a CDFW Watch List species that was observed foraging on-site. Given that southern California rufous-crowned sparrow is a relatively common species in southern California grasslands, coastal sage scrub, and chaparral, and is only a Watch List species (which denotes a lower level of rarity than a CDFW SSC), such impacts would not constitute a substantial adverse effect, and would be less than significant.
10. Yellow warbler, which is a CDFW Species of Concern and USFWS Bird of Conservation Concern, is a migratory songbird that breeds in riparian habitats in southern California. This species exhibits habitat requirements similar to the yellow-breasted chat and the least Bell's vireo. Suitable habitat typically consists of multi-layered riparian scrub or willow woodland corridors along flowing streams. The yellow warbler was observed in the western portion of the Study Area during focused surveys for special-status riparian birds.

Like yellow-breasted chat, although yellow warbler is classified as a CDFW SSC and a USFWS BCC, this species is very common in willow riparian habitat in southern California. As impacts to potential riparian foraging and nesting area for yellow warbler associated with Option 1 and Option 2 are minimal (0.29 of the 5.34 acres of riparian habitat that could potentially be used by this species within the Study Area for Option 1 and 0.983 of the 5.34 acres of riparian habitat that could potentially be used by this species within the Study Area for Option 2, and given that this species frequently occurs in such habitat, impacts

would not constitute a substantial adverse effect, and would be less than significant.

5. Impacts to Raptor Foraging Habitat

The Study Area supports some raptor foraging habitat, and in general the development portions of the Study Area exhibit low- to moderate-quality foraging habitat based on field observations during numerous site visits. No nesting by raptors was observed within the Study Area during the site visits, and no recently abandoned nests were observed. Although a few special status species were observed foraging within the Study Area, including Cooper's hawk, golden eagle, northern harrier, peregrine falcon, and sharp-shinned hawk, foraging by these species was infrequent, and the Study Area does not provide an important location for raptor foraging, especially given that raptors can utilize the extensive habitat at the adjacent Chino Hills State Park. As such, direct and indirect impacts to raptor foraging habitat under Option 1 and Option 2 do not constitute a substantial adverse effect on special status raptors, would be less than significant, and would not require mitigation.

The avoided scrub and chaparral, grassland, and woodland habitats similarly do not exhibit substantial use by foraging raptors, and the project does not exhibit potential for significant indirect impacts on raptor foraging.

6. Project Impact to Nesting Birds and Migratory Bird Treaty Act Considerations

Under Option 1 and 2, the Study Area currently contains trees, shrubs, and ground cover that have the potential to support nesting birds protected by the MBTA, which makes it unlawful to take, possess, buy, sell purchase or barter any migratory bird listed, including feathers or other parts, nests, eggs, or products. Direct impacts to a large variety of nesting birds are prohibited under the MBTA. Direct impacts to those species of nesting birds would be considered a significant impact.

7. Project Impact to Wildlife Movement

Although local resident wildlife use the Study Area for local movement and dispersal, the Study Area does not act as a corridor or linkage for movement between open space areas, as use of the Study Area as a movement corridor is constrained by urban development south and west of the Study Area.

As discussed in the Chino Hills State Park General Plan, there are three important corridors that connect Chino Hills State Park with adjacent projected open space: Coal Canyon, Sonome and Tonner Canyons, and the Prado Basin. None of these corridors traverse the Study Area or connect it to adjacent habitat areas.

As such, none of the project options would interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Therefore, under Option 1 and Option 2 impacts to wildlife movement would be less than significant

8. Coastal California Gnatcatcher Critical Habitat

As previously stated, the Study Area occurs entirely within Critical Habitat Unit 9, but the Study Area is not occupied by coastal California gnatcatcher as determined during a number of surveys beginning in 2007 through 2013, all of which showed the species to be absent from the site. In addition, PCEs are severely limited or lacking due to disturbance to coastal sage scrub habitat from the 2008 Freeway Complex Fire. Because the site has not been occupied, and because PCEs are limited or lacking, impacts to coastal California gnatcatcher critical habitat would be less than significant under Option 1 and Option 2.

9. Jurisdictional Impacts

a. Option 1

1. **Impacts to ACOE Jurisdictional Waters** – Under Option 1, the Proposed Project would impact a total of 0.91 acre of ACOE jurisdictional waters over 16,460 linear feet, of which 0.89 acre consists of non-wetlands waters, and 0.02 acre consists of jurisdictional wetlands (refer to Table 5-3-7 below, and Exhibit 5-32– ACOE Jurisdictional Delineation / Option 1 Impact Map). Impacts would occur in Drainages A, D, E, and F, while Drainages B, C, and G would be fully avoided. Impacts to 0.91 acre of ACOE jurisdiction, including 0.02 acre of wetlands, over 16,460 linear feet, would be potentially significant without mitigation.

Table 5-3-7 Impacts to ACOE Jurisdiction - Option 1

Drainage	Total ACOE Jurisdictional Impacts			Linear Length of Impacts (feet)
	Non-Wetlands Waters (acres)	Wetlands (acres)	Total (acres)	
A	0.10	0.0	0.10	2,984
B	0.0	0.0	0.0	0.0
C	0.0	0.0	0.0	0.0
D	0.39	0.0	0.39	6,619
E	0.39	0.0	0.39	6,542
F	0.01	0.02	0.03	315
G	0.0	0.0	0.0	0
Total	0.89	0.02	0.91	16,460

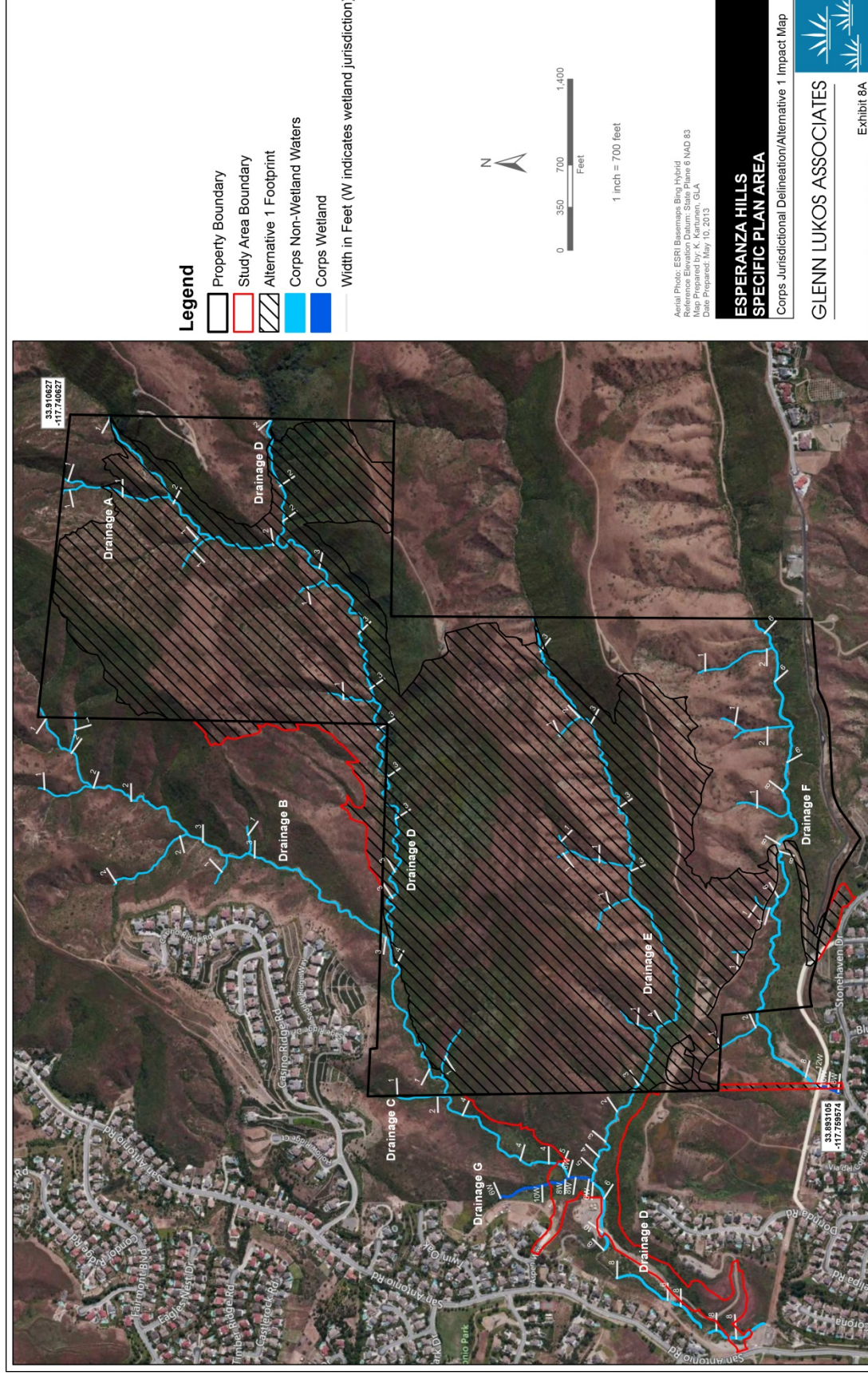


Exhibit 5-32– ACOE Jurisdictional Delineation / Option 1 Impact Map

2. **Impacts to CDFW Jurisdiction** – Under Option 1, the Proposed Project would impact 1.955 acres of CDFW jurisdictional drainage, of which 0.735 acre consists of unvegetated drainage, and 1.22 acres consist of vegetated riparian habitat, including coast live oak trees within CDFW jurisdiction (refer to Table 5-3-8 and Exhibit 5-33 – CDFW Jurisdictional Delineation/Option 1 Impact Map). Impacts would occur in Drainages A, D, E, and H, while Drainages B, C, and G would be fully avoided. Impacts to 1.955 acres of CDFW jurisdiction, including 1.22 acres of vegetated riparian habitat and associated coast live oak trees, would be potentially significant without mitigation.

