

**REVISED
NESTING SEASON SURVEY
BURROWING OWL**
(Athene cunicularia hypugaea)

PLOT PLAN T18003 (PAR 1536)

APN 941-180-032

44.6-Acre Site (Gross); ±40 Acres Surveyed

LOCATION:

Northeast corner of intersection of De Portola Road and Monte De Oro in unincorporated Riverside County, California. Mapped in portions of Sections 29 and 30, Township 7 South and Range 1 West of USGS Topographic Map, 7.5 Minute Series, Bachelor Mountain, California Quadrangle

OWNER/APPLICANT:

**Long Jiang
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SURVEYS CONDUCTED ON:

July 17 and 25, and August 10 and 17, 2017

REPORT DATE:

April 2, 2018

REPORT DATES

Original: November 1, 2017

Revised: April 2, 2018

REPORT TITLE

Nesting Season Survey for the Burrowing Owl (*Athene cunicularia hypugaea*)

CASE NUMBER

PAR 1536 (Note that the Plot Plan T18003 was submitted on January 24, 2018, and this report was completed on November 1, 2017)

ASSESSOR'S PARCEL NUMBER

941-180-032

SITE LOCATION

Northeast corner of intersection of De Portola Road and Monte De Oro in unincorporated Riverside County, California (**Site Vicinity Map**). Mapped in portions of Sections 29 and 30, Township 7 South and Range 1 West of USGS Topographic Map, 7.5 Minute Series, Bachelor Mountain, California Quadrangle (**USGS Location Map**).

ACREAGES

±44.6 gross acres

±40 acres surveyed (30 acres onsite and 10 acres offsite)

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PRINCIPAL INVESTIGATOR

Paul A. Principe

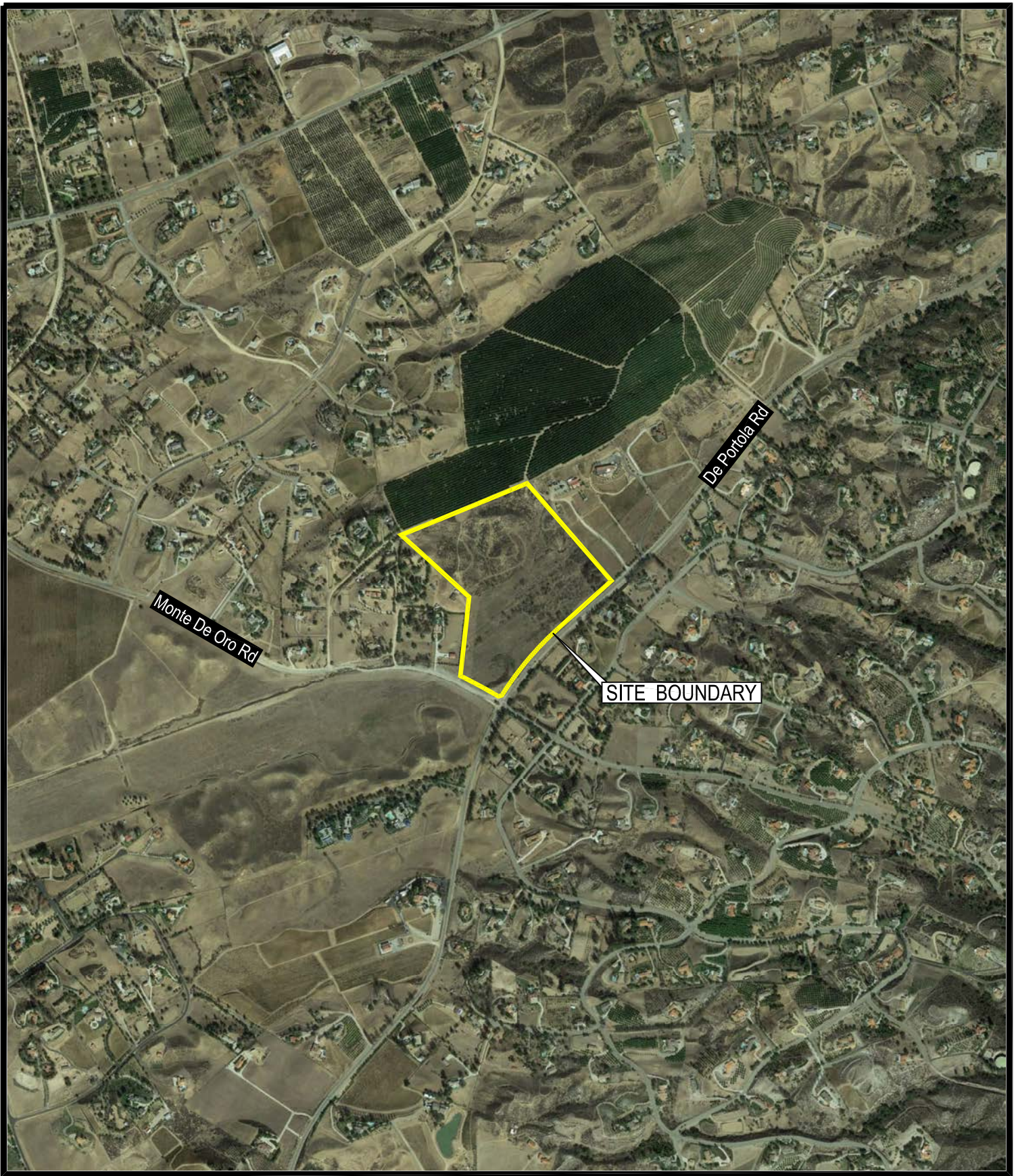
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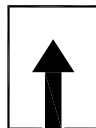
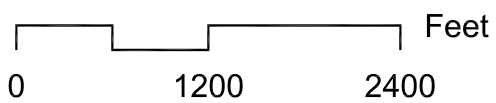
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Source of Aerial Photo: Google Earth 10-21-2016

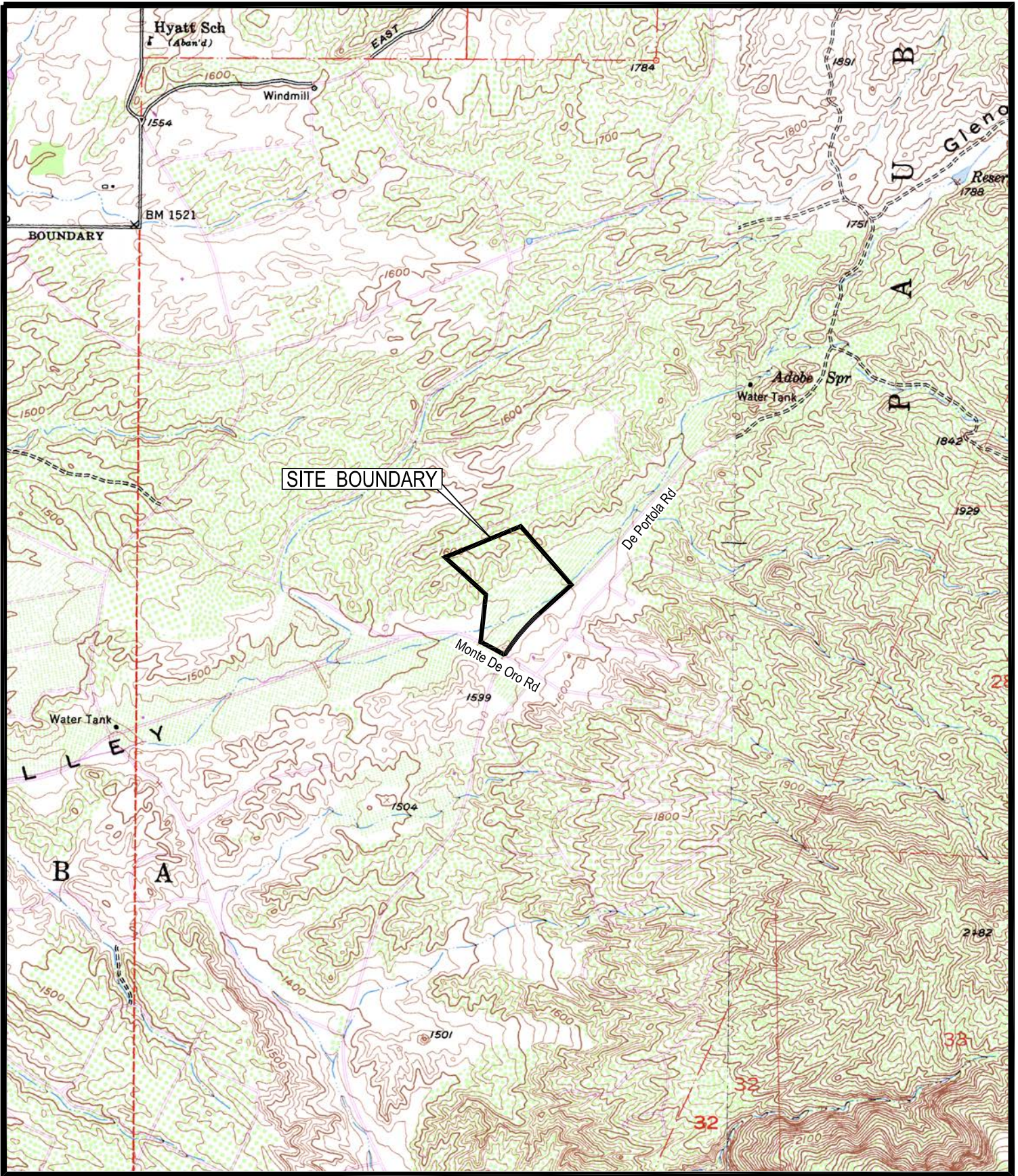
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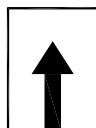
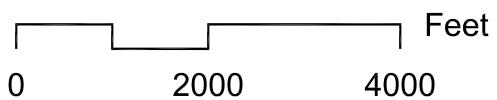
SITE VICINITY MAP

