

# Appendix D

*Biological Resources Assessment*



*City of Goleta*

# **Heritage Ridge Residential Project**

## **Biological Resource Appendix**

**May 2016**

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**Biological Resource Assessment**  
**Heritage Ridge Residential Project**  
**APNs: 073-060-031 through 073-060-043**  
**Goleta, Santa Barbara County, California**

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## **EXECUTIVE SUMMARY**

This report documents the biological resources on the Heritage Ridge Project site. Section 4.3 of the Envirometnal impact Report (EIR) evaluates potential impacts to sensitive resources based on current project plans. The proposed project involves the development of 360 residential units in eight buildings, as well as two additional recreational buildings within the City of Goleta. No change to the underlying land use and zoning designation is proposed, but amendments to General Plan Figures 3-5 and 4-1 (Open Space and Conservation Elements) are required to remove an Environmentally Sensitive Habitat Area (ESHA) designation of Coastal Sage Scrub that does not occur on the property. The vacant site has undergone grading a disturbance since at least 1986, and is surrounded by residential land uses, with Willow Springs I & II to the east, the Village at Los Carneros to the west, and The Union Pacific Railroad (UPRR) and U.S. Highway 101 to the north. Pursuant to CEQA Guidelines § 15150, this report incorporates by reference the Willow Springs II EIR (City of Goleta, 2012; State Clearinghouse No. 2010031059).

Construction and grading is proposed entirely within the existing disturbed areas, and would not require displacement of any intact native habitat. Coastal sage scrub ESHA is mapped onsite, but does not occur and the designation is proposed for removal. No special status species have a moderate or high potential to occur on-site. The Project site hosts low-quality foraging habitat for birds and bats. A local wildlife linkage has been observed on the site between habitat to the north of U.S. Highway 101 and the Los Carneros Wetland.

### **1.0 INTRODUCTION**

Rincon Consultants, Inc. has prepared this biological resources assessment to document the existing conditions and special status resources present at Heritage Ridge Residential Project in the City of Goleta (City), Santa Barbara County, California. The proposed project involves the development of 360 residential units in eight buildings, as well as two additional recreational buildings within the City of Goleta. No change to the underlying land use and zoning designation is proposed, but amendments to General Plan Figures 3-5 and 4-1 (Open Space and Conservation Elements) are required to remove an Environmentally Sensitive Habitat Area (ESHA) designation of Coastal Sage Scrub that does not occur on the property. For a detailed project description, refer to the Environmental Impact Report (EIR) Section 2.0, *Project Description*. It should be noted that during the development of the Willow Springs I and II projects located adjacent to the south, the project site was previously referred to as "North Willow Springs."

#### **1.1 PROJECT LOCATION**

The Project is located at a currently vacant site (APNs 073-060-031 through 073-060-043), comprised of lots 1 through 13 of Tract No. 13646 in the City of Goleta, County of Santa Barbara, California, as shown in Figure 1. The project site is northeast of Calle Koral, north of Camino Vista, and east of S. Los Carneros Road. The project site is bounded on the north by the Southern Pacific Railroad. The U.S. Highway 101 southbound on-ramp from S. Los Carneros Road is immediately north of the railroad, approximately 300 feet north of the project site boundary. The project site is bounded by S. Los Carneros Road to the west; industrial business to the east; and Camino Vista and residential uses (Willow Springs I & II) to the south. The project is located at latitude 34.435834 and longitude -119.851159 (NAD83), and is depicted on the



Goleta, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle, within Township 4 North and Range 28 West.

## **1.2 SITE BACKGROUND**

Historically, the project site and vicinity were in agricultural production. Before 1928, the project area was used for agriculture and grazing. An archaeologically sensitive site has been documented directly south of the project site. This prehistoric archaeological site was originally recorded by David Banks Rogers (1929). Based on the excavation of 46 trenches, Rogers characterized the very dense archaeological deposits associated with a village site resulted in a determination that the on-site archaeological deposits were eligible for listing on the National Register of Historic Places. The boundary of the archaeological area, generally in the center of the project site, and a 50-foot buffer have been fenced to ensure that no disturbance to the resource occurred during placement of stockpile soils outside of this area.

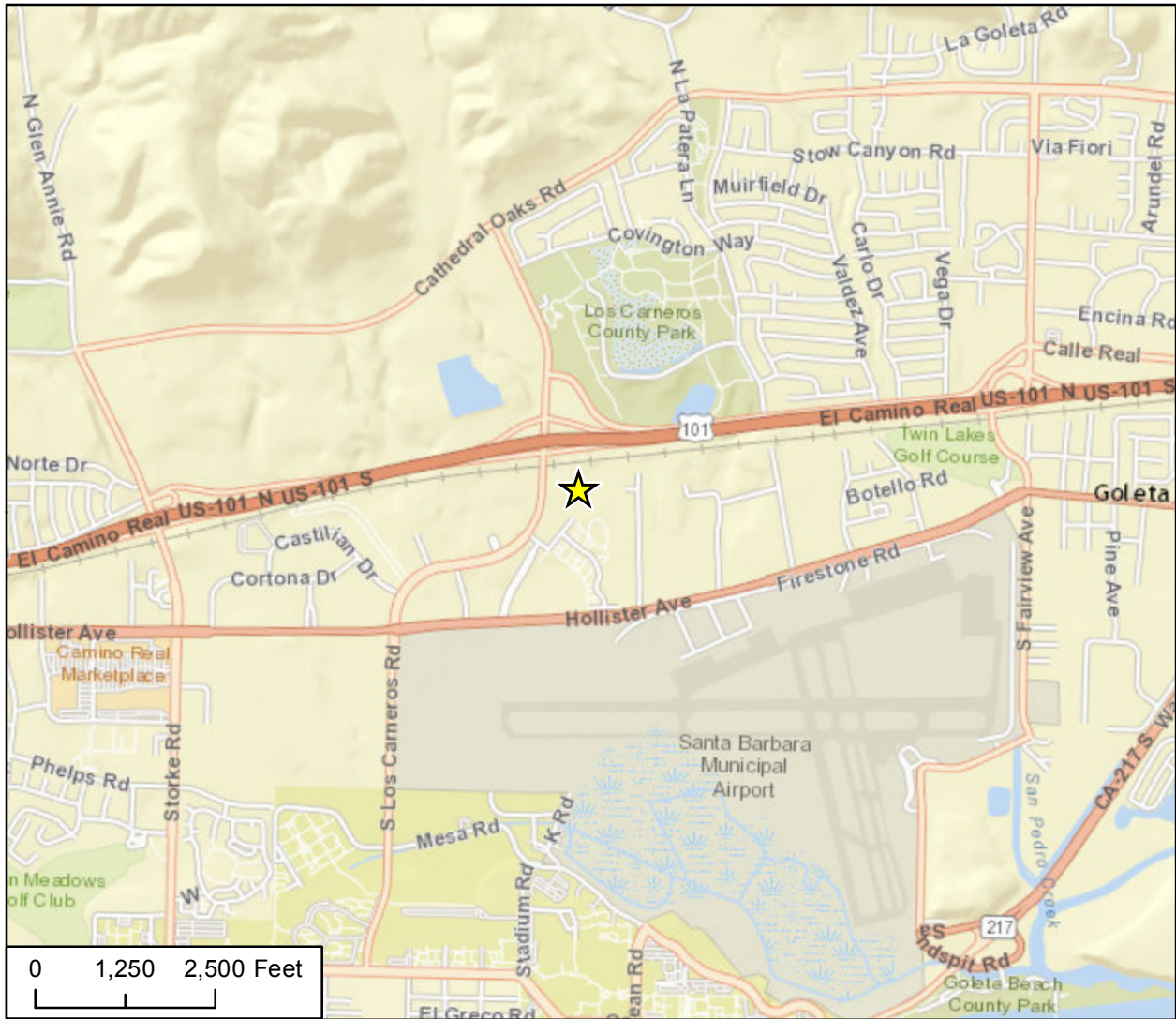
In 1986, a mass grading plan for the entire site was submitted, approved, and initiated (Mac Design Associates, 1997). Initial grading on-site consisted of clearing and grubbing of orchard trees and root structures. Surface material was scraped and placed in windrows. Investigations of prehistoric cultural resources were undertaken and grading resumed outside of fenced sensitive archaeological areas (Mac Design Associates, 1997). The Project site was used as a staging area for fill during the Los Carneros Road/Highway 101 interchange construction (Mac Design Associates, 1997). Ongoing activity associated with two stockpile permits first issued in 2002 avoided the fenced archaeological area and 50-foot buffer.

Today, the Project site consists of 13 undeveloped lots located between developed commercial and industrial development to the east and undeveloped vacant land to the west. There is no structural development; however, there are pieces of construction equipment and containers stored on site.

The Project site is relatively flat to gently sloping with the exception of the moderately steep slopes that define the boundary of the stockpile soils along the perimeter of the archaeological area and the eastern, western, northern, and southwestern property lines. Topography within the archaeological area is characterized by a modest ridge that trends generally northwest to southeast between 25 and 36 feet above mean sea level (AMSL). Low-lying level soils drain generally to the south. Soil stockpiling has resulted in elevating surrounding topography to over 43 feet AMSL. As a result, the central portion of the site has the highest elevations on the property and forms a ridge that divides the site drainage, with approximately half of the site draining in a westerly direction and half of the site draining in an easterly direction from the higher, center portion of the site. Ultimately, all runoff from the site drains through existing storm drains and into a 7.25-acre treatment wetland located on the Willow Springs property to the south. Runoff entering the treatment wetland drains across 500 feet (storm drain "A") and 950 feet (storm drain "C") of wetland vegetation before leaving the Willow Springs property at Hollister Avenue.

Pursuant to CEQA Guidelines § 15150, this report incorporates by reference the Willow Springs II EIR (City of Goleta, 2012; State Clearinghouse No. 2010031059).





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★ Project Location



Regional Location

Figure 1

## 2.0 METHODOLOGY

### 2.1 REGULATORY OVERVIEW

Regulated or sensitive resources studied and analyzed herein include special status plant and wildlife species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees.

#### 2.1.1 Environmental Statutes

Biological resources are generally regulated by the following statutes:

- California Environmental Quality Act (CEQA)
- Federal Endangered Species Act (ESA)
- California Endangered Species Act (CESA)
- Federal Clean Water Act (CWA)
- California Fish and Game Code (CFGC)
- Migratory Bird Treaty Act (MBTA)
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- City of Goleta General Plan/Coastal Land Use Plan (updated November, 2009) (General Plan)

#### 2.1.2 Guidelines for Determining CEQA Significance

Determination of impacts is done on a project-by-project basis. Because of the complexity of biological resource issues, substantial variation can occur between projects. Impact assessment must account for both short-term and long-term impacts. Impacts are classified as significant or less than significant, depending on the size, type, and timing of the impact and the biological resources involved. Disturbance to habitats and/or species are considered significant if they substantially affect significant biological resources using the CEQA Checklist and City thresholds discussed below.

**CEQA Checklist.** The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist are used to evaluate potential environmental effects. Refer to Section 4.3 of the EIR for an analysis of Project impacts to biological resources. Based on these criteria, the Project would have a significant effect on biological resources if it would:

*a) Have substantial adverse effects, 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, and regulations or by the California Department of Fish and Wildlife or US 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.*

**City of Goleta Environmental Thresholds Manual.** The City's adopted Environmental Thresholds and Guidelines Manual provides environmental thresholds specific to biological resources. This manual primarily uses Appendix G of the State CEQA Guidelines for its criteria.<sup>1</sup>

- a) substantially reduces or eliminates species diversity or abundance;*
- b) substantially reduces or eliminates quantity or quality of nesting areas;*
- c) substantially limits reproductive capacity through loss of individuals or habitat;*
- d) substantially fragments, eliminates, or otherwise disrupts foraging areas and/or access to food sources;*
- e) substantially limits or fragments the geographic range or dispersal routes of species; or*
- f) substantially interferes with natural processes, such as fire or flooding, upon which the habitat depends.*

Impacts to biological resources may be considered less than significant where there is little or no importance to a given habitat and where disturbance would not create a significant impact. For example, disturbance to cultivated agricultural fields, or small acreages of nonnative, ruderal habitat, would be considered less than significant.

## **2.2 LITERATURE REVIEW**

Rincon staff reviewed literature for baseline information on biological resources potentially occurring at the Project site and in the surrounding area. The literature review included information available in peer reviewed journals, standard reference materials (e.g., Bowers et al. 2004; Burt and Grossenheider, 1980; Holland, 1986; Baldwin et al. 2012, Sawyer et al. 2009; Stebbins, 2003; Oberhauser, 2004; American Ornithologists Union, 2014; United States Army Corps of Engineers, 2008 and 2014). Site-specific reports were reviewed, including the *Technical Review of Coastal Sage Scrub (CSS) Environmentally Sensitive Habitat Area (ESHA) for the North Willow Springs Project* (Dudek, 2014a), *Wildlife Corridor Analysis for the Heritage Ridge Project* (Dudek, 2014b), and the *Preliminary Landscape Plan, Heritage Ridge* (True Nature, 2014). Rincon also conducted a review of relevant databases of sensitive resource occurrences from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Data Base

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<sup>1</sup> The City's CEQA thresholds reference the Appendix G thresholds published in 1992, when the City's Threshold were adopted by the County Board of Supervisors. This BRA includes the Appendix G thresholds published in 2014.



(CNDDDB) (CDFW, 2015a) and Biogeographic Information and Observation System (CDFW, 2015b); the U.S. Fish and Wildlife Service (USFWS) Critical Habitat Portal (USFWS, 2015a), National Wetlands Inventory Wetlands Mapper (USFWS, 2015b), and Information, Planning and Conservation System (USFWS, 2015a); the United States Department of Agriculture, Natural Resource Conservation Service Web Soil Survey (United States Department of Agricultural, Natural Resources Conservation Service, 2015); and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS, 2015). The General Plan, and City of Goleta CEQA Guidelines (2014) were also reviewed. Other sources of information about the site included aerial photographs, topographic maps, geologic maps, climatic data, and project plans. The Rare Plants of Santa Barbara County list was also reviewed (Central Coast Center for Plant Conservation, 2005). Previous biological studies for projects occurring in the region, including the *Hollister/Kellogg Park and the Armitos to Hollister Avenue Creek Path Biological Resource Assessment* (Rincon, 2013), *Cavaletto Tree Farm Housing Project Final Environmental Impact Report* (County of Santa Barbara, 2011), *Willow Springs II Final Environmental Impact Report* (City of Goleta, 2012), *Village at Los Carneros Project Final Environmental Impact Report* (City of Goleta, 2014a), *Cortona Apartments Final Environmental Impact Report* (City of Goleta, 2014b), the *Biological Resources Report for the Ekwil Street and Fowler Road Extension Project* (URS, 2014), and the *Goleta Slough Mouth Management Biological Technical Report* (Rincon, 2015) were reviewed for pertinent information of special status biological resources occurring in the region.

## **2.3 FIELD RECONNAISSANCE SURVEY**

Rincon biologists conducted a vascular plant survey; wildlife observations; vegetation mapping; and a search for rare, threatened, and endangered species, sensitive natural communities, and potential jurisdictional resources on three separate occasions from March through June 2015. Surveys were conducted on foot and covered the Project site and a 100-foot buffer surrounding the Project site. Wildlife species were identified by direct observation, vocalization, or by sign (e.g. tracks, scat, burrows).

Dudek biologists visited the site on January 22, 2014 and conducted an ESHA analysis of the Project site and vicinity. Dudek biologists also visited the site on five separate occasions in January and February 2013; and on four occasions from February through April 2014 to assess of the condition and quality confirm existing biological conditions; search for wildlife species, sign and tracks, and travel routes; and perform nocturnal spotlighting surveys. The site was also surveyed by Envicom in 2010 and Dudek 2008 as part of the Willow Springs II permitting process (City of Goleta, 2011).

An inventory of native plant and animal species observed during the site visit was compiled, and an evaluation of potential jurisdictional features was performed. Where applicable, native vegetation communities were classified according to Sawyer et al. (2009), and cross-referenced with Holland (1986).

## **3.0 EXISTING CONDITIONS**

This section provides a brief discussion of the existing conditions observed on-site and in the Project vicinity. For further details refer to Section 3.0 of the EIR, *Environmental Impact Analysis*. Site photographs are located in Appendix C and a compendium of and animal species and native plant observed is located in Appendix D.



### **3.1 PHYSICAL CHARACTERISTICS**

Within Goleta, much of the coastal plain between the Santa Ynez Mountains and Pacific Ocean is developed or has been historically disturbed by agriculture or ranching uses. Native vegetation within Goleta is fragmented, but includes riparian and upland woodlands, coastal scrub, native and non-native grasslands, wetlands and vernal pools. Relatively undisturbed habitats are present along narrow riparian corridors, in scattered undeveloped lands of varying sizes, and in protected open space areas.

The site is within the Santa Ynez – Sulphur Mountains subsection of the Southern California Coast of the U.S. Department of Agriculture Forest Service ecoregion system (USDA Forest Service 2014). This ecological subunit extends from the Santa Ynez River mouth in northern Santa Barbara County, south and east into the Sulphur Mountains just west of the Ventura River in northern Ventura County (USDA Forest Service 2014). This ecological unit is generally defined by its mountainous topography inland, with coastal plains at the immediate coast. Locally, the Santa Ynez Mountains to the north of the site form relatively steep hillsides vegetated by native chaparral and drained by incised streams along which grow bands of riparian shrubs and woodlands. The Project site is located within the South Coast region of Santa Barbara County on a coastal plain, along the south edge of the western Transverse Range Mountains. The site is within the South Coast subregion of the Jepson ecoregion system, which extends from Point Conception to the west southward to Mexico, along the immediate coast in Santa Barbara County, but also extending inland to the San Gabriel and San Bernardino mountains farther east and south (Baldwin et al. 2012). The Pacific Ocean is approximately 1.5 miles to the south and the Santa Ynez Mountains begin approximately 1.2 miles to the north.

The ocean is directly adjacent to the Santa Ynez Mountains (with elevations surpassing 4,000 feet), which forces air masses upward. When moist air is pushed up by the mountains, the orographic effect causes increased precipitation along the South Coastal plain. Annual precipitation in Goleta is typically about 16.3 inches, with the majority of rainfall received between November and April in typical years (Western Region Climate Center 2015). Mean annual temperatures range from 48 to 69 degrees Fahrenheit (°F). Summer daytime temperatures are often modified by morning fog and sea breezes. The growing season lasts 340 to 360 days per year (USDA NRCS, 2015).

#### **3.1.1 Watershed and Drainages**

The Project is within the 47.4-square mile Goleta Slough Watershed, which is fed by five major streams: Atascadero, San Pedro, and San Jose Creeks (meet “upstream” and north of the slough mouth) and Los Carneros and Tecolotito Creeks (meet further downstream west of the slough). Not all the tributary creeks are equally important to the functioning of the slough. Atascadero (Maria Ygnacio is part of the Atascadero system), San Jose and San Pedro enter the slough on its extreme eastern edge, within a few hundred meters of the mouth, and have little influence on slough conditions during most of the year. In contrast, Tecolotito and Los Carneros, although smaller streams, enter on the northwest corner and waters, along with tidal inflows, that determine water quality for much of the wetland (Leydecker, 2006).

Lake Los Carneros is a historic man-made duck pond built in 1936, located north of U.S. Highway 101, approximately 1,300 feet north of the project site. The lake is part of a 136-acre County park.



The Goleta Slough begins 1,200 feet south of the Project between Hollister Avenue and the Pacific Ocean. The Goleta Slough is a large expanse of open water and estuarine/wetland habitats that supports a rich and diverse coastal ecosystem of biological and cultural importance, and provides important ecosystem services such as floodwater storage capacity and the filtering of pollutants contained within stormwater runoff. The Goleta Slough is the northernmost example of a large southern California estuary and represents the northern limit of distribution for several plant and animal species. The Slough contains breeding populations of listed species such as the State listed as endangered Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) and the federally listed as endangered tidewater goby (*Eucyclogobius newberryi*) as well as other species of federal, state, and local concern.

Intermittent Los Carneros Creek flows approximately 90 feet to the north of the Project parallel to the U.S. Highway 101, and then into an open, concrete-lined channel 450 feet to the east of the Project (beyond Aero Camino). It then flows from Lake Los Carneros Park, to a culvert under U. S. Highway 101, and is diverted in a concrete channel for 0.41 mile until it confluences with Tecolotito Creek and flows into the Goleta Slough, from whence its waters flow to the Pacific Ocean. The San Pedro Creek watershed (HUC 180600130202) includes San Pedro, San Jose, Los Carneros, and Tecolotito Creeks and their tributaries, and drains approximately 27.6 square miles. Tecolotito and Los Carneros Creeks had channel realignment projects implemented in 2006 as part of the airport expansion (County of Santa Barbara 2010). Compared with Tecolotito Creek, Los Carneros Creek is less developed and has fewer commercial or residential areas within its watershed (Leydecker, 2006).

The seven acre Los Carneros Wetland is located to the south between the Willow Springs I development and Hollister Avenue, beginning approximately 80 feet from the southern corner of the Project. Between Willow Springs I and II is an oval-shaped private open space preserve area, which is landscaped with a combination of ornamental and native species.

### **3.1.2 Soils**

The Project site has undergone disturbance and import of fill, as discussed under Section 1.2, *Project Background*. Soils in the Project site are mapped as Goleta fine sandy loam, 0% to 2% slopes, Milpitas-Positas fine sandy loam, 2% to 9% slopes, and Xerorthents cut and fill areas (NRCS, 2015).

## **3.2 VEGETATION**

Where applicable, classification on natural communities (Alliances and Associations) is based on the Manual of California Vegetation (Sawyer et. al., 2009). Numbers in brackets following natural communities correspond with the codes in the Manual of California Vegetation. This classification system is used by CNPS and CDFW to map, classify and establish the significance and rarity of vegetation types in California. Alliances and associations are defined by plant species composition and abundance, as well as the underlying abiotic characteristics of the stand (e.g., slope, aspect or soil type).

The following communities are present on site, as shown in Figure 2.

### ***Baccharis pilularis* (Coyote brush scrub) Alliance [32.060.00]**

The Manual of California Vegetation (2009) describes this community as occurring in river mouths, stream sides, terraces, stabilized dunes of coastal bars, spits along the coastline, coastal bluffs, open slopes, and ridges, although the species is upland. Elevations range from sea level to approximately





4,900 feet AMSL. Stands in southern California tend to be largely seral to other scrub and woodland types. *B. pilularis* mixes with shrubs with southern affinities (*Artemisia californica*, *Encelia californica*, *Eriogonum fasciculatum*, *Salvia leucophylla*, *S. mellifera*). On the south coast, *Baccharis pilularis* alliance appears as more disturbance related.

Coyote brush scrub at the site is a relatively open stand dominated by coyote brush with an understory of non-native grasses and forbs. The shrub layer consists almost exclusively of coyote brush, and biological diversity is low. California sagebrush is present, but at less than one percent of the total shrub cover. There are no other sage species present (i.e., species of the genus *Salvia* or *Artemisia*). Commonly-occurring species in the understory herbaceous layer include sweet fennel (*Foeniculum vulgare*), pampas grass (*Cortaderia jubata*), short-podded mustard (*Hirschfeldia incana*), scarlet pimpernel (*Anagallis arvensis*), Harding grass (*Phalaris aquatica*), filarees (*Erodium* spp.), ripgut brome (*Bromus diandrus*), rattail fescue (*Vulpia myuros*), and soft chess (*Bromus hordeaceus*).

Coyote brush is an early colonizer of disturbed areas. The coyote brush scrub on-site has become established in a slight depression, since this area was last mass graded. Due to the Project site's long history of agricultural use and grading, the coyote brush scrub contains low native species diversity, is infested by invasive species, and has lower overall biological value as compared to coyote brush scrub in a less-disturbed condition. Based on these characteristics, this community is not an example of intact coastal sage scrub that would qualify as ESHA. For further discussion refer to Section 4.3 of the Environmental Impact Report and Appendix D, *Technical Review of Coastal Sage Scrub (CSS) Environmentally Sensitive Habitat Area (ESHA) for the North Willow Springs Project*.

#### ***Atriplex lentiformis* Shrubland (Quailbush Scrub) Alliance [36.370.00]**

The Manual of California Vegetation (2009) describes this community as occurring on gentle to steep southeast- and southwest-facing slopes. Elevations range from sea level to approximately 557 feet asml. The alliance especially occurs in disturbed areas, including roadsides and fluvial areas with alkaline soils. *Atriplex lentiformis* is dominant in the shrub canopy with *Artemisia californica*, *Atriplex canescens*, *Baccharis pilularis*, *Baccharis salicifolia* ssp. *salicifolia*, *Encelia californica*, *Kochia americana*, *Malosma laurina*, *Pluchea sericea*, *Rhus integrifolia*, *Sporobolus airoides*, *Suaeda taxifolia* and *Tamarix* spp. Emergent trees may be present at low cover, including *Myoporum laetum* or *Prosopis glandulosa*.

The community on-site is comprised almost exclusively of common disturbance following native species and non-native invasive species. As is typical with most vegetation maintained in a ruderal condition by frequent disturbance, this vegetation type within Project site does not directly fit into the CDFW plant community classification system. The shrub layer of community on-site is dominated by quailbush, with codominant coyote brush. The understory is dominated by mustard and other non-native annuals. An emergent red willow trees is present in the southeast corner. The on-site community is characterized as ruderal scrub rather than a natural community, but is described as quailbush scrub for the purposes of classification. Quailbush and coyote brush are known initial colonizers after disturbances (i.e., grading), and native plant diversity and structure within the community is low. The Quailbush scrub is established on fill material, presumably since this area of the site was last mass graded. Quailbush scrub is not considered sensitive by CDFW, and is not classified as coastal sage scrub.

#### ***Bromus (diandrus, hordeaceus)-Brachypodium distachyon* Herbaceous Semi-Natural Alliance**

**[42.026.00]** This semi-natural stand is found in all topographic settings in foothills, waste places, rangelands, openings in woodlands. Elevations range from sea level to approximately 7,200 feet asml.



On-site areas mapped as non-native grasses and forbs consist overwhelmingly of introduced nonnative species, with native species poorly represented. Ripgut brome, summer and black mustard, smilo grass (*Stipa miliacea*), soft chess, and foxtail barley (*Hordeum murinum*) are prevalent. Other selected non-native species occurring in notable quantities are long-beaked filaree (*Erodium botrys*), bristly ox-tongue (*Helminthotheca* [ $\leq$  *Picris*] *echioides*), tocalote (*Centaurea melitensis*), and Italian thistle (*Carduus pycnocephalus*). These species may be well distributed or concentrated in certain areas.

Native annual species represent much less than five percent of the vegetative cover. Among these species are Canada horseweed (*Conyza canadensis*), common tarweed (*Deinandra fasciculata*), and western ragweed (*Ambrosia psilostachya*). Emergent native shrubs include California sagebrush and coyote brush. Because they are comprised almost exclusively of non-native invasive species, areas mapped as *Bromus* grassland are not sensitive.

***Brassica nigra* and other mustards (Upland Mustards) Herbaceous Semi-Natural Alliance [42.011.00]**

Typically occurs in fallow fields, grasslands, roadsides, levee slopes, disturbed coastal scrub, riparian areas, waste places. Elevations range from sea level to approximately 4,900 feet asml. *Brassica nigra*, *Brassica rapa*, *Brassica tournefortii*, *Hirschfeldia incana*, *Isatis tinctoria* or *Raphanus sativus* are dominant in the herbaceous layer. Emergent trees and shrubs may be present at low cover.