Table 5-3-8 Impacts to CDFW Jurisdiction – Option 1

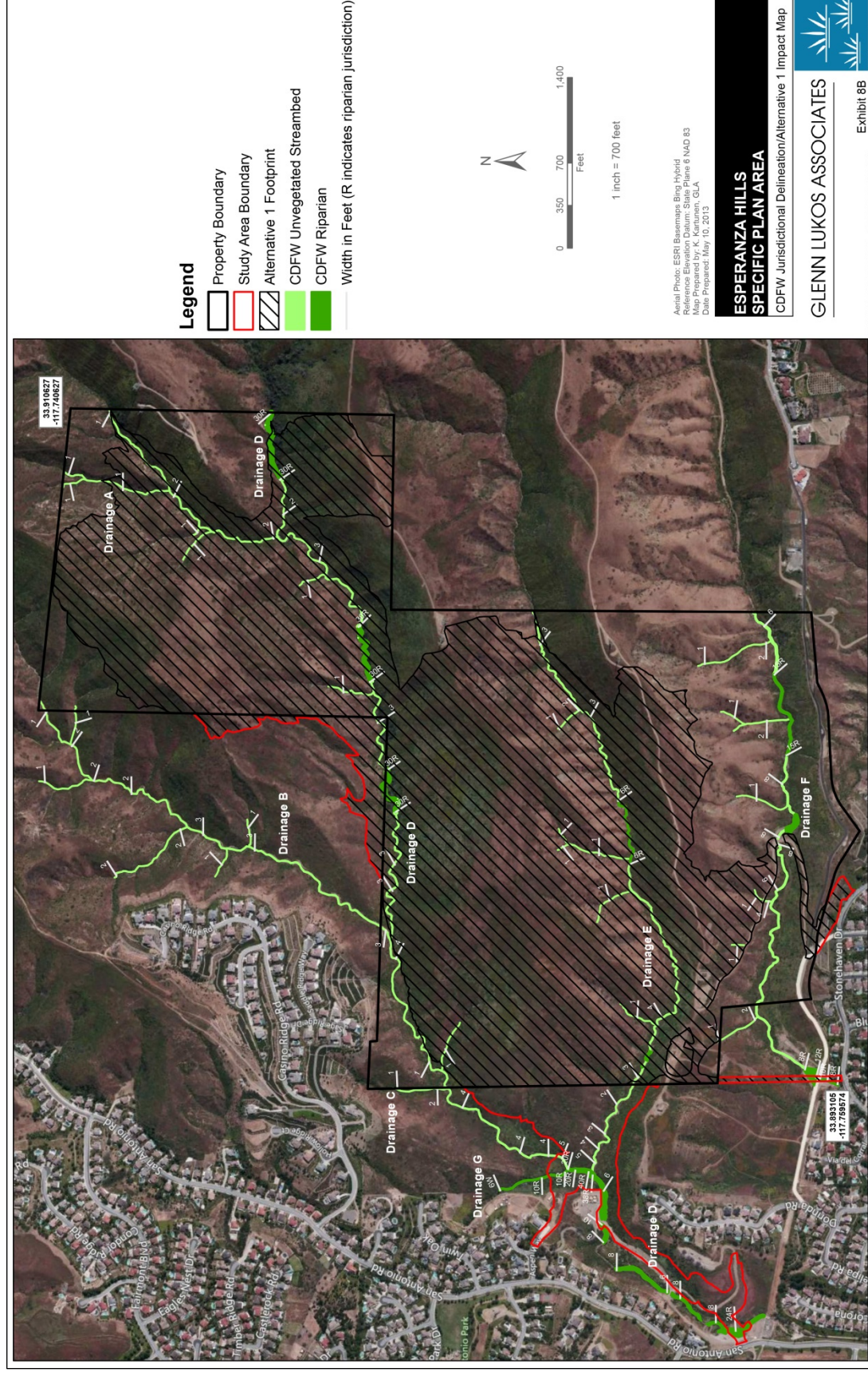
Drainage	Total CDFW Jurisdictional Impacts			Linear Length of Impacts (feet)
	Unvegetated Drainages (acres)	Riparian Drainages (acres)	Total (acres)	
A	0.10	0.0	0.10	2,984
B	0.0	0.0	0.0	0.0
C	0.0	0.0	0.0	0.0
D	0.29	1.02	1.31	6,619
E	0.34	0.13	0.47	6,542
F	0.005	0.07	0.075	315
G	0.0	0.0	0.0	0
Total	0.735	1.22	1.955	16,460

Option 2

1. **Impacts to ACOE Jurisdictional Waters** – Under Option 2, the Proposed Project would impact a total of 1.15 acre of ACOE jurisdictional waters over 17,834 linear feet, of which 0.98 acre consists of non-wetland waters, and 0.17 acre consists of jurisdictional wetlands (refer to Table 5-3-9 below, and Exhibit 5-34– ACOE Jurisdictional Delineation / Option 2 Impact Map). Impacts would occur in Drainages A, D, E, and F, while Drainages B, C, and G would be fully avoided. Impacts to 1.15 acre of ACOE jurisdiction, including 0.10 acre of wetlands, over 17,834 linear feet, would be potentially significant without mitigation.

Table 5-3-9 Impacts to ACOE Jurisdiction - Option 2

Drainage	Total ACOE Jurisdictional Impacts			Linear Length of Impacts (feet)
	Non-Wetland Waters (acres)	Wetland (acres)	Total (acres)	
A	0.10	0.0	0.10	2,984
B	0.0	0.0	0.0	0.0
C	0.0	0.0	0.0	0.0
D	0.41	0.11	0.52	6,690
E	0.46	0.0	0.46	7,530
F	0.01	0.02	0.03	143
G	0.0	0.04	0.04	187
Total	0.98	0.17	1.15	17,834