PAR 1536

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Base Map Source: USGS 7.5 Min.
Bachelors Mtn., Calif. Quad.



USGS LOCATION MAP

PAR 1536

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SURVEY SUMMARY

The site is located within the Burrowing Owl Survey Area, Figure 6-4 of the MSHCP. Based on the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area, an independent assessment was made of the presence or absence of burrowing owl habitats on the site and in a 150-meter buffer zone around the project boundary.

The methodology used to prepare the assessment involved conducting complete visual and walk-over field surveys to determine the presence or absence of burrowing owl habitats on the site and in a 150-meter (approximately 500 feet) buffer zone around the project boundary. Surveys were conducted by walking through suitable habitats on the site and in the buffer zone.

The assessment determined that a portion of the site was providing suitable burrowing owl habitats consisting of relatively large open expanses of annual grassland and lowland scrub on gentle rolling and level terrain with active small mammal burrows. Only a few required habitat features capable of being used for nesting and roosting were present, and included natural California ground squirrel burrows in the flat-lying areas located in the northern portion of the site and artificial burrows (culverts) in the southern portion of the site. All suitable habitats present on the site were surveyed. The rather dense sage scrub covering the steeper hills located in the remainder of the northern portion of the site were not providing suitable burrowing owl habitats, and were not surveyed.

Suitable habitats were limited in the buffer zone to the undeveloped area located west of the site. All suitable habitats present in the buffer zone were surveyed. A citrus grove, winery and vineyard, and numerous single-family residential developments located in the remainder of the buffer zone were not providing suitable burrowing owl habitats, and were not surveyed.

A Nesting Season Survey following the survey instructions was then undertaken. Four surveys were conducted between and July 17 and August 17, 2017. During the 2017 Nesting Season Survey, burrowing owls were not observed. Required burrowing owl habitats capable of being used for nesting and roosting were not being used. Also, animal signs diagnostic of burrowing owls that are sometimes overlooked were not discovered anywhere on the site or in the buffer zone. There was no evidence of either active habitats presently being used by burrowing owls, or habitats abandoned within the last year.

Completion of this Nesting Season Survey is consistent with Species Conservation Objective 5 of the MSHCP that was developed for the burrowing owl. To ensure direct mortality of burrowing owls is avoided in the future, a pre-construction presence/absence survey should be conducted within thirty (30) days prior to ground disturbance at the site. The proposed project site would then be consistent with Species Conservation Objective 6 of the MSHCP.

ABSTRACT

Due to the presence of suitable and required burrowing owl habitats on the site and in the buffer zone, a **Nesting Season Survey for the Burrowing Owl (*Athene cunicularia hypugaea*)** was completed at the site. Four nesting season surveys were conducted between July 17 and August 17, 2017, and followed the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (March 29, 2006).

DESCRIPTION OF THE SITE, INCLUDING TOPOGRAPHY, HYDROGRAPHY, SOILS, VEGETATION ASSOCIATIONS AND SPECIES COMPOSITION, AND ANIMALS OBSERVED DURING VISIT(S)

Site Description

The site is currently vacant and undeveloped with structures. According to Ben Drake, President of Drake Enterprises, Inc., a farm management company specializing in the development, maintenance and marketing of winegrapes and avocados in Southern Riverside and Northern San Diego Counties, the western portion of the site was developed as a vineyard in the late 1960s, and was productive through 1999. An aerial photograph from 1996 shows that the hilly northern portion of the site was covered by native sage scrub vegetation, and the southern and eastern portions were covered by grassland vegetation and emergent vegetation associated with Long Valley Wash. By 2002 dirt bike trails were present through the hills, and the flat-lying areas at the base of the hills were cleared of all vegetation and agricultural crops. In 2003, the majority of the sage scrub growing on the hills was cleared. It appears that over the years, the nature of the habitat present along the wash and in the southern portion of the site was dependent on the amount of annual precipitation. Even with the above-average precipitation experienced during the 2016-2017 rainy season, most of that vegetation was severely drought stressed and either dead or dying.

An Agricultural Grading/Clearing Certificate Exemption was obtained in August 7, 2017 (BFE 170055) by Drake Enterprises, Inc to develop a vineyard. Per the certificate, 17.73 acres located in the southern portion of the site (south of Long Valley Wash) would be cleared and graded so planting could occur. Clearing of dead wood by hand, using mechanical methods to process the dead wood into mulch (*i.e.*, chopping and crushing) and the import of piles of fertilizer (gypsum) were the first grove development activities to occur on the site.

Topography

Topography on the site has been altered in the past by agricultural clearing and grading, but rolling hill and valley contours characteristic of Long Valley are still apparent there. Topography in the northern half of the site is dominated by a series of elongate hilltops and ridges flanked by shallow U-shaped valleys. The ridges trend in general north-to-

south directions, decreasing in elevations by about 40 feet (1630→1590 feet, 1620→1580 feet and 1580→1540 feet). The valleys also decrease about 40 feet in elevations between the ridges.

Relatively flat-lying terrain is present in the southern portion of the site. Elevations in this area range from a high of 1545 feet at the site's east property line to a low of 1515 feet at the west property line. This 30-foot change in elevation over a distance of over 1,500 feet is hardly noticeable. South of the wash, the terrain slopes in a general north-to-south direction toward De Portola Road. The change in elevation in this area ranges from 0-15 feet. As such, most of it is located within the 100-year flood limit.

Hydrography and Drainage

Long Valley Wash roughly bisects the site in a northeast-to-southwest direction, the direction of flow. It has been mapped as an intermittent blue-line stream on the USGS Topographic Map, 7.5 Minute Series, Bachelor Mountain, California Quadrangle. The wash meanders over a distance of approximately 1,500 linear feet on the site. The channel of this historic wash is difficult to detect in the eastern and central portions of the site. There are reaches that are not incised into the terrain. The channel is incised in the western portion of the site, where it varies from less than one-foot to about three feet into the terrain. There are earthen berms present along the north bank of the wash. Based on an aerial photograph from 1996, this area of the site was being used to grow winegrapes. The berm may have been constructed in this area to keep the wash from flooding the grapevines in the past.