Under the Willow Springs II EIR, this area was classified as “non-native grasses and forbs” (City of Goleta, 2012). On-site black mustard (*brassica nigra*) is dominant, and many other non-native annual species are also present. This area was required to be hydro-seeded with native seed for erosion control following grading in 2013 as part of Willow Springs II. Seeded species include purple needle grass (*Stipa pulchra*), nodding needle grass (*Stipa cernua*), California brome (*Bromus carinatus*), blue wildrye (*Elymus glaucus*), California brittlebrush (*Encelia californica*), western blue eyed grass (*Sisyrinchium bellum*), small fescue (*Festuca microstachys*), and California poppy (*Eschscholzia californica*). Emergent trees include tree tobacco (*Nicotiana glauca*) and shrubs include castor bean (*Ricinus communis*) and coyote brush.

Per the General Plan CE Policy 5.2 and the City’s CEQA Thresholds, existing native grasslands must be comprised of 10% or more cover of total relative native grasses and that removal of or disturbance to a patch of native grasses less than 0.25 acre that is clearly isolated and not part of a significant native grassland or an integral component of a larger ecosystem is allowed. The purple needle grass observed within the upland mustard area does not constitute sensitive native grassland pursuant to the General Plan and City CEQA Guidelines, since it was required to be planted for erosion control following 2013 grading.

**Disturbed**

Disturbed areas include the Camino Vista roadway constructed in 2013, dirt roads, and areas cleared as part of the recent Los Carneros Bridge improvements. These areas have been recently graded or are subject to routine disturbance, leaving them barren or sparsely vegetated. Plant species consist overwhelmingly of non-native species, as well as occasional native species common to highly disturbed areas.



Imagery provided by Google and its licensors © 2015.

Habitat Map

Figure 2  
 City of Goleta

Off-site natural communities, between the railroad and U.S. Highway 101 to the north of the site, include Eucalyptus groves (*Eucalyptus (globulus, camaldulensis)* Semi-Natural Woodland Stands [79.100.00]) and Arroyo willow thickets (*Salix lasiolepis* Alliance [61.205.00]).<sup>2</sup>

### **3.3 GENERAL WILDLIFE**

Vertebrate wildlife species observed during the Rincon and Dudek biological surveys included one lizard, 16 species of birds, and seven species of mammals. Many of these species are typical of undeveloped weedy lots within urban areas or patches of native habitat within urban areas or at the urban-wildland interface. A list of these species is provided in Appendix B. This list represents a sample of the non-sensitive wildlife species that can be expected to utilize habitats at the site for cover, foraging, and reproduction. Furthermore, in general, this list includes species that are relatively common and more easily detected during daytime surveys. Several smaller species (e.g. some reptiles, birds, and rodents) undoubtedly reproduce within the Project site, and some larger or more mobile species utilize the site's resources occasionally or on an infrequent basis, such as foraging raptors, migrating songbirds, and medium to large sized mammals such as coyotes, opossums, raccoons, and skunks.

As described earlier under the Section 3.2, *Vegetation*, the Project site has a long history of disturbance. The type and number of species that are expected at the site reflects disturbed habitat conditions. Habitats supporting wildlife at the site are limited to non-native herbaceous vegetation and coyote brush scrub. The relatively low native plant, plant community and habitat diversity, as well as the small size of the patch of coyote brush scrub, limits available niche space and the type of wildlife species and number of individuals the site can support. Also, the Project's proximity to urban areas and roads and associated night lighting, human activity and higher noise levels compared to more pristine native habitats is expected to dissuade many species from utilizing the area. Species using the site are those adapted to urban areas or at least somewhat tolerant of human activities.

The Goleta area is highly developed and the extent of native habitats been reduced considerably, historically through agriculture and through urban and suburban development since the 1940s. Consequently, habitat to support wildlife populations in the Goleta area is limited. The disturbed coyote brush scrub and the non-native vegetation at the Project site and vicinity provide habitat value, albeit low, for a variety of wildlife species. The area supports rodent fauna, and several rodent burrows were observed at the site. This prey base is expected to attract mammalian and avian predators, including potentially several species of raptors. The Project site may be a foraging resource for bats as well. Some migratory songbirds are expected to forage occasionally within the disturbed coyote brush scrub, especially because of the site's proximity to the Goleta Slough, the Los Carneros Wetland, and Lake Los Carneros Open Space. The proximity of the Project to these important wetlands/open spaces increases the potential for wildlife to use the Project site and vicinity.

While the Project site itself lacks a stream or other water body, Los Carneros Creek is approximately 90 feet to the north and provides an intermittent source of water for wildlife, as well as a potential movement corridor to larger areas of core habitat to the north. The site is also connected to the Goleta Slough via Los Carneros Creek, or via disturbed habitats, the Los Carneros Wetland, and a culvert beneath Hollister Avenue.

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<sup>2</sup> Also considered Southern Arroyo Willow Riparian Forest [CTT61320CA] under Holland, which is considered sensitive by CDFW.



The Project site contains habitat that can support nesting birds, including raptors, protected under the California Fish and Game (CDFG) Code Section 3503 and the Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§ 703–712). Native trees, ornamental trees, woody palms, and woody shrubs are present within and adjacent to the Project that could provide suitable nesting habitat. However, no active or previously occupied nests were observed in the vegetation during the 2015 (or previous) surveys.

## 4.0 SENSITIVE BIOLOGICAL RESOURCES

Local, state, and federal agencies regulate special status species and require an assessment of their presence or potential presence to be conducted on-site prior to the approval of any proposed development on a property. For the purposes of this analysis, the term “sensitive” is used to denote those species that meet the criteria of CEQA Guidelines Section 15380 as an Endangered, Rare or Threatened Species, whether or not officially listed, as provided in Section 15380(d).

This section discusses sensitive biological resources observed on the Project site, and evaluates the potential for the Project site to support other sensitive biological resources.

### 4.1 SPECIAL STATUS SPECIES

Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDDB, species occurrence records from other sites in the vicinity of the survey area, and previous reports for the Project. Refer to Figure D.1 in Appendix D for map of CNDDDB records and critical habitat in the Project vicinity (within 5 miles). The potential for each special status species to occur in the survey area was evaluated according to the following criteria:

- **None.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Low.** Suitable or marginal habitat may occur in the Project site; however: no CNDDDB records of the species have been recorded within twenty five years; records of the species within 5 miles of the Project are suspected to be now extirpated or potentially misidentified with other species; or individuals were not observed during field surveys and are not anticipated to be present. For bird and bat species, this category may be used for species that are documented, but likely to be only transient through the area during foraging or migratory movements, and for which no suitable nesting or roosting habitat is present.
- **Moderate.** CNDDDB or other documented occurrences have been recorded within 5 miles of the Project site (project vicinity) and suitable habitat is present (suitable nesting or roosting habitat or high quality foraging areas for bird and bat species). Individuals were not observed during field surveys; however, the species could be present or otherwise impacted by the Project.
- **High.** CNDDDB or other documented occurrences have been recorded within 1 mile of the Project site and suitable habitat is present (suitable nesting or roosting habitat for bird and bat species). Individuals were not observed during field surveys; however, the species could be present or otherwise impacted by the project.
- **Present.** The species was observed in the Project site during field surveys, or documented from the site during recent previous surveys.





#### 4.1.1 Special Status Plant Species

For the purposes of this report, special status plant species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the United States Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (FESA) (7 U.S.C. § 136, 16 U.S.C. § 1531 *et seq.*); those listed or proposed for listing, or candidates for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); and/or species on the *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW, 2015c). This latter document includes the *California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California, Seventh Edition* (CNPS, 2015) as updated online. Those plants contained on the CNPS Rare Plant Rank (CRPR) Lists 1, 2, 3, and 4 are considered special-status species in this BRA, per the CNPS code definitions:

- *List 1A = Plants presumed extinct in California;*
- *List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);*
- *List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);*
- *List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);*
- *List 2 = Rare, threatened or endangered in California, but more common elsewhere;*
- *List 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA);*
- *List 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80% occurrences threatened); and*
- *List 4.4 = Plants of limited distribution (watch list), not very endangered in California (<20% occurrences threatened or no current threats known).*

CEQA Guidelines, Section 15125(a), also directs that special emphasis should be placed on resources that are rare or unique to the region. For example, plants listed by the Santa Barbara Botanic Garden (SBBG) or the Goleta Slough Ecosystem Management Plan (GSEMP) may be considered locally sensitive.

Based on the database and literature review, 17 special status plant species are known or have the potential to occur within a 5-mile vicinity of the Project (Appendix D). Of these, seven special status plant species have a low potential to occur based on the presence of potentially suitable habitat and recorded occurrences:

- Coulter's saltbush (*Atriplex coulteri*) – CRPR 1B.2
- Davidson's saltscale (*Atriplex serenana* var.  *davidsonii*) – CRPR 1B.2
- Mesa horkelia (*Horkelia cuneata* var. *puberula*) – CRPR 1B.1
- Pale-yellow layia (*Layia heterotricha*) – CRPR 1B.1
- Black-flowered figwort (*Scrophularia atrata*) – CRPR 1B.2
- Southern tarplant (*Centromadia parryi* ssp. *australis*) – CRPR 1B.1
- Contra Costa goldfields (*Lasthenia conjugens*) – federally endangered and CRPR 1B.1
- Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*) – CRPR 1B.2



No special status plant species were observed during the spring 2015 surveys, or previous surveys in 2014, 2013, 2010, or 2008. Based on the long history of agricultural use and soil disturbance at the Project site, and because the Project site was mass graded on at least two occasions since 1986, the potential for occurrence of special status plant species is considered to be very low. Furthermore, competition from invasive species further reduces the potential for occurrence of listed species. Therefore, no special status plant species are expected to be impacted by the project and no further analysis of special status plants is required.

#### **4.1.2 Special Status Wildlife Species**

Special status wildlife species are animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS or National Marine Fisheries Service under the FESA; those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California CESA; animals designated as “Fully Protected,” “Species of Special Concern,” or “Rare,” by the CDFW; and species on the *Special Animals List* (CDFW, 2015d). CEQA Guidelines, Section 15125(a), also directs that special emphasis should be placed on resources that are rare or unique to the region.

Based on the database and literature review, 47 special status wildlife species are known or have the potential to occur within the vicinity, known occurrences within 5 miles of the Project were considered in this analysis (Appendix D). Of these, 26 species have a low potential to occur, based on the criteria above. While species such as white-tailed kite and Coopers hawk have been recorded foraging on the site, they have a low potential to occur based on the category above. For bird and bat species, the low category may be used for species that are documented but likely to be only transient through the area during foraging or migratory movements, and for which no suitable nesting or roosting habitat is present. The species that can be reasonably anticipated to occur were determined based on the reported ranges of the species, and the type, extent, and condition of habitat available at the site.

The use of the site by sensitive vertebrate wildlife species is limited to foraging by some species of birds and mammals listed as Fully Protected (FP), Species of Special Concern (SSC), Watch List (WL), or other Special Animals (SA) by the State of California. No species listed as threatened or endangered under the ESA or the CESA are expected to have the potential to occur at the site; for details refer to Appendix D, *Special Status Species Evaluation Tables*. No sensitive species are expected to reproduce at the site.

Special-status species present or with a low potential to occur within or adjacent to the Project but could be potentially affected, are discussed below, and, if applicable evaluated under Section 4.3 of the EIR.

Low:

- Monarch butterfly (*Danaus plexippus*) – SA, foraging
- Silvery legless lizard (*Anniella pulchra pulchra*) – SSC
- Coast horned lizard (*Phrynosoma blainvillii*) – SSC
- Two-striped garter snake (*Thamnophis hammondi*) – SSC, foraging
- Cooper’s hawk (*Accipiter cooperi*) – WL, foraging
- Grasshopper Sparrow (*Ammodramus savannarum*) – SSC, foraging
- sharp-shinned hawk (*Accipiter striatus*) – WL, foraging
- Short-eared owl (*Asio flammeus*) –SSC, foraging
- Long-eared owl (*Asio otus*) – SSC, foraging



- Oak titmouse (*Baeolophus inornatus*) – SA, foraging
- Burrowing owl (*Athene cunicularia*) – SSC, overwintering and foraging
- Vaux's swift (*Chaetura vauxi*) – SSC, foraging
- Northern harrier (*Circus cyaneus*) – SSC, foraging
- Black swift (*Cypseloides niger*) – SSC, foraging
- White-tailed kite (*Elanus leucurus*) – CFP, foraging
- Merlin (*Falco columbarius*) – WL, foraging
- Loggerhead shrike (*Lanius ludovicianus*) – SSC, foraging
- Yellow warbler (*Setophaga petechia*) – SSC, foraging
- Hoary bat (*Lasiurus cinereus*) – SA, foraging
- Pallid bat (*Antrozous pallidus*) – SSC, foraging
- Silver-haired bat (*Lasionycteris noctivagans*) – SA, foraging
- Western mastiff bat (*Eumops perotis californicus*) – SSC, foraging
- Western red bat (*Lasiurus blossevillii*) – SSC, foraging
- Townsend's big-eared bat (*Corynorhinus townsendii*) – SSC, foraging
- Yuma myotis (*Myotis yumanensis*) – SA, foraging
- American badger (*Taxidea taxus*) – SSC, foraging

### **Sensitive Terrestrial and Species**

No special status wildlife species have the potential to occur based on the absence of suitable habitat and ongoing disturbance (Appendix D). In the unlikely event a special status terrestrial species was present on-site, it would be capable of escaping harm during vegetation removal and grading/construction activities. Impacts to individuals would not have an impacts to population in the area, given the fragmented nature of the Project site and presence of suitable habitat at north of U.S. Highway 101. Therefore, no special status terrestrial species are expected to be significantly impacted by the project and no further analysis of special status terrestrial species is required.

### **Nesting Bird Habitat**

The Project site contains habitat that can support nesting birds, including raptors, protected under the California Fish and Game (CFG) Code Section 3503 and the Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§ 703–712). Woody shrubs, eucalyptus and willow woodlands, and ornamental trees are present within and adjacent to the Project that could provide suitable nesting habitat. However, no active or previously occupied nests were observed in the vegetation during the 2015 or previous surveys.

Many other sensitive bird species potentially use the Project site for foraging (see Appendix D), but are not expected to nest thereon. The yellow-breasted chat and the yellow warbler may temporarily forage in the disturbed coyote brush scrub during migration, as each is known to utilize scrub habitats and is known to occur within the Goleta Slough Ecosystem and nearby Tecolotito Creek. The northern harrier is a fairly common visitant to the Goleta Slough and has been observed roosting at the Los Carneros Wetland, which is a few hundred feet to the south of the Project. This species as well as migrants such as the Vaux's swift and black swift may potentially forage over the Project site when present in the area. The burrowing owl and loggerhead shrike are also known from the Goleta Slough and have been observed in the vicinity of the Project to the west of Los Carneros Road.

### **Bat Habitat**

As many as five species of bats and three other species of mammals listed as SSC may occur at the Project site. The bat species would only be expected to aerially forage occasionally over the site, and





would not be expected to roost, hibernate, or reproduce on the site. The badger could potentially reach the Project site from natural areas to the north by way of the Los Carneros Creek riparian corridor; although, given the disturbed condition of the Project site and vicinity, as well as its small size, any occurrence of badgers would likely be transient.

### **Raptor Habitat**

The City and surrounding area are inhabited by several species of migratory and resident raptors. Sensitive sensitive raptors species are known to occur or have potential to occur at the project site, including the white-tailed kite, burrowing owl, northern harrier, Cooper's hawk, sharp-shinned hawk, and short-eared owl, and merlin may forage on or near the Project site.

*White-tailed kite.* The white-tailed kite is a regular breeder and year-round resident in the Goleta area. Numbers declined in the area beginning in the 1970s through the early 1990s, but subsequently rebounded, based on annual Santa Barbara Audubon Society Christmas Bird Count data and annual monitoring of kite populations by local biologists (National Audubon Society 2015; Holmgren 2011). Although roost sites may shift suddenly within and between seasons, nearly all roosts on the South Coast since 1965 have been on or within one mile of More Mesa (Lehman, 2015). At the Goleta Slough, white-tailed kites forage regularly and have been recorded roosting in small numbers. Kites have been observed foraging over the Project site. The white-tailed kite inhabits low elevation, open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands (Dunk, 1995). They nest in trees, usually with a dense canopy, but nest trees can vary from single, isolated trees to trees within large woodlands. Along the South Coast, preferred nest trees include (in order of frequency used): oaks, pines, Monterey cypress, eucalyptus, and willows (Holmgren, 2000). In the Goleta area, nest sites are always adjacent to open space areas with a stable prey base, and kites show long-term fidelity to sites with good foraging opportunities (Holmgren, 2000). A variety of foraging habitat types are used, but those that support larger and more accessible prey populations are more suitable. Diurnally active rodents, primarily meadow vole (*Microtus californicus*), but also house mouse (*Mus musculus*) and western harvest mouse (*Reithrodontomys megalotis*) are the kite's principal dietary components. White-tailed kite territory size is a function of prey and competitor abundance. Reported average territory sizes include 4 to 53 acres, 47 to 130 acres, and 42 to 297 acres (City of Goleta, 2011). They are also found less commonly over agricultural areas and along highway rights-of-way (Lehman, 2015).

*Burrowing owl.* The burrowing owl formerly bred along the South Coast and in western Santa Barbara County, but its presence along the South Coast and western portions of Santa Barbara County is now restricted to late fall and winter transients from more interior portions of California (Lehman, 2015). Favored overwintering sites over the past two decades have been More Mesa and San Marcos Foothills (Lehman, 2015). Burrowing owls frequent extensive dry or sparse grassland and agricultural areas. The burrowing owl nests in burrows typically dug by fossorial mammals such as badgers and ground squirrels. Man-made structures, such as cement culverts and debris piles, may also be used. Recent sightings of wintering burrowing owls along the South Coast include Atascadero Creek near More Mesa in 2008, rocky grassland northeast of Foothill Road and Highway 154, the University of California Santa Barbara (UCSB) West Campus in 1998 and other University lands north of the Coal Oil Point Reserve in 2001. The latter record was of a single individual observed within a burrow in heavily disturbed area in the southern portion of the University-owned South Parcel, several hundred feet northwest of Devereux Slough in winter, 2001. A burrowing owl may have been observed on November 7, 2006 by Goleta staff along the railroad berm to the north of the Village at Los Carneros development site west of Los Carneros Road (City of Goleta, 2014a). Given the lack of recent records in the project vicinity, fragmented ruderal habitat subject to ongoing disturbance, and the adjacency on-site ruderal



habitat to U.S. Highway 101 and the Union Pacific Railroad (UPRR) tracks, the burrowing owl has low potential to overwinter on at or adjacent to the Project site.

As discussed above, the low potential to occur determination is applied to species that are documented, but likely to be only transient through the area during foraging or migratory movements. Several other raptors that do not meet the aforementioned definition as “sensitive” (but are protected when nesting pursuant to CFGC § 3503.5) were observed or have the potential to forage at the site, including the American kestrel (*Falco sparverius*), barn owl (*Tyto alba*), great horned owl (*Bubo virginianus*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), and turkey vulture (*Cathartes aura*). The following discussion of raptor habitat focuses considerably on the sensitive white-tailed kite, as the local population of white-tailed kites has been well studied, it is the only FP raptor documented as foraging (only) at the Project site, and it also nests in the Goleta area (outside the Project site).

The General Plan extends protection to raptor nesting and roosting sites, by designating nesting and roosting sites as ESHA. The City requires that new development be set back at least 100 feet from active and historical raptor nests that qualify as ESHA, under CE Policy 8.4 (when feasible). Nesting raptors are also protected by Fish and Game Code Sections 3503 and 3503.5, as well as the Migratory Bird Treaty Act.

Raptor nests were not observed during the biological surveys conducted in 2015, 2014, 2013, 2010, and 2008, and the General Plan does not have a record of a historical raptor nest at or adjacent to the Project, as shown in the General Plan CE Figure 4.1 (Figure 4). Special Status and other sensitive raptors do not have potential to nest at the Project site due to lack of suitable nesting habitat and the proximity of the site to existing development, noise, and human activities, or because the Goleta area is outside of the species current breeding range. The Project site also lacks habitat for communal roosts of turkey vultures or white-tailed kites. The stand of eucalyptus located to the north of the northern stockpile area and the UPRR could be used by nesting raptors, although this is considered unlikely due to the proximity of the trees to Los Carneros Road and U.S. Highway 101 and, therefore, considerable traffic and noise. Additionally, the off-site trees were surveyed for nests in the spring 2015, and raptor nests (active or inactive) were not detected.

White-tailed kites gather in communal roosts during the non-breeding season. Roost aggregations of several to 45 individuals were recorded during regular monitoring of several roost sites in Goleta from November 1986 to May 2000 (Holmgren, 2000). Historically, More Mesa has been the most important communal roosting site in the Santa Barbara area, which is approximately three miles from the Project. Turkey vulture communal roosts at Ellwood North and Ellwood West on Ellwood Mesa are documented in the Ellwood-Devereux Coast Open Space and Habitat Management Plan (March 2004). The northern harrier has also roosted at the Los Carneros Wetland (GSEMP, 1997).

At the Los Carneros Wetland, white-tailed kites nested in 1990 (City of Goleta, 2012), and winter roosts were observed 1985–1990 (Lehman, 2015). However, presence/absence data for nesting kites is lacking for the wetland for most years since 1990. This historical nest site is several hundred feet to the south of the Project and, therefore, well outside of the 100-foot buffer required between new development and historical nest sites of sensitive (special-status) raptors by the General Plan (City of Goleta, 2012).

White-tailed kite nest sites can be vacated for a period of years and returned to later for nesting (Holmgren, 2000). The possibility of kites returning to roost or nest at the Los Carneros Wetland cannot be discounted, although it is less likely now that the wetlands are nearly surrounded by residential



development and roads. In the Goleta area, kite nest sites have always been adjacent to open space areas with a stable prey base (Holmgren, 2000). Historical nest sites in the Goleta area have been abandoned when adjacent foraging areas have been compromised (Holmgren, 2000). Selected important nesting areas for the white-tailed kite in the Goleta area include Ellwood Mesa, Lake Los Carneros County Park, Coal Oil Point Reserve and nearby undeveloped areas, More Mesa, the East Storke Campus Wetland, and the Goleta Slough.

General Plan Policy CE 8.2 requires that all development be located, designed, constructed, and managed to avoid disturbance or adverse impacts to sensitive (special-status) species and their habitats, including nesting, rearing, roosting, *foraging*, and other elements of required habitats. The City's Environmental Thresholds and Guidelines Manual instructs that a project may result in a significant impact if it substantially fragments, eliminates, or otherwise disrupts foraging areas and/or access to food resources.

Project site habitat includes 4.74 acres of *Bromus* grassland, 4.17 acres of quailbush scrub, 3.29 acres of coyote brush scrub, and 4.06 acres of upland mustards that likely provide limited low-quality foraging habitat for raptors. The raptor foraging habitat at the Project site is separated from Bishop Ranch and Lake Los Carneros foraging habitat by U.S. Highway 101 and UPRR train tracks. Two important factors influencing habitat quality for foraging are prey density, as well as habitat features affecting prey accessibility, such as suitable perches (Dunk 1995). A number of prey species including Botta's pocket gophers, California ground squirrels, brush rabbits, various passerines, and western fence lizards, as well as several rodent burrows were observed during the biological surveys of the site in 2010, 2013, 2014, and 2015. Based on previous environmental analysis, the site has prey availability and foraging value (City of Goleta, 2011). The Project site does not contain notable perching habitat for foraging raptors. There are a few medium-sized trees, fences, and tall posts adjacent to the Project site, as well as tall eucalyptus trees to the north, which could serve as perches for foraging raptors. However, these potential perches are generally close to existing development or the traffic and noise of the U.S. Highway 101.

The Project is in local wildlife linkage between natural habitats to the north of U.S. Highway 101, the project site, and Los Carneros Wetland (see Section 4.5, *Wildlife Movement*). These habitat connections are expected to have positive effects on the foraging value of the site, as they allow for dispersal of small mammals and other prey species to repopulate the site following population declines. Prey density is in part dependent upon the ability of prey populations to rebound following cyclical declines caused by over-exploitation by predators or catastrophes, such as drought or disease. Habitat connectivity is an important factor affecting the ability of prey populations to rebound. Corridors and connections among habitat areas indirectly support kites as well as other birds-of-prey by maintaining their prey base.

White-tailed kites are known to forage up to tens of kilometers from communal roost sites, so when prey reductions occur at the local level, kites have a sufficiently large daily range that they can find other areas to hunt (Dunk, 1995). When collapse of prey populations occurs at the regional scale, kites can vacate an area until prey populations rebuild at which time kites gradually reoccupy suitable foraging areas, nest sites, and roost locations (Dunk, 1995). The local population of white-tailed kites has fluctuated dramatically presumably in response to prey abundance. Kites are a nomadic species able to adopt new home bases and vacate long-used areas quite abruptly (Dunk, 1995). The presence and abundance of white-tailed kites is strongly correlated with the presence of meadow voles (Stendell, 1972). California voles (*Microtus californicus*) were not observed, but can be expected to occur at the Project site.



As discussed previously, white-tailed kites formerly nested at the Los Carneros Wetland. If kites were to return to nest at the Los Carneros Wetland, the foraging habitat at the Project site would become of greater importance, as kites seldom forage more than 0.5 mile from the nest when breeding (Hawbecker, 1942). Henry (1983) found the mean breeding home range to be as low as 0.2 mile. The Project is within a 0.2-mile radius of the wetland, and much of the area within a 0.5-mile radius of the wetland is currently developed and would be almost completely developed under the Project. With development of the Project, kites nesting at the Los Carneros Wetland would be able to forage within a 0.5-mile radius of the wetland at the areas within the Goleta Slough Ecosystem south of Hollister Road, and undeveloped fields and native habitats north of U.S. Highway 101.

The Project also within a 0.5-mile radius of the natural habitats at Lake Los Carneros County Park, where nesting kites or kites displaying persistent territoriality have been observed in most years since year 1999 (City of Goleta, 2012). Kites have been recorded nesting have been recorded in the pine trees south of the dam in recent years (Millikan, 2011). Although the Project is within a 0.5-mile radius of this area, the foraging habitats at the County Park and adjacent undeveloped fields to the north of U.S. Highway 101 are probably of sufficient size and quality to support successful kite breeding. The Project is outside of the anticipated foraging range of nesting white-tailed kites at other known key nesting areas in the Goleta area (City of Goleta, 2012).

Although the Project site is estimated to be of moderate value to foraging raptors, it is of lesser regional importance given its small size, fragmented condition, proximity to urban development and road right-of-ways, and low native habitat diversity. The Project site is part of a fragmented area of disturbed habitat that is surrounded by development and roads. The Goleta area contains a number of other natural areas that provide comparatively larger expanses and higher value raptor habitat, as evidenced by the documented use and repeated nesting of various species of raptors in these areas (City of Goleta, 2012). For example, quality raptor habitat exists at Ellwood Mesa, Los Carneros Lake County Park, the Goleta Slough, Coal Oil Point Reserve and vicinity, and the Santa Ynez foothills.

Raptors generally require large home ranges, and individual foraging territories are often measured in terms of tens of acres to square miles. During breeding, demand for prey increases and additional habitat must be available for young birds to disperse from nesting locations and establish new territories. Urban development and other land-use conversion have resulted in the removal of substantial amounts of raptor foraging habitat in the Goleta area. Loss of foraging habitat reduces prey abundance and availability, which reduces and limits the number of raptors a given area can support. In general, smaller populations are less resilient to environmental stress (e.g. drought, disease, and fluctuations in prey availability).