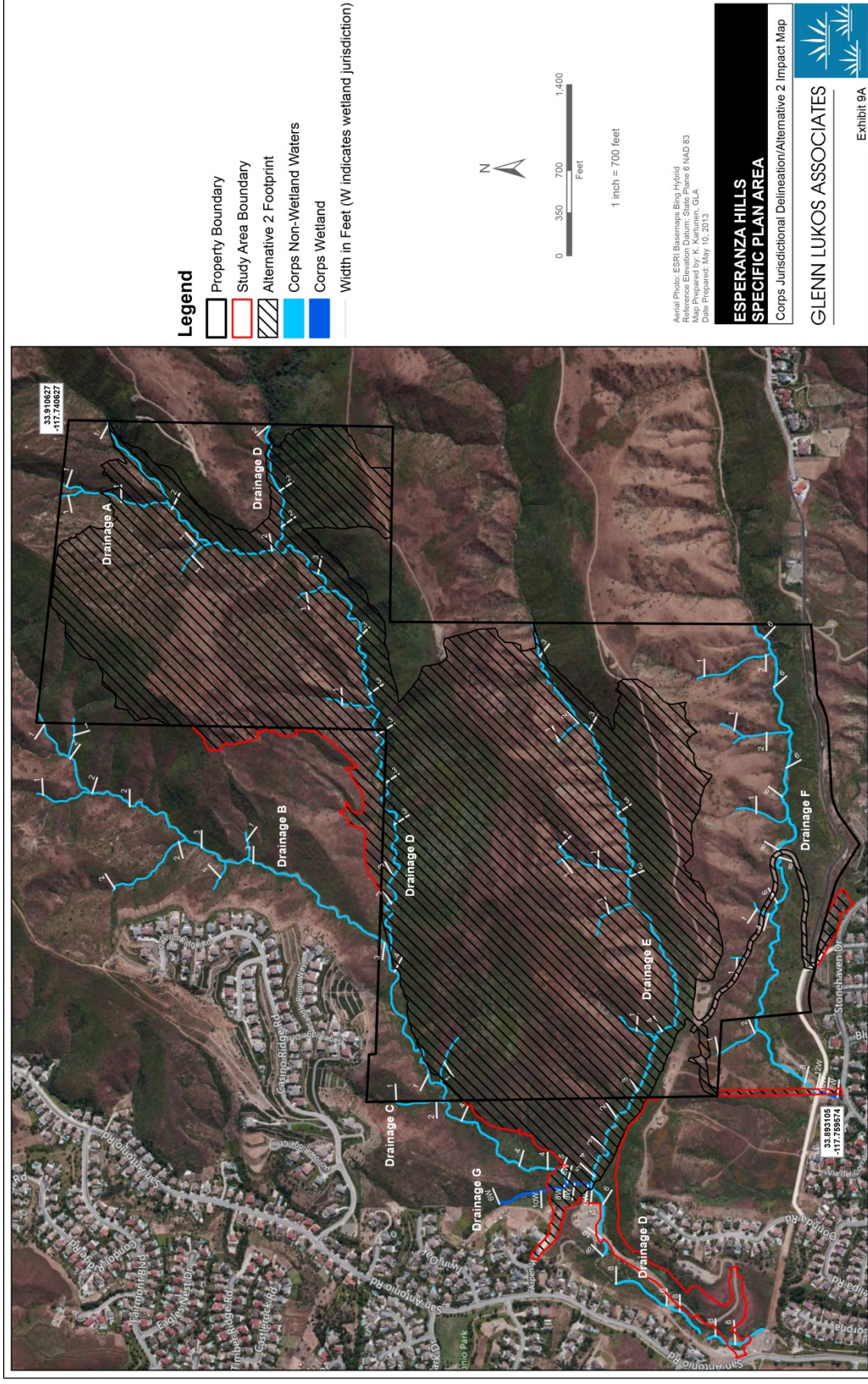


Exhibit 5-34– ACOE Jurisdictional Delineation / Option 2 Impact Map

2. **Impacts to CDFW Jurisdiction** – Under Option 2, the Proposed Project would impact a total of 2.234 acres of CDFW jurisdictional drainages, of which 0.824 acre consists of unvegetated drainages, and 1.41 acres consist of vegetated riparian habitat, including coast live oak trees within CDFW jurisdiction refer to Table 5-3-10 below, and Exhibit 5-35 – CDFW Jurisdictional Delineation, Option 2 Impact Map. Impacts would occur in Drainages A, D, E, F and G, while Drainages B and C would be fully avoided. Impacts to 2.234 acres of CDFW jurisdiction, including 1.41 acres of vegetated riparian habitat and associated coast live oak trees, would be potentially significant without mitigation.

Table 5-3-10 Impacts to CDFW Jurisdiction - Option 2

Drainage	Total CDFW Jurisdictional Impacts			Linear Length of Impacts (feet)
	Unvegetated Drainages (acres)	Riparian Drainages (acres)	Total (acres)	
A	0.10	0.0	0.10	2,984
B	0.0	0.0	0.0	0.0
C	0.0	0.0	0.0	0.0
D	0.31	1.17	1.48	6,990
E	0.41	0.13	0.54	7,530
F	0.004	0.07	0.074	143
G	0.0	0.04	0.04	187
Total	0.824	1.41	2.234	17,834

10. Indirect Impacts

a. Indirect Impacts to Native Habitats

Upon build-out of the project under either option, the Study Area will be bounded by urban development to the south and west, and open space associated with Chino Hills State Park to the north and east. Potential indirect impacts typically associated with development of native habitats include introduction of trash and debris, human intrusion that results in trampling of vegetation and/or creation of ad hoc trails, potential introduction of non-native invasive plants, and generation of ambient dust during construction.

1. **Introduction of Trash and Debris** – A Project Design Feature (PDF) of the Proposed Project will include trash receptacles placed in appropriate locations to ensure that trash and debris are controlled and collected on the site and pose no risk to native habitats. With the incorporation of this PDF, there would be no significant impacts to native habitats due to introduction of trash and debris into areas of adjacent native habitat, because potential trash will be collected and removed.

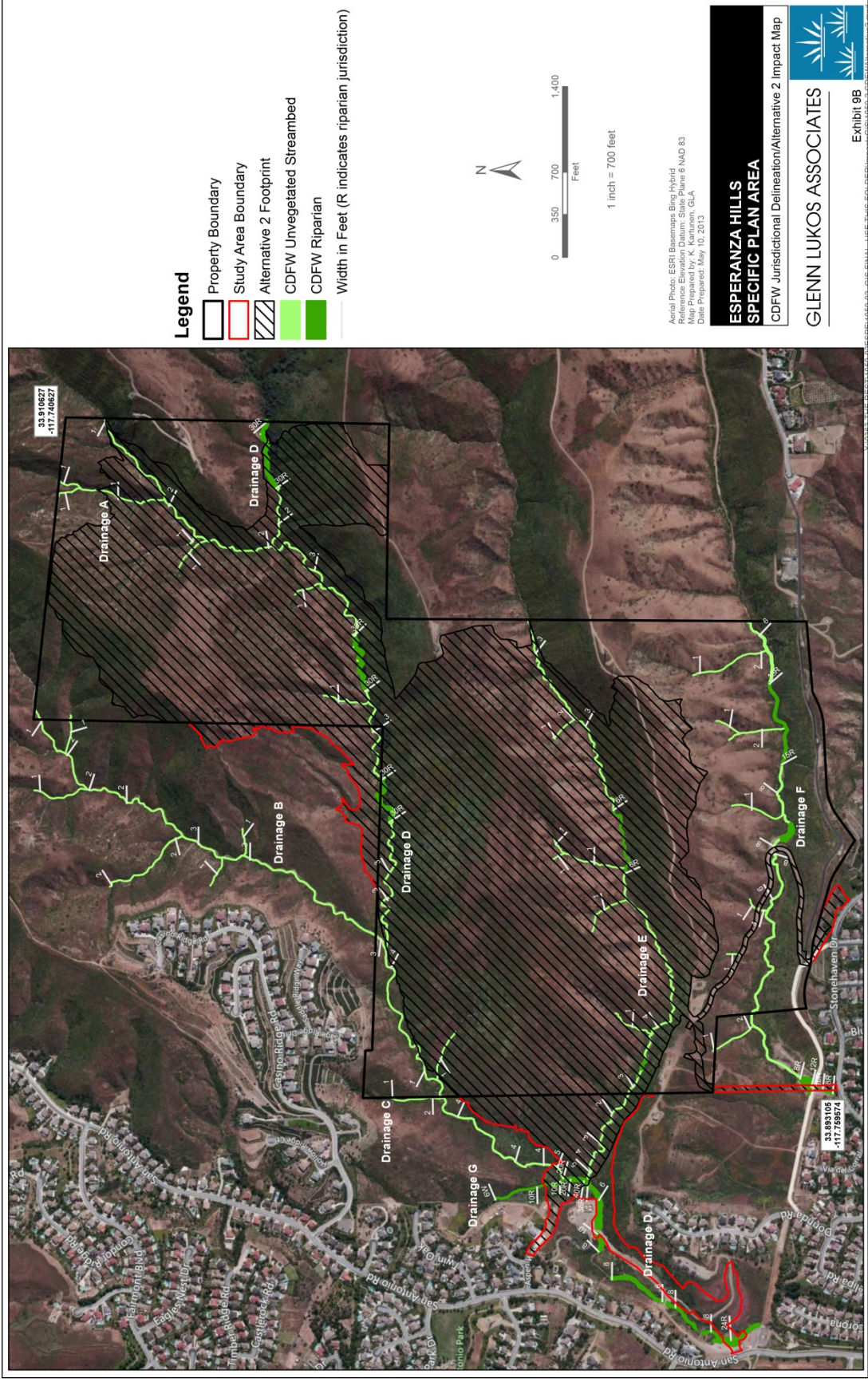


Exhibit 5-35– CDFW Jurisdictional Delineation, Option 2 Impact Map

2. Human Intrusion – Mitigation Measure Bio-9 for the Proposed Project will include signage placed at appropriate locations to control human access to sensitive habitat areas and Chino Hills State Park to the north. With the incorporation of PDF 15, there would be no significant impacts to native habitats due to human intrusion into adjacent native habitat areas, because people will be directed away from sensitive habitat areas.
3. Non-Native Invasive Plants – A PDF of the Proposed Project will utilize either native species or non-invasive ornamental species within the project landscaping and within fuel modification zones as listed as part of the fuel modification plan and required by Mitigation Measures Bio-9, Haz-6, and Haz-7. With the incorporation of PDF 16 and Mitigation Measure Haz-6, there would be no significant impacts to native habitats due to introduction of non-native plants into adjacent native habitat areas.
4. Dust during Construction – A potential indirect impact to native vegetation includes deposition of dust on adjacent native vegetation during grading for both Project options. While such impacts would be short-term, they do exhibit potential to harm native species. Accordingly, the Proposed Project includes Mitigation Measures AQ-2 and AQ-3 requiring dust control during construction. With the incorporation of these Mitigation Measures, there would be no significant impacts to native habitats due to dust deposition from construction.

b. Indirect Impacts to Special-Status Plants

Potential indirect impacts associated with both options identified above for native vegetation associations would not be considered significant for avoided Catalina mariposa lily, southern California walnut, and small-flowered microseris; nevertheless, implementation of PDF 15 and PDF 16 and/or Mitigation Measures Bio-2 through Bio-9 would provide a potential benefit for these species.

c. Indirect Impacts to Special-Status Wildlife Resources

1. Least Bell's Vireo – Lighting and Noise
 - a. Least Bell's Vireo, Option 1 - As noted, the least Bell's vireo occurs within the areas proposed for off-site development at Blue Mud Canyon (Drainage F), and will be subject to direct impacts under Option 1, as discussed on page 5-149. Relative to indirect impacts, because the occupied habitat would be removed, there is no opportunity for indirect impacts to least Bell's vireo. However, riparian habitat, which is currently not occupied by least Bell's vireo, adjacent to the directly impacted habitat is suitable for least Bell's vireo, would not be removed, and as such may be used by the vireo following removal of the impacted habitat. Noise-related impacts to least Bell's vireo from construction of Option 1 would result in

potentially significant impacts, because the least Bell's vireo may relocate to that area.