There is a gully present in the northern portion of the site. It is confined to a small valley or ravine originally worn away by running water originating from the paved surfaces on the single-family residence located adjacent to the northeast corner of the site. The two main processes that result in the formation of gullies are downcutting and headcutting, which are forms of longitudinal (incising) erosion. These actions ordinarily result in erosional cuts that are often deeper than they are wide, with very steep banks and small beds. Gullies are younger than streams in geologic age, and typically lack an ordinary highwater mark (OHWM). They are commonly found in areas with low density vegetative cover and soils that are highly erodible.

After this gully formed, it conveyed storm water runoff downslope and into the central portion of the site characterized by low volume, infrequent and short duration flows that only occurred during and after precipitation events. The gully can be traced for approximately 500 linear feet before it disappears on the surface. From this point on, the runoff spread onto the surface in typical sheet flow fashion. There is no evidence that this gully had a recent confluence with Long Valley Wash. It now ends approximately 175 feet north of the wash.

Drainage on the site is by overland flow or downslope movement of storm water runoff (sheet flow) down the sloping hillsides. Some of the storm water runoff originating on the higher elevated terrain located in the northern portion of the site drains downslope directly

into the wash and is carried downstream and off the site. Because the channel is not incised in the eastern portion of the site, storm water runoff drains onto the flat-lying southern portion of the site where it either percolates into the ground or flows into the drainage ditches present along the side of De Portola Road.

Storm water runoff also enters the southern portion of the site via culverts placed beneath De Portola Road. Gullies have also formed on the site downstream of the culverts.

Soils

Review of the “Soil Survey of Western Riverside Area, California” revealed that the surficial soils at the site are included in the Hanford-Tujunga-Greenfield Association (Soils of the Southern California Coastal Plain). Within this association, six soil types have been mapped on the site (**Soils Map**):

- AtD2 – Arlington and Greenfield fine sandy loams, 8 to 15 percent slopes, eroded
- GzG – Gullied land
- HcC – Hanford coarse sandy loam, 2 to 8 percent slopes
- HcD2 – Hanford coarse sandy loam, 8 to 15 percent slopes, eroded
- RuF – Rough broken land
- VmC – Visalia fine sandy loam, 2 to 8 percent slopes

Vegetation Associations and Species Composition

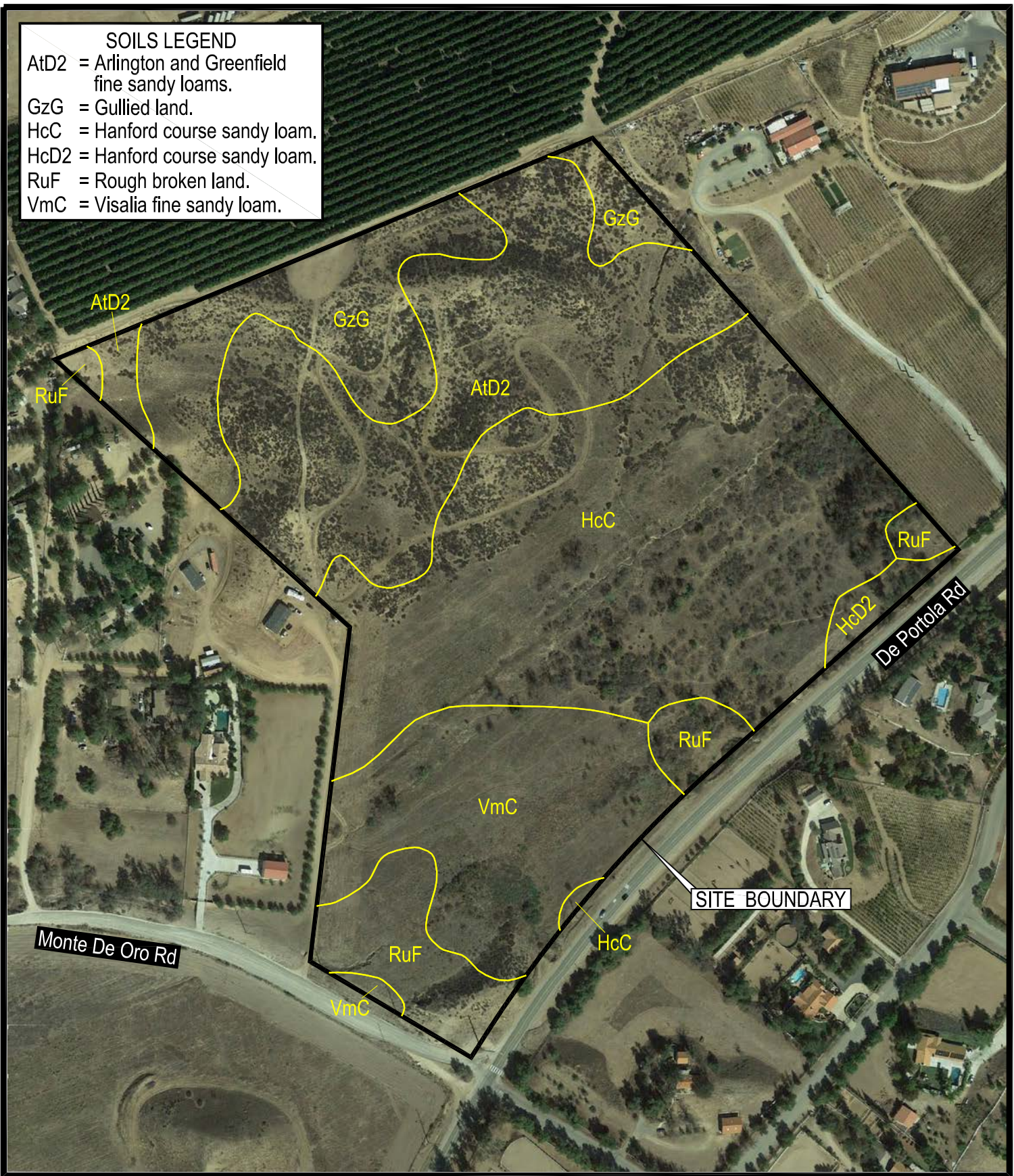
Based on the Habitat Accounts described in Volume 2 of the MSHCP, the Vegetation Associations occurring in the areas of the site that were surveyed are classified as Coastal Sage Scrub (17.2 acres), Grasslands (24.7 acres) and Riparian Scrub (0.4 acres) (**Biological Resources Map**).

The **Coastal Sage Scrub Vegetation Association** is distributed throughout Western Riverside County, occupying approximately 159,000 acres (12 percent) of the MSHCP Plan Area. It is represented by three subassociations: Diegan coastal sage, Riversidean sage scrub and undifferentiated coastal scrub. As with the vegetation growing on the site, Coastal Sage Scrub in Riverside County is contained in the **Riversidean Sage Scrub Mapped Subassociation**. Riversidean sage scrub is the dominant sage scrub Mapped Subassociation in the MSHCP Plan Area, occupying

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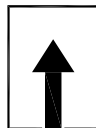
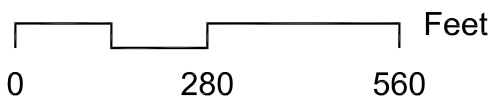
SOILS LEGEND

- AtD2 = Arlington and Greenfield fine sandy loams.
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Source of Aerial Photo: Google Earth 10-21-2016

Scale: 1"= 280'