#### **Semi-aquatic Animals and Off-site Aquatic Critical Habitat**

Semi-aquatic species (e.g., California red-legged frog, two-striped garter snake) are not likely to occur in and upstream from the channelized section of Los Carneros Creek adjacent to the Project, because only a limited band of riparian habitat is present that is adjacent to and subject to noise and vibration disturbances from U.S. Highway 101 and UPRR. The upland areas within 100 feet of the creek include the off-site filled and compacted UPRR tracks, and areas on the Project site that have recently been graded and reseeded. Areas within 500 feet of the creek are not suitable upland transitional habitat because of ongoing disturbance.



Off-site Los Carneros Creek provides intermittent aquatic habitat; during the dry season flow is low and consists of agricultural run-off (Leydecker, 2006). The creek is designated critical habitat for the southern steelhead, and south of Hollister Avenue for the tidewater goby (*Eucyclogobius newberryi*). However, neither species is anticipated to be present adjacent to the Project since the riparian area is separated from the Goleta Slough by 0.41 mile of channelization. Refer to Figure D.1 in Appendix D for map of designated critical habitat in the Project vicinity.

No direct impacts would result from construction and operation since no aquatic habitat occurs (or is expected to occur) on-site, Indirect impacts off-site aquatic habitat for downstream aquatic species (e.g., tidewater goby, and steelhead) would be reduced with adherence to existing regulations requiring a Stormwater Pollution Prevention Plan (SWPPP) to address stormwater run-off and sedimentation. Therefore, no special status aquatic or semi-aquatic species are expected to be impacted by the project and no further analysis of special status aquatic or semi-aquatic species is required.

## **4.2 SENSITIVE PLANT COMMUNITIES**

One sensitive plant community that is tracked by the CNDDDB occurs within the Project vicinity: Southern Coastal Salt Marsh. This nearshore marine tidal habitat is not present on-site. During the 2015 surveys no sensitive plant communities were present, nor were any of the individual indicator species associated with the communities observed. As discussed above, the purple needlegrass hydro-seeded within the upland mustard area is not considered a sensitive community, including under the General Plan and City's CEQA Thresholds. ESHA on-site and adjacent to the Project is discussed in Section 4.5, *Resources Protected by Local Policies and Ordinances*, below.

## **4.3 JURISDICTIONAL WATERS AND WETLANDS**

No areas defined as wetlands by Federal, State or local policy are located on the Project site. Two previously identified jurisdictional features exist off-site adjacent to Project: 1) Los Carneros Creek, approximately 90 feet (measured from the edge of riparian vegetation) north of the northeast corner and channelized east of the Project; and 2) the Los Carneros Wetland, approximately 80 feet south of the southeastern corner of the Project site. No jurisdictional features are present within the Project site.

Los Carneros Creek riparian habitat, measured to edge of the willow thickets, extends approximately 100 feet wide beyond the limits of the banks where the creek crosses U.S. Highway 101. The potential off-site jurisdictional edge of riparian vegetation begins approximately 90 feet from the northern Project boundary. During 2015 surveys the ordinary high water mark (OHWM) was not apparent as the creek was obscured by vegetation. The off-site drainage is intermittent and does not regularly contain flowing water (Leydecker, 2006). Los Carneros Creek is channelized approximately 400 feet to the east of the Project, separated by Aero Camino. Water in Los Carneros Creek flows approximately 1.18 river miles south to its confluence with Tecolotito Creek, then approximately 2.24 river miles through the Goleta Slough to the Pacific Ocean.

As authorized by the U.S. Army Corps of Engineers (USACE) 404 Permit (No. 95-50087-DJC) the Los Carneros Wetland is permitted to receive stormwater flows from the Willow Springs I & II development, and the Project. The northern portion of the Los Carneros Wetland was required to be created to both as mitigation for filling a portion of a wetland on Willow Springs I, and to manage stormwater run-off from Willow Springs I & II and the Project.



## 4.4 WILDLIFE MOVEMENT

Wildlife need to access essential habitat for water, foraging, breeding, and cover. Examples of barriers or impediments to movement include housing and other urban development, roads, fencing, unsuitable habitat, or open areas with little vegetative cover. “Wildlife corridor” is a term commonly used to describe linkages between discrete areas of natural habitat that allow movement of wildlife for foraging, dispersal, and seasonal migration.

The Project is in a highly urbanized area. At the regional/landscape level scale, the City is not within any mapped landscape models, such as an Essential Connectivity Area or Natural Landscape block in the *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California* (Spencer, et al. 2010). Recent Environmental Impact Reports (EIRs) analyzed potential impacts to wildlife corridors for proposed residential projects adjacent to Los Carneros Road and south of U.S. 101: Willow Springs II, to the east of Los Carneros Road (City of Goleta, 2011), and the Village at Los Carneros (City of Goleta 2014), to the west of Los Carneros Road. Tecolotito Creek is recognized as ESHA under the General Plan and considered a wildlife corridor for mammal species that travel between the Santa Ynez Mountain foothills and the Santa Barbara Airport and greater Goleta Slough (Dudek, 2014b). Los Carneros Creek that connects areas north of U.S. 101 to the Goleta Slough is a poor wildlife linkage providing minimal wildlife habitat. The “stormwater culvert” consists of an approximate 2,000 foot concrete-lined flood control channel with steep walls and 6-foot high chain-link fences at the top-of-slope (west and east) bordering the channel. The Project site was evaluated as an alternative wildlife movement corridor, from the Los Carneros Creek culvert under U.S. Highway 101, through the Project site and Los Carneros Wetland, below Hollister Avenue, and to the Goleta Slough (City of Goleta, 2011; Figure 4.3-3).<sup>3</sup>

The General Plan does not specifically define “wildlife corridors” or “habitat networks” which as discussed below, are protected under the General Plan. A wildlife movement corridor was defined by the City in the Willow Springs EIR as:

*“...physical connections that allow wildlife to move between patches of suitable habitat in both undisturbed landscapes, as well as environments fragmented by urban development. Large areas of suitable habitat and corridors between these areas are necessary to maintain healthy ecological and evolutionary processes. For example, wildlife movement corridors are necessary for dispersal and migration, to ensure the mixing of genes between populations, and so wildlife can respond and adapt to environmental stress.”*

The *Wildlife Corridor Analysis for the Heritage Ridge Project* (Appendix E) further defines wildlife movement between core areas and/or habitat patches as wildlife corridors and linkages:

*Habitat Linkage: An area which possesses sufficient cover, food, water and/or other essential elements to serve as a movement pathway between two or more large areas of habitat. An example of a linkage would be a belt of coastal sage scrub traversing a development, and connecting suitable habitat areas on either side of the developed area.*

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<sup>3</sup> The wildlife analysis shown in Figure 4.3-3 of the Willow Springs II EIR does not account for the existing cultural resource fencing present in the project site.



*Wildlife Corridor: Areas of open space of sufficient width to permit larger, more mobile species to pass between larger areas of open space (core habitats), or to disperse from one major core habitat to another. Such areas can be several hundred feet wide, unobstructed, and usually possess cover, food and water.*

The Willow Springs II EIR identified two biologically significant ecological habitat “patches” in the area, the Santa Ynez Mountains and the Goleta Slough. The latter, the Goleta Slough, has become isolated from the “core habitats” of the Santa Ynez Mountains due to urban expansion in the City. Several creeks connect these two ecological areas, including Tecolotito (Glen Annie), Los Carneros, San Pedro, Las Vegas, San Jose, and Marie Ignacio. Tecolotito Creek has been determined to be one of four primary corridors in the Goleta Valley with sufficient culvert sizes to allow for movement of larger mammals (i.e., deer and black bears) (Hoagland et al., 2011; City of Goleta, 2012). However, in the Village of Los Carneros FEIR, the City (2014) noted that the largest species to move through the Tecolotito Creek and culverts are foxes (*Vulpes* spp.) and the American badger and found the 110-foot total minimum width (60-feet for the Tecolotito Creek ESHA and 50 feet for adjacent upland habitat) proposed for the Los Carneros Village project was sufficient for wildlife species utilizing corridor (City of Goleta, 2014a). Based on literature, existing regional data, and site-specific studies, Tecolotito Creek and its culverts provide the best option for wildlife movement between the Santa Ynez Mountain foothills and the Goleta Slough on Santa Barbara Airport property.

In 2014 and 2013, wildlife camera studies were conducted, as summarized in the *Wildlife Corridor Analysis for the Heritage Ridge Project* (Appendix E). The study found evidence of a wildlife linkage between the Santa Ynez Mountain foothills and the Los Carneros Wetlands through the Heritage Ridge Project site and no linkage between the Los Carneros Creek or Wetlands and the greater Goleta Slough on the Santa Barbara Airport. This on-site wildlife linkage is important for many small- (raccoon, striped skunk, etc.) and medium- (coyote and bobcat) sized mammal species that use these areas (wetlands and foothills) to hunt, seek shelter, breed, and conduct other normal behaviors important for their survival, especially within the wilderness-urban interface. The study confirmed that the Hollister Avenue culvert at Tecolotito Creek offers the most ideal wildlife access point to the Goleta Slough on Santa Barbara Airport property. Another possible wildlife linkage exists to the east connecting to Las Vegas Creek at the Twin Creeks Golf Course, which also connects to the Goleta Slough, although with impediments. The expected end point of the linkage for most wildlife species traveling to the east may be the golf course for hunting opportunities.

## **4.5 RESOURCES PROTECTED BY LOCAL POLICIES AND ORDINANCES**

Natural resources are regulated and protected through the Conservation Element (CE) of the General Plan, which contains policies aimed at protecting ESHAs that are generally mapped in Figure 4.1 of the General Plan (Figure 4). The General Plan provisions are also included in the City’s Zoning Ordinance through the ESHA Goleta Overlay (Section 35-250B).<sup>4</sup> Policies in the CE reinforce State and Federal regulations that protect special-status habitats and species and apply additional local restrictions to identify, preserve, and protect the City’s biological resources. Below is a summary of each ESHA type mapped on or near the Project (See Figures 3 and 4), and the text of the policies that regulate these resources.

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<sup>4</sup> The City’s Zoning Ordinance also includes a Riparian Corridor Goleta overlay (Section 35-250C), but it only applies to rural agriculturally designated parcels the existing and Project site land use designation is urban.



### **Sage Scrub ESHA**

A portion of the Project site that contains coyote brush scrub is currently designated an ESHA pursuant to the City's General Plan. It is mapped on Figure 4-1 of the Conservation Element as "sage scrub" on the Project site in the approximate areas fenced for cultural resources, as shown in Figure 3. Pursuant to CE Policy 1.5, the ESHA designation may be removed if a site-specific biological study contains substantial evidence that an area previously shown as an ESHA on Figure 4-1 does not contain habitat that meets the definition of an ESHA (excluding illegal removal). If the final decision-making body determines that the area is not an ESHA, a map modification shall be included in the next General Plan/Coastal Land Use Plan amendment. Please refer to Appendix F, *Technical Review of Coastal Sage Scrub (CSS) Environmentally Sensitive Habitat Area (ESHA) for the North Willow Springs Project*, for a site-specific biological study and substantial evidence regarding the ESHA designation. The area originally designated ESHA also extended onto Willow Springs II; refer to Figure 4-1 City's General Plan Conservation Element (Figure 4). A General Plan Amendment removing the sage scrub ESHA designation from Willow Springs II was approved by the Goleta City Council on June 17, 2014.

The Project was not mapped as ESHA under the 1993 Goleta Community Plan (County of Santa Barbara, 1993). The on-site ESHA is mapped as "Various Annual Grasslands" a habitat type under the March 2004 Detailed Habitat Inventory conducted by the City (City of Goleta, 2004). The 2006 General Plan EIR maps the on-site ESHA as "scrub." However, "coyote brush scrub" is not considered ESHA under the Programmatic General Plan EIR (City of Goleta, 2006, Page 3.4-10). A description of the coyote brush scrub is provided under Section 3.2, *Vegetation and Sensitive Plant Communities*.

The General Plan CE Policy 5.3 defines coastal sage scrub habitat as a drought-tolerant, Mediterranean habitat characterized by soft-leaved, shallow-rooted subshrubs such as California sagebrush, coyote brush, California encelia, goldenbush (*Ericameria ericoides*), giant wild rye (*Elymus condensatus*), and annual non-native grasses. Of these species only coyote brush was observed as dominant or codominant within the mapped on-site ESHA. The National Vegetation Classification Hierarchy as Applied to California Vegetation identifies coastal sage scrub as a macrogroup of multiple alliances, none of which includes coyote brush as the dominant alliance species. Under General Plan CE Policy 5.3 coastal sage scrub habitat must have both the compositional and structural characteristics of coastal sage scrub as described in a classification system recognized by the CDFW. However, no other characteristic coastal sage scrub species was observed as occurring even infrequently or sparsely (< 8% cover) by Rincon or Dudek Biologists.

The coyote brush scrub does not meet City's General Plan Policy CE 1.1a or CE 1.1b definitions of ESHA, and is not "rare or especially valuable because of its special nature or role in an ecosystem," when considering of the following conditions:

- Coyote brush scrub is a common plant community. Coyote brush scrub receives the lowest rarity ranking (G5S5) and is not considered sensitive by the State of California (CDFW, 2010);
- The coyote brush scrub at the site is disturbed, contains high cover of invasive species, low native plant species diversity, and has become established at the site relatively recently since the area was last graded. The site has been subject to agricultural activity related earth disturbance for much of the last 100 years;
- Threatened, endangered, or other special status wildlife species are not expected to reproduce at the site, and the site is not essential to the life-cycle of any listed wildlife species;
- Threatened, endangered, or other special status plant species have not been found at the site, and are not expected due to prior grading and agricultural use, as well as the site's existing disturbed condition; and,





- The coyote brush scrub is within an urban area, adjacent to existing industrial and residential development, and is not contiguous with native habitats.

Therefore, although according to Figure 4-1 in the Conservation Element of the Goleta General Plan the Project site contains coastal sage scrub ESHA, habitat that meets ESHA criteria was not observed within the Project boundary or nearby areas.

The coyote brush scrub does not meet the criteria in relevant City's General Plan policies to be considered an ESHA or coastal sage scrub; and therefore, should not be subject to the ESHA protection policies of the General Plan. Conservation Element policy CE 1.5: *Corrections to Map of ESHAs* allows ESHAs to be removed from Figure 4-1 of the General Plan if a site-specific biological study demonstrates substantial evidence that the area does not in fact contain habitat that meets the definition of an ESHA. The Project includes a General Plan Amendment to remove the Coastal Sage Scrub ESHA designation that is being concurrently processed. For further details, refer to Appendix F, *Technical Review of Coastal Sage Scrub (CSS) Environmentally Sensitive Habitat Area (ESHA) for the North Willow Springs Project*.

#### **Stream Protection Area ESHA**

The riparian habitat associated with the Los Carneros Creek adjacent the northeast property line is mapped as a Stream Protection Area (SPA) ESHA, thereby warranting a 100-foot buffer under Policy CE 2.2.

#### **Wetland ESHA**

The Los Carneros Wetland begins approximately 80 feet from the southeast portion of the Project site, and is designated ESHA pursuant to General Plan CE Policy the 3.5, *Protection of Wetlands Outside the Coastal Zone*. A buffer evaluation is required under Policy CE 3.5; the policy requires a minimum buffer of 50 feet.

The Los Carneros Wetland is an approximate 7.25-acre open space area located north of Hollister Avenue, east of Los Carneros Way, and southwest of the residential units at Willow Springs I. It is approximately 600 feet southwest of the Willow Springs II project. The GSEMP considered the Los Carneros Wetland a major subarea of the Goleta Slough Ecosystem. The Los Carneros Wetland is a rare, surviving remnant freshwater-to-estuarine transitional habitat at the northern edge of the Goleta Slough. It contains areas of brackish and freshwater marsh, as well as willow-dominated, palustrine scrub-shrub/forested wetlands that were once part of a continuous corridor connecting Lake Los Carneros and the Goleta Slough. The site has historically supported nesting and roosting white-tailed kites. The wetland is also known as a roosting and foraging habitat for the northern harrier, short-eared owl, sharp-shinned hawk, and Cooper's hawk, and supports the only Goleta Valley location for yerba



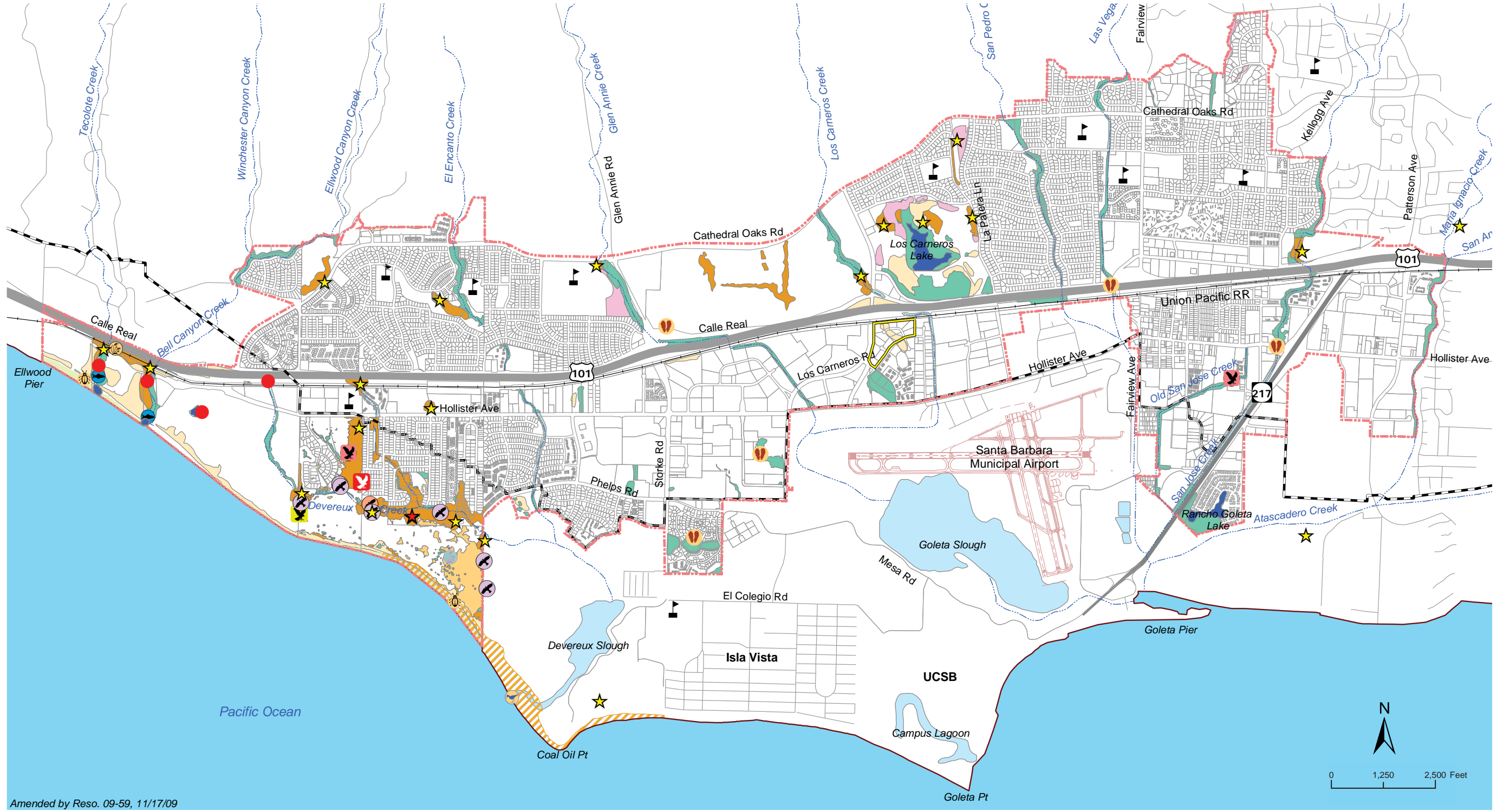


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Additional data provided by City of Goleta, March 2015.

Surrounding ESHA Map

Figure 3  
City of Goleta





Amended by Reso. 09-59, 11/17/09

- Legend**
- |   |  |                               |                           |
|---|--|-------------------------------|---------------------------|
| <b>Environmentally Sensitive Habitats</b> |  | <b>Special-Status Species</b> |                           |
| Beach and Shoreline                       | Sage Scrub/Dune/Bluff Scrub                      | Cooper's Hawk Nest            | Tidewater Goby            |
| Unvegetated Open Creek Channel            | Native Upland Woodlands/Savannahs                | Kite Nest                     | Red-Legged Frog           |
| Open Water                                | Monarch Butterfly and/or Raptor Roosting Habitat | Red-Shouldered Hawk Nest      | Globose Dune Beetle       |
| Riparian/Marsh/Vernal Pool                | Critical Habitat for the Western Snowy Plover    | Red-Tailed Hawk Nest          | Santa Barbara Honeysuckle |
| Native Grassland                          |  | Vulture Roost                 | Black-Flowered Figwort    |
|   |  | Western Snowy Plover          | Southern Tarplant         |
|   |  | Ellwood Main Monarch Grove    |                           |

**Other Features**

- Goleta City Boundary
- Coastal Zone
- Schools
- Creeks
- Project Site

**Sources:** Habitat mapping conducted by Jones & Stokes in April-May 2006 based on aerial imagery (1-foot resolution) and field observation, merged with 1) information on the occurrence of special status habitats and species collected by City from recent information from local environmental review; 2) mapping of creeks, ponds, lakes and reservoir location based on USGS topographic map review and habitat management plan documents, air photo interpretation, and field survey; and 3) review of California Natural Diversity Database (CNDDB) records by Jones & Stokes for occurrence of special status species in the Goleta and Dos Pueblos quadrangles and vicinities (2006 databases). Habitats reflect those comprising an ESHA.

**Note:** ESHA locations are approximate. Any area not designated on the ESHA map that meets the ESHA criteria shall be accorded the same protections as if the area was shown on the map. ESHA buffers are not shown on this map. Refer to the applicable policy in the General Plan for the specific buffer widths.

Special-Status Species and Environmentally Sensitive Habitat Areas

mansa (*Anemopsis californica*), a locally important species according to the GSEMP. The Los Carneros Wetland is upstream from and connected to the Goleta Slough through a small culvert traversing north-south beneath Hollister Road. The Los Carneros Wetland serves as an approved detention area and bio-filter for stormwater flows from the existing Willow Springs I and II developments, and the Project. Refer to the Preliminary Hydraulic Report and Preliminary Stormwater Control Plan (MAC Design, 2014) and Environmental Impact Report Section 4.8, *Hydrology and Water Quality*, for additional information regarding Project drainage.

### **General Plan Policies**

Below is a summary of the biological resource policies in the CE that apply to the Project; full text of the biological resource policies are included in Appendix A, *Regulatory Guidance*.

*Policy CE 1: Environmental Sensitive Habitats Area Designation and Policy.* The key protections and guidelines are stated in Policy CE 1, which include the following provisions applicable to ESHA:

- No development, except as otherwise allowed by Policy CE 1 is allowed within ESHAs.
- A setback or buffer separating all permitted development from an adjacent ESHA is required and must meet the minimum width requirements identified in the Conservation Element.
- Where there are no feasible, less environmentally damaging alternatives, the following uses may be located in ESHAs and ESHA buffers provided that measures are implemented to avoid or lessen impacts to the maximum extent feasible: public road crossings, utility lines, resource restoration and enhancement, nature education, and biological research.
- Any land use, construction, grading, or removal of vegetation that is not specified in Policy CE 1 is prohibited.
- New development must be sited and designed to avoid impacts to ESHAs. If there are no feasible alternatives that can eliminate all impacts, the alternative with the fewest or least significant impacts will be selected. Any impacts that cannot be avoided must be fully mitigated. On-site mitigation will be given priority; off-site mitigation will be approved only when it is not feasible to mitigate fully on-site.
- Development adjacent to an ESHA must minimize impacts to habitat values or sensitive species in the ESHA area to the maximum extent feasible.
- ESHA buffers shall have native habitat to serve as transitional habitat and must be of sufficient size to ensure the biological integrity and preservation of the ESHA they are intended to protect.
- Development in or adjacent to ESHA is subject to the following standards:
  - Site designs shall preserve wildlife corridors or habitat networks (CE 1.9).
  - Land divisions for parcels (except for open space lots) shall be allowed only if the new lot(s) can be developed without building in an ESHA or ESHA buffer and without impacts to ESHAs related to fuel modification for fire safety purposes.
  - Site plans and landscaping shall be designed to protect ESHAs, with priority given to protecting, supporting, and enhancing wildlife habitat values. Planting of nonnative invasive species is prohibited in ESHAs and ESHA buffers.
  - All new development shall be sited and designed to minimize grading, alteration of natural landforms and physical features, and vegetation clearance in order to reduce or avoid soil erosion, creek siltation, increased runoff, and reduced infiltration of stormwater and to prevent net increases in baseline flows for any receiving water body.
  - Light and glare will be controlled and directed away from wildlife habitat. Exterior night lighting shall be minimized, restricted to low intensity fixtures, shielded, and directed away from ESHAs.



- Noise levels from new development should not exceed an exterior noise level of 60 Ldn at the habitat site. During construction, this level may be exceeded if it can be demonstrated that significant adverse impacts on wildlife will be avoided or will be temporary.
- All new development shall be sited and designed to minimize the need for fuel modification or weed abatement for fire safety in order to preserve natural vegetation in and adjacent to ESHAs.
- The timing of grading and construction activities shall be controlled to minimize potential disruption of wildlife during critical time periods such as nesting or breeding seasons.
- Grading, earthmoving, and vegetation clearance adjacent to an ESHA shall be prohibited during the rainy season, generally from November 1 to March 31, except where necessary to protect or enhance the ESHA or to remediate hazardous flooding hazardous geologic conditions.
- In areas not adjacent to ESHAs where grading may be allowed, erosion control measures shall be implemented prior to and concurrent with all grading operations.

Additionally, the ESHA Goleta Overlay (Inland Zoning Ordinance Section 35-250.B) and General Plan Policy 8.3 requires a biological report for applications application with ESHA on-site, and includes specific conditions that may be placed on a project (e.g., deed restrictions, vegetation replacement). While not mapped under General Plan Figure 4.1, wildlife corridors are protected under CE policy 1.9. Wildlife corridors have been identified on the Project site, as discussed under Section 4.4 (above).

*Policy CE 2: Protection of Creek and Riparian Areas.* Policy CE 2.2, designated Streamside Protection Areas (SPA), requires a 100-foot buffer from Los Carneros Creek, as it is identified as creeks as shown in Figure 4.1 (Figure 4). SPA buffers may be adjusted based on a site-specific recommendation to the City. Section 4.3 of the EIR includes a buffer recommendation from off-site Los Carneros Creek.

*Policy CE 3: Protection of Wetland.* The off-site Los Carneros Wetland, which was previously identified as an USACE wetland (i.e., hydrophytic vegetation, hydrology, and soils) is protected under Policy CE 3.2, as analyzed under EIR Section 4.3.

*Policy CE 8: Protection of Special-Status Species.* Nesting and roosting habitat for raptors are protected as ESHA in the under Policy CE 8. Policy CE 8.4 requires protection of protected raptors through the establishment of buffers around historic and active nests when feasible. No historical raptor nests are mapped nor were raptor nests observed in suitable eucalyptus tree habitat; therefore raptor nest ESHA is not present. Policy CE 8.3 requires a site-specific biological study, with specific ESHA mapping requirements.