Under Option 1, the least Bell's vireo at the western edge of the Study Area would not be subject to direct or indirect impacts, as the habitat would not be removed, and the nearest grading, construction, and residential development would be over 800 feet to the east, exceeding the 500 foot threshold generally accepted by resource agencies for noise impacts. Additionally, lighting 800 feet east of least Bell's vireo would not result in indirect impacts to least Bell's vireo as there is existing development approximately 350 feet to the west and the Proposed Project, being a greater distance, would not increase ambient light. With incorporation of PDF 3 and PDF 5, all permanent lighting adjacent to native habitat will be of the lowest illumination necessary for human safety, selectively placed and shielded and directed away from adjacent natural habitats. Accordingly, there would be no indirect impacts from lighting or noise.

- b. Least Bell's Vireo, Option 2 - As noted, the least Bell's vireo occurs within the areas proposed for off-site development at Blue Mud Canyon (Drainage F) and Drainage G on the western edge of the Study Area, and will be subject to direct impacts under Option 2, as discussed on page 5-149. Relative to indirect impacts, because the occupied habitat would be removed for project construction, there is no opportunity for indirect impacts to least Bell's vireo. However, riparian habitat adjacent to the directly impacted habitat, which is currently not occupied by least Bell's vireo, is suitable for least Bell's vireo. Accordingly, noise-related impacts to least Bell's vireo in Blue Mud Canyon from construction of Option 2 would result in potentially significant impacts, because the least Bell's vireo may relocate to that area.

Lighting associated with Option 2 would not result in indirect impacts to least Bell's vireo as there is existing development approximately 350 feet to the west and the Proposed Project would not increase ambient light. As part of the PDF, all permanent lighting adjacent to native habitat will be of the lowest illumination necessary for human safety, selectively placed, and shielded and directed away from adjacent natural habitats.

2. Impacts from Domestic Cats

Domestic cats are known predators of native birds, especially within developments situated at the urban edge. As the Study Area is bordered by Chino Hills State Park to the north, it is possible that domestic cats allowed outdoors may, over time, cause the decline of some resident bird

populations. As a PDF, the project will prohibit outdoor cats, and residents will be warned through the HOA that cats allowed to roam/reside outdoors in violation of HOA regulations may be preyed upon by Chino Hills State Park resident fauna such as coyotes.

d. Indirect Impacts from Noise and Lighting – Option 1 and 2

1. Impacts from Noise

There will be a temporary, unavoidable increase in noise levels during construction; however, noise will be minimized to the greatest extent practicable. All construction vehicles and equipment, fixed or mobile, will be equipped with properly operating and maintained mufflers to minimize noise, and construction will be limited to the hours of 7:00 a.m. to 8:00 p.m. on weekdays and Saturdays with no construction on Sundays and federal holidays in compliance with Orange County Noise Ordinance. As such, there will be no significant indirect impact to any special-status wildlife species due to noise from either Option 1 or Option 2, with the exception of least Bell's vireo as discussed above.

Under both project options, the lots nearest Chino Hills State Park would be least 500 feet south of the state park boundary. Noise levels associated with the completed project will be typical of suburban development, with typical noise sources to include automobile traffic and lawn mowing/gardening equipment. As such, at that distance, typical suburban noise levels would not result in any significant indirect impacts to biological resources associated with Chino Hills State Park due to noise from Option 1 or Option 2.

2. Impacts from Lighting

The project is designed to eliminate light spillage into open space areas. As part of the PDF, all permanent lighting adjacent to native habitat will be of the lowest illumination necessary for human safety, selectively placed, and shielded/directed away from adjacent natural habitats. As such there would be no indirect impact to special status wildlife species associated with lighting from Option 1 or Option 2.

5.3.5 Project Design Features

- PDF 11 Introduction of Trash and Debris. The project landscape plan shall include trash receptacles placed in appropriate locations to ensure that trash and debris are controlled on-site and pose no risk to native habitats. The Homeowner's Association (HOA) shall be responsible daily to maintain the trash receptacles and remove trash to avoid accumulation.

- PDF 12 Impacts from Domestic Cats. Included in the HOA CC&Rs, domestic cats shall remain inside a home, or be leashed for walks or visits to the local outside environment. House cats shall not be permitted to range free outside the confines of a home.
- PDF 13 Impacts from Light Pollution
1. Provide homeowner education to limit outdoor lighting by using energy efficient low-voltage systems, photo sensors, solar and light emitting diode.
 2. Lighting will be hooded, shielded, and pointed away from the sensitive habitat areas, and ambient light levels will be minimized to the maximum extent practicable.
- PDF 14 Short-term construction-related noise impacts will be reduced by the implementation of a number of measures including the following:
1. During all excavation and grading on-site, the construction contractors will equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards to reduce construction equipment noise to the maximum extent practicable. The construction contractor will place all stationary construction equipment so that emitted noise is directed away from Chino Hills State Park lands and staging areas will not be placed in proximity to sensitive habitats.
 2. The construction contractor will stage equipment in areas that will create the greatest distance between construction-related noise sources and noise sensitive receptors (the preserved habitat areas) during all project construction.
 3. All construction work will occur during the daylight hours. Construction shall not take place between the hours of 8:00 p.m. and 7:00 a.m. AM on weekdays, including Saturday, or at any time on Sunday or a federal holiday. All construction operations shall comply with Orange County Codified Ordinance Division 6 (Noise Control).
 4. The construction contractor will limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes will not pass through sensitive habitats and land uses or residential dwellings
- PDF 15 Minimize Edge Effect. Best management practices will be incorporated into the project to ensure that indirect impacts (i.e., edge effects) are avoided or minimized to the maximum extent possible. Lighting will be shielded and directed away from adjacent natural habitat areas and ambient light levels will be minimized to the maximum extent

practicable. Additionally, the project's Water Quality Management Plan and Storm Water Pollution Prevention Plan will ensure that project runoff will not adversely affect the drainage within the jurisdictional drainages. Noise standards will comply with County Codes and will be consistent with General Plan Policies. In addition, fencing will be limited to open fencing that does not exceed 40 inches in height. Vegetation thinning within the fuel modification area will only occur on occasion and during daylight hours.

PDF 16 Fuel Modification Plan. To the extent feasible, native planting species will be used in fuel modification zones adjacent to natural habitat areas.

5.3.6 Mitigation Measures

This section identifies mitigation measures to ensure that impacts to sensitive biological resources as a result of the Proposed Project are less than significant after mitigation. Exhibit 5-36 – Proposed Mitigation Area depicts the locations of proposed mitigation.

Mitigation for Mulefat Scrub, Walnut Woodland, and Blue Elderberry Woodland

- Bio-1 Prior to the issuance of grading permits, the Project Applicant shall prepare a re-vegetation plan for mulefat scrub, black willow riparian forest, and blue elderberry woodland located within Blue Mud Canyon. The plan will also incorporate California black walnut into the plant palette to mitigate the loss of 0.48 or 0.22 acre of walnut woodland associated with Options 1 and Option 2, respectively. The plan shall be prepared by a qualified biologist for review and approval by the Manager of OC Planning. At a minimum, the plan shall include restoration of mulefat scrub and black willow riparian forest vegetation that also includes a black walnut component. The plan shall include replacement of habitat at a minimum a ratio of 1:1; responsibility and qualifications of the personnel to implement and supervise the plan; site selection; site preparation and planting implementation; schedule; maintenance plan/guidelines; monitoring plan; and long-term preservation.

Mitigation for Intermediate Mariposa Lily

- Bio-2 Prior to the issuance of grading permits, a detailed restoration program shall be prepared by a qualified biologist for approval by the County of Orange. The program shall provide for planting of 326 greenhouse-propagated individuals of intermediate mariposa lily in the Study Area within an undisturbed area of coastal sage scrub. This mitigation program will be considered successful if at least 80% of 326 flowering individuals, or 261 flowering individuals, are observed five years after planting. If success criteria are not met after five years, remedial measures shall include greenhouse propagation and planting of additional individuals on the Project Site.