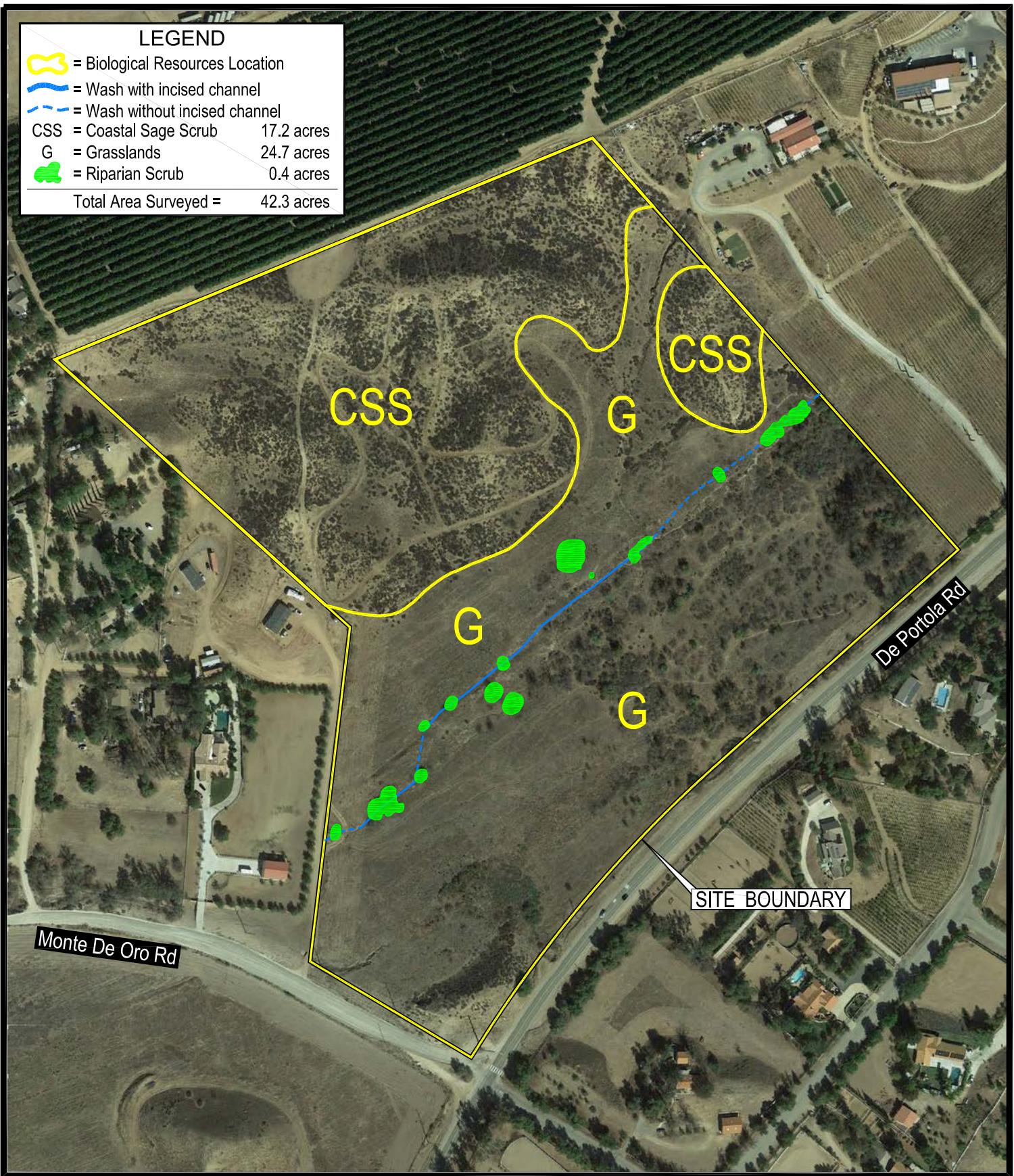
SOILS MAP

PAR 1536

PRINCIPE AND ASSOCIATES

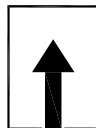
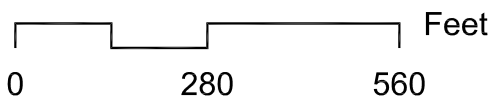
LEGEND

-  = Biological Resources Location
-  = Wash with incised channel
-  = Wash without incised channel
- CSS = Coastal Sage Scrub 17.2 acres
- G = Grasslands 24.7 acres
-  = Riparian Scrub 0.4 acres
- Total Area Surveyed = 42.3 acres



Source of Aerial Photo: Google Earth 10-21-2016

Scale: 1"= 280'



BIOLOGICAL RESOURCES MAP

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Riversidean sage scrub is growing on the hilltops, ridges and valleys present in the northern portion of the site. It is no longer contiguous with similar sage scrub growing in any direction. This area receives heavy dual-purpose motorcycle use (dirt bikes). Where it is relatively undisturbed between established trails, the growth form is closed canopy with a low abundance and diversity of sage scrub species. Where it is disturbed, it is mixed with a high percentage of invasive, non-native grasses and weeds.

The dominant sage scrub species is interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*). Some of the other typical sage scrub species include coastal sagebrush (*Artemisia californica*), pine goldenbush (*Ericameria pinifolia*), Vasey's prickly pear (*Opuntia xvaseyi*), and yellow bush-penstemon (*Keckiella antirrhinoides* subsp. *antirrhinoides*). The understory is also composed of many of the forbs and grasses listed below.

See attached Checklist of Vascular Plant Species for a complete list of species identified in the Riversidean Sage Scrub Mapped Subassociation.

The **Grasslands Vegetation Association** occurs throughout most of Western Riverside County, and covers approximately 11.8% (154,421 acres) of the Plan Area. The **Non-native grasslands Vegetation Subassociation** is growing on the site. Non-native grasslands occur throughout the majority of the Plan Area (11.6%), usually within close proximity to urbanized or agricultural land uses.

Non-native grasslands are primarily composed of annual grass species introduced from the Mediterranean basin and other Mediterranean-climate regions with variable presence of non-native and native herbaceous species. Species composition of Non-native grasslands may vary over time and place based on grazing or fire regimes, soil disturbance and annual precipitation patterns. Non-native grasslands typically produce deep layers of organic matter which is inversely related to the abundance of non-native and native forbs. Non-native grasslands also typically support an array of annual forbs from the Mediterranean-climate regions. Low abundances of native species are sometimes present within Non-native grasslands.

Non-native grasslands occur primarily in southern portion of the site. It is growing in all previously disturbed areas, and now forms a mosaic with the sage scrub in the northern portion of the site. The ground covering is sparse in most areas, as the vegetation is periodically grazed and cleared for fire prevention purposes. Most of it is dominated by common and widespread non-native annual grass and weed species, but remnants of species that emerge in seasonally wet areas were also present. Dicot species include *shortpod mustard (*Brassica geniculata*), *lamb's quarters (*Chenopodium album*), *summer cypress (*Kochia scoparia*), and *Russian-thistle (*Salsola tragus*). Monocot species include *slender wild oat (*Avena barbata*), *brome grasses (*Bromus diandrus* and *B. hordeaceus*), and *rattail fescue (*Vulpia myuros* var. *myuros*).

*Denotes non-native species throughout the text

Nomenclature after Roberts, Jr., Fred M., Scott D. White, Andrew C. Sanders, David E. Bramlet, and Steve Boyd. 2004.

The latest aerial photograph from October 21, 2016 shows that trees had emerged in the southern portion of the site. Older aerial photographs show that storm water runoff has periodically been entering the southern portion of the site via drainage ditches located along the north side of De Portola Road. By the start of the nesting season surveys, two drainage ditches had resulted from storm water runoff entering the site downstream of culverts placed beneath De Portola Road. During certain years, they appear to have eroded drainageways through two or three portions of the site. Due to the above-average rainfall this year, these ditches were deeply incised and relatively long. They were likely the sources of fresh water for these trees. As the majority of the trees were growing a distance south of Long Valley Wash, their root systems were not growing in association with the hydrology of the wash.

Small (<2 feet tall) *tree tobacco (*Nicotiana glauca*), willow (*Salix* spp.), Mexican elderberry (*Sambucus mexicana*), *Peruvian pepper tree (*Schinus molle*), and *Mediterranean tamarix (*Tamarix ramosissima*) seedlings were found growing in the southern portion of the site.