*Policy CE 9: Protection of Native Woodlands.* Within the City there is currently no specific Tree Protection Plan or Ordinance adopted. Protection of trees within the City is regulated by Section 4.0, CE 9 of the General Plan, the Goleta Municipal Code Appendix A Grading Ordinance Guidelines for Native Oak Tree Removal (GMC), and the Draft *State of the Goleta Urban Forest Report: An Urban Resource Assessment for the City of Goleta* (dated November 17, 2009; herein referred to as the Goleta Urban Forest Report). The General Plan contains policies for the preservation of native trees including oaks (*Quercus* spp.), walnut (*Juglans californica*), California sycamore, cottonwood (*Populus* spp.), willows (*Salix* spp.) and other native trees found in ESHAs (General Plan Policy CE 9: Protection of Native Woodlands). However, per the GMC Part III – Program Basics trees voluntarily planted (e.g., landscape trees), regardless of species, are not protected. Landscape trees may be replaced. No trees are present on-site or are proposed for removal. Willows and eucalyptus tree present off-site in, but would not be directly affected by the Project.



*Policy CE 10: Watershed Management and Water Quality.* Provisions of Policy CE 10 that apply to the Project include Policy 10.3, Incorporation of Best Management Practices for Stormwater Management, CE 10.6, Stormwater Management Requirements, and Policy CE 10.7, Drainage and Stormwater Management Plans. Additionally, Policy CE 10, Landscaping to Control Erosion, specify erosion control landscaping specifics.

Other policies in the CE that do not apply to the Project provide additional detail project-level standards for terrestrial habitat areas (native grasslands, chaparral), and marine habitat areas beach and shoreline habitats.

## **4.6 CONSERVATION PLANS**

No Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan has been adopted in this urbanized area.

## **5.0 IMPACT ANALYSIS AND MITIGATION MEASURES**

Refer to Section 4.3, *Biological Resources*, of the Environmental Impact Report for a discussion of impact analysis and mitigation measures.

## **6.0 LIMITATIONS, ASSUMPTIONS, AND USE RELIANCE**

This Biological Resources Assessment has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. Biological surveys for the presence or absence of certain taxa have been conducted as part of this assessment but were not performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if present, and therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis, or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, jurisdictional areas, review of CNDDDB RareFind 5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDDB, may vary with regard to accuracy and completeness. In particular, the CNDDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.



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# **Appendix A**

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*Regulatory Guidance*

## **APPENDIX A: REGULATORY SETTING**

Special-status habitats are vegetation types, associations, or sub-associations that support concentrations of special-status plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife.

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g. U.S. Fish and Wildlife Service [USFWS]), pursuant to the Federal Endangered Species Act (FESA) or as endangered, threatened, or rare (for plants only) by the State of California (i.e. California Fish and Game Commission), pursuant to the California Endangered Species Act or the California Native Plant Protection Act. Some species are considered rare (but not formally listed) by resource agencies, organizations with biological interests/expertise (e.g. Audubon Society, CNPS, The Wildlife Society), and the scientific community.

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the Project site include:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States);
- Regional Water Quality Control Board (waters of the State);
- U.S. Fish and Wildlife Service (federally listed species and migratory birds);
- California Department Fish and Wildlife (riparian areas and other waters of the State, state-listed species);
- City of Goleta

**U.S. Army Corps of Engineers.** Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that could discharge fill of material or otherwise adversely modify wetlands or other “waters of the United States.” Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any fill or adverse modification of wetlands that are hydrologically connected to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetland acres or values is met through compensatory mitigation involving creation or enhancement of similar habitats.

**Regional Water Quality Control Board.** The State Water Resources Control Board (SWRCB) and the local Central Coast Regional Water Quality Control Board (RWQCB) have jurisdiction over “waters of the State,” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to “isolated” waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The Central Coast RWQCB enforces actions under this general order for isolated



waters not subject to federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

**United States Fish and Wildlife Service (USFWS).** The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 et seq.). The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in “take” of any federally listed threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. “Take” under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

**California Department of Fish and Wildlife (CDFW).** The CDFW derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened, endangered or fully protected species. Take under CESA is restricted to direct mortality of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW also prohibits take for species designated as Fully Protected under the Code.

California Fish and Game Code sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of plant.

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at least 10 days in advance of changing the land use to allow for salvage of plant. Special status plant species are given a California Rare Plant Rank (RPR) code. The code definitions are:

- List 1A = Plants presumed extinct in California;
- List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);
- List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);
- List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);
- List 2 = Rare, threatened or endangered in California, but more common elsewhere;
- List 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA);
- List 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80% occurrences threatened); and
- List 4.4 = Plants of limited distribution (watch list), not very endangered in California (<20% occurrences threatened or no current threats known).

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 et seq. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

**Goleta Slough Ecosystem Management Plan (GSEMP).** The Goleta Slough Ecosystem Management Plan provides a comprehensive framework for ecosystem management and impact mitigation within the Goleta Slough Ecosystem. The policies of the Management Plan are advisory and are no more restrictive than the policies of the regulatory agencies that retain control over the Ecosystem. The Plan strives to balance protecting and enhancing wetland habitats while accommodating existing land uses. It also recognizes the need to balance the existing diversity of land uses with protection and enhancement of natural and human values that are provided within the Ecosystem. The Goleta Slough Ecosystem Management Area is comprised of all areas currently or historically within the tidally influenced basin of the Goleta Slough, as well as contiguous freshwater wetland habitats and upland habitats. While the project site apparently lies outside of the GSEMP boundary, the GSEMP is included herein because of the project's potential to result in indirect impacts on the Goleta Slough Ecosystem.

**City of Goleta.** Natural resources within the Goleta city limits are regulated according to the General Plan as summarized above under Section 4.3 of the EIR. The General Plan includes policies that protect and preserve biological resources within the City by designating specific resources and areas as protected, including Environmentally Sensitive Habitat Areas (ESHA), restricting activities and uses in protected areas, providing for the management of the resources on City lands, specifying impact avoidance and mitigation requirements for types of activities and by type of biological resource, and providing guidance for development and conservation decisions over the long-term. The policies anticipate the potential impacts to biological resources from the land uses and activities that will occur under the General Plan and serve to avoid, reduce, and/or mitigate those impacts. The key policies regarding biological resources are in the Conservation, Open Space, and Land Use Elements.



The CE contains the following policies applicable to project:

*CE 1.1 Definition of Environmentally Sensitive Habitat Areas. [GP/CP]* ESHAs shall include, but are not limited to, any areas that through professional biological evaluation are determined to meet the following criteria:

- a. Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and that could be easily disturbed or degraded by human activities and developments.
- b. Any area that includes habitat for species and plant communities recognized as threatened or endangered by the state or federal governments; plant communities recognized by the State of California (in the Terrestrial Natural Communities Inventory) as restricted in distribution and very threatened; and those habitat types of limited distribution recognized to be of particular habitat value, including wetlands, riparian vegetation, eucalyptus groves associated with monarch butterfly roosts, oak woodlands, and savannas.
- c. Any area that has been previously designated as an ESHA by the California Coastal Commission, the California Department of Fish and Game, City of Goleta, or other agency with jurisdiction over the designated area.

*CE 1.2 Designation of Environmentally Sensitive Habitat Areas. [GP/CP]* ESHAs in Goleta are generally shown in Figure 4-1, and Table 4-2 provides examples of the ESHAs and some locations of each. The provisions of this policy shall apply to all designated ESHAs. ESHAs generally include but are not limited to the following:

- a. Creek and riparian areas.
- b. Wetlands, such as vernal pools.
- c. Coastal dunes, lagoons or estuaries, and coastal bluffs/coastal bluff scrub.
- d. Beach and shoreline habitats.
- e. Marine habitats.
- f. Coastal sage scrub and chaparral.
- g. Native woodlands and savannahs, including oak woodlands.
- h. Native grassland.
- i. Monarch butterfly aggregation sites, including autumnal and winter roost sites, and related habitat areas.

*CE 1.6 Protection of ESHAs. [GP/CP]* ESHAs shall be protected against significant disruption of habitat values, and only uses or development dependent on and compatible with maintaining such resources shall be allowed within ESHAs or their buffers. The following shall apply:

- a. No development, except as otherwise allowed by this element, shall be allowed within ESHAs and/or ESHA buffers.
- b. A setback or buffer separating all permitted development from an adjacent ESHA shall be required and shall have a minimum width as set forth in subsequent policies of this element. The purpose of such setbacks shall be to prevent any degradation of the ecological functions provided by the habitat area.
- c. Public accessways and trails are considered resource-dependent uses and may be located within or adjacent to ESHAs. These uses shall be sited to avoid or minimize impacts on the resource to the maximum extent feasible. Measures—such as signage, placement of boardwalks, and limited fencing or other barriers—shall be implemented as necessary to protect ESHAs.
- d. The following uses and development may be allowed in ESHAs or ESHA buffers only where there are no feasible, less environmentally damaging alternatives and will be subject to requirements





for mitigation measures to avoid or lessen impacts to the maximum extent feasible: 1) public road crossings, 2) utility lines, 3) resource restoration and enhancement projects, 4) nature education, 5) biological research, and 6) Public Works projects as identified in the Capital Improvement Plan, only where there are no feasible, less environmentally damaging alternatives.

- e. If the provisions herein would result in any legal parcel created prior to the date of this plan being made unusable in its entirety for any purpose allowed by the land use plan, exceptions to the foregoing may be made to allow a reasonable economic use of the parcel. Alternatively, the City may establish a program to allow transfer of development rights for such parcels to receiving parcels that have areas suitable for and are designated on the Land Use Plan map for the appropriate type of use and development.

*CE 1.7 Mitigation of Impacts to ESHAs. [GP/CP]* New development shall be sited and designed to avoid impacts to ESHAs. If there is no feasible alternative that can eliminate all impacts, then the alternative that would result in the fewest or least significant impacts shall be selected. Any impacts that cannot be avoided shall be fully mitigated, with priority given to on-site mitigation. Off-site mitigation measures shall only be approved when it is not feasible to fully mitigate impacts on site. If impacts to on-site ESHAs occur in the Coastal Zone, any off-site mitigation area shall also be located within the Coastal Zone. All mitigation sites shall be monitored for a minimum period of 5 years following completion, with changes made as necessary based on annual monitoring reports. Where appropriate, mitigation sites shall be subject to deed restrictions. Mitigation sites shall be subject to the protections set forth in this plan for the habitat type unless the City has made a specific determination that the mitigation is unsuccessful and is to be discontinued.

*CE 1.8 ESHA Buffers. [GP/CP]* Development adjacent to an ESHA shall minimize impacts to habitat values or sensitive species to the maximum extent feasible. Native vegetation shall be provided in buffer areas to serve as transitional habitat. All buffers shall be of a sufficient size to ensure the biological integrity and preservation of the ESHA they are designed to protect.

*CE 1.9 Standards Applicable to Development Projects. [GP/CP]* The following standards shall apply to consideration of developments within or adjacent to ESHAs:

- a. Site designs shall preserve wildlife corridors or habitat networks. Corridors shall be of sufficient width to protect habitat and dispersal zones for small mammals, amphibians, reptiles, and birds.
- b. Land divisions for parcels within or adjacent to an ESHA shall only be allowed if each new lot being created, except for open space lots, is capable of being developed without building in any ESHA or ESHA buffer and without any need for impacts to ESHAs related to fuel modification for fire safety purposes.
- c. Site plans and landscaping shall be designed to protect ESHAs. Landscaping, screening, or vegetated buffers shall retain, salvage, and/or reestablish vegetation that supports wildlife habitat whenever feasible. Development within or adjacent to wildlife habitat networks shall incorporate design techniques that protect, support, and enhance wildlife habitat values. Planting of nonnative, invasive species shall not be allowed in ESHAs and buffer areas adjacent to ESHAs.
- d. All new development shall be sited and designed so as to minimize grading, alteration of natural landforms and physical features, and vegetation clearance in order to reduce or avoid soil erosion, creek siltation, increased runoff, and reduced infiltration of stormwater and to prevent net increases in baseline flows for any receiving water body. Light and glare from new



- development shall be controlled and directed away from wildlife habitats. Exterior night lighting shall be minimized, restricted to low intensity fixtures, shielded, and directed away from ESHAs.
- e. All new development should minimize potentially significant noise impacts on special-status species in adjacent ESHAs.
  - f. All new development shall be sited and designed to minimize the need for fuel modification, or weed abatement, for fire safety in order to preserve native and/or nonnative supporting habitats. Development shall use fire resistant materials and incorporate alternative measures, such as firewalls and landscaping techniques, that will reduce or avoid fuel modification activities.
  - g. The timing of grading and construction activities shall be controlled to minimize potential disruption of wildlife during critical time periods such as nesting or breeding seasons.
  - h. Grading, earthmoving, and vegetation clearance adjacent to an ESHA shall be prohibited during the rainy season, generally from November 1 to March 31, except as follows: 1) where erosion control measures such as sediment basins, silt fencing, sandbagging, or installation of geofabrics have been incorporated into the project and approved in advance by the City; 2) where necessary to protect or enhance the ESHA itself; or 3) where necessary to remediate hazardous flooding or geologic conditions that endanger public health and safety.
  - i. In areas that are not adjacent to ESHAs, where grading may be allowed during the rainy season, erosion control measures such as sediment basins, silt fencing, sandbagging, and installation of geofabrics shall be implemented prior to and concurrent with all grading operations.

*CE 1.10 Management of ESHAs.* [GP/CP] The following standards shall apply to the ongoing management of ESHAs:

- a. The use of insecticides, herbicides, artificial fertilizers, or other toxic chemical substances that have the potential to degrade ESHAs shall be prohibited within and adjacent to such areas, except where necessary to protect or enhance the ESHA itself.
- b. The use of insecticides, herbicides, or other toxic substances by City employees and contractors in construction and maintenance of City facilities and open space lands shall be minimized.
- c. Mosquito abatement within or adjacent to ESHAs shall be limited to the implementation of the minimum measures necessary to protect human health and shall be undertaken in a manner that minimizes adverse impacts to the ESHAs.
- d. Weed abatement and brush-clearing activities for fire safety purposes shall be the minimum that is necessary to accomplish the intended purpose. Techniques shall be limited to mowing and other low-impact methods such as hand crews for brushing, tarping, and hot water/foam for weed control. Disking shall be prohibited.
- e. Where there are feasible alternatives, existing sewer lines and other utilities that are located within an ESHA shall be taken out of service, abandoned in place, and replaced by facilities located outside the ESHA to avoid degradation of the ESHA resources, which could be caused by pipeline rupture or leakage and by routine maintenance practices such as clearing of vegetation.
- f. Removal of nonnative invasive plant species within ESHAs may be allowed and encouraged, unless the nonnatives contribute to habitat values.
- g. The following flood management activities may be allowed in creek and creek protection areas: desilting, obstruction clearance, minor vegetation removal, and similar flood management methods.

*CE 2.1 Designation of Protected Creeks.* [GP/CP] The provisions of this policy shall apply to creeks shown in Figure 4-1. These watercourses and their associated riparian areas are defined as ESHAs. They serve as habitat for fish and wildlife, provide wildlife movement corridors, provide for the flow of



stormwater runoff and floodwaters, and furnish open space and passive recreational areas for city residents.

*CE 2.2 Streamside Protection Areas. [GP/CP]* A streamside protection area (SPA) is hereby established along both sides of the creeks identified in Figure 4-1. The purpose of the designation shall be to preserve the SPA in a natural state in order to protect the associated riparian habitats and ecosystems. The SPA shall include the creek channel, wetlands and/or riparian vegetation related to the creek hydrology, and an adjacent upland buffer area. The width of the SPA upland buffer shall be as follows:

- h. The SPA upland buffer shall be 100 feet outward on both sides of the creek, measured from the top of the bank or the outer limit of wetlands and/or riparian vegetation, whichever is greater. The City may consider increasing or decreasing the width of the SPA upland buffer on a case-by-case basis at the time of environmental review. The City may allow portions of a SPA upland buffer to be less than 100 feet wide, but not less than 25 feet wide, based on a site-specific assessment if (1) there is no feasible alternative siting for development that will avoid the SPA upland buffer; and (2) the project's impacts will not have significant adverse effects on streamside vegetation or the biotic quality of the stream.
- i. If the provisions above would result in any legal parcel created prior to the date of this plan being made unusable in its entirety for any purpose allowed by the land use plan, exceptions to the foregoing may be made to allow a reasonable economic use of the parcel, subject to approval of a conditional use permit.

*CE 3.1 Definition of Wetlands. [GP/CP]* Wetlands are defined as any area that meets the definition of a wetland as defined by the California Coastal Commission, California Department of Fish and Game, and U.S. Fish and Wildlife Service. The most protective of definitions shall be applied and used to determine the boundary of a wetland. The City of Goleta uses the identification of a single indicator (soil, hydrology, or plants) to determine the boundary of a wetland.

*CE 3.2 Designation of Wetland ESHAs. [GP/CP]* Wetland ESHAs are included on Figure 4-1. In the Coastal Zone, wetlands are lands that may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens. Goleta's wetlands are associated with small lagoons at the mouths of Bell Canyon and Tecolote Creeks, vernal pools, and freshwater marshes and ponds or impoundments, such as Lake Los Carneros. All wetlands are defined as ESHAs. Any unmapped areas that meet the criteria identified in CE 3.1 are wetlands and shall be granted all of the protections for wetlands set forth in this plan.

*CE 3.4 Protection of Wetlands in the Coastal Zone. [CP]* The biological productivity and the quality of wetlands shall be protected and, where feasible, restored in accordance with the federal and state regulations and policies that apply to wetlands within the Coastal Zone. Only uses permitted by the regulating agencies shall be allowed within wetlands. The filling, diking, or dredging of open coastal waters, wetlands, estuaries, and lakes is prohibited unless it can be demonstrated that:

- a. There is no feasible, environmentally less damaging alternative to wetland fill.
- b. The extent of the fill is the least amount necessary to allow development of the permitted use.
- c. Mitigation measures have been provided to minimize adverse environmental effects.
- d. The purposes of the fill are limited to: incidental public services, such as burying cables or pipes; restoration of wetlands; and nature study, education, or similar resource-dependent activities.



A wetland buffer of a sufficient size to ensure the biological integrity and preservation of the wetland shall be required. Generally the required buffer shall be 100 feet, but in no case shall wetland buffers be less than 50 feet. The buffer size should take into

*CE 3.5 Protection of Wetlands Outside the Coastal Zone. [GP]* The biological productivity and the quality of inland wetlands shall be protected and, where feasible, restored. The filling of wetlands outside the Coastal Zone is prohibited unless it can be demonstrated that:

- a. The wetland area is small, isolated, not part of a larger hydrologic system, and generally lacks productive or functional habitat value.
- b. The extent of the fill is the least amount necessary to allow reasonable development of a use allowed by the Land Use Element.
- c. Mitigation measures will be provided to minimize adverse environmental effects, including restoration or enhancement of habitat values of wetlands at another location on the site or at another appropriate offsite location within the City.

A wetland buffer of a sufficient size to ensure the biological integrity and preservation of the wetland shall be required. A wetland buffer shall be no less than 50 feet. The buffer size should take into consideration the type and size of the development, the sensitivity of the wetland resources to detrimental edge effects of the development to the resources, natural features such as topography, the functions and values of the wetland and the need for upland transitional habitat. The buffer area shall serve as transitional habitat with native vegetation and shall provide physical barriers to human intrusion.

*CE 4.1 Definition of Habitat Area. [GP/CP]* The monarch butterfly is recognized as a California and Goleta special resource. Although the species is not threatened with extinction, its autumnal and winter aggregation sites, or roosts, are especially vulnerable to disturbance. Sites that provide the key elements essential for successful monarch butterfly aggregation areas and are locations where monarchs have been historically present shall be considered ESHAs. These elements include stands of eucalyptus or other suitable trees that offer shelter from strong winds and storms, provide a microclimate with adequate sunlight, are situated near a source of water or moisture, and that provide a source of nectar to nourish the butterflies.

*CE 4.2 Designation of Monarch Butterfly ESHAs. [GP/CP]* Existing and known historical monarch roost sites, as shown on Figure 4-1, are hereby designated as ESHAs. These include about 20 known roosts, eight of which comprise the Ellwood Complex, a series of sites within a network consisting of eucalyptus groves and windrows interspersed by open fields and crossed by small creeks. This network includes several separate but interconnected autumnal and winter roost sites. The Ellwood Main site, the largest roost in Santa Barbara County and one of the largest in the state, occupies a site along Devereux Creek in the Sperling Preserve, a City-owned tract situated near the coastal bluffs in western Goleta.

*CE 4.3 Site-Specific Studies and Unmapped Monarch ESHAs. [GP/CP]* Any area not designated on Figure 4-1 that is determined by a site-specific study to contain monarch habitats, including autumnal and winter roost sites, shall be granted the same protections as if the area was shown on the figure. Proposals for development on sites shown on this figure or where there is probable cause to believe that monarch habitats may exist shall be required to provide a site-specific study.

*CE 4.4 Protection of Monarch Butterfly ESHAs. [GP/CP]* Monarch butterfly ESHAs shall be protected against significant disruption of habitat values, and only uses or development dependent on



and compatible with maintaining such resources shall be allowed within these ESHAs or their buffer areas. The following standards shall apply:

- a. No development, except as otherwise allowed by this policy, shall be allowed within monarch butterfly ESHAs or ESHA buffers.
- b. Since the specific locations of aggregation sites may vary from one year to the next, the focus of protection shall be the entire grove of trees rather than individual trees that are the location of the roost.
- c. Removal of vegetation within monarch ESHAs shall be prohibited, except for minor pruning of trees or removal of dead trees and debris that are a threat to public safety.
- d. Public accessways are considered resource-dependent uses and may be located within a monarch ESHA or its buffer; however, such accessways shall be sited to avoid or minimize impacts to aggregation sites.
- e. Interpretative signage is allowed within a monarch ESHA or its buffer, but shall be designed to be visually unobtrusive.
- f. Butterfly research, including tree disturbance or other invasive methods, may be allowed subject to City approval of a permit.

*CE 4.5 Buffers Adjacent to Monarch Butterfly ESHAs. [GP/CP]* A buffer of a sufficient size to ensure the biological integrity and preservation of the monarch butterfly habitat, including aggregation sites and the surrounding grove of trees, shall be required. Buffers shall not be less than 100 feet around existing and historic roost sites as measured from the outer extent of the tree canopy. The buffer area shall serve as transitional habitat with native vegetation and shall provide physical barriers to human intrusion. The buffer may be reduced to 50 feet in circumstances where the trees contribute to the habitat but are not considered likely to function as an aggregation site, such as along narrow windrows. Grading and other activities that could alter the surface hydrology that sustains the groves of trees are prohibited within or adjacent to the buffer area.

*CE 4.6 Standards Applicable to New Development Adjacent to Monarch ESHAs. [GP/CP]* The following standards shall apply to consideration of proposals for new development adjacent to monarch ESHAs or ESHA buffers:

- a. A site-specific biological study, prepared by an expert approved by the City who is qualified by virtue of education and experience in the study of monarch butterflies, shall be required to be submitted by the project proponent.
- b. The study shall include preparation of a Monarch Butterfly Habitat Protection Plan, which at a minimum shall include: 1) the mapped location of the cluster of trees where monarchs are known, or have been known, to roost in both autumnal and over-wintering aggregations; 2) an estimate of the size of the population within the colony; 3) the mapped extent of the entire habitat area; and 4) the boundaries of the buffer zone around the habitat area.
- c. A temporary fence shall be installed along the outer boundary of the buffer zone prior to and during any grading and construction activities on the site.
- d. If an active roost or aggregation is present on the project site, any construction grading, or other development within 200 feet of the active roost, shall be prohibited between October 1 and March 1.

*CE 8.3 Site-Specific Biological Resources Study.* Any areas not designated on Figure 4-1 that meet the ESHA criteria for the resources specified in CE 8.1 shall be accorded the same protections as if the area were shown on the figure. Proposals for development on sites where ESHAs are shown on the



figure, or where there is probable cause to believe that an ESHA may exist, shall be required to provide the City with a site-specific biological study that includes the following information:

- a. A base map that delineates topographic lines, parcel boundaries, and adjacent roads.
- b. A vegetation map that 1) identifies trees or other sites that are existing or historical nests for the species of concern and 2) delineates other elements of the habitat such as roosting sites and foraging areas.
- c. A detailed map that shows the conclusions regarding the boundary, precise location and extent, or current status of the ESHA based on substantial evidence provided in the biological studies.
- d. A written report that summarizes the survey methods, data, observations, findings, and recommendations.

*CE 8.4 Buffer Areas for Raptor Species. [GP/CP]* Development shall be designed to provide a 100-foot buffer around active and historical nest sites for protected species of raptors when feasible. In existing developed areas, the width of the buffer may be reduced to correspond to the actual width of the buffer for adjacent development. If the biological study described in CE 8.3 determines that an active raptor nest site exists on the subject property, whenever feasible no vegetation clearing, grading, construction, or other development activity shall be allowed within a 300-foot radius of the nest site during the nesting and fledging season.

*CE 9.1 Definition of Protected Trees. [GP/CP]* New development shall be sited and designed to preserve the following species of native trees: oaks (*Quercus* spp.), walnut (*Juglans californica*), sycamore (*Platanus racemosa*), cottonwood (*Populus* spp.), willows (*Salix* spp.), or other native trees that are not otherwise protected in ESHAs, unless as otherwise allowed in CE 9.

*CE 10.1 New Development and Water Quality. [GP/CP]* New development shall not result in the degradation of the water quality of groundwater basins or surface waters; surface waters include the ocean, lagoons, creeks, ponds, and wetlands. Urban runoff pollutants shall not be discharged or deposited such that they adversely affect these resources.

*CE 10.2 Siting and Design of New Development. [GP/CP]* New development shall be sited and designed to protect water quality and minimize impacts to coastal waters by incorporating measures designed to ensure the following:

- a. Protection of areas that provide important water quality benefits, areas necessary to maintain riparian and aquatic biota, and areas susceptible to erosion and sediment loss.
- b. Limiting increases in areas covered by impervious surfaces.
- c. Limiting the area where land disturbances occur, such as clearing of vegetation, cut-and-fill, and grading, to reduce erosion and sediment loss.
- d. Limiting disturbance of natural drainage features and vegetation.

*CE 10.3 Incorporation of Best Management Practices for Stormwater Management. [GP/CP]* New development shall be designed to minimize impacts to water quality from increased runoff volumes and discharges of pollutants from nonpoint sources to the maximum extent feasible, consistent with the City's Storm Water Management Plan or a subsequent Storm Water Management Plan approved by the City and the Central Coast Regional Water Quality Control Board. Post construction structural BMPs shall be designed to treat, infiltrate, or filter stormwater runoff in accordance with applicable standards as required by law. Examples of BMPs include, but are not limited to, the following:

- a. Retention and detention basins.



- b. Vegetated swales.
- c. Infiltration galleries or injection wells.
- d. Use of permeable paving materials.
- e. Mechanical devices such as oil-water separators and filters.
- f. Revegetation of graded or disturbed areas.
- g. Other measures as identified in the City's adopted Storm Water Management Plan and other City-approved regulations.