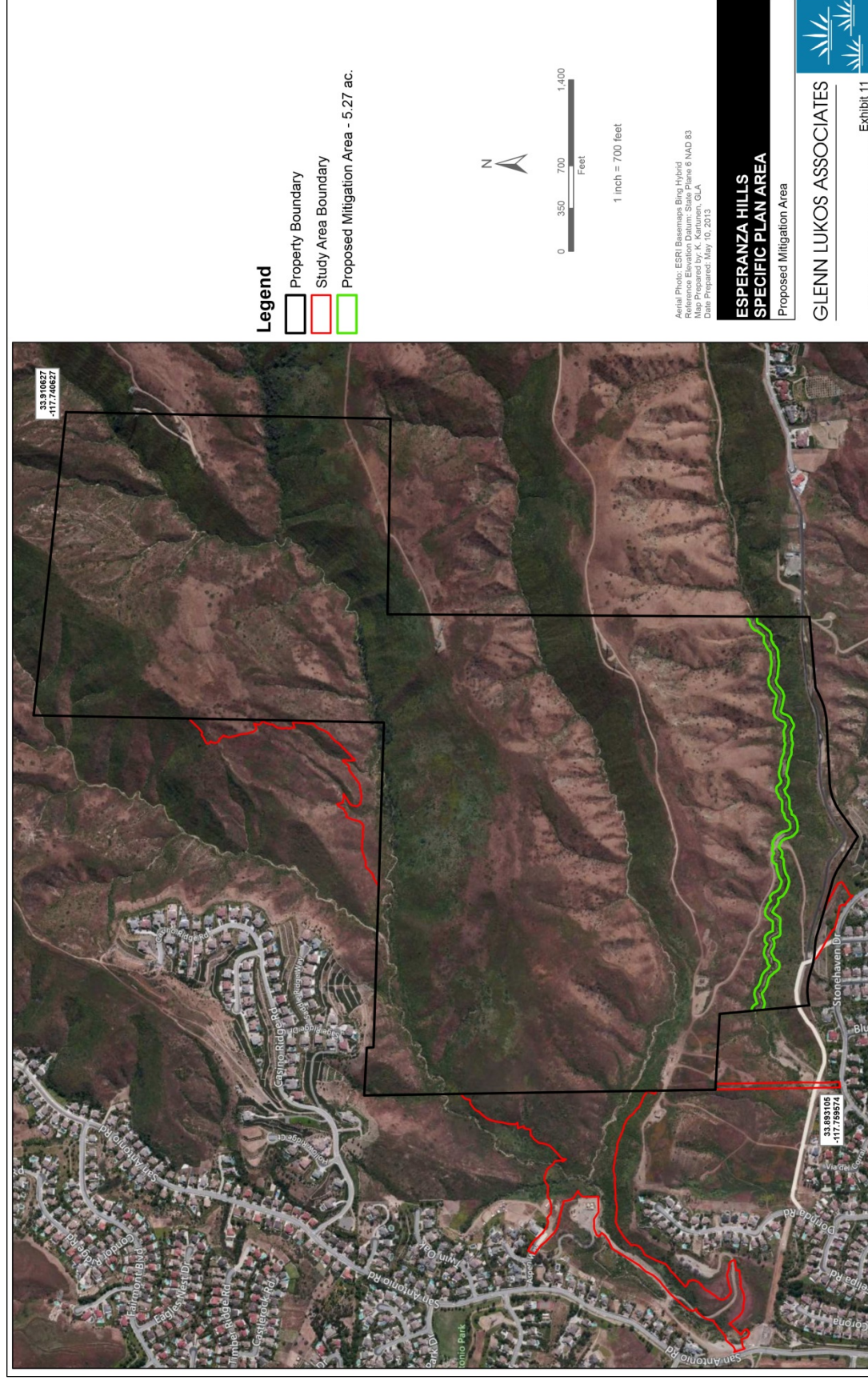


Exhibit 5-36– Proposed Mitigation Area

Mitigation for Intermediate Braunton's Milk-Vetch

- Bio-3 Prior to the issuance of grading permits, a detailed restoration program shall be prepared by a qualified biologist for approval by the County of Orange. The program shall provide for planting of 400 greenhouse-propagated individuals of Braunton's milk-vetch in the Study Area within an undisturbed area of suitable habitat and soils, slope and exposure. This mitigation program will be considered successful if at least 80% of 400 individuals, or 320 individuals, flower and set seed prior to senescence. If success criteria are not met prior to senescence of the planted individuals, remedial measures shall include greenhouse propagation and planting of additional individuals on the Project Site.

Mitigation for Project Impact to Least Bell's Vireo:

- Bio-4 Prior to the issuance of grading permits, the Project Applicant shall prepare a re-vegetation plan for mulefat scrub and black willow riparian forest located within Blue Mud Canyon. The plan will also incorporate California black walnut into the plant palette to mitigate the loss of walnut woodland as described in Mitigation Measure Bio-1. The plan shall be prepared by a qualified biologist for review and approval by the Manager of OC Planning. At a minimum, the plan shall include: restoration of mulefat scrub and black willow riparian forest vegetation at a ratio of 1:1; responsibility and qualifications of the personnel to implement and supervise the plan; site selection; site preparation and planting implementation; schedule; maintenance plan/guidelines; monitoring plan; and long-term preservation.
- Bio-5 Prior to the issuance of grading permits, the Project Applicant shall include the following measures on the grading plan to be implemented with grading operations:
1. Prior to the commencement of clearing operations or other activities involving significant soil disturbance, all areas of mulefat scrub and black willow riparian forest habitat to be avoided shall be identified with temporary fencing or other markers that are clearly visible to construction personnel.
 2. A USFWS-approved Biological Monitor shall be on-site during any clearing of mulefat scrub and black willow riparian forest. The Project Applicant shall advise the U.S. Fish & Wildlife Service at least 7 calendar days – but preferably 14 calendar days – prior to the clearing of mulefat scrub and black willow riparian forest. The Biological Monitor shall flush avian or other mobile species from habitat areas immediately prior to brush-clearing and earth-moving activities. It shall be the responsibility of the monitoring biologist to ensure that identified bird species are not directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities to continue on a timely basis.
 3. Following the completion of initial clearing activities, all areas of mulefat scrub and black willow riparian forest habitat to be avoided by construction equipment and personnel shall be marked with temporary fencing or other clearly visible,

appropriate markers. No construction access, parking, or storage of equipment shall be permitted within such marked areas.

Mitigation for Project Impacts to Army Corps of Engineers and California Department of Fish and Wildlife Jurisdiction

- Bio-6 Prior to the issuance of grading permits, the Project Applicant shall prepare a Restoration Plan for mulefat scrub, black willow riparian forest, coast live oak riparian woodland, and other appropriate wetland/riparian habitats at an acreage ratio of 1:1 to be located within Blue Mud Canyon. The plan shall be prepared by a qualified biologist for review and approval by the Manager of OC Planning. The Restoration Plan shall include the following:
1. Impacts to living coast live oak trees within CDFW jurisdiction will be mitigated through planting liners or locally collected acorns within Blue Mud Canyon at the following ratios:
 - For healthy trees to be removed for development:
 - trees less than 5 inches diameter at breast height (DBH) should be replaced at 3:1
 - trees between 5 and 12 inches DBH should be replaced at 5:1
 - trees between 12 and 36 inches DBH should be replaced at 10:1
 - trees greater than 36 inches DBH should be replaced at 20:1
 - For damaged trees (including trees damaged by construction and fire damaged trees to be removed for development):
 - trees less than 12 inches DBH should be replaced at 3:1
 - trees greater than 12 inches DBH should be replaced at 5:1
 - Impacts to trees that were killed by the 2008 Freeway Complex Fire do not require mitigation.
 2. The sizes, condition, and total number of impacted trees will be determined after verification of the limits of CDFW jurisdiction and prior to issuance of any permit that results in ground disturbance.
- Bio-7 Prior to the issuance of grading permits, the Project Applicant shall prepare a Habitat Mitigation and Monitoring Program (HMMP). The HMMP shall be prepared by a qualified biologist for review and approval by the Manager of OC Planning. The HMMP shall include responsibility and qualifications of the personnel to implement and supervise the plan; site selection; site preparation and planting implementation; schedule; maintenance plan/guidelines; monitoring plan; and long-term preservation.
- The Project Applicant shall be fully responsible for the implementation of the Habitat Mitigation and Monitoring Program until the restoration areas have met the success criteria outlined in the approved plan. The Manager of OC Planning shall have final authority over mitigation area sign-off.
- Bio-8 Prior to the issuance of any grading permit the Project Applicant shall include the following measures on the grading plan to be implemented with grading operations:

1. Prior to the commencement of clearing operations or other activities involving significant soil disturbance, all areas of ACOE and CDFW jurisdiction to be avoided shall be identified with temporary fencing or other markers that are clearly visible to construction personnel.
2. A USFWS-approved Biological Monitor shall be on-site during any clearing of riparian vegetation. The Project Applicant shall advise the US Fish & Wildlife Service at least 7 calendar days – but preferably 14 calendar days – prior to the clearing of riparian vegetation. The Biological Monitor shall flush avian or other mobile species from habitat areas immediately prior to brush-clearing and earth-moving activities. It shall be the responsibility of the monitoring biologist to ensure that identified bird species are not directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities to continue on a timely basis.
3. Following the completion of initial clearing activities, all areas of ACOE and CDFW jurisdiction to be avoided by construction equipment and personnel shall be marked with temporary fencing or other clearly visible, appropriate markers. No construction access, parking, or storage of equipment shall be permitted within such marked areas.

Mitigation for Project Impact to Nesting Birds Protected under Migratory Bird Treaty Act

- Bio-9 Prior to the issuance of grading permits, the Project Applicant shall include the following condition on the grading plan for implementation during vegetation removal operations:

No vegetation removal shall occur between the dates of March 15 to August 31, unless a qualified biologist surveys the Project's impact area prior to disturbance to confirm the absence of active nests. If an active nest is discovered, vegetation removal within a particular buffer surrounding the nest shall be prohibited until nesting is complete; the buffer distance shall be determined by a qualified biologist (in consultation with the CDFW or the USFWS, if applicable) and in consideration of species sensitivity and existing nest site conditions. Limits of avoidance, which can be up to 300 feet for nesting raptors, shall be demarcated with flagging or fencing. The Biologist shall record the results of the recommended protective measures described above and shall submit a memo summarizing any nest avoidance measures to the Manager of OC Planning to document compliance with applicable state and federal laws pertaining to the protection of native birds, including nesting raptors.