See attached Checklist of Vascular Plant Species for a complete list of species identified in the Non-Native Grasslands Vegetation Subassociation.

Riparian Forest/Woodland/Scrub Vegetation Association subtypes are spatially distributed in drainages throughout much of Western Riverside County, and cover approximately 1.1 percent (14,545 acres) of the Plan Area. Southern Cottonwood/Willow Riparian Forest makes up the largest proportion of the riparian vegetation in the Plan Area comprising nearly one-half of the acreage (6,610 acres). Large complexes containing several of the riparian forest, woodland and scrub types are located in several portions in the Plan Area. The Temecula area supports a diversity of riparian vegetation types among urban and agricultural land uses along Temecula Creek, Sandia Canyon and portions of Wolf Valley.

Long Valley Wash is present on the site. Based on species composition, the **Riparian Scrub Mapped Subassociation** is present along the wash. Based on the hydrological cycle and landform history and dynamics, the wash is only providing a low quality riparian habitat that is not dominated by trees or shrubs depend upon soil moisture from a nearby fresh water source. The entire habitat is severely drought stressed, whereas the few trees still standing are in poor shape and vigor.

The channel of this wash is difficult to detect in the eastern and central portions of the site. There are reaches that are not incised into the terrain. Mule fat (*Baccharis salicifolia*) is the only riparian species growing in these areas. Annual burweed (*Ambrosia acanthicarpa*), a common species found along sandy washes in lowlands, was also growing there. The other species are all upland types, and include *shortpod mustard, interior California buckwheat, *brome grasses, and jimsonweed (*Datura wrightii*). Mule fat is on the National Wetland Plant List (USDA 2012).

The channel is incised in the western portion of the site, where it varies from less than one-foot to about three feet into the terrain. The best examples of Riparian Scrub are present in this portion of the site, but note that the trees are sparse, the canopy is open and intermittent, and the condition and vigor of the trees is poor. Typical riparian species found growing in this area are western cottonwood (*Populus fremontii* subsp. *fremontii*), black willow (*Salix gooddingii*), red willow (*Salix laevigata*), and arroyo willow (*Salix lasiolepis* var. *lasiolepis*). Black, red and arroyo willows are on the National Wetland Plant List (USDA 2012), western cottonwood is not.

See attached Checklist of Vascular Plant Species for a complete list of species identified in the Riparian Scrub Mapped Subassociation.

Wildlife Species Observed

A moderate abundance and diversity of wildlife was observed at the site. Native wildlife habitat is primarily provided by the Riversidean sage scrub and the trees, but a few species were observed foraging in the Non-native grasslands. The species composition consists of common and opportunistic species that are adapted to exploit available habitats or resources in close proximity to man. Species observed include the western fence lizard (*Sceloporus occidentalis*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), northern flicker, red-shafted flicker group (*Colaptes auratus*), Nuttall's woodpecker (*Picoides nuttallii*), black phoebe (*Sayornis nigricans*), western kingbird (*Tyrannus verticalis*), American crow (*Corvus brachyrhynchos*), bushtit (*Psaltriparus minimus*), western bluebird (*Sialia mexicana*), northern mockingbird (*Mimus polyglottos*), California towhee (*Pipilo crissalis*), chipping sparrow (*Spizella passerina*), Savannah sparrow (*Passerculus sandwichensis*), house finch (*Carpodacus mexicana*), and desert cottontail (*Sylvilagus audubonii*).

Diagnostic animal signs were limited to Botta's pocket gopher (*Thomomys bottae*) mounds and coyote (*Canis latrans*) scat in the grasslands habitat, and pocket mice (*Perognathus* sp.), deer mice (*Peromyscus* sp.) and California ground squirrel (*Spermophilus beecheyi*) burrows in the mixed grasslands and sage scrub habitat.

There is a remnant of a raptor nest in the largest western cottonwood tree present on the site. During the four nesting season surveys conducted on the site for the burrowing owl, it was not being used by any bird species. Additional surveys were conducted at the site on September 29 and October 4 and 17, 2017 which coincided with the nesting season for raptors (September 1 to January 14) and for songbirds (September 1 to February 14). There were no nesting activities observed during those survey dates.

ASSESSMENT OF HABITAT SUITABILITY FOR BURROWING OWLS

Burrowing owl habitats can be found in shortgrass prairies, annual and perennial grasslands, lowland scrub, agricultural lands and rangelands, prairies, coastal dunes, deserts, scrublands characterized by low-growing vegetation, and some artificial areas

(i.e., golf courses, cemeteries, irrigation ditches, etc.). Suitable owl habitats may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface, and they may also occur in forb and open stages of pinyon-juniper and ponderosa pine habitats. They require large open expanses of sparsely vegetated areas on gentle rolling or level terrain with an abundance of active small mammal burrows. As an important part of their habitat, they require the use of rodent or other burrows for roosting and nesting. Burrows are the essential component of burrowing owl habitats. Natural and manmade structures (artificial burrows) provide protection and shelter for burrowing owls, and places for nesting and roosting.

Based on the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (March 29, 2006), an independent assessment was made of the presence or absence of burrowing owl habitats on the site and in a 150-meter (approximately 500 feet) buffer zone around the project boundary (**Step I of the Burrowing Owl Survey Instructions**).

The methodology used to prepare the assessment involved conducting complete visual and walk-over field surveys to determine the presence or absence of burrowing owl habitats on the site and in a 150-meter (approximately 500 feet) buffer zone around the project boundary. Surveys were conducted by walking through suitable habitats on the site and in the buffer zone. The assessment determined that a portion of the site was providing suitable burrowing owl habitats consisting of relatively large open expanses of annual grassland and lowland scrub on gentle rolling and level terrain with active small mammal burrows. Only a few required habitat features capable of being used for nesting and roosting were present, and included natural California ground squirrel burrows in the flat-lying areas located in the northern portion of the site and artificial burrows (culverts) in the southern portion of the site. All suitable habitats present on the site were surveyed (**see Burrowing Owl Habitat/Survey Transect Map and Site Photographs attached**). The rather dense sage scrub covering the steeper hills located in the remainder of the northern portion of the site were not providing suitable burrowing owl habitats, and were not surveyed. Suitable habitats were limited in the buffer zone to the undeveloped area located west of the site. All suitable habitats present in the buffer zone were surveyed (**see Burrowing Owl Habitat/Survey Transect Map and Site Photographs attached**). A citrus grove, winery and vineyard, and numerous single-family residential developments located in the remainder of the buffer zone were not providing suitable burrowing owl habitats, and were not surveyed.

DATE AND TIME OF VISIT(S), INCLUDING NAME OF THE QUALIFIED BIOLOGIST CONDUCTING SURVEYS, WEATHER AND VISIBILITY CONDITIONS, AND SURVEY METHODOLOGY

Suitable burrowing owl habitats were carefully surveyed for the presence/absence of the burrowing owl. Thorough searches were conducted during morning hours in an attempt to directly observe this species, and followed **Step II of the Burrowing Owl Survey Instructions**.

The methodology used to prepare this Nesting Season Survey involved conducting complete visual and walk-over field surveys to determine if the site contained occupied habitats. Surveys were conducted by walking through suitable habitats on the site and in the buffer zone. Survey transects were spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines on the site and in the buffer zone was approximately 30 meters (± 100 feet).

Four surveys were conducted between July 17 and August 17, 2017. All surveys were conducted in the morning one hour before sunrise to two hours after sunrise. They were conducted during weather that was conducive to observing burrowing owls outside of their burrows, and detecting burrowing owl sign. Surveys were not conducted during rain or within five days of a rain event, high winds (> 20 mph), dense fog, or temperatures over 90°F .

