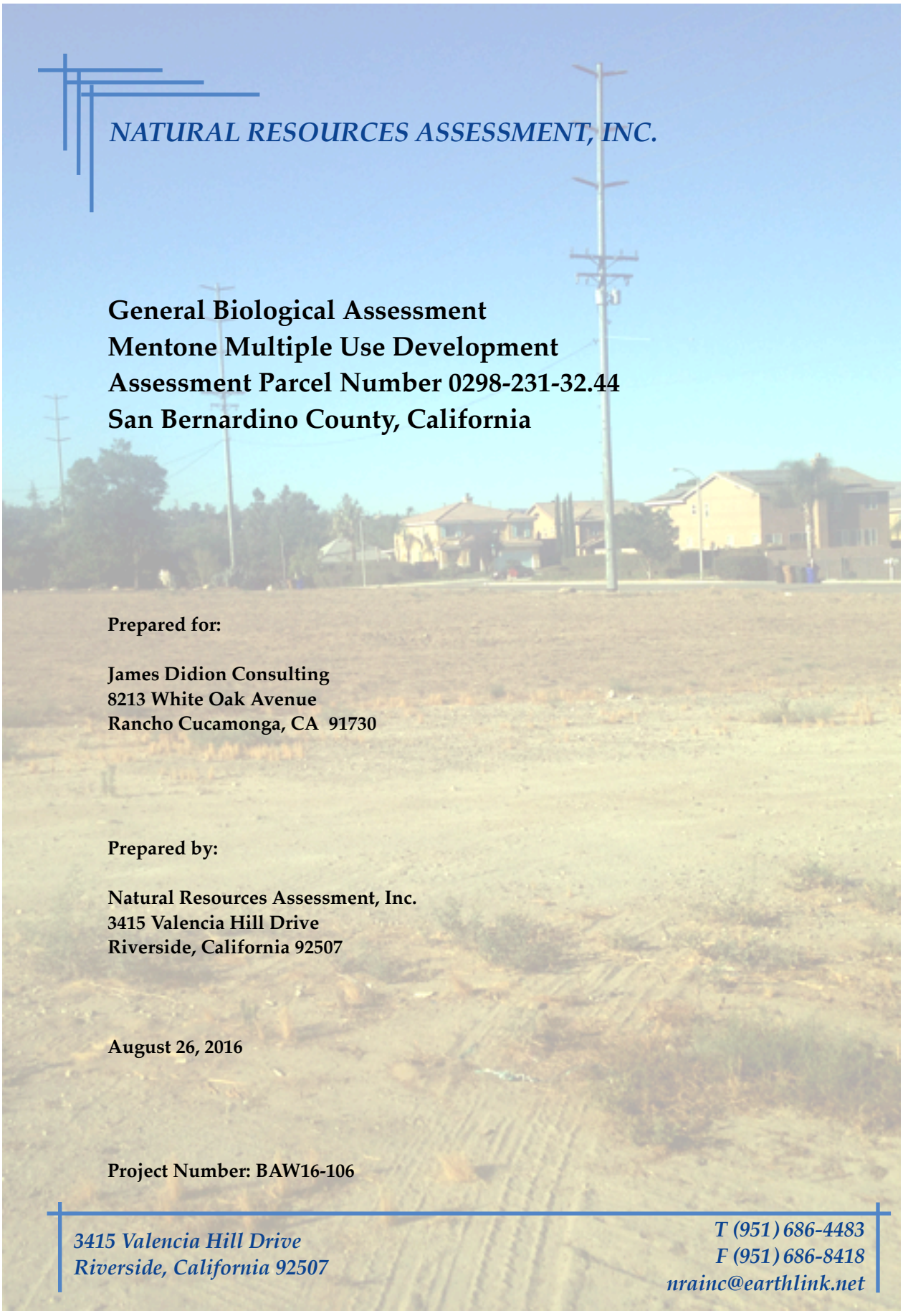

NATURAL RESOURCES ASSESSMENT, INC.

General Biological Assessment
Mentone Multiple Use Development
Assessment Parcel Number 0298-231-32.44
San Bernardino County, California

Prepared for:

James Didion Consulting
8213 White Oak Avenue
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Prepared by:

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August 26, 2016

Project Number: BAW16-106

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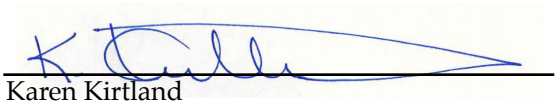
CERTIFICATION

I hereby certify that the statements furnished below and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.