Mitigation for Indirect Impacts to Special Status Plants, Sensitive Natural Communities, and Chino Hills State Park, and Preservation of Open Space

- Bio-10 Prior to the issuance of building permits, the Project Applicant shall prepare a resident Environmental Awareness Program to be reviewed and approved by the Manager of OC Planning. The Environmental Awareness Program is intended to increase

awareness to residents of the sensitive plants, wildlife, and associated habitats that occur in the preserved open space areas. The intention of the program shall be to encourage active conservation efforts among the residents to help conserve the habitats in the preserved open space. The program shall address inadvertent impacts from the introduction of invasive plant species (including escapees), human intrusion, trash and debris, creation of ad hoc trails, domestic cats, and light pollution. At a minimum, the Environmental Awareness Program shall include the following components:

- Informational kiosks shall be constructed at entrance points to hiking and equestrian trails and at various locations along the fence line that separates the Project Site and the open space area to inform residents and trail users on the sensitive flora and fauna that rely on the habitats found within the preserved open space. The intent of these kiosks is to bring awareness to the sensitive plants, wildlife and associated habitats which occur in the area along with discouraging creation of ad hoc trails and trash and debris.
- The Project Applicant shall provide residents or the HOA for nearby subdivisions (if applicable) with a brochure that includes a list of plant species to avoid in residential landscaping to prevent the introduction of invasive plant species and impacts from human intrusion, light pollution and domestic cats to the surrounding natural communities.

Mitigation for Indirect Impacts to Least Bell's Vireo

Bio-11 Prior to the issuance of grading permits the Project Applicant shall include the following measures on the grading plan to be implemented with grading operations:

- No clearing, grubbing, grading, or other construction activities shall occur within and in the vicinity of riparian habitat occupied by least Bell's vireo between March 15 and September 15, the breeding season of the least Bell's vireo, until the following requirements have been met:
 1. A qualified biologist shall survey riparian areas that would potentially be subject to construction noise levels exceeding 60 decibels [dB(A)] hourly average for the presence of least Bell's vireo. Surveys for this species shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish & Wildlife Service within the breeding season prior to the commencement of construction. If the least Bell's vireo is present, then the following conditions must be met:
 - a. Between March 15 and September 15, no clearing, grubbing, or grading of occupied least Bell's vireo habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist;
 - b. Between March 15 and September 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the

edge of occupied least Bell's vireo habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a qualified acoustician and/or qualified biologist (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the U.S. Fish & Wildlife Service at least two weeks prior to the commencement of construction activities. Prior to the commencement of any construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist;

- c. If it is desired to conduct construction activities adjacent to habitat determined to be occupied by least Bell's vireo during pre-construction surveys, then at least two weeks prior to the commencement of construction activities, under the direction of a qualified acoustician and/or qualified biologist, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat occupied by the least Bell's vireo. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring shall be conducted at the edge of occupied area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician and/or biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 16).

Construction noise shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.]

2. If least Bell's vireos are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the U.S. Fish & Wildlife Service that demonstrates whether or not mitigation measures such as noise walls are necessary between March 15 and September 15 as follows:
 - If this evidence indicates the potential is high for least Bell's vireo to be present based on historical records or site conditions, then condition 1.c shall be adhered to as specified above.
 - If this evidence concludes that no impacts to this species are anticipated, no further surveys or monitoring would be necessary.

5.3.7 Level of Significance after Mitigation

The Proposed Project will not have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations or by the CDFW or the USFWS. Two special status plant species (Braunton's milk-vetch and intermediate mariposa lily) were identified as potential significant impact by implementation of the Project; however, Mitigation Measures Bio-2 and Bio-3 have been incorporated into the Project to replant the same number of impacted plants in an undisturbed area. With the implementation of Mitigation Measures Bio-2 and Bio-3, Project impacts to sensitive or special status species is less than significant. The least Bell's vireo is a special status wildlife resource that has the potential to be impacted by implementation of the Project. However, Mitigation Measure Bio-4 has been incorporated into the Project to prepare and implement a plan to restore and the revegetation of mulefat scrub and black willow riparian forest. Mitigation Measure Bio-10 has been incorporated into the Project to mitigate indirect impacts to special status plants, sensitive natural communities with the preparation and implementation of a resident Environmental Awareness Program. With the implementation of Mitigation Measures Bio-1 through Bio-4, Project impacts to sensitive or special status species is less than significant.

The following is further discussion of the level of significance after mitigation to each sensitive biological resource.

1. Walnut Woodland and Blue Elderberry Woodland

Removal of vegetation during grading exhibits potential for impacts to 0.48 and 0.22 acres of walnut woodland for Options 1 and 2, respectively. To ensure that impacts to walnut woodland are fully addressed, Mitigation Measure Bio-1 has been proposed that includes incorporation of at least 0.22 or 0.48 acres of walnut woodland into areas of habitat restoration within the Blue Mud Canyon mitigation site. With implementation of this mitigation measure, impacts to walnut woodland, for either Option 1 or Option 2 will result in less than significant impacts on walnut woodland.

Similarly, removal of vegetation during grading exhibits potential for impacts to 11.37 and 13.63 acres of disturbed blue elderberry woodland for Options 1 and 2

respectively. To ensure that impacts to disturbed blue elderberry woodland are fully addressed, Mitigation Measure Bio-1 has been proposed that includes incorporation of at least 11.37 or 13.63 acres of blue elderberry woodland into areas of habitat restoration within the Blue Mud Canyon mitigation site. With implementation of this mitigation measure, impacts to blue elderberry woodland for either Option 1 or Option 2 will result in less than significant impacts on blue elderberry woodland.

2. Braunton's Milk-Vetch

Removal of vegetation during grading exhibits potential for impacts to Braunton's milk-vetch. Impact to Braunton's milk-vetch is considered potentially significant. Option 1 and Option 2 would impact approximately 400 individuals of Braunton's milk-vetch within the Study Area. To ensure that impacts to Braunton's milk-vetch are fully avoided, Mitigation Measure Bio-3 has been proposed. This mitigation measure requires the replanting in undisturbed area of coastal sage scrub within the Study Area of 400 greenhouse-propagated individuals. With implementation of this mitigation measure, impacts to Braunton's milk-vetch for Option 1 or Option 2 will result in less than significant impacts on Braunton's milk-vetch.

3. Intermediate Mariposa Lily

Removal of vegetation during grading exhibits potential for impacts to intermediate mariposa lily. Impact to intermediate mariposa lily is considered potentially significant. Option 1 and Option 2 would impact all of the 326 individuals of intermediate mariposa lily detected during focused surveys in 2010, which would be potentially significant without mitigation, given that intermediate mariposa lily is a CRPR List 1B.2 species. To ensure that impacts to intermediate mariposa lily are fully avoided, Mitigation Measure Bio-2 has been proposed. This mitigation measure requires replanting 326 greenhouse-propagated individuals in undisturbed area of suitable habitat and soils, slope, and exposure within the Study Area. With implementation of this mitigation measure, impacts to intermediate mariposa lily for Option 1 or Option 2 will result in less than significant impacts on intermediate mariposa lily.

4. Least Bell's Vireo

Removal of vegetation during grading exhibits potential for impacts to mulefat scrub. Impact to mulefat scrub is considered potentially significant. Option 1 would permanently impact 0.05 acre of mulefat scrub occupied by least Bell's vireo. The least Bell's vireo is a special status wildlife resource that has the potential to be impacted by Project implementation. These impacts would be considered significant before mitigation. However, with the mitigation proposed for the project, there would be a net increase of riparian habitat suitable for breeding least Bell's vireo, and impacts would be reduced to less than significant following mitigation. No direct take of individual birds would occur, as impacts would occur outside the breeding season.

Removal of vegetation during grading exhibits potential for impacts to mulefat scrub and black willow riparian forest. Impact to mulefat scrub and black willow riparian forest is considered potentially significant. Option 2 would permanently impact 0.05 acre of mulefat scrub and 0.19 acre of black willow riparian forest occupied by least Bell's vireo. These impacts would be considered significant before mitigation. However, with the mitigation proposed for the Project, there would be a net increase of riparian habitat suitable for breeding least Bell's vireo and impacts would be reduced to less than significant following mitigation. No direct take of individual birds would occur, as impacts would occur outside the breeding season.

The Proposed Project will not 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 CDFW or the USFWS. Grading of the project will result in fill of drainages within ACOE, CDFW, and RWQCB jurisdictions. Option 1 and Option 2 would significantly impact drainages within ACOE, CDFW, and RWQCB jurisdiction. To ensure that impacts to ACOE, CDFW, and RWQCB jurisdictions are mitigated, Mitigation Measures Bio-6, Bio-7, and Bio-8 have been proposed. Mitigation Measure Bio-5 requires a Restoration Plan for mulefat scrub, black willow riparian forest, coast live oak riparian woodland, and other appropriate wetland/riparian habitats at an acreage ratio of 1:1 to be located within Blue Mud Canyon. Mitigation Measure Bio-7 requires a Habitat Mitigation and Monitoring Program. Mitigation Measure Bio-8 requires notes on the grading plan to ensure habitat protection procedures are followed during grading operations. With the implementation of Mitigation Measures Bio-5, Bio-6, and Bio-8 impacts to riparian habitat or other sensitive natural communities identified in local or regional plans, policies, and regulations or by the CDFW or the USFWS is less than significant.