All surveys were conducted by Paul Principe and Jan Principe. Paul Principe held a Federal Fish and Wildlife Permit (TE 786497-7) for 14 years, which has just been renewed, and holds a current California Resident Scientific Collecting Permit (#SC-002215). He was among the first authorized Biological Consultants to conduct biological surveys in Riverside County by the Riverside County Planning Department over 25 years ago, and has been conducting biological surveys in Riverside County since 1980. Jan Harrison (Principe) was first authorized to conduct Threatened and Endangered Species surveys by the U.S. Fish and Wildlife Service under Federal Fish and Wildlife Permit (TE 786497, Amendment #6) in 2002, and has been conducting biological surveys in Riverside County for 15 years.

Following are the number and dates of surveys, start and stop times of surveys and the weather conditions at the beginning and end of each survey (shaded temperature in degrees Fahrenheit includes the wind chill factor, and wind speed in miles per hour is given as the range measured over a few moments with a Kestrel $\text{\textcircled{R}}$ 2000):

1. July 17, 2017: Mostly clear, 67°F , 0-1 mph winds (0530 hours)
Sunrise at 0550 hours
Clear, 70°F , 1-2 mph winds (0745 hours)
 2. July 25, 2017: Mostly cloudy, 70°F , 0-1 mph winds (0545 hours)
Sunrise at 0555 hours
Mostly cloudy, 71°F , 1-2 mph winds (0745 hours)
- Rain: August 1, 2017
3. August 10, 2017: Clear, 62°F , 0-1 mph winds (0600 hours)
Sunrise at 0607 hours
Clear, 65°F , 0-1 mph winds (0800 hours)
 4. August 17, 2017: Mostly clear, 63°F , 0-1 mph winds (0600 hours)
Sunrise at 0610 hours
Mostly clear, 65°F , 1-2 mph winds (0800 hours)

RESULTS OF TRANSECT SURVEYS, INCLUDING A MAP SHOWING THE LOCATION OF ALL BURROW(S) (NATURAL OR ARTIFICIAL) AND OWL(S), INCLUDING THE NUMBERS AT EACH BURROW, IF PRESENT, AND TRACKS, FEATHERS, PELLETS, OR OTHER ITEMS (PREY REMAINS, ANIMAL SCAT)

Burrowing owls or their diagnostic signs were not observed during any of the surveys. A map has been prepared showing the locations of the California ground squirrel burrows and artificial burrows on the site that are capable of being used for nesting and roosting by burrowing owls. This required burrowing owl habitat has been overlaid on an aerial photograph that shows the suitable habitat present on the site. The location of the survey transect is also shown on this map (**Burrowing Owl Habitat/Survey Transect Map**).

Photographs were taken showing suitable and required burrowing owl habitats at various locations along the survey transect (**see Site Photographs attached**). Note that the photographs were taken after the first grove development activities had begun.

BEHAVIOR OF OWLS DURING THE SURVEYS

Burrowing owls were not observed during any of the surveys.

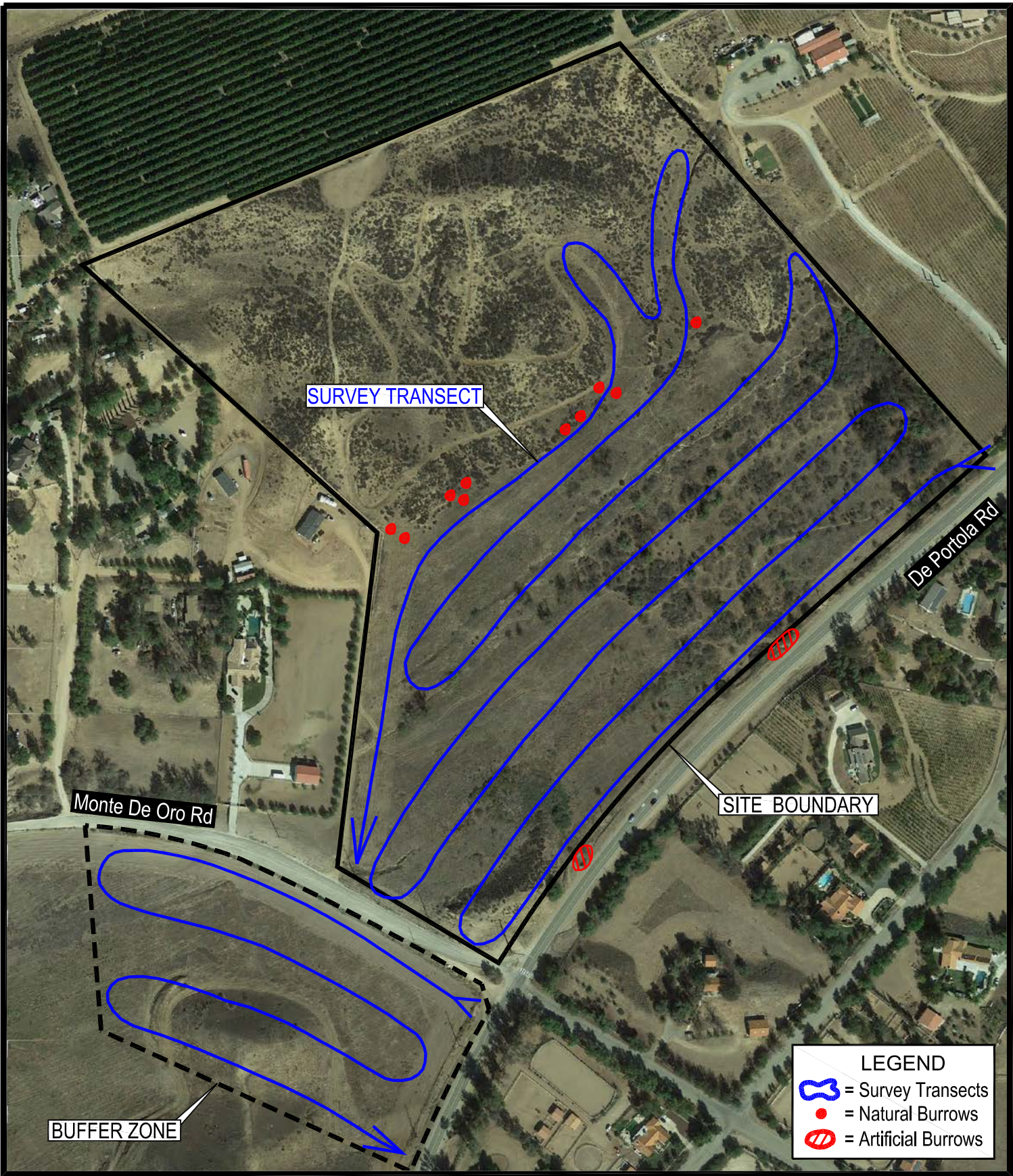
SUMMARY OF BOTH WINTER AND NESTING SEASON SURVEYS INCLUDING ANY PRODUCTIVITY INFORMATION AND A MAP SHOWING TERRITORIAL BOUNDARIES AND HOME RANGES

A Survey for Winter Residents was not completed at this site.

During the 2017 nesting season surveys, burrowing owls were not observed. Required burrowing owl habitats capable of being used for nesting and roosting were not being used (i.e., ground squirrel burrows and artificial burrows). Also, animal signs diagnostic of burrowing owls that are sometimes overlooked were not discovered anywhere on the site or in the buffer zone (i.e., molted feathers, cast pellets, prey remains, eggshell fragments, and/or excrement at or near a burrow entrance). There was no evidence of either active habitats presently being used by burrowing owls, or habitats abandoned within the last year.

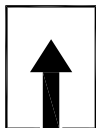
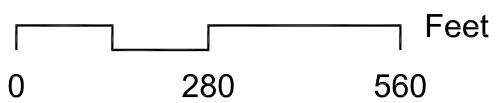
MSHCP CONSIDERATIONS

Completion of this Nesting Season Survey is consistent with Species Conservation Objective 5 of the MSHCP that was developed for the burrowing owl. To ensure direct mortality of burrowing owls is avoided in the future, a pre-construction presence/absence survey should be conducted within thirty (30) days prior to ground disturbance at the site. The proposed project site would then be consistent with Species Conservation Objective 6 of the MSHCP.