## **Appendix B**

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*Site Photographs*





## **Appendix C**

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*Floral and Faunal Compendium*

**Appendix C. Plant and Wildlife Species Observed Within the Project Site**

Scientific Name	Common Name	Status	Native or Introduced
<b>PLANTS</b>			
<b>Trees</b>			
<i>Nicotiana glauca</i>	tree tobacco	-	Non-native
<i>Myoporum laetum</i>	false sandalwood		Non-native
<i>Platanus racemosa</i>	California Sycamore		Native (planted)
<i>Salix lasiolepis</i>	arroyo willow	-	Native
<b>Shrubs</b>			
<i>Atriplex lentiformis</i>	quailbush (saltbush)	-	Native
<i>Artemisia californica</i>	California sagebrush	-	Native
<i>Baccharis pilularis</i>	coyote brush	-	Native
<i>Encelia californica</i>	California brittlebush	-	Native
<i>Ricinus communis</i>	castor bean	-	Non-native
<b>Herbs</b>			
<i>Ambrosia psilostachya</i>	western ragweed	-	Native
<i>Amaranthus albus</i>	pigweed amaranth	-	Non-native
<i>Brassica nigra</i>	black mustard	-	Non-native
<i>Brassica rapa</i>	field mustard	-	Non-native
<i>Bromus carinatus</i>	California brome	-	Native
<i>Bromus diandrus</i>	ripgut brome	-	Non-native
<i>Bromus hordeaceus</i>	soft chess	-	Non-native
<i>Carduus pycnocephalus</i>	Italian thistle	-	Non-native
<i>Centaurea melitensis</i>	toocalote	-	Non-native
<i>Chenopodium sp.</i>	goosefoot	-	Non-native
<i>Conyza canadensis</i>	Canada horseweed	-	Non-native
<i>Cortaderia sp.</i>	pampas grass species	-	Non-native
<i>Calystegia macrostegia</i>	morning glory	-	Native
<i>Datura wrightii</i>	jimson weed	-	Native
<i>Deinandra fasciculata</i>	common tarweed	-	Native
<i>Elymus glaucus</i>	Buckley blue wildrye	-	Native
<i>Erodium botrys</i>	long-beaked filaree	-	Non-native
<i>Erodium cicutarium</i>	red-stemmed filaree	-	Non-native
<i>Eschscholzia californica</i>	California poppy	-	Native
<i>Festuca microstachys</i>	small fescue	-	Native
<i>Helminthotheca echioides</i>	bristly ox-tongue	-	Non-native
<i>Heterotheca grandiflora</i>	telegraph weed	-	Native
<i>Hordeum murinum</i>	foxtail barley	-	Non-native
<i>Lupinus sp.</i>	Lupine species	-	Native
<i>Malva parviflora</i>	cheeseweed	-	Non-native
<i>Malva nicaeensis</i>	bull mallow	-	Non-native
<i>Madia gracilis</i>	gumweed	-	Native
<i>Malacothrix saxatilis</i>	cliff aster	-	Native
<i>Marrubium vulgare</i>	horehound	-	Non-native
<i>Oxalis sp.</i>	Sorrel species	-	Non-native
<i>Plantago lanceolata</i>	English plantain	-	Non-native
<i>Polygonum aviculare ssp. depressum</i>	common knotweed	-	Non-native
<i>Pennisetum setaceum</i>	fountaingrass	-	Non-native
<i>Stipa miliacea</i>	smilo grass	-	Non-native
<i>Raphanus sativus</i>	wild radish	-	Non-native



**Appendix C. Plant and Wildlife Species Observed Within the Project Site**

Scientific Name	Common Name	Status	Native or Introduced
<i>Rumex crispus</i>	curly dock	-	Non-native
<i>Salsola tragus</i>	Russian thistle	-	Non-native
<i>Sisyrinchium bellum</i>	western blue-eyed grass	-	Native
<i>Stipa pulchra</i>	purple needle grass	-	Native (hydroseed)
<i>Stipa cernua</i>	nodding needlegrass	-	Native (hydroseed)
<i>Sonchus asper</i>	prickly sow-thistle	-	Non-native
<i>Solanum douglasii</i>	Douglas' nightshade	-	Native
<i>Xanthium strumarium</i>	cocklebur	-	Native
<i>Verbena lasiostachys</i>	common vervain	-	Non-native
<i>Vulpia myuros</i>	rattail fescue	-	Non-native
<b>WILDLIFE</b>			
<b>Birds</b>			
<i>Accipiter cooperii</i>	Copper's hawk	SA	Native
<i>Cathartes aura</i>	turkey vulture	-	Native
<i>Larus sp.</i>	gull species	-	Native
<i>Columba livia</i>	rock pigeon	-	Non-native
<i>Calypte anna</i>	Anna's hummingbird	-	Native
<i>Tyrannus vociferans</i>	Cassin's kingbird	-	Native
<i>Corvus brachyrhynchos</i>	American crow	-	Native
<i>Psaltriparus minimus</i>	bush-tit	-	Native
<i>Baeolophus inornatus</i>	oak titmouse	SA	Native
<i>Mimus polyglottos</i>	Northern mockingbird	-	Native
<i>Geothlypis trichas</i>	common yellowthroat	-	Native
<i>Pipilo maculatus</i>	spotted towhee	-	Native
<i>Melospiza crissalis</i>	California towhee	-	Native
<i>Melospiza melodia</i>	song sparrow	-	Native
<i>Haemorhous mexicanus</i>	house finch	-	Native
<i>Spinus psaltria</i>	lesser goldfinch	-	Native
<b>Reptiles</b>			
<i>Sceloporus occidentalis</i>	coastal western fence lizard	-	Native
<b>Mammals</b>			
<i>Canis latrans</i> *	coyote	-	Native
<i>Didelphis virginiana</i> *	opossum	-	Native
<i>Lynx rufus</i> *	bobcat	-	Native
<i>Mephitis mephitis</i> *	striped skunk	-	Native
<i>Otospermophilus beecheyi</i>	California ground squirrel		Native
<i>Procyon lotor</i> *	raccoon	-	Native
<i>Sylvilagus bachmani</i>	brush rabbit		Native

Source: Rincon, 2015.

\*Observed Dudek, 2014. Refer to Appendix F





**Photograph 1.** View north of the on-site native hydroseed area in the foreground, and the off-site eucalyptus trees and willow thickets past the UPPR tracks in the background.



**Photograph 2.** View south of coyote brush scrub, also designated by the City as ESHA and proposed to be removed through a General Plan Amendment, and the cultural resources fencing.





**Photograph 3.** View northeast in the fenced cultural resources area of non-native grasses and forbs in the foreground, and the coyote brush scrub in the background. The existing Willow Springs apartments are visible to the south.



**Photograph 4.** View from the existing Via Luisa entrance, looking southwest of the saltbush / coyote bush scrub. Yellow-blooming mustard is codominant. Camino Vista Road is visible.





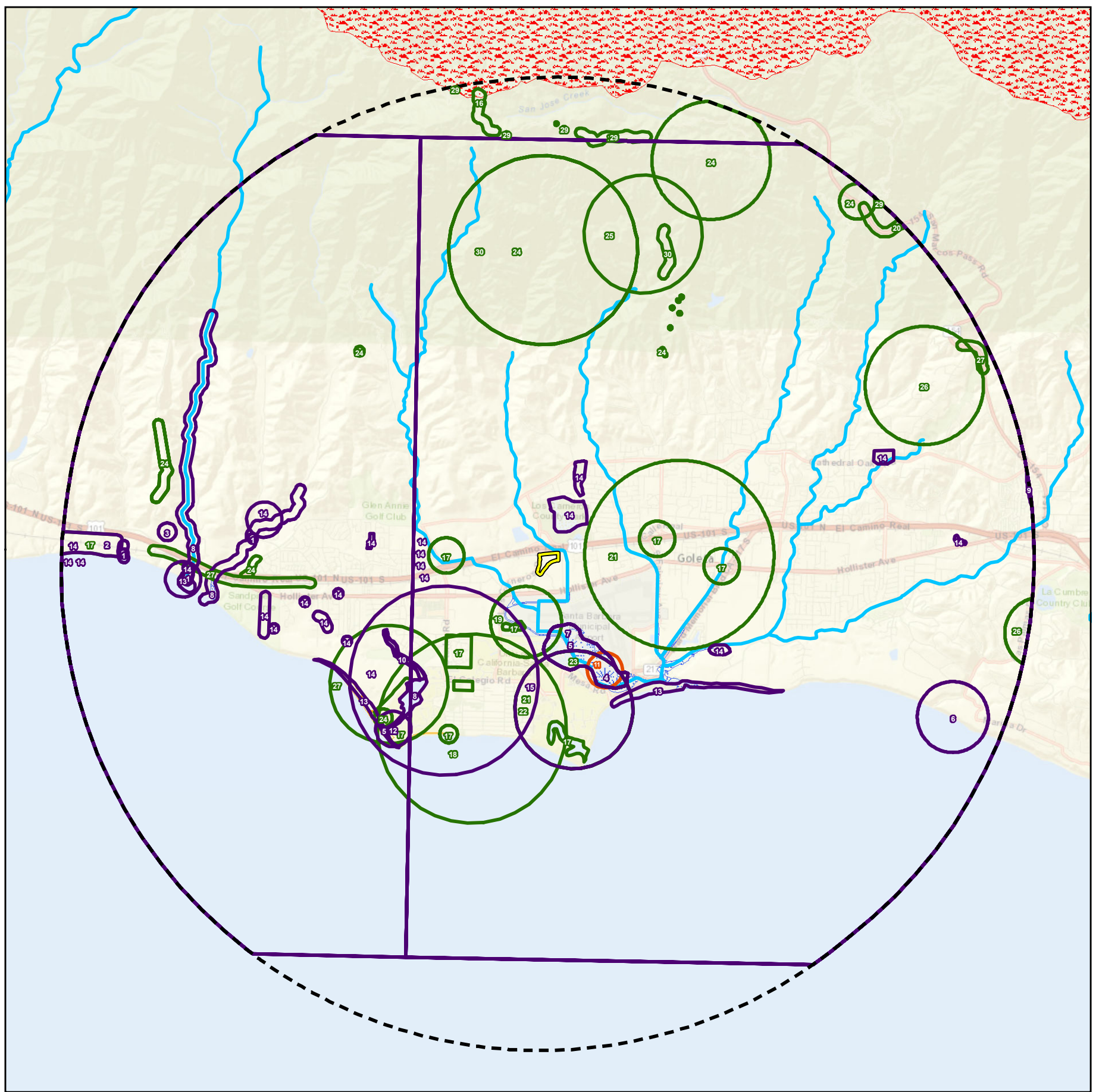
**Photograph 5.** View of coyote brush scrub along the northern property line and the UPRR tracks, with off-site willow thickets in the background.

## **Appendix D**

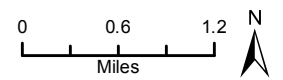
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*Special Status Species Evaluation Tables*





Imagery provided by ESRI and its licensors © 2015.  
 Additional data provided by the:  
 California Natural Diversity Database, May 2015.  
 Critical Habitat, September 2015



- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li><span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Project Boundary</li> <li><span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 5 Mile Buffer</li> <li><b>CNDDDB</b></li> <li><span style="border: 1px solid purple; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Animals</li> <li><span style="border: 1px solid green; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Plants</li> <li><span style="border: 1px solid orange; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Natural Communities</li> <li><b>Critical Habitat</b></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #f0f0f0; border: 1px solid red; border-style: dotted; margin-right: 5px;"></span> California red-legged frog</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #e0e0e0; border: 1px solid blue; border-style: dotted; margin-right: 5px;"></span> Tidewater goby</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #e0e0e0; border: 1px solid orange; border-style: dotted; margin-right: 5px;"></span> Western snowy plover</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #e0e0e0; border: 1px solid blue; margin-right: 5px;"></span> Steelhead</li> </ul> | <ul style="list-style-type: none"> <li>1 - California red-legged frog</li> <li>2 - white-tailed kite</li> <li>3 - ferruginous hawk</li> <li>4 - light-footed clapper rail</li> <li>5 - western snowy plover</li> <li>6 - bank swallow</li> <li>7 - Belding's savannah sparrow</li> <li>8 - tidewater goby</li> <li>9 - Townsend's big-eared bat</li> <li>10 - western pond turtle</li> <li>11 - Southern Coastal Salt Marsh</li> <li>12 - sandy beach tiger beetle</li> <li>13 - globose dune beetle</li> <li>14 - monarch butterfly</li> <li>15 - mimic tryonia (=California brackishwater snail)</li> <li>16 - slender silver moss</li> <li>17 - southern tarplant</li> <li>18 - Contra Costa goldfields</li> <li>19 - Coulter's goldfields</li> <li>20 - pale-yellow layia</li> <li>21 - Coulter's saltbush</li> <li>22 - Davidson's saltscale</li> <li>23 - estuary seablite</li> <li>24 - Santa Barbara honeysuckle</li> <li>25 - Refugio manzanita</li> <li>26 - mesa horkelia</li> <li>27 - black-flowered figwort</li> <li>28 - Santa Lucia dwarf rush</li> <li>29 - late-flowered mariposa-lily</li> <li>30 - Sonoran maiden fern</li> </ul> |
|--|---|

Project Vicinity CNDDDB and Critical Habitat

Figure D  
 City of Goleta

**Table 1. Special Status Plant Species in Project Vicinity**

Scientific Name	Fed/State ESA CRPR G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence	Rationale
<i>Amsinckia douglasiana</i> Douglas' fiddleneck	--/-- G3/S3.2 4.2	Annual herb; blooms March to May; cismontane woodland and valley and foothill grassland; usually on Monterey shale in dry areas.	None	Suitable habitat and soils not present on site. No CNDDDB records within 5 miles.
<i>Anemopsis californica</i> yerba mansa	Locally Rare (GSEMP)	Marsh and creekside plant that is alkaline tolerant. Blooms in Spring. Tolerates alkaline soil, sand, clay, no drainage and seasonal flooding.	None	Suitable wetland habitat not present on site. Present at the Los Carneros Wetland.
<i>Anomobryum julaceum</i> slender silver moss	-- / -- 4.2 G4G5 / S2	Moss. Broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest. Moss which grows on damp rocks and soil; acidic substrates. Usually seen on roadcuts. 100-1000m (330-3280ft).	None	Suitable habitat not present on site.
<i>Arctostaphylos refugioensis</i> Refugio manzanita	-- / -- 1B.2 G2 / S2	Perennial evergreen shrub. Blooms Dec-May. Chaparral. On sandstone. 300-820m (985-2690ft).	None	Suitable habitat not present on site.
<i>Atriplex coulteri</i> Coulter's saltbush	--/ -- 1B.2 G2/S2	Perennial herb. Blooms Mar-Oct. Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places. 10-440m (30-1445ft).	Low	Marginal habitat present on site. Known CNDDDB occurrence 2-miles east of site. Known from the Goleta Slough. Not detected during surveys.
<i>Atriplex serenana</i> var. <i> davidsonii</i> Davidson's saltscale	--/ -- 1B.2 G5T1/S1	Annual herb. Blooms Apr-Oct. Coastal bluff scrub, coastal scrub. Alkaline soil. 3-250m (10-820ft).	Low	Marginal habitat present on site. Not detected during surveys. Not detected during surveys.
<i>Calochortus fimbriatus</i> late-flowered mariposa-lily	-- / -- 1B.2 G3 / S3	Perennial bulbiferous herb. Blooms June-Aug. Chaparral, cismontane woodland, riparian woodland. Dry, open coastal woodland, chaparral; on serpentine. 275-1905 m (900-6250ft).	None	Suitable habitat and serpentine soils not present on site.



**Table 1. Special Status Plant Species in Project Vicinity**

Scientific Name	Fed/State ESA CRPR G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence	Rationale
<i>Centromadia parryi</i> ssp. <i>australis</i>  southern tarplant	-- / -- 1B.1 G3T2/S2	Annual herb. Blooms May-Nov. Marshes and swamps (margins), valley and foothill grassland. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. 0-425m (0-1395ft).	Low	No vernal pool habitat present on-site, marginal habitat off-site in Los Camaros Wetland. Multiple CNDDDB occurrences greater than 1 mile east, west and south of the site near water. Known from the Goleta Slough 0.5 mile south. Not detected during surveys.
<i>Horkelia cuneata</i> var. <i>puberula</i>  mesa horkelia	-- / -- 1B.1 G4T1 / S1	Perennial herb. Blooms Feb-Sept. Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 70-810m (230-2655ft).	Low	Marginal habitat present on site. Not detected during surveys. Low potential to occur due to long history of disturbance. No CNDDDB records within 5 miles.
<i>Juncus luciensis</i>  Santa Lucia dwarf rush	-- / -- 1B.2 G2G3/ S2S3	Annual herb. Blooms Apr-Jul. Vernal pools, meadows, lower montane coniferous forest, chaparral, Great Basin scrub. Vernal pools, ephemeral drainages, wet meadow habitats and streamsides. 300-2040m (985-6690ft).	None	Suitable habitat not present on site.
<i>Lasthenia conjugens</i>  Contra Costa goldfields	FE/ -- 1B.1 G1/S1	Annual herb. Blooms Mar-Jun. Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodland. Vernal pools, swales, low depressions, in open grassy areas. 1-470m (3-1540ft).	Low	Historical (1972) extirpated Project vicinity CNDDDB record in on the Isla Vista bluffs. Marginal habitat present on site. Low potential to occur due to long history of disturbance. Not detected during surveys.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>  Coulter's goldfields	-- / -- 1B.1 G4T2/S2	Annual herb. Blooms Feb-Jun. Coastal salt marshes, playas, valley and foothill grassland, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1400m (3-4595ft).	Low	Marginal grassland habitat present on site. Low potential to occur due to long history of disturbance. CNDDDB (1982) occurrence 0.5 mile south of Project on opposite side of Hollister Avenue in the Goleta Slough.
<i>Layia heterotricha</i>  pale-yellow layia	-- / -- 1B.1 G2/S2	Annual herb. Blooms Mar-Jun. Cismontane woodland, pinyon-juniper woodland, valley and foothill grassland. Alkaline or clay soils; open areas. 270-1365m (885-4480ft).	Low	Marginal habitat present on site. Low potential to occur due to long history of disturbance. Not detected during surveys.



**Table 1. Special Status Plant Species in Project Vicinity**

Scientific Name	Fed/State ESA CRPR G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence	Rationale
<i>Lonicera subspicata</i> var. <i>subspicata</i> Santa Barbara honeysuckle	-- / -- 1B.2 G5T2/ S2	Perennial evergreen shrub. Blooms May-Feb. Chaparral, cismontane woodland, coastal scrub. 35-1000m (115-3280ft).	Low	Marginal habitat present on site. Low potential to occur due to long history of disturbance. Not detected during surveys.
<i>Scrophularia atrata</i> black-flowered figwort	-- / -- 1B.2 G2G3 / S2S3	Perennial herb. Blooms Mar-Jul. Closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, riparian scrub. Sand, diatomaceous shales, and soils derived from other parent material; around swales and in sand dunes. 10-250m (30-820ft).	Low	Marginal habitat present on site. Low potential to occur due to long history of disturbance. Not detected during surveys.
<i>Suaeda esteroa</i> estuary seablite	-- / -- 1B.2 G3 / S2	Perennial herb. Blooms May-Jan. Marshes and swamps. Coastal salt marshes in clay, silt, and sand substrates. 0-5m (0-15ft).	None	Suitable habitat not present on site.
<i>Thelypteris puberula</i> var. <i>sonorensis</i> Sonoran Maiden fern	-- / -- 2B.2 G5T3 / S2.2?	Perennial rhizomatous herb. Blooms Jan-Sep. Meadows and seeps. Along streams, seepage areas. 50-550m (165-1805ft).	None	Suitable habitat not present on site.

Project Vicinity refers to within a 5 mile radius of site.

FE = Federally Endangered FT = Federally Threatened

SE = State Endangered ST = State Threatened SR = State Rare

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDDB RareFind3.

CRPR (CNPS California Rare Plant Rank):

1A=Presumed Extinct in California

1B=Rare, Threatened, or Endangered in California and elsewhere

2A=Plants presumed extirpated in California, but more common elsewhere

2B=Plants Rare, Threatened, or Endangered in California, but more common elsewhere

3=Need more information (a Review List)

4=Plants of Limited Distribution (a Watch List)

CRPR Threat Code Extension:

.1=Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2=Fairly endangered in California (20-80% occurrences threatened)

.3=Not very endangered in California (<20% of occurrences threatened)



**Table 2. Special Status Animal Species in the Project Vicinity**

Scientific Name Common Name	Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence	Potential for Occurrence
<b>Invertebrates</b>				
<i>Danaus plexippus</i> Monarch butterfly	-- / -- -- G5 / S3	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Low	No suitable habitat present. Eucalyptus trees are approximately 100 feet north of the Project site, but the monarch butterfly host and food plants are absent from the Project site. There are no historical reports of monarch butterflies using these trees for roosting aggregations. Plants that would serve as food sources for monarch butterflies are absent from within the Project site.
<i>Cicindela hirticollis gravida</i> Sandy beach tiger beetle	-- / -- -- G5T2 / S1	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sands not affected by wave action.	None	Suitable habitat not present on site.
<i>Coelus globosus</i> Globose dune beetle	-- / -- -- G1 / S1	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.	None	Suitable habitat not present on site.
<i>Tryonia imitator</i> Mimic tryonia (=California brackishwater snail)	-- / -- -- G2G3 / S2S3	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities.	None	Suitable habitat not present on site.
<b>Fish</b>				
<i>Eucyclogobius newberryi</i>	FE / -- SSC G3 / S2S3	Brackish water habitats along the Calif coast from Agua Hedionda Lagoon, San Diego Co. to mouth of Smith River. Found in shallow lagoons and lower stream reaches,	None	No habitat present on site, or anticipated or in channelized Los Carneros Creek. Critical habitat off-site downstream in Creek,



**Table 2. Special Status Animal Species in the Project Vicinity**

Scientific Name Common Name	Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence	Potential for Occurrence
Tidewater goby		they need fairly still but not stagnant water and high oxygen levels.		south of holster Avenue.
<i>Oncorhynchus mykiss irideus</i> southern California DPS	FE/-- G5T2A/S2 SSC	Cold, clear waters in complex streams with riffles, pools, and sources of cover such as undercut banks, aquatic vegetation, submerged wood, etc.; connectivity to Pacific Ocean key to life cycle.	None	No habitat present on site or within channelized Los Carneros Creek. Los Carneros Creek is designated as critical habitat (South Coast Hydrologic Unit 3315). No CNDDDB records within 5 miles.
<b>Amphibians</b>				
<i>Rana draytonii</i> California red-legged frog	FT / -- -- G2G3 / S2S3	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	None	Suitable habitat not present on site, Los Carneros creek does not provide a permanent water source. No watershed CNDDDB records.
<b>Reptiles</b>				
<i>Emys marmorata</i> western pond turtle	-- / -- SSC G3G4 / S3	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	None	No suitable habitat on-site. Suitable ponding and basking sites off-site in Los Carneros Creek.
<i>Thamnophis hammondi</i> Two-striped garter snake	--/-- G3/S2 SSC	Streams or ponds having riparian or wetland vegetation; small mammal burrows are used for overwintering.	None	Suitable habitat not present on site, potential to occur off-site in Los Carneros Creek riparian area. No CNDDDB records within 5 miles.
<b>Birds</b>				



**Table 2. Special Status Animal Species in the Project Vicinity**

Scientific Name Common Name	Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence	Potential for Occurrence
<i>Accipiter cooperii</i> Cooper's hawk	-- / -- WL G5 / S4	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also live oaks.	Low (foraging)	Observed foraging on-site during 2015 surveys. No suitable nesting habitat is present.
<i>Accipiter striatus</i> sharp-shinned hawk	-- / -- WL G5 / S4	Ponderosa pine, black oak, riparian deciduous, mixed conifer and Jeffrey pine habitats. Prefers riparian areas. North-facing slopes, with plucking perches are critical requirements. Nests usually within 275 ft. of water.	Low (foraging)	No CNDDDB records within 5 miles. eBird observations in 2012 and 2013 in Los Carneros Wetland near airport 0.25 mile south of site. Site is within winter migratory range.
<i>Asio flammeus</i> short-eared owl	-- / -- SSC G5 / S3	Uncommon and local winter visitant along the coast, where it formerly nested. Usually found in open areas with few trees, such as annual and perennial grasslands, prairies, dunes, meadows, irrigated lands, and saline and fresh emergent wetlands	Low (foraging)	No CNDDDB records within 5 miles. Observed roosting at the Los Carneros Wetlands, but as a rare vagrant (GSEMP). Potential visitant, transient, foraging only.
<i>Asio otus</i> Long-eared owl	-- / -- SSC G5 / S3	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding. Riparian habitat required; also uses live oak thickets and other dense stands of trees.	Low (foraging)	No CNDDDB records within 5 miles. Rare transient and winter visitant along the coast.
<i>Agelaius tricolor</i> tri-colored blackbird	-- / SE SSC G2G3 / S1S2	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony. Formerly more common, now an uncommon and very local breeder in Santa Barbara County in dense stands of bulrushes and cattails.	None	No CNDDDB records within 5 miles. Project site lacks suitable habitat.
<i>Ammodramus savannarum</i> grasshopper sparrow	-- / -- SSC G5 / S2	Uncommon and very local summer resident on grassy slopes and mesas west of the deserts.	Low (foraging)	Breeding localities include west of Goleta. Potential visitant, transient, foraging only. 2007 airport eBird records; 2015 and 2014 eBird



**Table 2. Special Status Animal Species in the Project Vicinity**

Scientific Name Common Name	Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence	Potential for Occurrence
				sightings concentrated at the Elwood Open Space, four miles west.
<i>Athene cunicularia</i> burrowing owl	--/-- G4/S3 SSC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Low (winter foraging)	Formerly a common breeder from coastal bluffs to foothills in Goleta area, now only an occasional winter visitor. No suitable habitat onsite due to the ongoing disturbance, lack ground squirrel burrows, and the site is fragmented and isolated from other foraging areas by development and infrastructure. Recent CNDDDB (2004, 2006) Goleta overwintering records. Possible sighting by City staff west of Los Carneros Road in 2008. No CNDDDB records within 5 miles.
<i>Aquila chrysaetos</i> golden eagle	--/-- G5/S3 FP,WL	Uncommon resident of mountainous and valley-foothill areas. Nesting occurs on cliff ledges and overhangs or in large trees. Foraging typically occurs in open terrain where small rodent prey is seen while soaring high above ground.	None	No suitable nesting habitat and Project site is likely too small and proximal to urban development to provide foraging habitat. No CNDDDB records within 5 miles.
<i>Baeolophus inornatus</i> oak titmouse	--/-- G5/S3? SA	Resident from southern Oregon south to Baja California. Preferred habitats include live oaks and deciduous growth, including oak woodlands, streamside cottonwoods, forest edges, and oak-juniper woodlands.	Low (foraging)	No oak woodland on-site or in the Project vicinity. No CNDDDB records within 5 miles. Detected on-site, expected to forage only.
<i>Circus cyaneus</i> northern harrier	-- / -- SSC G5 / S3	Fairly common winter visitant to open grasslands, agricultural fields, freshwater and coastal salt marshes, estuaries, open desert and brushlands.	Low (foraging)	Potentially a winter visitor at Goleta Slough, and may forage occasionally at the site, when present. No CNDDDB records within 5 miles. EBird sightings throughout Goleta concentrated near the estuaries and golf course.
<i>Chaetura vauxi</i>	-- / --	Fairly common spring and fall transient in	Low (foraging)	No CNDDDB records within 5 miles.