The Proposed Project will not have 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. Grading of the project will result in fill of drainages within ACOE, CDFW, and RWQCB jurisdictions. Option 1 and Option 2 would significantly impact drainages within ACOE, CDFW, and RWQCB jurisdiction. To ensure impacts to ACOE, CDFW, and RWQCB jurisdictions are mitigated; Mitigation Measures Bio-6, Bio-7, and Bio-8 have been proposed. Mitigation Measure Bio-5 requires a Restoration Plan for mulefat scrub, black willow riparian forest, coast live oak riparian woodland, and other appropriate wetland/riparian habitats at an acreage ratio of 1:1 to be located within Blue Mud Canyon. Mitigation Measure Bio-7 requires a Habitat Mitigation and Monitoring Program. Mitigation Measure Bio-8 requires notes on the grading plan to ensure habitat protection procedures are followed during grading operations. With the implementation of Mitigation Measures Bio-6, Bio-7, and Bio-8 impacts to federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means is less than significant.

The Proposed Project will not substantially interfere with the movement of any native resident or migratory wildlife corridors, or impede the use of native wildlife nursery

sites. The Proposed Project does not include any wildlife corridors that provide regional connection between habitats and therefore the impact to wildlife movement is less than significant. Removal of vegetation during grading results in a potential impact to nesting birds. Impacts to nesting birds are considered potentially significant. In order to ensure that impacts to nesting birds are fully avoided, Mitigation Measure Bio-9 has been proposed. Under this measure, vegetation must either be removed outside the avian nesting season or a qualified biologist must conduct surveys within areas of vegetation removed during the nesting season to ensure that nesting birds are not present. With the implementation of Mitigation Bio-9, impact to native wildlife nursery site is less than significant.

The Proposed Project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The Natural Resource Element of the Orange County General Plan includes Resources Policy 1. Wildlife and Vegetation: To identify and preserve the significant wildlife and vegetation habitats of the County. This EIR was prepared to identify and preserve the significant wildlife and vegetation habitats impacted by the Project. With the implementation of Mitigation Measures Bio-1 through Bio-9, the Proposed Project will not conflict with any local policies or ordinances protecting biological resources and therefore the potential for conflict with policies and ordinances is less than significant.

5. Nesting Birds

Removal of vegetation during grading exhibits potential for impacts to nesting birds. Impacts to nesting birds are considered potentially significant. In order to ensure that impacts to nesting birds are fully avoided, Mitigation Measure Bio-9 has been proposed. Under this measure, vegetation must either be removed outside the avian nesting season or a qualified biologist must conduct surveys within areas of vegetation removed during the nesting season to ensure that nesting birds are not present. With implementation of this mitigation measure, impacts to nesting birds are avoided, and Option 1 or Option 2 will result in less than significant impacts on nesting birds.

6. ACOE, CDFW, and RWQCB Jurisdiction

Grading of the project will result in fill of drainages within ACOE, CDFW, and RWQCB jurisdictions. Option 1 and Option 2 would significantly impact drainages within ACOE, CDFW, and RWQCB jurisdiction. To ensure that impacts to ACOE, CDFW, and RWQCB jurisdictions are avoided, Mitigation Measures Bio-6, Bio-7, and Bio-8 have been proposed. Mitigation Measure Bio-6 requires a Restoration Plan for mulefat scrub, black willow riparian forest, coast live oak riparian woodland, and other appropriate wetland/riparian habitats at an acreage ratio of 1:1 to be located within Blue Mud Canyon. Mitigation Measure Bio-7 requires a Habitat Mitigation and Monitoring Program. Mitigation Measure Bio-8 requires notes on the grading plan to ensure habitat protection procedures are followed during grading operations. Impacts would be reduced to a level that is less than significant with these mitigation measures.

The Proposed Project will not conflict with provisions of an adopted Habitat Conservation Plan, a Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Although the Study Area occurs entirely within Critical Habitat Unit 9 for the coastal California gnatcatcher, surveys between 2007 and 2013 document that the Study Area is not occupied by coastal California gnatcatcher, and PCEs are severely limited or lacking due to disturbance to coastal sage scrub habitat from the 2008 Freeway Complex Fire. As such, impacts to coastal California gnatcatcher critical habitat would be less than significant under Option 1 and Option 2. Therefore, Project impact to adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan is less than significant.

5.3.8 Cumulative Impacts

The analysis considers cumulative biological impacts to sensitive biological resources that result from combined, incremental impacts of each of the options when added to other past, present, and reasonably foreseeable future projects having closely related impacts (including federal, non-federal governmental, and private actions). Cumulative impacts can result from individually minor, but collectively significant, impacts taking place over a period of time. When an analysis concludes that a project's impacts are individually minor but "cumulatively considerable" the project may have a significant impact on the environment. An incremental contribution is cumulatively considerable if the incremental effects of the project are significant when viewed in combination with the effects of past and current projects and reasonably foreseeable future projects. The following cumulative impact analysis is based on a review of related projects in the vicinity of the Project Site (Table 5-9-21, page 5-456), existing conditions in the vicinity of the Proposed Project, and an analysis of aerial photographs. Because the Project Site is located adjacent to Chino Hills State Park, the substantial areas of permanently preserved habitat associated with the Park are also in the evaluation of cumulative impacts to certain biological resources where appropriate.

The following potential impacts to biological resources have been evaluated, and as appropriate are addressed in the mitigation measures set forth above. The potential cumulative effects of these potential impacts are addressed below.

1. Southern Willow Scrub

Under Option 1 and Option 2 of the Proposed Project, southern willow scrub would not be impacted. It is anticipated that the proposed Cielo Vista project will impact approximately 1.25 acres of southern willow scrub; however, given the disturbed nature of the habitat resulting from the 2008 Freeway Complex Fire, this impact is anticipated to be found less than significant. Impacts to southern willow scrub occupied by least Bell's vireo were found to be significant before mitigation, and would be reduced to less than significant with mitigation. The Bridal Hills, LLC

property does not support any southern willow scrub and would therefore not impact southern willow scrub.

Finally, potential indirect impacts associated with introduction of trash and debris, human intrusion, introduction of non-native invasive plants, and dust generated during construction were evaluated. Through a combination of project design features (PDFs) and mitigation, potential indirect impacts would be reduced to less than significant and, as such, would not add to the cumulative impacts to southern willow scrub within the region.

For Option 1 and Option 2, which do not impact this habitat, there would be no significant cumulative impact. An analysis of cumulative impacts to riparian vegetation occupied by least Bell's vireo is presented below.

2. California Walnut Woodland and Blue Elderberry Woodland

Under Options 1 and 2 California walnut woodland and blue elderberry woodland would be impacted. The scale of impacted acres among the options are similar, with 0.22 to 0.48 acre of the total 6.37 acres of California walnut woodland being impacted and mitigated, since it is a significant impact, and 11.37 to 13.63 acres of the total 23.88 acres of blue elderberry woodland being impacted. As noted, the California walnut woodland within the Study Area was burned in the 2008 Freeway Complex Fire, and the majority of the walnut trees were damaged and a few killed by the fire. As such, the walnut woodland within the Study Area is highly disturbed and does not exhibit habitat values typical of intact California walnut woodland.

Nevertheless, because this habitat is a G2S2 impacts to this habitat associated with Option 1 and Option 2 would be potentially significant without mitigation. Similarly, the blue elderberry woodland within the Study Area was burned in the 2008 Freeway Complex Fire. More than half of the elderberry trees were damaged and many were killed by the fire. It is not clear that the CNDDB ranking of G3S3 applies to the blue elderberry habitat on the site, and while this habitat type is relatively secure as a G3S3 species, and that more than half of the elderberry trees are damaged or dead, impacts associated with Option 1 and 2 would be significant before mitigation; however, with mitigation these impacts would be reduced to less than significant.

It is anticipated that the proposed Cielo Vista project will impact approximately 4.60 acres of blue elderberry woodland; however, given the disturbed nature of the habitat resulting from the 2008 Freeway Complex Fire, this impact is anticipated to be less than significant. It is anticipated that the proposed Cielo Vista project will not impact any California walnut woodland. Although no biological survey results are available for the Bridal Hills, LLC property, based on a review of aerial photography and GLA's reconnaissance viewing of the site with binoculars, the Bridal Hills property does not appear to support blue elderberry woodland or California walnut woodland, and therefore would not impact them.

Finally, potential indirect impacts associated with introduction of trash and debris, human intrusion, introduction of non-native invasive plants, and dust generated during

construction were evaluated. Through a combination of project design features and mitigation, potential indirect impacts would be reduced to less than significant and, as such, would not add to the cumulative impacts to California walnut woodland and blue elderberry woodland within the region.

As noted, Option 1 and 2 impacts would be reduced to less than significant with mitigation to California walnut woodland and blue elderberry woodland and would improve existing conditions considering the highly disturbed nature of these habitats within the Study Area due to the 2008 Freeway Complex Fire.

Considering the two projects described above in combination with the less than significant impacts associated with Options 1 and 2, there would be no significant cumulative impacts to California walnut woodland and blue elderberry woodland.

3. Braunton's Milk-Vetch

Both options would impact the approximately 400 individuals of Braunton's milk-vetch within the Study Area, which would be significant without mitigation, but would be reduced to less than significant with mitigation. Braunton's milk-vetch was not detected during focused surveys at the Cielo Vista site, and it is not known if it occurs at the Bridal Hills, LLC property, although suitable habitat may be present given the proximity to the population at Esperanza Hills. The Proposed Project, including Option 1 or Option 2, will not contribute to cumulative impacts to this species. Because the Proposed Project would fully mitigate project-related impacts, there would be no cumulative significant impacts to this species associated with Option 1 or Option 2.