Source of Aerial Photo: Google Earth 10-21-2016

Scale: 1"= 280'



**BURROWING OWL HABITAT /
SURVEY TRANSECT MAP**

PAR 1536

PRINCIPE AND ASSOCIATES

HISTORICAL INFORMATION (NATURAL DIVERSITY DATABASE, DEPARTMENT REGIONAL FILES, BREEDING BIRD SURVEY DATA, AMERICAN BIRDS RECORDS, AUDUBON SOCIETY, LOCAL BIRD CLUB, OTHER BIOLOGISTS, ETC.) REGARDING THE PRESENCE OF BURROWING OWLS ON THE SITE

Breeding and burrow locations have not been identified within the University of California, Riverside (UCR) database, although most observations that have been recorded are probably located near a burrow due to the relatively sedentary nature of the species. The species has been detected east of the Jurupa Mountains, along the Santa Ana River, at Lake Mathews, at Good Hope, Alberhill, Murrieta, March Air Reserve Base, the Lake Perris/Mystic Lake area, the Badlands, within the vicinity of Beaumont and Banning, San Jacinto, Valle Vista, between San Jacinto River and Lakeview Mountains, west of Hemet, the area around Diamond Valley Lake, east and south of Lake Skinner area, along Santa Gertrudis Creek and Tocalota Creek, in Long Canyon, and along De Portola Road as documented in the UCR database and from other sources (USFWS 1996 unpublished data; California Science and Engineering Associates 1996).

The California Natural Diversity Database (CNDDDB) for the Bachelor Mountain, California Quadrangle does not include any occurrence records of the burrowing owl at the site. Twenty-one occurrence records were found in the CNDDDB from within a 6.0-mile radius of the site. One occupied burrow was recorded at a site located 4.6 miles northwest of the site in 1994. Two adults were recorded at a site located 3.0 miles northwest of the site in 1998. 15 adults and 10 juveniles were recorded at a site located 5.8 miles southwest of the site in 1999. Colonies were recorded at a site located 4.3 miles northwest of the site in 2000. Adult pair was recorded at a site located 5.3 miles northwest of the site in 2006. Breeding pairs with juveniles were recorded at 11 different study sites located 5.9 miles northwest of the site in 2006 and 2007. Breeding pairs were recorded at 5 different study sites located 3.0 miles northwest of the site in 2007. Occupied habitats included annual grassland and mixed annual grassland and lowland scrub.

Based on the information above, clusters of locations, and information from the USFWS (1996 unpublished data), the Core Areas may include Santa Ana River, Lake Mathews area, Lake Perris/Mystic Lake, playa west of Hemet, Lake Skinner/Diamond Valley Lake area, and Valle Vista. The site is located approximately 2.5 miles southeast of the proposed Lake Skinner/Diamond Valley Lake Core Area.

CERTIFICATION STATEMENT

Original Date: November 1, 2017

Revision Date: April 2, 2018

I hereby certify that the statements furnished herein and in the attached exhibits present the data and information required to complete this Nesting Season Survey for the Burrowing Owl to the best of my ability, and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.

Paul A. Principe

PRINCIPE AND ASSOCIATES

Paul A. Principe

Principal

REFERENCES

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Dudek & Associates, Inc. June 17, 2003. Riverside County Integrated Project. Final Western Riverside County Multiple Species Habitat Conservation Plan. Volumes II-A through E, The Reference Document.

Google Earth

Search: Glenoaks Hills, California

Imagery Dates: 10/1/1995 through 10/21/2016

Image Sources: U.S. Geological Survey, NASA, © 2016 DigitalGlobe, and USDA. Farm Service Agency

<http://www.google.earth.com>

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CHECKLIST OF VASCULAR PLANT SPECIES

<u>GROUP</u>	<u>FAMILY</u>	<u>Species</u>	<u>COMMON NAME</u>	<u>HABITATS</u>
ANGIOSPERMAE - DICOTS				
	ADOXACEAE – ELDERBERRY FAMILY			
		<i>Sambucus mexicana</i>	MEXICAN ELDERBERRY	RSS, NNG, RS
	AMARANTHACEAE – AMARANTH FAMILY			
		* <i>Amaranthus albus</i>	TUMBLING PIGWEED	NNG
	ANACARDIACEAE – SUMAC FAMILY			
		* <i>Schinus molle</i>	PERUVIAN PEPPER TREE	NNG, RS
	ASCLEPIADACEAE – MILKWEED FAMILY			
		<i>Funastrum cynanchoides</i> var. <i>hartwegii</i>	HARTWIG'S MILKVINE	RSS, NNG
	ASTERACEAE – SUNFLOWER FAMILY			
		<i>Ambrosia acanthicarpa</i>	ANNUAL BURWEED	NNG (DD)
		<i>Ambrosia psilostachya</i> var. <i>californica</i>	WESTERN RAGWEED	NNG (DD)
		<i>Artemisia californica</i>	COASTAL SAGEBRUSH	RSS
		<i>Baccharis salicifolia</i>	MULE FAT	RS
		* <i>Centaurea melitensis</i>	TOCALOTE	NNG
		* <i>Cirsium vulgare</i>	BULL THISTLE	NNG
		* <i>Conyza canadensis</i>	COMMON HORSEWEED	NNG
		<i>Deinandra fasciculata</i>	FASCICLED TARWEED	RSS, NNG
		<i>Deinandra paniculata</i>	PANICULATE TARWEED	RSS, NNG
		<i>Ericameria pinifolia</i>	PINE GOLDENBUSH	RSS
		<i>Erigeron foliosus</i> var. <i>foliosus</i>	LEAFY DAISY	RSS
		<i>Filago californica</i>	CALIFORNIA FILAGO	RSS
		<i>Gnaphalium californicum</i>	CALIFORNIA EVERLANSTING	RSS, RS
		<i>Helianthus annuus</i>	WESTERN SUNFLOWER	NNG (DD)
		<i>Heterotheca grandiflora</i>	TELEGRAPH WEED	NNG
		* <i>Lactuca serriola</i>	PRICKLY LETTUCE	NNG (DD)
		<i>Lessingia glandulifera</i> var. <i>glandulifera</i>	VALLEY LESSINGIA	RSS
	ASTERACEAE – SUNFLOWER FAMILY			
		* <i>Senecio vulgaris</i>	COMMON GROUNDSEL	NNG
		* <i>Sonchus asper</i>	PRICKLY SOW-THISTLE	NNG
		<i>Stephanomeria virgata</i> subsp. <i>virgata</i>	VIRGATE WREATH-PLANT	RSS, RS
	BORAGINACEAE – BORAGE FAMILY			
		<i>Amsinckia menziesii</i> var. <i>intermedia</i>	COMMON FIDDLENECK	RSS, NNG
		<i>Heliotropium curassavicum</i> subsp. <i>oculatum</i>	SALT HELIOTROPE	NNG (DD)