**Table 2. Special Status Animal Species in the Project Vicinity**

Scientific Name Common Name	Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence	Potential for Occurrence
Vaux's swift	SSC G5 / S2S3	southern California, and rare and irregular winter visitant, primarily along the coast. Prefers redwood and Douglas-fir habitats with nest-sites in large hollow trees and snags, especially tall, burned out stubs.		Potential visitant, transient, foraging only.
<i>Cypseloides niger</i> black swift	-- / -- SSC G4 / S2	Breeds very locally in the Sierra Nevada and Cascade Range, the San Gabriel, San Bernardino, and San Jacinto Mts., and in coastal bluffs and mountains from San Mateo Co. south probably to San Luis Obispo Co. Nests in moist crevice or cave on sea cliffs above the surf, or on cliffs behind, or adjacent to, waterfalls in deep canyons. Forages widely over many habitats.	Low (foraging)	No CNDDDB records within 5 miles. EBird sightings on the outskirts of Goleta and in the Santa Ynez foothills.
<i>Buteo regalis</i> Ferruginous hawk	-- / -- WL G4 / S3S4	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon-juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Low (foraging)	Marginally suitable foraging habitat on site. Suitable nesting habitat not present.
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	FT / -- SSC G3T3 / S2	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	None	Suitable habitat not present on site.
<i>Empidonax traillii extimus</i> southwestern willow flycatcher	FE/SE -- G5T1T2/S1	Riparian woodlands in southern California, generally with dense shrubs and trees.	None	Suitable habitat not present on site, and off-site willow thickets are limited in acreage and isolated. No CNDDDB records within 5 miles. No eBird records in the Goleta Valley or the South Coast.
<i>Falco columbarius</i> Merlin	-- / -- WL G5 / S3S4	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. Clumps of trees or windbreaks are required for roosting in open country.	Low (foraging)	No CNDDDB records within 5 miles. Reported at Lake Los Carneros. Not observed during site visit.



**Table 2. Special Status Animal Species in the Project Vicinity**

Scientific Name Common Name	Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence	Potential for Occurrence
<i>Icteria virens</i> yellow-breasted chat	-- / -- SSC G5 / S3	Migratory birds that occasionally winter in coastal areas. Habitat consists of thick, shrubby areas such as abandoned farmlands where vegetative growth is abundant.	None	No CNDDDB records within 5 miles. Reported from Tecolotito Creek in previous years. Riparian habitats not present on site, and off-site willow thickets are limited in acreage and isolated. .
<i>Lanius ludovicianus</i> loggerhead shrike	--/-- SSC G4/S4	Found in open grasslands with scattered perches of posts, wires, trees and scrub.	Low (foraging)	The relatively small size of the Project site and proximity to transportation infrastructure and urban development likely discourage this species from occurring. No CNDDDB records within 5 miles. Ebird records at Lake Los Carneros and the Santa Barbara Airport.
<i>Elanus coeruleus</i> white-tailed kite	--/-- FP G5/S3	Grassland, sparse scrub, marshes or open woodland habitats often near agricultural areas. Nests are in isolated trees or forests.	Low (foraging)	Observed foraging on-site in 2010 (City of Goleta, 2011) and to the west of Los Carneros Road (City of Goleta 2014). White-tailed kites are commonly observed at the Santa Barbara Airport, and are documented as nesting at Lake Los Carneros. Not documented by CNDDDB in the Project vicinity. Known roosts at Lake Los Carneros. Breed in oak woodlands and trees, which are not present on the project site. Eucalyptus windrow trees adjacent to the project site not suitable for roosting since subject to ongoing disturbance by US 101 and UPRR. Cyclically fluctuating depending on prey population.



**Table 2. Special Status Animal Species in the Project Vicinity**

Scientific Name Common Name	Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence	Potential for Occurrence
<i>Passerculus sandwichensis beldingi</i> Belding's savannah sparrow	-- / SE -- G5T3 / S2	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in Salicornia on and about margins of tidal flats.	None	Suitable habitat not present on site.
<i>Picoides nuttallii</i> Nuttall's woodpecker	--/-- SA G5/SNR	Typically associated with oak trees and found in wooded canyons and foothills, groves and orchards.	None	No CNDDDB records within 5 miles. No oak woodland habitat on-site or in the Project vicinity.
<i>Rallus obsoletus levipes</i> (= <i>Rallus longirostris levipes</i> ) light-footed Ridgway's [clapper] rail	FE / SE FP G5T1T2 / S1	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation. Requires dense growth of either pickleweed or cordgrass for nesting or escape cover; feeds on mollusks and crustaceans.	None	Suitable habitat not present on site.
<i>Riparia riparia</i> bank swallow	-- / ST SSC G5 / S2S3	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	None	Project vicinity CNDDDB records are historical (1913, 1927). Suitable nesting habitat not present on site.
<i>Setophaga petechia</i> (= <i>Dendroica petechia brewsteri</i> ) yellow warbler	-- / -- SSC G5 / S3S4	Inhabits riparian areas and nests in trees and shrubs of overgrown fields, pastures, shorelines, cultivated fields, orchards, roadsides, and suburban parks.	Low (foraging)	Marginally suitable habitat off-site in Los Carneros Creek riparian vegetation. No CNDDDB records within 5 miles, recent (2013) observation one mile west of the Project site. eBird records at Tecolotito Creek, Lake Los Carneros, and the Santa Barbara Airport.
<i>Vireo bellii pusillus</i> least Bell's vireo	FE/SE -- G5T2/S2	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, baccharis, mesquite.	None	Suitable habitat not present on site, off-site willow thickets are isolated. No CNDDDB records within 5 miles. No eBird records in the Goleta Valley or the South Coast. There are only two breeding season records for the south coast in recent decades. One of these, from the Santa Barbara Municipal



**Table 2. Special Status Animal Species in the Project Vicinity**

Scientific Name Common Name	Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence	Potential for Occurrence
				Airport, involved a bird that was singing in willows along Los Carneros Creek in Goleta Slough, May 18–June 10, 2005 (City of Santa Barbara, 2015). No additional birds were detected that year, and the bird was not detected later in the season, despite additional visits.
<b>Mammals</b>				
<i>Antrozous pallidus</i> pallid bat	--/-- G5/S3 SSC	Deserts, grasslands, shrublands, woodlands, and forest. Most common in open, dry, habitats with rocky area for roosting. Roost must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Low (foraging)	No CNDDDB records within 5 miles. Marginally suitable foraging habitat on-site. Off-site woodland adjacent to railroad and US 101 is not suitable.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-- / -- SSC G3G4 / S2S3	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Low (foraging)	CNDDDB Record (1985) suitable habitat not present on site. Marginally suitable foraging habitat on site.
<i>Eumops perotis californicus</i> western mastiff bat	-- / -- SSC G5T4 / S3S4	Open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. Crevices in cliff faces, high buildings, trees, and tunnels are required for roosting.	Low (foraging)	No CNDDDB records within 5 miles. Roosting habitat not present. Marginally suitable foraging habitat on site.
<i>Lasiorycteris noctivagans</i> silver-haired bat	--/-- SA G5/S3S4	Primarily a coastal and montane forest dweller feeding over streams, ponds, and open brushy areas; roosts in hollow trees beneath exfoliating bark, abandoned woodpecker holes and rarely under tocks. Needs drinking water.	Low (foraging)	No CNDDDB records within 5 miles. Suitable roosting habitat not present on site. May forage on-site.
<i>Lasiurus blossevillii</i> western red bat	-- / -- SSC G5 / S3	Roosts primarily in trees, 2-40 feet above ground, from sea level up through mixed conifer forests; prefers habitat edges and mosaics with trees that are protected from	Low (foraging)	No CNDDDB records within 5 miles. Suitable roosting and not present on site. May forage on-site.



**Table 2. Special Status Animal Species in the Project Vicinity**

Scientific Name Common Name	Fed/State ESA CDFW G-Rank/S-Rank	Habitat Requirements	Potential for Occurrence	Potential for Occurrence
		above and open below with open areas for foraging.		
<i>Lasiurus cinereus</i> hoary bat	--/-- SA G5/S3	The most widespread North American bat. Prefers open habitats or habitat mosaics with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	Low (foraging)	No CNDDDB records within 5 miles. Suitable roosting habitat not present on-site, may forage on-site.
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	-- / -- SSC G5T3T4 / S3	Inhabits desert scrub, coastal scrub and early stages of forest and chaparral habitats	None	Commonly occurred in grassland and disturbed habitat along runways within the Goleta Slough Ecosystem, but not present in the Ecosystem since late 1980s.
<i>Myotis yumanensis</i> Yuma myotis	-- / -- -- G5 / S4	Widespread in California, except the Mojave and Colorado Desert regions. Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution closely tied to bodies of water. Maternity roosts typically occur in caves and buildings.	Low (foraging)	No CNDDDB records within 5 miles. Suitable roosting and open water foraging habitat not present on site.
<i>Neotoma bryanti</i> ( <i>N. lepida intermedia</i> ) Bryant's [San Diego desert] woodrat	-- / -- SSC G5T3T4 / S3S4	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred, xeric sties. They are particularly abundant in rock outcrops and rocky cliffs and slopes.	None	No CNDDDB records within 5 miles. Not observed during surveys. Project site lacks suitable habitat such as rock outcrops preferred by this species for nest structures, and medium to dense foliage in the xeric grassland/scrub areas. Prefers xeric sites, not likely present in the adjacent Los Carneros Creek or Wetland.
<i>Taxidea taxus</i> American badger	--/-- SSC G5/S3	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Low (foraging)	No CNDDDB records within 5 miles. Recorded in the Goleta Slough as late as 1986. Not detected during wildlife camera studies. This species could potentially reach the site from undeveloped areas to the north byway of Los Carneros



**Table 2. Special Status Animal Species in the Project Vicinity**

<b>Scientific Name</b> <b>Common Name</b>	<b>Fed/State ESA</b> <b>CDFW</b> <b>G-Rank/S-Rank</b>	<b>Habitat Requirements</b>	<b>Potential for Occurrence</b>	<b>Potential for Occurrence</b>
				Creek, although given the fragmented and disturbed condition of the Project site and vicinity, as well as its small size, this is unlikely. Any occurrence would likely be transient.

Regional Vicinity refers to within a 5 mile radius of site.

FT = Federally Threatened

SE = State Endangered

FC = Federal Candidate Species

ST = State Threatened

FE = Federally Endangered

SR = State Rare

FS = Federally Sensitive SS = State Sensitive

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDDB RareFind3.

SC = CDFW Species of Special Concern

FP = Fully Protected



Appendix E: Wildlife Corridor Analysis for the Heritage Ridge Project





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September 2, 2014

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*Via mail and E-mail*

Mr. Craig Minus  
The Towbes Group  
21 East Victoria Street, Suite 200  
Santa Barbara, California 93101

***Subject: Wildlife Corridor Analysis for the Heritage Ridge Project***

Dear Mr. Minus:

This wildlife corridor analysis examines the possible movement of mammal species onto and through the Heritage Ridge Project (Project) site between the Santa Ynez Mountain foothills and the Goleta Slough. The focused analysis was designed to collect information relating to a proposed alternative wildlife corridor to a segment of Los Carneros Creek identified by the City in the *Draft Willow Springs II Environmental Impact Report* (DEIR; City 2011). The Project site is located east of Los Carneros Road, south of U.S. Highway 101 (U.S. 101), and immediately north of the existing Willow Springs I and II residential communities in the City of Goleta (City), California (*Figure 1*). The biological study area encompasses the Project site, the Los Carneros Creek and Wetland, and additional open space between Willow Springs I and II, and U.S. 101.

## **BACKGROUND**

Recent Environmental Impact Reports (EIRs) analyzed potential impacts to wildlife corridors for proposed residential projects adjacent to Los Carneros Road and south of U.S. 101: Willow Springs II, to the east of Los Carneros Road (City 2011), and the Village at Los Carneros (City 2014a), to the west of Los Carneros Road. Tecolotito Creek is recognized as an Environmentally Sensitive Habitat Area (ESHA) under the City's Coastal Land Use Plan (Coastal LUP) and considered a wildlife corridor for mammal species that travel between the Santa Ynez Mountain foothills and the Santa Barbara Airport and greater Goleta Slough (Hoagland 2011). The City (2011) considered the Willow Springs II Project site a potential alternative wildlife corridor to Los Carneros Creek for wildlife movement.



A wildlife movement corridor was defined by the City (2011) as,

*“...physical connections that allow wildlife to move between patches of suitable habitat in both disturbed and undisturbed landscapes, as well as environments fragmented by urban development. Large areas of suitable habitat and corridors between these areas are necessary to maintain healthy ecological and evolutionary processes. For example, wildlife movement corridors are necessary for dispersal and migration, to ensure the mixing of genes between populations, and so wildlife can respond and adapt to environmental stress.”*

In the DEIR (2011), Envicom identified two biologically significant ecological habitat “patches” in the area, the Santa Ynez Mountains and the Goleta Slough. The latter, the Goleta Slough, has become isolated from the “core habitats” of the Santa Ynez Mountains due to urban expansion in the City. Several creeks connect these two ecological areas, including Tecolotito (Glen Annie), Los Carneros, San Pedro, Las Vegas, San Jose, and Marie Ignacio. Although the City’s consultant, Envicom Corporation (Envicom), was not able to investigate each creek or route for the possibility of successful wildlife movement as part of EIR preparation, they nonetheless were able to draw conclusions based on field visits in the area and available materials. Generally, they found that, due to the City’s urban environment south of U.S. 101, the creeks offered the best potential wildlife corridors between the foothills of the Santa Ynez Mountains and Goleta Slough, although the quality of these corridors varied.

Specific to Los Carneros Creek and the Project site, the City continues:

*“Los Carneros Creek flows beneath the 101 Freeway in a culvert large enough to support the movement of large mammals. After passing beneath the 101 Freeway, realigned Los Carneros Creek turns and flows east just north of the Union Pacific Railroad tracks before turning and flowing to the south for approximately 0.40 miles to Hollister Avenue in an exposed concrete-lined channel through the industrial area to the east of the project site. Los Carneros Creek then passes under Hollister Avenue in a culvert also capable of supporting the movement of large mammals, including deer, bear, and mountain lion, to the open space of the Goleta Slough Ecosystem. North of the 101 Freeway, Los Carneros Creek passes from the foothills of the Santa Ynez Mountains through naturally vegetated, agricultural or undeveloped lands. Based on land uses surrounding the creeks and associated riparian areas, it appears that Los Carneros Creek, as well as Glen Annie (Tecolotito) Creek, offer better opportunities for movement compared to other creeks draining to the Slough, since each passes through relatively little urban development.”*

*“The project site and the Willow Springs North property represent an alternative to movement along the approximately 0.40-mile exposed concrete-lined reach of Los Carneros*

*Creek to the east of the site. Wildlife utilizing the Willow Springs North property could pass from the Los Carneros Creek culvert beneath the 101 Freeway to the Goleta Slough, via disturbed undeveloped habitats and the Los Carneros Wetland....This option is not without impediments, as portions of the area are graded or contain sparse vegetative cover, and wildlife must cross Camino Vista, a two-lane residential road. However, these are not substantial barriers for some species. Furthermore, the culvert beneath Hollister Avenue between the Los Carneros Wetland and the Goleta Slough is too small to allow passage of large and perhaps some medium-sized mammals. It would be necessary for larger species to cross Hollister Avenue. Nevertheless, this corridor is the more suitable option for smaller species, as compared to the exposed concrete-lined reach of Los Carneros Creek to the east. The concrete-lined reach lacks any cover or foraging habitat for a long distance, leaving many animals vulnerable to predation by raptors, owls, or coyotes, for example. Many animals would not pass through this area due to these habitat conditions.”*

Of wildlife corridors in general, the DEIR states that, “*where movement has been substantially restrained by encroaching development, it is necessary to maintain corridors, despite existing impediments within them, in order to preserve what remains as opportunities for movement.*” The DEIR nonetheless concluded that impacts from the proposed Willow Springs II development would have a *less than significant* affects to the potential alternative corridor (City 2011). Alternatively, the City arrived at the *potentially significant without mitigation* conclusion in their DEIR for the Village at Los Carneros (City 2014a), which contains a primary wildlife corridor along and including Tecolotito Creek, an Environmentally Significant Habitat Area (ESHA) with a City Streamside Protection Area (SPA) designation. The City allowed for a reduction in ESHA buffer from 100-feet to 35 to 40 feet ESHA/SPA from Tecolotito Creek ESHA and, as mentioned, a primary wildlife corridor in their EIR; however, the final conditions of approval for the Village at Los Carneros project required that “*the applicant must submit plans demonstrating a minimum 100-foot setback buffer between the project development and the top of the Tecolotito Creek bank*” (City 2014b). No ESHA, SPA, or riparian or creek habitats occur on the Heritage Ridge Project site.

For this study, Dudek further defines wildlife movement between core areas and/or habitat patches as wildlife corridors and linkage. Please note that the City’s definition of “wildlife corridor” is used when describing or paraphrasing EIR statements.

Habitat Linkage: *An area which possess sufficient cover, food, water and/or other essential elements to serve as a movement pathway or between two or more large areas of habitat. An example of a linkage would be a belt of coastal sage scrub traversing a development, and connecting suitable habitat areas on either side of the developed area.*

Wildlife Corridor: Areas of open space of sufficient width to permit larger, more mobile species to pass between larger areas of open space (core habitats), or to disperse from one major core habitat to another. Such areas can be several hundred feet wide, unobstructed, and usually possess cover, food and water.

## **METHODOLOGY**

Dudek investigated wildlife movement within the biological study area in 2013 and 2014. A pilot study was conducted in 2013 between January 3 and February 4, 2013 (32 days). In 2014, Dudek increased the number of camera stations and duration of the focused study, which lasted from January 18 to June 3, 2014 (160 days). The methodology of the two studies, which comprises our wildlife corridor analysis (i.e., analysis), is described in detail below.

During the 2013 pilot study, under the direction of senior ecologist John Davis IV, wildlife biologists Traci Caddy and Dave Compton conducted an initial daytime field survey on January 3, 2013, to confirm existing biological conditions; search for wildlife species, sign and tracks, and travel routes; and select appropriate camera station locations to record animal movements through the Project site and vicinity. Based on this survey, Dudek strategically placed four cameras to capture wildlife species movement through selected locations in the biological study area (*Table 1, Figure 2*). In addition, Dudek biologists Traci Caddy and Dave Compton conducted one additional daytime tracking survey on January 9, 2013, and two nocturnal spotlighting surveys on January 3, 2013, and January 9, 2013, to survey for nocturnal wildlife activity. An additional daytime visit to review collected data, camera station, and site conditions as they related to wildlife movement was conducted by Dave Compton and senior ecologist John Davis IV on February 4, 2013.

In 2014, Dudek expanded the biological survey area, increased the number of camera stations, and lengthened the survey duration. In addition to camera locations used in 2013, five cameras were placed in strategic locations to provide more coverage of the potential routes of travel. Dudek strategically placed a total of nine cameras to capture species movement through these selected areas of the Project site and to assess entrance and/or exit points to the Project site. In addition, Dudek biologists conducted three daytime tracking surveys, on February 4, April 3, and May 2014. Detailed methods for camera stations and daytime surveys are discussed below.

### **Camera Stations**

Nine motion-triggered camera stations (un-baited and unscented) were set up using Cuddeback Capture® digital cameras with a 50-foot flash range and seven Bushnell HD® Trophy Cams with an 80-foot flash range. The cameras were placed throughout the Project site, and each

operated to a maximum period of 160 days (*Table 1*). Camera direction and location were selected according to the most likely route of wildlife travel through the potential wildlife corridor and at access points to the potential corridor, including the culverts on the north and south ends of the study area (*Figure 2*).

Four camera stations were redeployed in the same locations as in the Dudek 2013 study. For the purpose of this study, Camera Station 1 is in the same location as in the 2013 study at the Hollister Avenue culvert. Camera Station 2 is in the same location as in the 2013 study and now has two cameras (2a and 2b) to ensure coverage that is more complete over possible routes of travel through the Los Carneros Wetland. Camera Station 3 has been re-named Camera station 11 and has been moved slightly south of the original 2013 location due to added fencing and gates. Camera Station 4 is in the same location as in 2013, at the Los Carneros Creek site at the Highway 101 culvert. Five additional cameras have been added to this 2014 study to more thoroughly cover all of the possible routes of travel or entry points into the corridor. These are at the locations described in *Table 1* and displayed on *Figure 1*.

The camera stations were visited on January 22, February 4, February 13, March 3, March 13, April 15, May 15, and June 11, 2014 to download photographs, adjust the position of the camera, and replace batteries (as needed). In 2013, the camera stations were visited on January 9, 13, 15, and 31.

## **Tracking Surveys**

Dudek biologists Traci Caddy and Dave Compton surveyed the study area for tracks and signs during daytime hours on January 3, 2013, and January 9, 2013 (*Table 2*). The entire Project site and access areas to the suggested wildlife movement corridor were surveyed on foot, and all mammal tracks and sign were inventoried. Surveys focused on potential accessed points to the site and areas where mammal tracks could easily be observed, including roads and muddy/wet areas. During the February 4, 2013, site visit, senior ecologist John Davis IV revisited many of the tracks to further verify identification and search for additional tracks. In 2014, Mr. Davis IV, Mr. Compton, and Ms. Caddy conducted four additional tracking surveys.

## **Spotlighting Surveys**

Dudek biologists Traci Caddy and Dave Compton conducted nocturnal spotlighting surveys in the study area for mammal species on January 3, 2013, and January 15, 2013 (*Table 2*). Each survey lasted approximately two hours. The biologists walked the Project site and other open space between Willow Springs I and U.S. 101, watching for wildlife and occasionally stopping to shine flashlights over open areas where wildlife might be passing. On the latter date, the

biologists also walked the perimeter of the Los Carneros Wetland, occasionally shining lights over the wetland to scan for wildlife.

**Table 1**  
**Camera Station Locations and Dates of Operations**

Camera Station	Location and Orientation	Coordinates	Start Date(s)	End Date(s)
1	North end of culvert beneath Hollister Avenue	34° 25' 52.38" N 119° 51' 02.74" W	January 7, 2014	June 11, 2014
2(a)	Los Carneros Wetland; Camera faces east	34° 35' 55.22" N 119° 51' 07.96" W	January 16, 2014	June 11, 2014
2(b)	Los Carneros Wetland; same location as Camera 2 facing south	34° 35' 10.47" N 119° 51' 07.74" W	March 3, 2014	June 11, 2014
3 <sup>1</sup>	Middle of potential wildlife corridor on fence at west edge of project site	34° 26' 55.22" N 119° 51' 07.96" W	January 9, 2013	January 31, 2013
4	South end of culvert beneath U.S. 101	34° 26' 14.67" N 119° 51' 00.52" W	January 7, 2014	June 11, 2014
5	South end of culvert beneath U.S. 101; east of camera 4 and just north of camera 6	34° 26' 15.42" N 119° 50' 53.13" W	January 16, 2014	June 11, 2014
6	Concrete channel north end	34° 26' 13.51" N 119° 50' 52" W	January 16, 2014	June 11, 2014
7	Concrete channel south end	34° 25' 53.94" N 119° 50' 51.30" W	January 7, 2014	June 11, 2014
8	Corner of Los Carneros Way	34° 26' 01.79" N 119° 51' 09.98" W	January 22, 2014	June 11, 2014
9	Middle of corridor and behind construction trailer	34° 26' 06.61" N 119° 51' 06.31" W	January 22, 2014	June 11, 2014
10 <sup>2</sup>	North-central portion of project site along coyote brush scrub.	34° 26' 11.44" N 119° 51' 05.46" W	Not applicable <sup>2</sup>	Not applicable <sup>2</sup>
11	Middle of project site through chain-link fence	34° 26' 10.44" N 119° 51' 08.06" W	January 16, 2014	June 11, 2014

<sup>1</sup>Installed, but not operating on January 11-14, 2013.

<sup>2</sup>Location of camera station selected, however, camera was not installed. Instead selected stations 3 (2013) and 11 (2014)

**Table 2**  
**Tracking and Spotlighting Survey Dates, Times, and Conditions**

Survey Date/ Times	Conditions	Surveyors	Type of Survey
January 3, 2013 2:21pm-4:30pm	Clear with light winds (0-2 mph). Temperatures ranged from 63°F to 64°F.	Dave Compton, Traci Caddy	Daytime tracking survey
January 3, 2013 6:43pm-8:30pm	Clear with light winds (0-2 mph). Temperatures ranged from 43°F to 51°F.	Dave Compton, Traci Caddy	Nighttime spotlighting survey
January 9, 2013 6:50am- 8:45am	Clear with light winds (0-2 mph). Temperatures ranged from 42°F to 50°F.	Dave Compton, Traci Caddy	Daytime tracking survey
January 15, 2013 6:50pm-8:20pm	Clear with light winds (0-2 mph). Temperatures ranged from 41°F 42°F.	Dave Compton, Traci Caddy	Nighttime spotlighting survey
February 4, 2013 11:00am – 12:30pm	Clear with light winds (0-2 mph). Temperatures ranged from 70°F 72°F.	John Davis IV Dave Compton	Daytime site review
February 4, 2014 8:11am- 10:34am	25% Cloud Cover with light winds (0-1 mph). Temperatures ranged from 49°F to 52°F.	Traci Caddy, Dave Compton	Daytime tracking survey
March 3, 2014 8:11am – 9:35	25%CC with light winds (0-1mph). Temperatures ranged from 52°F-57°F.	Traci Caddy, Dave Compton	Daytime tracking survey
April 8, 2014 3:30 – 5:00 pm	50%CC with light winds (0-5.5mph). Temperatures ranged from 75°F-84°F.	John Davis IV	Daytime tracking survey
April 15, 2014 11:00 – 12:35 pm	Clear with light winds (0-1mph). Temperatures ranged from 73°F-78°F.	John Davis IV	Daytime tracking survey

## LIMITATIONS

The 2013 survey was conducted during winter, when most mammals occurring in the area would be expected to be active in this season. Conditions were suitable for detection of active wildlife species and any recent sign of their presence in the Project area during the surveys (*Table 2*). However, the short duration of the wildlife movement assessment during mid-winter limited the amount and intensity of wildlife movement we could reasonably document. Further, the winter season is not ideal to capture wildlife dispersing from “core habitats” such as the Santa Ynez Mountains foothill to “patches” like the Goleta Slough. Instead, wildlife movement captured by the cameras and evidenced by sign was likely a function of daily activities in search of prey items and shelter. Wildlife activities, especially of mammals, increase in spring and summer;

therefore, there is chance that wildlife species that may occur at other times of year were not captured as a result. Additionally, some of the fences that were present during the study were likely installed since field surveys were performed by Envicom (July 16, 2010) and/or the FEIR (City 2011) was prepared (2010/2011). Some fencing in the direct pathway of the potential wildlife corridor may have obstructed wildlife movement during the study.

The 2014 study was conducted concurrently with the construction of the Willow Springs II development. The combination of on-going construction, traffic, fencing, material storage, etc. likely affected wildlife travel routes, however, these limitations were recognized and discussed early in the study (before camera's were positioned). In fact, The Towbes Group understood the limitations and worked proactively with Dudek to make adjustments to reduce the limitations and strengthen the study. The major changes were to fencing. The Towbes Group – Construction Division cut several openings in the chain link fencing in areas where Dudek observed or determined that wildlife traveled or could through the site on the way to and back from the Los Carneros Wetlands.

Also during the study, a second construction project started to the west of the Project site, reinforcement of the Los Carneros Road overpass, a Caltrans project. The steep slope of the south overpass abutment was highly disturbed throughout much of the study and access to the lower portions of the abutment occurred in the northern portion of the biological study area. It is unlikely that the daytime construction directly affected wildlife movement to the Los Carneros Wetlands or west to Tecolotito Creek (no nighttime work was conducted); however, Dudek was unable to safely place camera stations in the area to capture wildlife movement to the west of the Project site. The construction activities also affected prime wildlife tracking conditions following rain events as ideal tracking areas were quickly driven over by construction equipment and vehicles quickly eliminating any new tracks.