4. Intermediate Mariposa Lily

Both options would impact all of the 326 individuals of intermediate mariposa lily detected during focused surveys in 2010, which would be potentially significant without mitigation, given that intermediate mariposa lily is a California Rare Plant Ranks List 1B.2 species. With mitigation, impacts would be reduced to less than significant. The Cielo Vista property does not support this species, and it is unknown if the Bridal Hills, LLC property supports it. Given that impacts to this species at Esperanza Hills will be fully mitigated, there would be no cumulative significant impacts to this species associated with Option 1 or Option 2.

5. Southern California Walnut, Catalina Mariposa Lily, and Small Flowered Microseris

Southern California walnut is a CRPR List 4 species and was detected during focused surveys in 2007. A majority of the walnut trees within the Study Area were damaged or killed in the 2008 Freeway Complex Fire. Impacts to dead trees would not be significant. Under Options 1 and 2 some live southern California walnut trees may be impacted; however, given that southern California walnut is a List 4 species, impacts to the remaining live and damaged trees would not constitute a substantial adverse

effect, and therefore would be less than significant. It is anticipated that impacts to this species from the proposed Cielo Vista project will be considered less than significant for these same reasons. The Esperanza Hills and Bridal Hills, LLC properties may support only a few scattered individuals of this species, but they do not support any areas of walnut woodland. Given these considerations, there would be no cumulative significant impacts to this species associated with Option 1 or Option 2.

Catalina mariposa lily is a CRPR List 4 species, and 445 plants were observed by GLA during 2010 surveys. All would be impacted under Options 1 and 2. However, given that Catalina mariposa lily is a List 4 species, impacts to 445 plants would not constitute a substantial adverse effect, and therefore would be less than significant. The Cielo Vista property does not support Catalina mariposa lily, and it is not known whether the Bridal Hills, LLC property supports this species. Given these considerations, there would be no cumulative significant impacts to this species associated Option 1 or Option 2.

Small flowered microseris is a CRPR List 4 species, and 10 individuals were observed by Campbell BioConsulting in 1998. Given that the 10 individuals detected in 1998 were not detected during multiple subsequent surveys, and that impacts to 10 individuals of a CRPR List 4 would not constitute a substantial adverse effect, under Options 1 or 2, any potential impacts to small-flowered microseris would be less than significant. The proposed Cielo Vista project does not support small flowered microseris, and it is not known whether the Bridal Hills, LLC property supports this species. Given these considerations, there would be no cumulative significant impacts to this species associated with Option 1 or Option 2.

6. Least Bell's Vireo

Option 1 would permanently impact 0.24 acre of mulefat scrub occupied by least Bell's vireo. These impacts would be considered significant before mitigation. However, with the mitigation proposed for the project, there would be a net increase of riparian habitat suitable for breeding least Bell's vireo, and impacts would be reduced to less than significant following mitigation. No direct take of individual birds would occur, as impacts would occur outside the breeding season.

Option 2 would permanently impact 0.79 acre of mulefat scrub and 0.19 acre of black willow riparian forest occupied by least Bell's vireo. These impacts would be considered significant before mitigation. However, with the mitigation proposed for the Project, there would be a net increase of riparian habitat suitable for breeding least Bell's vireo and impacts would be reduced to less than significant following mitigation. No direct take of individual birds would occur, as impacts would occur outside the breeding season.

Of the potential projects in the vicinity of the Study Area, it is anticipated that only the Cielo Vista property supports least Bell's vireo; however, it should be noted that the riparian habitat to be impacted under the proposed Cielo Vista project consists of the same habitat patches to be impacted by off-site impacts for the Proposed Project,

although at varying degrees. As such, the subject riparian least Bell's vireo habitat will only be subject to permanent impacts once, and the impacts should not be counted twice.

Given that the impacts to riparian habitat occupied by least Bell's vireo will be fully mitigated, with a net gain of riparian habitat, and no additional impacts would occur in the vicinity, there would be no significant cumulative impacts to least Bell's vireo associated with Option 1 or Option 2.

7. Other Special-Status Wildlife

In addition to least Bell's vireo, several other special-status wildlife were detected during surveys, including Cooper's hawk (CDFW Watch List when nesting), golden eagle (CDFW Watch List when nesting), northern harrier (CDFW SSC when nesting) peregrine falcon (CDFW FPS and USFWS BCC when nesting), sharp-shinned hawk (CDFW Watch List), yellow-breasted chat (CDFW SSC), and yellow warbler (CDFW SSC and USFWS BCC). Impacts to these species under Option 1 and Option 2 would be less than significant for the reasons set forth in above, and generally because of any given species being either relatively common and/or using the Study Area for only occasional foraging and not breeding.

Two of these species, yellow-breasted chat and yellow warbler, were detected at the Cielo Vista site; however, it should be noted that a portion of the off-site Study Area for Esperanza Hills is coincident with the potential project area of the proposed Cielo Vista project, and the chat and warbler individuals were detected in the same patches of riparian vegetation, and are not distinct occurrences.

Based on the lack of riparian habitat at Bridal Hills, LLC, yellow-breasted chat and yellow warbler are not expected to occur.

The 14,102-acre Chino Hills State Park directly north and east of the Study Area contains large tracts of suitable nesting and foraging habitat for all of the above-mentioned species. Given these considerations, there would be no cumulative significant impacts to special-status wildlife associated with Option 1 or Option 2.

8. Coastal California Gnatcatcher Critical Habitat

As described in detail above, the coastal California gnatcatcher has not been found to occur in the Study Area and therefore none of the options would be expected to result in direct impacts to the species.

The proposed Cielo Vista project, the Bridal Hills, LLC property, and the Yorba Linda Land property are all located in designated coastal California gnatcatcher critical habitat and contain coastal sage scrub habitat disturbed by the 2008 Freeway Complex Fire similar to the Proposed Project. Coastal California gnatcatchers were not detected at the proposed Cielo Vista project, and are not expected to occur at the Bridal Hills, LLC property or the Yorba Linda Land, LLC properties. As such, these projects exhibit no potential for impacts to the coastal California gnatcatcher.

Therefore, the Proposed Project and the proposed Cielo Vista project would not contribute to any cumulative impacts to the coastal California gnatcatcher.

Under Option 1 and Option 2, there would be direct impacts to areas mapped as Coastal California Gnatcatcher Critical Habitat, but given the highly disturbed nature of the habitat, construction of the Proposed Project would not result in impacts to PCEs. Given that neither the Proposed Project nor the projects in the vicinity would impact PCEs within Coastal California Gnatcatcher Critical Habitat Unit 9, there would be no significant cumulative impacts to coastal California gnatcatcher Critical Habitat associated with Option 1 or Option 2.

9. Raptor Foraging Habitat

The Project Site exhibits low to moderate quality foraging habitat based on field observations during numerous site visits. No raptor nests were detected on the site, and there were no old abandoned or nests observed on the site, indicating that nesting is not common on the site. As such, development of the Proposed Project would not result in significant impacts to raptor foraging habitat due to the limited use of the site by foraging raptors.

The Project Site is adjacent to Chino Hills State Park, which provides substantial conserved areas for raptor foraging, primarily grassland and shrub and habitats. Therefore, substantial raptor foraging areas have been subject to regional conservation. As such, under Option 1 or Option 2, there would be no significant cumulative impacts to raptor foraging habitat.

10. Nesting Birds

Removal of vegetation during grading exhibits potential for impacts to nesting birds. Impacts to nesting birds are considered potentially significant. To ensure that impacts to nesting birds are fully avoided, Mitigation Measure Bio-9 (page 5-168) has been proposed. Under this measure, vegetation must either be removed outside the avian nesting season or a qualified biologist must conduct surveys within areas of vegetation removed during the nesting season to ensure that nesting birds are not present. With implementation of this mitigation measure, impacts to nesting birds are avoided, and Option 1 or Option 2 will not contribute to potential cumulative impacts on nesting birds.

11. Wildlife Movement

The Study Area is not part of any regional wildlife movement corridor, and construction of Option 1 or Option 2 would not substantially interfere with the movement of native wildlife on a regional basis due to the lack of connectivity to other habitat areas. Accordingly, impacts to wildlife movement would be less than significant. The major wildlife corridors in the vicinity of the Study Area are all in preserved lands within Chino Hills State Park. As such, under either Option 1 or Option 2 there would be no significant cumulative impacts to raptor foraging habitat.

12. ACOE, CDFW, and RWQCB Jurisdiction

Option 1 and Option 2 would significantly impact drainages within ACOE, CDFW, and RWQCB jurisdiction. With mitigation, this impact would be reduced to a level that is less than significant. It is anticipated that the proposed Cielo Vista project would significantly impact ACOE, CDFW, and RWQCB jurisdiction, but it is anticipated that these impacts would be required to be fully mitigated, as required under §1602 of the *California Fish and Game Code* and Sections 401 and 404 of the Clean Water Act. The Bridal Hills, LLC parcel contains drainages that are likely jurisdictional, and any project constructed there would likely impact such drainages. However, such impacts would require mitigation under §1602 of the *California Fish and Game Code* and Sections 401 and 404 of the Clean Water Act.

Nevertheless, because the impacts under Option 1 and Option 2 will be fully mitigated, with a net gain in aquatic resource functions, this impact will not contribute to cumulatively considerable impacts to jurisdictional resources within the region.

5.3.9 Unavoidable Adverse Impacts

With implementation of the recommended mitigation measures and project design features, impacts to biological resources will be reduced to a less than significant level and, therefore, there are no unavoidable adverse impacts associated with the development of the project.