FAMILY	Species	COMMON NAME	HABITATS
BRASSICACEAE (CRUCIFERAE) – MUSTARD FAMILY			
	<i>*Brassica geniculata</i>	SHORTPOD MUSTARD	RSS, NNG (DD)
	<i>*Sisymbrium irio</i>	LONDON ROCKET	NNG
CACTACEAE – CACTUS FAMILY			
	<i>Cylindropuntia californica</i>	VALLEY CHOLLA	RSS
	<i>Opuntia xvaseyi</i>	VASEY'S PRICKLY PEAR	RSS
CHENOPODIACIAE – GOOSEFOOT FAMILY			
	<i>*Atriplex semibaccata</i>	AUSTRALIAN SALTBUSH	NNG
	<i>*Chenopodium album</i>	LAMB'S QUARTERS	NNG (DD)
	<i>*Kochia scoparia</i>	SUMMER CYPRESS	NNG
	<i>*Salsola tragus</i>	RUSSIAN THISTLE	RSS, NNG (DD)
CONVOLVULACEAE – MORNING-GLORY FAMILY			
	<i>Calystegia macrostegia</i> subsp. <i>tenuifolia</i>	NARROW-LEAVED MORNING GLORY	NNG
	<i>Cuscuta californica</i> var. <i>californica</i>	CALIFORNIA WITCH'S HAIR	RSS
CUCURBITACEAE – GOURD FAMILY			
	<i>Cucurbita foetidissima</i>	CALABAZILLA	RSS, NNG, RS
EUPHORBIACEAE – SPURGE FAMILY			
	<i>Croton setiger</i>	DOVEWEED	RSS, NNG (DD)
FABACEAE (LEGUMINOSAE) – PEA FAMILY			
	<i>*Lotus purshianus</i>	SPANISH CLOVER	NNG
	<i>Lotus scoparius</i> subsp. <i>scoparius</i>	COASTAL DEERWEED	RSS
	<i>Lupinus</i> sp.	LUPINE	RSS
GERANIACEAE – GERANIUM FAMILY			
	<i>*Erodium botrys</i>	LONG-BEAK FILAREE	NNG
HYDROPHYLLACEAE – WATERLEAF FAMILY			
	<i>Phacelia</i> sp.	PHACELIA	NNG (DD)
LAMIACEAE – MINT FAMILY			
	<i>Salvia columbariae</i>	CHIA	RSS
	<i>Trichostema lanceolatum</i>	VINEGAR WEED	RSS, NNG
MALVACEAE – MALLOW FAMILY			
	<i>*Malva parviflora</i>	CHEESEWEED	NNG
NYCTAGINACEAE – FOUR-O'CLOCK FAMILY			
	<i>Mirabilis californica</i>	CALIFORNIA WISHBONE BUSH	RSS
ONAGRACEAE – EVENING PRIMROSE FAMILY			
	<i>Camissonia strigulosa</i>	STRIGULOSE EVENING PRIMROSE	RSS

FAMILY	Species	COMMON NAME	HABITATS
PLANTAGINACEAE – PLANTAIN FAMILY			
	<i>Plantago erecta</i>	CALIFORNIA PLANTAIN	RSS
POLYGONACEAE – BUCKWHEAT FAMILY			
	<i>Eriogonum fasciculatum</i> subsp. <i>foliolosum</i>	INTERIOR CALIFORNIA BUCKWHEAT	RSS, NNG, RS
	* <i>Rumex crispus</i>	CURLY DOCK	NNG (DD)
PORTULACACEAE – PURSLANE FAMILY			
	* <i>Portulaca oleracea</i>	COMMON PURSLANE	NNG
SALICACEAE – WILLOW FAMILY			
	<i>Populus fremontii</i> subsp. <i>fremontii</i>	WESTERN COTTONWOOD	NNG, RS
	<i>Salix gooddingii</i>	BLACK WILLOW	NNG, RS
	<i>Salix laevigata</i>	RED WILLOW	NNG, RS
	<i>Salix lasiolepis</i> var. <i>lasiolepis</i>	ARROYO WILLOW	NNG, RS
SCROPHULARIACEAE – FIGWORT FAMILY			
	<i>Keckiella antirrhinoides</i> subsp. <i>antirrhinoides</i>	YELLOW BUSH-PENSTEMON	RSS
SOLANACEAE – NIGHTSHADE FAMILY			
	<i>Datura wrightii</i>	JIMSONWEED	NNG (DD), RS
	* <i>Nicotiana glauca</i>	TREE TOBACCO	RSS, NNG (DD), RS
TAMARICACEAE – TAMARISK FAMILY			
	* <i>Tamarix ramosissima</i>	MEDITERRANEAN TAMARISK	NNG, RS
URTICACEAE – NETTLE FAMILY			
	* <i>Urtica urens</i>	DWARF NETTLE	NNG (DD)
VITACEAE – GRAPE FAMILY			
	* <i>Vitis vinifera</i>	WINE GRAPE	NNG
ZYGOPHYLLACEAE – CALTROP FAMILY			
	* <i>Tribulus terrestris</i>	PUNCTURE VINE	NNG

<u>GROUP</u>	<u>FAMILY</u>	<u>Species</u>	<u>COMMON NAME</u>	<u>HABITATS</u>
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MONOCOTYLEDONES - MONOCOTS

AGAVACEAE – AGAVE FAMILY

		<i>Yucca schidigera</i>	MOJAVE YUCCA	RSS
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POACEAE – GRASS FAMILY

		* <i>Avena barbata</i>	SLENDER WILD OAT	SS, NNG
		* <i>Bromus diandrus</i>	COMMON RIPGUT GRASS	RSS, NNG, RS
		* <i>Bromus hordeaceus</i>	SOFT CHESS	NNG
		* <i>Cynodon dactylon</i>	BERMUDA GRASS	NNG
		* <i>Hordeum murinum</i> subsp. <i>leporinum</i>	FOXTAIL BARLEY	RSS, NNG
		* <i>Poa annua</i>	ANNUAL BLUEGRASS	RSS, NNG
		* <i>Vulpia myuros</i> var. <i>myuros</i>	RATTAIL FESCUE	RSS, NNG

THEMIDACEAE – BRODIAEA FAMILY

		<i>Dichelostemma pulchellum</i> var. <i>pulchellum</i>	BLUE-DICKS	RSS
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HABITATS:

RSS = RIVERSIDEAN SAGE SCRUB

NNG = NON-NATIVE GRASSLANDS

NNG (DD) = NON-NATIVE GRASSLANDS IN THE DRAINAGE DITCHES ALONG DE PORTOLA AND MONTE DE ORO ROADS

RS = RIPARIAN SCRUB

*Denotes non-native species throughout Checklist
 Nomenclature after Roberts, Jr., Fred M., Scott D. White, Andrew C. Sanders, David E. Bramlet, and Steve Boyd. 2004.



Burrowing owl habitats can be found in annual and perennial grasslands, lowland scrub, and agricultural lands. The southern portion of the site was providing suitable burrowing owl habitats consisting of relatively large open expanses of annual grassland on gentle rolling and level terrain with active small mammal burrows. Looking southeast-to-northwest from the south property line.

SITE PHOTOGRAPH 1

PAR 1536

PRINCIPE AND ASSOCIATES



Another view of suitable burrowing owl habitat present on the site. The annual grassland ground covering is sparse in most areas, whereas the vegetation has historically been cleared by grazing and/or discing for fire prevention purposes. Piles of gypsum and wood chips can be seen in this photograph. Looking from the west property line on Monte De Oro Road toward the east property line.

SITE PHOTOGRAPH 2

PAR 1536

PRINCIPE AND ASSOCIATES



The suitable annual grassland habitat extends into the northern portion of the site past (north of) Long Valley Wash. In the area located not far from the east property line, it forms a mosaic with suitable lowland scrub habitat. Looking south-to-north through the site from De Portola Road.

SITE PHOTOGRAPH 3

PAR 1536

PRINCIPE AND ASSOCIATES



As an important part of burrowing owl habitat, they require the use of rodent or other burrows for roosting and nesting. Natural burrows provide protection and shelter for burrowing owls, and places for nesting and roosting. Only a few required habitat features capable of being used for nesting and roosting were present on the site, and included natural California ground squirrel burrows.

SITE PHOTOGRAPH 4

PAR 1536

PRINCIPE AND ASSOCIATES



Manmade structures (artificial burrows) also provide protection and shelter for burrowing owls, and places for nesting and roosting. Only a few manmade features capable of being used for nesting and roosting were present on the site, and included artificial burrows provided by culverts.

SITE PHOTOGRAPH 5

PAR 1536

PRINCIPE AND ASSOCIATES



Suitable burrowing owl habitats consisting of open expanses of annual grassland on level terrain with active small mammal burrows were limited in the buffer zone to the undeveloped area located west of the site. Only a few natural California ground squirrel burrows capable of being used for nesting and roosting were present in the buffer zone.

SITE PHOTOGRAPH 6

PAR 1536

PRINCIPE AND ASSOCIATES