## RESULTS

### Camera Stations

#### Coyote

The coyote (*Canis latrans*) is a medium-size mammal (8 to 20 kg / 1300 to 1700 mm total length) that can move over a large area and between habitats in search of prey. During this study, coyotes were detected by an independent camera station observation (observation) at Camera Station 2b, Camera Station 4, Camera Station 5, Camera Station 6, and Camera Station 9 (*Table 3* and *Camera Data*). Camera Station 4 (at the culvert at U.S 101 just north of the Project site) had the greatest number of observations of coyote (total number (n) equals 17). There were only



two on-site observations of coyote recorded at Camera Station 9 (*Table 3*) and a total of 29 coyote observations for all camera stations.

### Bobcat

The bobcat (*Lynx rufus*) is a medium-size mammal (7 to 13 kg / 635 to 1400 mm total length) that can move over a large area (territory size ranges from 5 to 30 square miles) and their habitat includes forests, deserts, urban edges, and scrub. Bobcats were detected at Camera Station 2a, Camera Station 4, Camera Station 5, Camera Station 8, Camera Station 9, and Camera Station 11. Camera Station 5 (at the culvert at U.S 101 northeast of the Project site) had the greatest number of observations of bobcat, with 146 moving in either direction along the Los Carneros Creek culvert. There were several observations (n=27) of bobcat recorded on all three of the cameras located on the Project site. There were also several observations of bobcat at the entrance/exit points to the Project site including Camera Stations 4 and 2a (17 observations) (*Table 3*). There were a total of 190 observations of bobcat.

### Raccoon

The raccoon (*Procyon lotor*) is a medium-size mammal (4 to 8 kg / 780 to 930 mm total length) that persists near creeks in the urban landscape and also natural forest woodlands and wetlands habitats. While this species covers relatively long distances for a mammal of its size, its home range is much smaller than that of the coyote and larger mammals (Zeiner et al. 1990). Raccoons were detected at Camera Station 2a, Camera Station 4, Camera Station 5, Camera Station 6, Camera Station 8, and Camera Station 9 (*Table 3*). The culverts north of the Project site at Camera Station 4, Camera Station 5, and Camera Station 6 at the north end of the concrete channel had the highest number of raccoon observations, with 48-61 per location. There were several observations (n=30) of raccoon at two of the cameras (Camera Station 8 and Camera Station 9) on the Project site. There were a total of 204 observations of raccoon.

Other mammal species recorded at camera stations were smaller mammals that do not range over large areas and, therefore, are not indicator species for wildlife corridors. They included striped skunk (*Mephitis mephitis*) and opossum (*Didelphis virginiana*). Neither rabbit nor rodent (i.e., small mammal) species were included in the analysis.

**Table 3**  
**Camera Station Results**

Camera Station No.	Season Year	Mammal Species Observed	Number of Independent Observation	Notes
1	Winter 2013	Coyote ( <i>Canis latrans</i> )	2	Heading in west direction in both photographs.
1	Winter 2013	Raccoon ( <i>Procyon lotor</i> )	3	Crossing through stream and heading south in all photographs.
2a	Winter 2013	Coyote ( <i>Canis latrans</i> )	5	The same individual identified in three of the photographs based on distinct tail markings
2a	Winter 2014	Bobcat ( <i>Lynx rufus</i> )	9	Observed equally going in both directions
2a	Winter 2014	Raccoon ( <i>Procyon lotor</i> )	4	
2a	Winter 2014	Opossum ( <i>Didelphis virginiana</i> )	1	
2b	Spring 2014 Summer 2014	Coyote( <i>Canis latrans</i> )	4	Heading west in all occasions
4	Winter 2014 Spring 2014 Summer 2014	Coyote( <i>Canis latrans</i> )	17	Most occurrences are heading in south direction
4	Winter 2014 Spring 2014 Summer 2014	Bobcat ( <i>Lynx rufus</i> )	8	Occurrences are going in both directions along creek.
4	Winter 2014 Spring 2014 Summer 2014	Raccoon ( <i>Procyon lotor</i> )	48	
4	Winter 2014 Spring 2014 Summer 2014	Striped Skunk ( <i>Mephitis mephitis</i> )	26	
4	Spring 2014	Opossum ( <i>Didelphis virginiana</i> )	13	
5	Winter 2014 Spring 2014	Coyote( <i>Canis latrans</i> )	5	All occurrences were heading in north direction
5	Winter 2014 Spring 2014	Bobcat ( <i>Lynx rufus</i> )	146	Occurrences are going in both directions.
5	Winter 2014 Spring 2014	Raccoon ( <i>Procyon lotor</i> )	51	Many of the occurrences have multiple individuals.
5	Winter 2014 Spring 2014	Striped Skunk ( <i>Mephitis mephitis</i> )	15	Most occurrences are heading in north direction.
5	Winter 2014 Spring 2014	Opossum ( <i>Didelphis virginiana</i> )	146	
6	Winter 2014	Coyote( <i>Canis latrans</i> )	1	
6	Winter 2014 Spring 2014	Raccoon ( <i>Procyon lotor</i> )	61	Occurrences heading in both directions
6	Spring 2014	Striped Skunk ( <i>Mephitis</i>	14	

**Table 3**  
**Camera Station Results**

Camera Station No.	Season Year	Mammal Species Observed	Number of Independent Observation	Notes
	Summer 2014	<i>mephitis</i> )		
8	Winter 2014 Spring 2014 Summer 2014	Bobcat ( <i>Lynx rufus</i> )	14	Occurrences heading in both directions
8	Winter 2014 Spring 2014 Summer 2014	Raccoon ( <i>Procyon lotor</i> )	26	Many of the occurrences have multiple individuals.
8	Winter 2014 Spring 2014 Summer 2014	Striped Skunk ( <i>Mephitis mephitis</i> )	19	
8	Winter 2014 Spring 2014 Summer 2014	Opossum ( <i>Didelphis virginiana</i> )	20	
9	Spring 2014 Summer 2014	Coyote ( <i>Canis latrans</i> )	2	Both occurrences heading in southern direction
9	Spring 2014 Summer 2014	Bobcat ( <i>Lynx rufus</i> )	11	Most occurrences heading in north direction.
9	Winter 2014 Spring 2014	Raccoon ( <i>Procyon lotor</i> )	4	
9	Winter 2014 Spring 2014	Striped Skunk ( <i>Mephitis mephitis</i> )	11	Most occurrences are heading in north direction
9	Winter 2014 Spring 2014	Opossum ( <i>Didelphis virginiana</i> )	24	
11	Spring 2014	Bobcat ( <i>Lynx rufus</i> )	2	Both occurrences heading in northern direction
11	Winter 2013	Raccoon ( <i>Procyon lotor</i> )	1	Two individuals in photograph
11	Winter 2013 Winter 2014 Spring 2014	Striped Skunk ( <i>Mephitis mephitis</i> )	12	Most occurrences heading in north direction
11	Spring 2014 Summer 2014	Opossum ( <i>Didelphis virginiana</i> )	14	All occurrences are heading in north direction

### Tracking Surveys

In 2013, most tracks were recorded around the middle of the Project site near Camera Station 3 (Figure 3). This area included a graded, temporary road and large unvegetated areas, including muddy ground and standing water. In this area, raccoon, coyote, striped skunk, bobcat, and opossum (*Didelphis virginiana*) tracks were observed. Additionally, raccoon tracks were observed near Camera Station 4. Much of the remainder of the Project site consisted of vegetated

areas where tracks could not easily be discerned. *Figure 3* displays the location and year of the tracks and sign observed.

In 2014, tracks were primarily recorded around the northern end of the Project site, just north of Camera Station 11 near the railroad tracks (*Figure 3*). This area had unvegetated areas along the railroad tracks and along the construction road areas and includes muddy ground and standing water. In this area, raccoon, coyote, and bobcat tracks or scat were observed. Additionally, coyote scat was observed near Camera Station 11. Much of the remainder of the Project site consisted of vegetated areas and/or substrate where tracks could not easily be discerned, and as discussed, construction activities on-site and near the Los Carneros Road Bridge reduced the area and timing for track identification.

### **Spotlighting Surveys**

In 2013, no mammal species were detected during walking nocturnal spotlighting surveys, however, several owls were observed. Spotlighting was not performed in 2014.

### **SUMMARY**

During the study, three target medium-sized mammal species (coyote, bobcat, and raccoon) and two non-target mammal species (striped skunk and opossum) moved between the north and western portions of the Heritage Ridge Project site and south to the Los Carneros Wetlands. No observations of deer, bear, or mountain lion were within the biological study area during the study. The most interesting data is that of the bobcat. The study's highly documented the bobcat, a typically timid species, within the biological study area demonstrating that the habitat at the U.S. 101 culverts outlets provided enough plant coverage and shelter to allow safe movement south of the highway for this elusive cat. Bobcats are primarily nocturnal animals, especially near urban areas where they try to avoid human encounters. In fact, bobcats that live in areas highly fragmented by urbanization are even more nocturnal than bobcats that live in remote areas (Urban Carnivores 2014). Nearly all bobcat observations were at night.

Bobcats moved through Project site to reach the Los Carneros Wetlands and are also thought to travel west or east of the site. The data suggest that the latter is preferred, but without camera stations positioned at the Los Carneros Road overpass due to on-going construction activities during the study, no direct evidence is available for the west travel route (alternative wildlife linkage); however, the west route connects with Tecolotito Creek, a documented primary wildlife corridor to the Goleta Slough (City 2014a, Hoagland 2011), approximately 0.44 to 0.50 mile to the south and west. To the east of the Project site and south of U.S. 101, the urban environment is dense and expansive, with the exception of Twin Lakes Golf Course and Las Vegas Creek (on

the golf course) approximately 0.64 mile east of Camera Station 5. Las Vegas Creek extends south across Hollister Avenue and along the eastern boundary of the Santa Barbara Airport with access to highly fragmented habitat patches, including the Goleta Slough another 0.75 mile south of the golf course. Of the 190 bobcat camera station observation only 25 (7.6 percent) were from on-site camera stations (8 and 11) and the Los Carneros Wetlands (camera station 2A). Los Carneros Creek represented the eastern boundary of the biological survey area (Camera Station 5, 6, and 7). Bobcats were most often observed at Camera Station 5, but not in Los Carneros Creek at station 6 or 7 as the creek becomes a concrete stormwater culvert south of the Union Pacific railroad track easement. This indicates that bobcats were also using, perhaps preferring, other routes of travel. Data for the coyote and raccoon supported the use of all potential wildlife movement routes (i.e., linkages). Both species are more tolerant of the urban environment and were found throughout the biological study area with the exception of the south end of the stormwater culvert (Camera Station 7), and, therefore, bobcats remain the focus of analysis especially as it relates to Project Design (below).

## DISCUSSION

The hypothesis of an alternative wildlife movement route (wildlife linkage) south through the Project site to the Los Carneros Wetlands and onto the Santa Barbara Airport and greater Goleta Slough was analyzed in this study. As alluded to by the City (2011) and consultant (Envicom), it is unlikely due to physical barriers and impediments that wildlife movement would occur in the concrete portion of Los Carneros Creek south of Union Pacific railroad tracks. Instead, it was proposed that the Project site and Tecolotito Creek would provide a more ideal wildlife corridor to the slough.

*“...it appears that Los Carneros Creek, as well as Glen Annie (Tecolotito) Creek, offer better opportunities for movement compared to other creeks draining to the Slough, since each passes through relatively little urban development” (City 2011).*

It is agreed that the segment of Los Carneros Creek that connects areas north of U.S. 101 to the Goleta Slough is a poor wildlife linkage providing no wildlife habitat. The “stormwater culvert” consists of an approximately 2,000 foot concrete-lined flood control channel with steep walls and 6-foot high chain-link fences at the top-of-slope (west and east) bordering the channel. Dudek’s data suggests that wildlife species were generally absent from the channel, especially the southern end near Hollister Road, where the camera captured regular human foot traffic but no wildlife activity. Striped skunk and opossum were, however, infrequently captured by the wildlife cameras on the north end. Based on the camera data, Los Carneros Creek/Channel does not provide a wildlife linkage between the Santa Ynez Mountains and the Goleta Slough on airport property.

Additionally, the City (2011) stated:

*“Wildlife utilizing the Willow Springs North property could pass from the Los Carneros Creek culvert beneath the 101 Freeway to the Goleta Slough, via disturbed undeveloped habitats and the Los Carneros Wetland...”*

*“It would be necessary for larger species to cross Hollister Avenue. Nevertheless, this corridor is the more suitable option for smaller species, as compared to the exposed concrete-lined reach of Los Carneros Creek to the east.”*

Light traffic on Hollister Avenue is expected late in the evening, which theoretically, would allow nocturnally active wildlife species to transverse the asphalt to the airport and slough from the Los Carneros Wetlands. However, most mammal species will then find limited habitat, coverage, and an 8-foot tall, well-maintained chain-link security fence approximately 300 feet south of the road, forming a physical barrier to the slough. The area north of the slough and south of Hollister Avenue is considered a “habitat patch” considering the surrounding urban environment, although the quality is questionable due to the existing hazards, frequent maintenance, and limited coverage. Predatory interactions and road casualties may result from these forays for the species of interest. One raccoon was observed dead on Hollister Avenue during the study. If wildlife species were able to access the airport property, just south of Los Carneros Creek is the airport runway and a very well maintain safety area providing no coverage and limited hunting or foraging opportunities. Habitat conditions improve further west and south near the confluence of Los Carneros and Tecolotito Creek and south along and adjacent to Tecolotito Creek deeper into the slough.

As indicated, the Hollister Avenue culvert at Tecolotito Creek offers the most ideal wildlife access point to the Goleta Slough on Santa Barbara Airport property (*Figure 4*). In fact, Hoagland et. al. (2011) determined Tecolotito Creek to be one of four primary corridors in the Goleta Valley with sufficient culvert sizes to allow for movement of larger mammals (i.e., deer and black bears) (Hoagland 2011, City 2012); however, in the Village of Los Carneros Draft EIR, the City (2014a) noted that the largest species to move through the Tecolotito Creek and culverts is foxes (*Vulpes* spp.) and the American badger (*Taxidea taxus*) and found the 110 foot total minimum width (60 foot for the Tecolotito Creek ESHA and 50 feet for adjacent upland habitat) proposed for the Village project was sufficient for wildlife species utilizing corridor, which was later expanded to 100 feet from the creek bank per the final conditions of approval for the project (City 2014b). Based on literature, existing data, and personal observations, Tecolotito Creek and its culverts provide the best option for wildlife movement between the Santa Ynez Mountain foothills and the Goleta Slough on Santa Barbara Airport property.

In conclusion, the study found evidence of a wildlife linkage between the Santa Ynez Mountain foothills and the Los Carneros Wetlands through the Heritage Ridge Project site and no linkage between the Los Carneros Creek or Wetlands and the greater Goleta Slough on the Santa Barbara Airport. The alternative wildlife corridor proposed by the City (2011) linking the foothills (and Project site) to the slough was, therefore, not substantiated. Instead, the data suggest that an alternative wildlife linkage occurs to the west connecting to Tecolotito Creek, a primary wildlife corridor to the Goleta Slough (*Figure 4*). Another possible wildlife linkage exists to the east connecting to Las Vegas Creek at the Twin Creeks Golf Course, which also connects to the Goleta Slough, although with impediments. The expected end point of the linkage for most wildlife species traveling to the east may just be the golf course for hunting opportunities.

## **PROJECT DESIGN**

Heritage Ridge has allotted for a wildlife linkage along the north and west perimeter of the Project site to allow for movement of mammals and other wildlife species between the Santa Ynez Mountain foothills and Los Carneros wetlands to the south of the site. True Nature Landscape Architecture, working with Dudek, has included in a wildlife trail in their preliminary landscape plan (*see attached C-1, C-2, and C-3*) along a 6 to 8-foot sound wall that will separate parking lots (north and west side of project) and condominiums (south side of Project) from the designated wildlife linkage. To ensure conditions along the linkage will continue its purpose of wildlife movement, the plant palette is low maintenance in design. Even so, the corridor will be regularly maintained. The wildlife linkage will also be in compliance with City of Goleta Fire Department Codes and resistant to vagrant establishments. The Towbes Group is in the process of finalizing the project design; therefore, recommendations are presented below to reduce indirect effects to the wildlife corridor that could inhibit movement and/or full use of the trail to the Los Carneros Wetlands.

## **RECOMMENDATIONS**

The Heritage Ridge Project will affect the width and topography of the wildlife linkage that extends between the Santa Ynez Mountain foothills and the Los Carneros Wetlands. To successfully allow for development of the Project while providing a functional wildlife linkage between the foothill and wetlands, the following recommendations are requested of the Project:

- Direct all neighborhood night lighting downward and away from the wildlife linkage
- No artificial lighting should be placed on the noise barrier or in the wildlife linkage
- Restrict the use of pesticides, insecticides, and rodenticides, and educate the future homeowners about the effects to mammals and other wildlife species

*Mr. Craig Minus*

*Wildlife Corridor Analysis for the Heritage Ridge Project*

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- Bobcats are susceptible to the same diseases as domestic cats, and disease can be transmitted between domestic cats and bobcats (or vice versa). Educating future house owners and the public about feline diseases and promoting indoor cats will protect bobcat use of the corridor and throughout the coastal zone and foothills
- Educate future homeowners and the public about the importance of the wildlife linkage

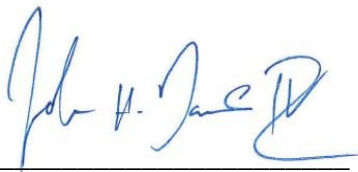
Implementation of the above recommendations will reduce potential indirect affects to wildlife utilizing the linkage, especially at night, when most mammals were observed moving through the area.

## **CONCLUSION**

The Heritage Ridge Project will expand the boundaries of the existing Willow Springs residential neighborhoods to the west near Los Carneros Road. Two narrow urban wildlife corridors/linkages are situated near the Project site; one potentially links with Tecolotito Creek further west of the site and Los Carneros Road, while the second extends along the northern and western portions of the Project site to the east and along Los Carneros Road and eventually south (off-site) to the Los Carneros Wetlands. Maintaining this wildlife linkage is important for many small- (raccoon, striped skunk, etc.) and medium- (coyote and bobcat) sized mammal species that use these areas (wetlands and foothills) to hunt, seek shelter, breed, and conduct other normal behaviors important for their survival, especially within the wildness-urban interface. If the recommendations presented are implemented and successfully maintained, I expect that wildlife travel will persist along the perimeter of the Project site connecting the San Ynez Mountain foothills and the Los Carneros Wetlands.

If you have any questions regarding the contents of this letter report, please do not hesitate to contact me at (805) 308-8524 office or (805) 252-7996 cell or by email at [jdavis@dudek.com](mailto:jdavis@dudek.com).

Sincerely,



John H. Davis IV  
Project Manager / Senior Ecologist

*Att.: References*  
*Camera Data*  
*Figure 1: Project Site Location*  
*Figure 2: Camera Stations*  
*Figure 3: Camera Station and Tracking Results*



*Mr. Craig Minus*  
*Wildlife Corridor Analysis for the Heritage Ridge Project*

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*Att. (continued):*

*Figure 4: Wildlife Corridors*  
*Photo Documentation*  
*Landscape Plans (C-1, C-2, and C-3)*

*cc: Linda Blackburn, The Towbes Group, via email*

## **REFERENCES**

- City of Goleta. 2014a. Village at Los Carneros Final Environmental Impact Report (June 2, 2014).
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## CAMERA STATION DATA

Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
2a	January 18, 2014/6:41am January 24, 2014/4:48am January 25, 2014/6:08 am January 30, 2014/6:03am February 1, 2014/7:13am February 5, 2014/8:26pm February 12, 2014/10:17pm February 18, 2014/12:13am February 21, 2014/10:15pm	Bobcat	Going in both directions       Heading southeast Heading northwest
2a	January 25, 2014/3:31am	Opossum	
2a	January 18, 2014/5:41am February 18, 2014/5:20am February 28, 2014/4:54am March 3, 2014/3:41am	Raccoon	
2b	April 23, 2014/2:48am May 18, 2014/4:15am May 23, 2014/12:20am June 8, 2014/11:38pm	Coyote	Heading west Heading west Heading west Heading west
4	March 26, 2014/10:48pm March 29, 2014/8:11pm April 4, 2014/8:39pm April 8, 2014/10:02pm April 10, 2014/2:29am April 28, 2014/12:53am May 4, 2014/4:42am May 8, 2014/2:02am May 9, 2014/5:09am May 22, 2014/3:09am May 24, 2014/11:36pm May 25, 2014/10:17pm May 31, 2014/10:32pm	Opossum	
4	February 15, 2014/5:09am February 18, 2014/1:20am February 24, 2014/5:55am March 4, 2014/3:21am March 7, 2014/10:08pm March 9, 2014/11:45pm March 11, 2014/2:49am March 13, 2014/3:34am March 15, 2014/10:54pm March 17, 2014/9:31pm March 24, 2014/7:27pm March 25, 2014/7:36pm	Raccoon	

Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	March 26, 2014/5:44am April 2, 2014/6:15am April 2, 2014/8:18pm April 5, 2014/8:20pm April 7, 2014/6:23am April 7, 2014/10:27pm April 7, 2014/10:53pm April 9, 2014/10:29pm April 12, 2014/11:12pm April 16, 2014/11:47pm April 17, 2014/4:38am April 19, 2014/8:13pm April 24, 2014/10:29pm April 26, 2014/9:01pm April 29, 2014/8:56pm May 1, 2014/6:22am May 3, 2014/1:13am May 3, 2014/1:14am May 3, 2014/1:26am May 3, 2014/4:52am May 4, 2014/9:28pm May 8, 2014/12:19am May 8, 2014/4:04am May 8, 2014/5:10am May 9, 2014/11:11pm May 13, 2014/4:36am May 13, 2014/11:10pm May 13, 2014/11:24pm May 18, 2014/1:27am May 25, 2014/11:07pm May 27, 2014/3:10am May 29, 2014/4:35am May 31, 2014/1:08am June 2, 2014/5:20am June 3, 2014/4:47am June 3, 2014/11:41pm		2 Raccoons
Camera Station 4	February 14, 2014/1:05am February 14, 2014/3:33am February 16,2014/2:08am February 16,2014/10:29pm February 23, 2014/1:57am February 23, 2014/6:50pm March 12, 2014/12:34pm March 16, 2014/4:06am March 19, 2014/2:57am	Striped Skunk	

Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	March 28, 2014/12:09am March 28, 2014/3:24am April 3, 2014/9:40pm April 10, 2014/5:12am April 13, 2014/3:42am April 17, 2014/1:43am April 24, 2014/1:05am April 24, 2014/9:04pm April 29, 2014/4:51pm April 30, 2014/11:49pm May 6, 2014/2:28am May 12, 2014/9:43pm May 14, 2014/3:26am May 15, 2014/1:52am May 15, 2014/11:34pm May 17, 2014/3:57am June 6, 2014/3:41am		
Camera Station 4	January 8, 2014/9:58pm January 13, 2014/4:55pm February 8, 2014/1:18am April 12, 2014/4:06am May 8, 2014/4:33am May 17, 2014/11:07pm June 4, 2014/3:14am June 6, 2014/9:28pm	Bobcat	Heading south  Heading north Heading north Heading north Heading south Heading north Heading south
Camera Station 4	January 17, 2014/10:52am January 20, 2014/11:05pm January 21, 2014/12:00am April 2, 2014/5:29pm April 25, 2014/6:08pm May 7, 2014/7:51pm May 9, 2014/5:16am May 11, 2014/4:36am May 18, 2014/4:00pm May 22, 2014/5:00am May 24, 2014/5:12am May 28, 2014/5:23pm May 31, 2014/4:30pm May 31, 2014/4:36pm June 4, 2014/2:03am June 8, 2014/6:57am June 9, 2014/5:23pm	Coyote	All heading south   Heading north Heading south Heading south Heading south Heading south Heading south Heading south Heading south Heading south Heading north Heading south Heading south
Camera Station 5	January 20, 2014/3:38am January 22, 2014/4:57am January 23, 2014/12:15am January 24, 2014/3:54am	Opossum	

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Wildlife Corridor Analysis for the Heritage Ridge Project

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Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	January 25, 2014/1:20am		
	January 25, 2014/1:52am		
	January 26, 2014/6:57pm		
	January 27, 2014/7:39pm		
	January 28, 2014/10:12pm		
	February 1, 2014/9:23pm		
	February 5, 2014/12:25am		
	February 5, 2014/8:55pm		
	February 8, 2014/1:36am		
	February 8, 2014/1:51am		
	February 8, 2014/6:35pm		
	February 9, 2014/6:24pm		
	February 10, 2014/6:12pm		
	February 11, 2014/12:08am		
	February 14, 2014/8:26pm		
	February 17, 2014/7:31pm		
	February 20, 2014/1:01am		
	February 20, 2014/11:28pm		
	February 27, 2014/7:37pm		
	March 6, 2014/8:14pm		
	March 7, 2014/8:38pm		
	March 8, 2014/8:11pm		
	March 9, 2014/1:53am		
	March 9, 2014/8:54pm		
	March 10, 2014/7:32pm		
	March 10, 2014/8:03pm		
	March 11, 2014/3:02am		
	March 11, 2014/3:16am		
	March 12, 2014/4:09am		
	March 12, 2014/8:12pm		
	March 14, 2014/9:03pm		
	March 16, 2014/9:09pm		
	March 16, 2014/10:47pm		
	March 17, 2014/8:28pm		
	March 18, 2014/4:03am		
	March 18, 2014/6:08am		
	March 18, 2014/8:56pm		
	March 18, 2014/11:01pm		
	March 19, 2014/11:43pm		
	March 20, 2014/4:35am		
	March 20, 2014/9:53pm		
	March 20, 2014/11:07pm		
	March 21, 2014/10:16pm		
	March 23, 2014/2:06am		
	March 23, 2014/11:09am		
	March 25, 2014/5:13am		

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Wildlife Corridor Analysis for the Heritage Ridge Project

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Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	March 25, 2014/8:46pm		
	March 25, 2014/9:18pm		
	March 27, 2014/2:13am		
	March 27, 2014/2:45am		
	March 27, 2014/8:28pm		
	March 28, 2014/1:39am		
	March 28, 2014/4:11am		
	March 28, 2014/8:36pm		
	April 2, 2014/11:24pm		
	April 3, 2014/3:38am		
	April 4, 2014/12:13am		
	April 4, 2014/3:21am		
	April 4, 2014/4:27am		
	April 4, 2014/9:28pm		
	April 4, 2014/10:25pm		
	April 5, 2014/12:02am		
	April 5, 2014/1:52am		
	April 5, 2014/2:15am		
	April 6, 2014/9:44pm		
	April 7, 2014/10:35pm		
	April 8, 2014/1:00am		
	April 9, 2014/5:29am		
	April 9, 2014/5:59am		
	April 10, 2014/4:43am		
	April 10, 2014/6:22am		
	April 10, 2014/9:04pm		
	April 11, 2014/5:31am		
	April 11, 2014/6:09am		
	April 11, 2014/6:54am		
	April 12, 2014/5:34am		
	April 12, 2014/10:06pm		
	April 12, 2014/11:11pm		
	April 12, 2014/11:54pm		
	April 13, 2014/2:11am		
	April 13, 2014/2:50am		
	April 13, 2014/5:21am		
	April 14, 2014/12:11am		
	April 14, 2014/3:47am		
	April 14, 2014/4:21am		
	April 14, 2014/9:23pm		
	April 15, 2014/12:22am		
	April 15, 2014/4:09am		
	April 16, 2014/2:39am		
	April 16, 2014/2:51am		
	April 16, 2014/3:40am		
	April 17, 2014/5:29am		

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Wildlife Corridor Analysis for the Heritage Ridge Project

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Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	April 18, 2014/1:13am		
	April 22, 2014/8:36pm		
	April 23, 2014/9:29pm		
	April 24, 2014/2:18am		
	April 24, 2014/4:57am		
	April 25, 2014/2:06am		
	April 25, 2014/11:40pm		
	April 26, 2014/12:39am		
	April 26, 2014/3:15am		
	April 26, 2014/10:50pm		
	April 27, 2014/1:55am		
	April 29, 2014/2:54am		
	April 30, 2014/4:52am		
	April 30, 2014/9:26pm		
	April 30, 2014/9:42		
	May 2, 2014/2:23am		
	May 3, 2014/1:31am		
	May 3, 2014/10:21pm		
	May 4, 2014/10:53pm		
	May 5, 2014/2:43am		
	May 6, 2014/1:03am		
	May 6, 2014/1:39am		
	May 6, 2014/10:22pm		
	May 7, 2014/12:14am		
	May 7, 2014/12:40am		
	May 7, 2014/1:32am		
	May 7, 2014/1:34am		
	May 7, 2014/4:21am		
	May 7, 2014/8:47pm		
	May 8, 2014/12:47am		
	May 8, 2014/2:30am		
	May 8, 2014/3:03am		
	May 8, 2014/3:04am		
	May 8, 2014/3:31am		
	May 8, 2014/3:40am		
	May 8, 2014/5:12am		
	May 8, 2014/9:07pm		
	May 9, 2014/12:04am		
	May 9, 2014/3:58am		
	May 12, 2014/10:15pm		
	May 15, 2014/12:41am		
	May 16, 2014/9:33pm		
	May 18, 2014/3:07am		
	May 18, 2014/9:42pm		
	May 20, 2014/3:37am		
	May 20, 2014/3:43am		





Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	April 14, 2014/1:51am April 14, 2014/2:32am April 18, 2014/4:16am April 19, 2014/8:26pm April 23, 2014/5:02am April 23, 2014/5:03 April 23, 2014/8:40pm April 25, 2014/5:46am April 26, 2014/10:35pm April 27, 2014/5:15am May 4, 2014/4:02am May 4, 2014/10:59pm May 5, 2014/5:17am May 7, 2014/5:18am May 9, 2014/3:05am May 9, 2014/9:26pm May 9, 2014/11:53pm May 15, 2014/12:53am May 18, 2014/2:31am		Two raccoons Two raccoons Two raccoons Two raccoons
Camera Station 5	January 18, 2014/3:25am January 20, 2014/12:14pm January 21, 2014/5:33am January 22, 2014/3:41am January 25, 2014/4:27am January 27, 2014/1:42am January 28, 2014/3:29am February 6, 2014/1:11am February 6, 2014/4:20am February 23, 2014/8:50pm March 5, 2014/8:24pm March 11, 2014/5:33am March 21, 2014/12:00am April 3, 2014/10:04pm April 7, 2014/11:09pm	Striped skunk	Heading north Heading south Heading north Heading north Heading north Heading north Heading north Heading north Heading south Heading north Heading north Heading north Heading west Heading south Heading north Heading north
Camera Station 5	January 18, 2014/1:00am January 27, 2014/2:25am January 30, 2014/2:18am February 1, 2014/1:31am May 8, 2014/2:15am	Coyote	Heading north Heading north Heading north Heading north Heading north
Camera Station 5	January 16, 2014/9:51pm January 16, 2014/10:18pm January 17, 2014/11:29pm January 18, 2014/12:12am January 18, 2014/4:10am January 19, 2014/2:42am January 19, 2014/2:49am	Bobcat	Heading south Heading north Heading south Heading north Heading north Heading south Heading south

Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	January 19, 2014/8:57pm		Heading south
	January 19, 2014/10:26pm		Heading north
	January 20, 2014/5:43am		Heading south
	January 20, 2014/6:08am		Heading north
	January 24, 2014/12:14am		Heading south
	January 24, 2014/12:46am		Heading north
	January 26, 2014/1:24am		Heading south
	January 26, 2014/1:24am		Heading west
	January 26, 2014/4:10am		Heading north
	January 27, 2014/12:46pm		Heading south
	January 27, 2014/1:12am		Heading north
	January 29, 2014/1:54am		Heading south
	January 29, 2014/4:13am		Heading north
	January 30, 2014/2:17am		Heading south
	January 30, 2014/3:59am		Heading north
	January 31, 2014/11:45am		Heading south
	February 1, 2014/3:01am		Heading north
	February 2, 2014/7:44pm		Heading south
	February 2, 2014/8:52pm		Heading north
	February 4, 2014/12:12am		Heading south
	February 4, 2014/2:24am		Heading south
	February 4, 2014/2:27am		Heading north
	February 4, 2014/2:57am		Heading north
	February 5, 2014/2:41am		Heading south
	February 5, 2014/3:44am		Heading north holding kill
	February 6, 2014/2:14am		Heading south
	February 8, 2014/3:34am		Heading south
	February 8, 2014/5:06am		Heading north
	February 10, 2014/2:33am		Heading north
	February 10, 2014/3:36am		Heading south
	February 10, 2014/4:15am		Heading north
	February 12, 2014/1:46am		Heading south
	February 12, 2014/3:43am		Heading north
	February 18, 2014/12:44am		Heading south
	February 18, 2014/2:00am		Heading north
	February 19, 2014/11:58pm		Heading south
	February 19, 2014/11:59pm		Heading north
	February 20, 2014/12:00am		Heading south
	February 20, 2014/2:07am		Heading north
	February 22, 2014/8:18pm		Heading south
	February 22, 2014/9:49pm		Heading north
	February 23, 2014/3:31am		Heading south
	February 23, 2014/5:07am		Heading north
	March 2, 2014/3:13am		Heading south
	March 3, 2014/4:48am		Heading north
	March 4, 2014/12:10am		Heading south

Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	March 4, 2014/4:48am		Heading north
	March 6, 2014/9:02pm		Heading south
	March 6, 2014/9:46pm		Heading north
	March 7, 2014/11:38pm		Heading south
	March 8, 2014/4:31am		Heading north
	March 9, 2014/1:59am		Heading south
	March 9, 2014/3:51am		Heading north
	March 9, 2014/10:59pm		Heading south
	March 10, 2014/3:26am		Heading north
	March 11, 2014/11:51pm		Heading south
	March 12, 2014/2:16am		Heading north
	March 12, 2014/5:17am		Heading north
	March 12, 2014/10:52pm		Heading south
	March 13, 2014/2:41am		Heading north
	March 16, 2014/2:20am		Heading north
	March 17, 2014/1:04am		Heading south
	March 17, 2014/5:17am		Heading north
	March 17, 2014/9:33pm		Heading south
	March 17, 2014/11:02pm		Heading north
	March 19, 2014/11:51		Heading south
	March 19, 2014/2:29am		Heading north
	March 22, 2014/10:46pm		Heading south
	March 23, 2014/11:57pm		Heading north
	March 24, 2014/12:10am		Heading north
	March 27, 2014/8:34pm		Heading south
	March 27, 2014/10:32pm		Heading north
	March 28, 2014/11:34pm		Heading south
	March 29, 2014/12:19am		Heading south
	March 29, 2014/2:18am		Heading north
	March 29, 2014/4:27am		Heading north
	March 30, 2014/11:19pm		Heading south
	March 31, 2014/1:22am		Heading north
	April 2, 2014/10:53pm		Heading south
	April 2, 2014/11:07pm		Heading south
	April 3, 2014/12:29am		Heading north
	April 6, 2014/12:31am		Heading south
	April 6, 2014/12:46am		Heading north
	April 6, 2014/3:55am		Heading north
	April 7, 2014/1:51am		Heading south
	April 7, 2014/3:29am		Heading south
	April 7, 2014/5:54am		Heading north
	April 10, 2014/7:56pm		Heading south
	April 10, 2014/9:46pm		Heading south
	April 10, 2014/9:56pm		Heading north
	April 11, 2014/3:44am		Heading north
	April 12, 2014/1:11am		Heading south

Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	April 12, 2014/3:22am		Heading north
	April 12, 2014/4:13am		Heading north
	April 14, 2014/9:05am		Heading south
	April 15, 2014/3:41am		Heading north
	April 16, 2014/1:35am		Heading south
	April 17, 2014/5:03am		Heading north
	April 18, 2014/11:52pm		Heading north
	April 19, 2014/3:23am		Heading south
	April 19, 2014/5:21am		Heading north
	April 20, 2014/8:57pm		Heading south
	April 21, 2014/4:12am		Heading north
	April 23, 2014/12:16am		Heading south
	April 23, 2014/3:03am		Heading north
	April 25, 2014/12:49am		Heading south
	April 25, 2014/12:51am		Heading north
	April 25, 2014/12:53am		Heading south
	April 25, 2014/5:03am		Heading north
	April 25, 2014/6:20am		Heading north
	April 25, 2014/11:02pm		Heading south
	April 26, 2014/1:25am		Heading north
	April 30, 2014/3:11am		Heading south
	April 30, 2014/4:51am		Heading north
	May 1, 2014/9:39pm		Heading north
	May 3, 2014/11:51pm		Heading south
	May 4, 2014/3:59am		Heading north
	May 7, 2014/2:53am		Heading south
	May 7, 2014/4:31am		Heading north
	May 7, 2014/9:48pm		Heading south
	May 8, 2014/1:44am		Heading south
	May 8, 2014/4:13am		Heading north
	May 11, 2014/12:20am		Heading north
	May 11, 2014/1:06am		Heading south
	May 11, 2014/2:37am		Heading north
	May 12, 2014/4:16am		Heading south
	May 15, 2014/3:32am		Heading north
	May 18, 2014/5:45am		Heading north
	May 18, 2014/11:43pm		Heading south
Camera Station 6	January 20, 2014/4:39am	Coyote	
Camera Station 6	February 17, 2014/ 2:00am	Raccoon	Heading south
	February 18, 2014/2:00am		Two individuals going south
	February 20, 2014/1:06am		Heading north
	February 20, 2014/1:09am		Heading south
	February 20, 2014/1:10am		Heading north
	February 23, 2014/4:59am		Heading south
	February 27, 2014/7:22am		Heading south
	February 27, 2014/9:15pm		Heading south

Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	March 4, 2014/4:09am		Heading south
	March 5, 2014/4:18am		Heading north
	March 7, 2014/7:26pm		Two individuals going south
	March 7, 2014/9:05pm		Heading south
	March 8, 2014/12:43pm		Heading north
	March 8, 2014/3:43am		Heading west
	March 8, 2014/7:13pm		Heading south
	March 11, 2014/8:40pm		Heading north
	March 11, 2014/11:25pm		Heading south
	March 12, 2014/1:42am		Heading north
	March 12, 2014/6:33pm		Heading south
	March 12, 2014/7:32pm		Two individuals going south
	March 12, 2014/7:56pm		Heading north
	March 13, 2014/1:49am		Heading south
	March 13, 2014/8:35pm		Heading south
	March 21, 2014/8:52pm		Heading north
	March 21, 2014/9:14pm		Heading south
	March 21, 2014/12:52am		Heading south
	March 21, 2014/3:43am		Heading south
	March 22, 2014/3:45am		Heading north
	March 23, 2014/4:48am		Heading north
	March 24, 2014/3:50am		Heading north
	March 24, 2014/11:39pm		Heading south
	March 25, 2014/8:01pm		Heading south
	March 25, 2014/11:32pm		Heading south
	March 26, 2014/4:54am		Heading south
	March 26, 2014/5:28am		Heading north
	March 27, 2014/4:38am		Heading south
	March 27, 2014/6:09am		Two individuals going south
	March 28, 2014/2:19am		Heading north
	March 28, 2014/8:38pm		Heading south
	March 28, 2014/9:03pm		Heading north
	March 29, 2014/4:58am		Heading south
	March 29, 2014/8:48pm		Two individuals going south
	April 1, 2014/2:33am		Heading north
	March 2, 2014/8:03pm		Heading south
	March 2, 2014/8:47pm		Heading south
	March 3, 2014/3:48am		Heading north
	March 4, 2014/12:42am		Heading north
	March 4, 2014/1:00am		Heading north
	March 4, 2014/4:43am		Heading south
	March 6, 2014/3:04am		Heading south
	March 11, 2014/2:07am		Heading south
	March 12, 2014/1:25am		Heading north
	March 13, 2014/12:02am		Heading south
	March 17, 2014/12:33am		Heading south

Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	March 18, 2014/9:24pm May 1, 2014/9:32pm May 6, 2014/3:01am May 8, 2014/12:25am May 13, 2014/4:21am May 22, 2014/3:58am May 30, 2014/2:53am		Heading south Heading south Heading south Heading south Heading north Heading south Heading north
Camera Station 6	March 21, 2014/11:45pm April 2, 2014/1:10am April 18, 2014/2:49am April 22, 2014/2:30am April 27, 2014/5:20am April 27, 2014/11:49pm April 30, 2014/11:21pm May 4, 2014/11:51pm May 7, 2014/9:23pm May 23, 2014/10:53pm May 23, 2014/11:45pm May 30, 2014/1:07am May 31, 2014/11:19pm June 6, 2014/11:38pm	Striped skunk	2 individuals heading south three individuals
Camera Station 8	January 24, 2014/5:36am January 28, 2014/10:56pm January 29, 2014/3:54am January 29, 2014/10:31pm January 31, 2014/2:14am February 2, 2014/12:15am February 3, 2014/4:27am February 6, 2014/9:55pm February 6, 2014/10:42pm February 8, 2014/6:28am February 10, 2014/4:00am February 12, 2014/1:11am March 9, 2014/12:40am March 17, 2014/10:11pm April 4, 2014/4:33am April 7, 2014/12:37am May 4, 2014/9:36pm May 13, 2014/9:11pm June 6, 2014/1:26am	Striped skunk	
Camera Station 8	January 28, 2014/11:29pm January 28, 2014/12:18am January 31, 2014/9:12pm February 3, 2014/1:31am February 6, 2014/2:39am	Opossum	

Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	February 10, 2014/1:43am February 10, 2014/10:10pm February 27, 2014/10:18pm March 13, 2014/3:13pm April 14, 2014/1:25am April 18, 2014/2:23am April 20, 2014/4:34am April 21, 2014/4:57am April 28, 2014/8:51pm April 30, 2014/2:02am May 2, 2014/10:58pm May 3, 2014/9:16pm June 3, 2014/10:35pm June 3, 2014/10:42pm June 10, 2014/1:40am		
Camera Station 8	January 22, 2014/8:18pm January 23, 2014/4:50am January 23, 2014/8:26am January 24, 2014/3:24am January 25, 2014/1:40am January 25, 2014/7:03pm January 27, 2014/5:07am January 28, 2014/7:50pm January 30, 2014/4:07am February 3, 2014/2:58am February 12, 2014/5:00am February 17, 2014/10:33pm February 19, 2014/10:05pm February 24, 2014/3:11am February 24, 2014/3:40am March 3, 2014/12:53am March 8, 2014/12:09am March 11, 2014/10:10pm April 7, 2014/4:42am April 7, 2014/6:16am April 25, 2014/4:39am May 7, 2014/8:34pm May 19, 2014/8:43pm May 29, 2014/12:38am May 29, 2014/1:35am June 2, 2014/8:26pm	Raccoon	2 Raccoons  2 Raccoons
Camera Station 8	January 25, 2014/1:23am January 25, 2014/4:42am January 28, 2014/4:44am February 6, 2014/12:45am February 13, 2014/11:01pm	Bobcat	Heading north Heading south Heading south Heading north Heading north



Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	February 14, 2014/1:39am March 18, 2014/10:41pm April 15, 2014/11:13pm April 17, 2014/2:47am April 17, 2014/2:50am April 27, 2014/10:48pm May 22, 2014/2:08am June 2, 2014/12:23am June 6, 2014/12:43am		Heading south Heading south Heading south Heading south Heading north Heading south Heading south Heading north Heading north
Camera Station 9	January 22, 2014/6:56pm January 22, 2014/9:39pm January 22, 2014/9:50pm January 22, 2014/9:59pm January 24, 2014/1:45am January 25, 2014/3:11am January 25, 2014/7:41pm February 4, 2014/10:27pm February 5, 2014/7:16pm February 6, 2014/2:29am February 17, 2014/12:20am March 3, 2014/4:55am March 4, 2014/1:19am March 5, 2014/12:51am March 6, 2014/4:45am March 7, 2014/2:55am March 8, 2014/2:49am March 9, 2014/2:53am March 10, 2014/5:42am March 11, 2014/2:34am March 12, 2014/7:59pm April 24, 2014/1:34am May 11, 2014/4:09am May 20, 2014/2:16pm	Opossum	2 opossums
Camera Station 9	January 23, 2014/2:31am January 24, 2014/12:36am January 24, 2014/7:17pm January 24, 2014/9:47pm January 24, 2014/9:51pm January 25, 2014/3:52am January 26, 2014/7:05pm January 26, 2014/9:49pm February 5, 2014/6:53pm February 7, 2014/10:26pm March 21, 2014/8:58pm	Striped skunk	
Camera Station 9	January 25, 2014/3:06pm March 7, 2014/6:38am	Raccoon	Heading north 2 raccoons

Camera Station No.	Date / Time Stamp	Mammal Species Observed	Notes
	March 19, 2014/4:36am March 19, 2014/4:48am		
Camera Station 9	March 11, 2014/10:25pm March 23, 2014/12:19am March 23, 2014/10:36pm March 27, 2014/9:02pm March 28, 2014/11:59pm April 5, 2014/10:55pm April 14, 2014/9:37pm April 23, 2014/1:40am May 11, 2014/1:59am May 18, 2014/2:39am June 1, 2014/10:22pm	Bobcat	Heading south Heading south Heading south Heading south Heading south Heading south Heading south Heading south Heading north Heading north Heading north Heading south
Camera Station 9	May 23, 2014/2:38am June 6, 2014/1:45am	Coyote	Heading south Heading south
Camera Station 11	January 24, 2014/5:55pm March 18, 2014/11:05pm March 21, 2014/8:23pm March 27, 2014/9:10pm April 3, 2014/8:19pm April 3, 2014/8:48pm May 3, 2014/3:33am May 6, 2014/11:56pm May 9, 2014/8:34pm May 17, 2014/10:19pm May 19, 2014/3:04am	Striped skunk	Heading north Heading north Heading south Heading north Heading north Heading north Heading north Heading north Heading north Heading north Heading north
Camera Station 11	March 29, 2014/12:58am March 21, 2014/12:27am	Bobcat	Heading north Heading north
Camera Station 11	April 23, 2014/9:02pm April 28, 2014/9:22pm April 30, 2014/2:28am March 19, 2014/11:36pm March 20, 2014/8:12pm April 23, 2014/9:02pm April 28, 2014/9:22pm May 2, 2014/11:54pm May 2, 2014/11:54pm May 5, 2014/11:54pm May 6, 2014/8:40pm May 26, 2014/2:45am June 3, 2014/10:56pm June 4, 2014/9:32pm	Opossum	Heading north Heading north Heading north Heading north Heading north Heading north Heading north Heading north Heading north Heading north Heading north Heading north Heading north



SOURCE: USGS Topo 7.5 Minute Series - GOLETA Quadrangle  
 Township 4N / Range 28W / Sections 07, 18

**FIGURE 1**  
**Project Site Location**





Project Site

Biological Study Area

Culvert

Camera Station (2014)

Camera Station (inactive)

Camera Station (2013-2014)

Camera Station (2013)



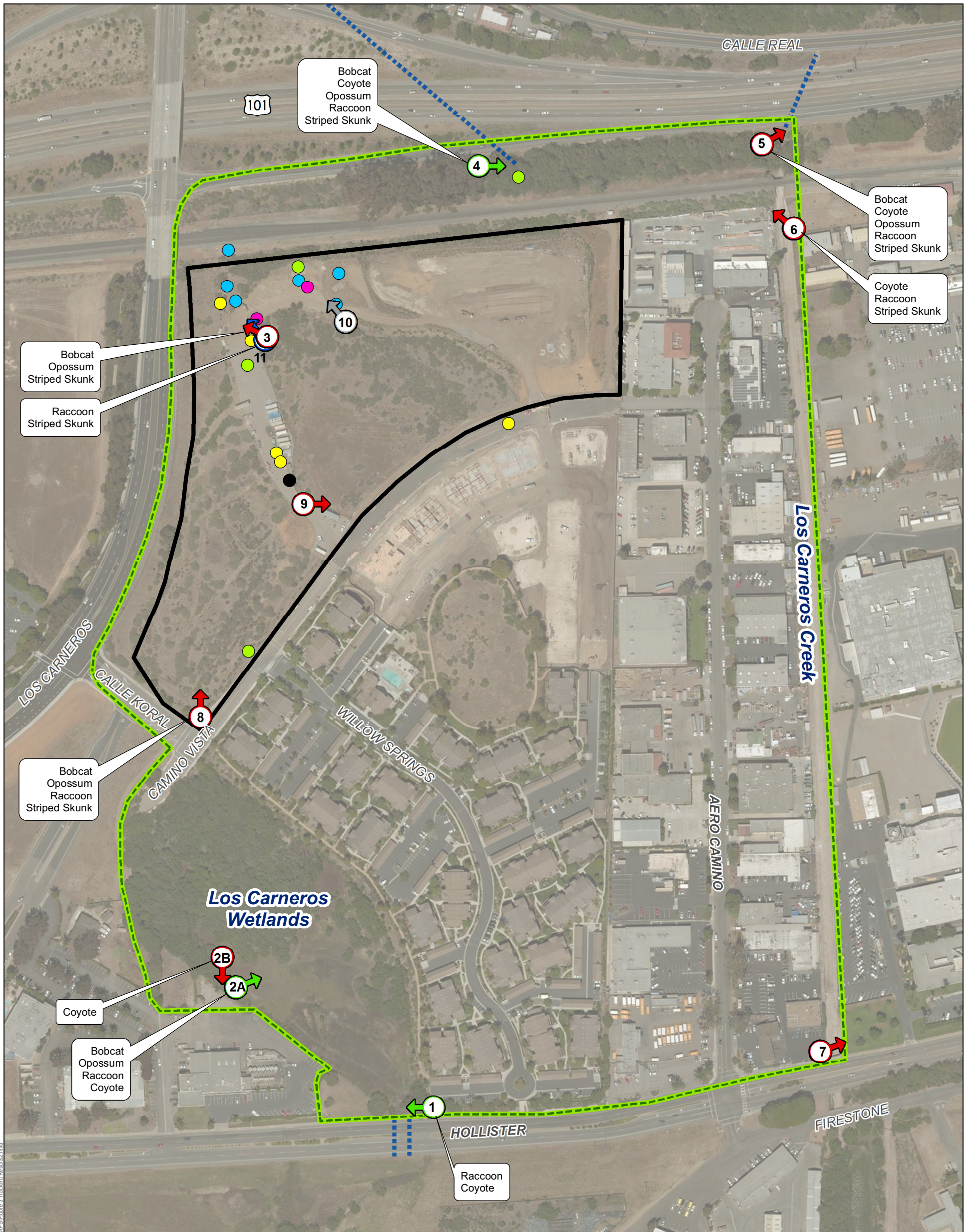
0 100 200 Feet

SOURCE: Bing Maps

**DUDEK**

**FIGURE 2**  
**Camera Stations**





- Project Site
- Biological Study Area
- Culvert

- Camera Station (2014)
- Camera Station (2013-2014)
- Camera Station (inactive)
- Camera Station (2013)

**Wildlife Observations**

- Bobcat
- Coyote
- Opossum
- Raccoon
- Skunk

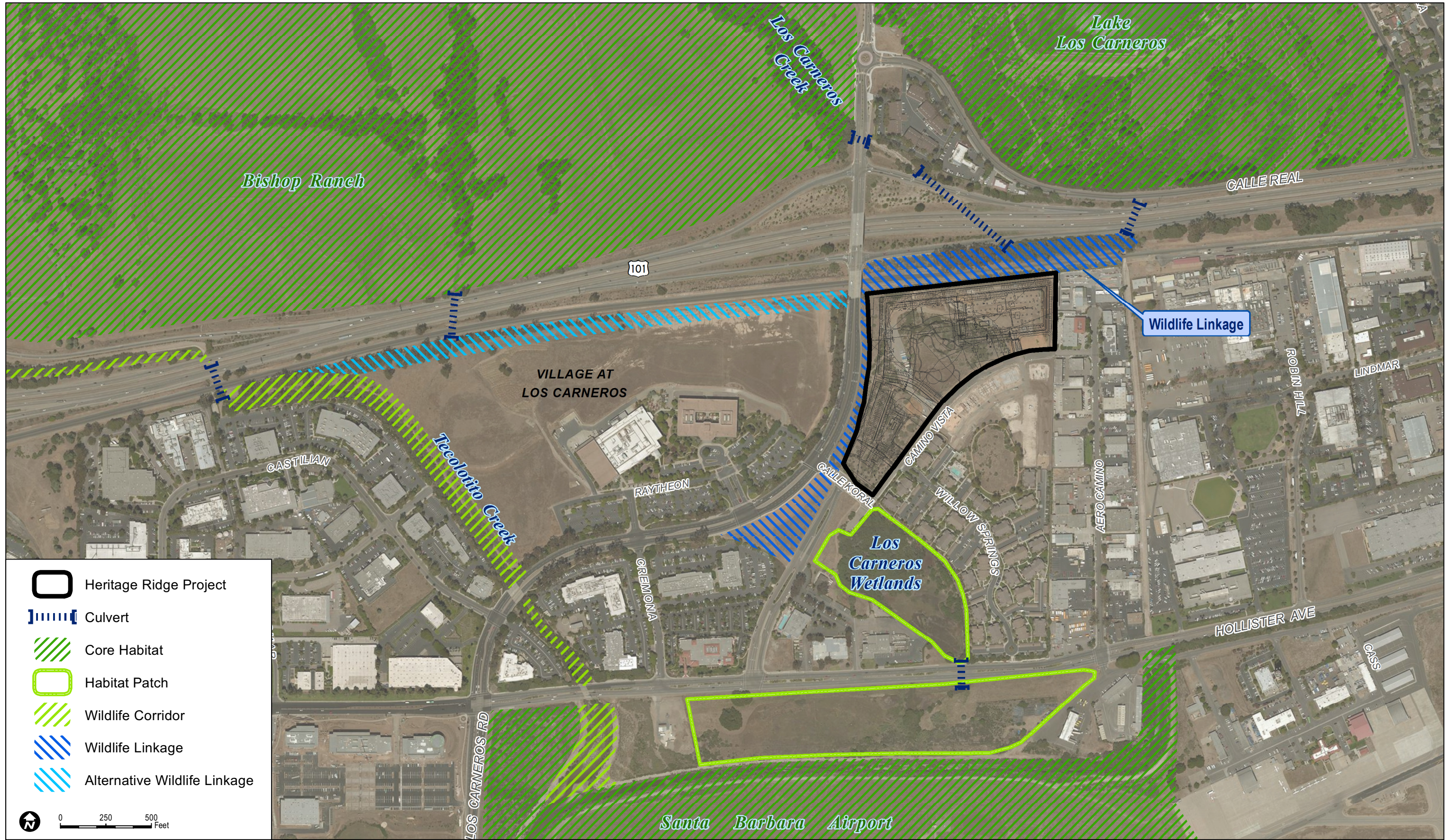
Bobcat Wildlife Species Capture by Camera



SOURCE: Bing Maps

**FIGURE 3**  
**Tracking Results**





SOURCE: SOURCE: MAC Design Associates, Bing Maps

**Figure 4**  
**Wildlife Corridors**