August 26, 2016

Karen Kirtland
Natural Resources Assessment, Inc.

Date

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Appendices

Executive Summary

Natural Resources Assessment, Inc. (NRAI) was contracted by Blaine A. Womer Civil Engineering to conduct a general biological assessment for the proposed mixed residential development project on the southeast corner of Crafton and Nice avenues in Mentone, California.

The biological assessment was required because of the potential presence on site of sensitive biological resources as identified by the County of San Bernardino.

Ms. Karen Kirtland of NRAI and Mr. Ricardo Montijo of SWCA Environmental Consultants (subconsultant to NRAI) surveyed the site, evaluated the habitats present, and conducted a jurisdictional waters evaluation. Binoculars were used to aid in the identification of wildlife. All species identified by sight, call or sign (burrows, scat, tracks, etc.) were recorded.

Project development will result in the loss of ruderal (weedy) habitat.

Burrowing owl was the principal species of concern for this parcel. No burrows, animals or sign of burrowing owl or burrowing owl use was found. The property is highly disturbed and does not currently provide suitable habitat for the burrowing owl.

There are no impacts to listed species or jurisdictional waters.

The project may have direct construction-related impacts to ground nesting birds, such as killdeer, that use the site. There may also be indirect impacts to nesting bird species off-site. We recommended a pre-construction nesting survey be conducted to determine the status of nesting species if construction occurs between February 1 and September 1.

There are no impacts to wildlife movement and no significant habitat fragmentation.

1.0 Introduction

Natural Resources Assessment, Inc. (NRAI) was contracted by Blaine A. Womer Civil Engineering to conduct a general biological assessment for a proposed 5.68 acre mixed residential development project in Mentone, California.

The biological assessment was required by the County of San Bernardino because of the potential presence on site of sensitive biological resources. Theses resources included burrowing owl and jurisdictional waters.

2.0 Site Location and Project Description

The property is located in the community of Mentone in San Bernardino County. The northern border is formed by Nice Avenue and the western border by Crafton Avenue (Figures 1 and 2). Residential development is on the north and west. South and east are existing agricultural operations.

The property is in the northwestern quarter of the southwestern quarter of the southwestern quarter of Section 20, Township 1 south, Range 2 west, Yucaipa 7.5′ U.S. Geological Survey (USGS) topographic quadrangle, San Bernardino base and meridian (Figure 1).

3.0 Methods

3.1 Data Review

NRAI conducted a data search for information on plant and wildlife species known occurrences within the vicinity of the project, as well as information on jurisdictional waters. This review included biological texts on general and specific biological resources, and those resources considered to be sensitive by various wildlife agencies, local governmental agencies and interest groups.

NRAI used the information to focus our survey efforts in the field. Please see Section 6.0 for a complete listing of documents reviewed.

3.2 Field Assessment

Ms. Karen Kirtland of NRAI and Mr. Richard Montijo of SWCA Environmental Consultants (subconsultant to NRAI), conducted a biological assessment of the proposed development area on July 21, 2016. The field team evaluated the surrounding habitats, making notes on the general and sensitive biological resources present and taking representative photographs. The survey included focused habitat assessment surveys for species identified by the County of San Bernardino and in the literature.

4.0 Results

4.1 Weather, Topography and Soils

Weather at the beginning of the survey was 86 degrees Fahrenheit, with clear skies and no wind. By the end of the survey, the temperature was 85 degrees Fahrenheit, with clear skies and winds of less than 1.0 miles per hour, gusting to 1.4 miles per hour.

The site is generally flat with no visible slope. It has been disked within the last year (Photos 1 and 2).

Soboba gravelly sand (SoC), found on zero to nine percent slopes, is the only soil on site ((Figure 4, Soil Survey Staff 2016). This soil is a gravelly sand made up of alluvium weathered from granite. It is an excessively drained, non-saline soil found on alluvial fans.

Map Base: Yucaipa and Redlands (date unknown) 7.5′ USGS topographic quadrangles
Map and inset source: Garmin BaseCamp 2016

Figure 1. Project Location and Site Vicinity

N

Feet
(approximate)
0 80.5 161

Mentone Mixed Use Development
APN 0298-321-32.44
San Bernardino County, California

Map Base: Google Earth 10 February 2016

Figure 2. Project Aerial

N

Feet
(approximate)

0 52.5 105

Mentone Mixed Use Development
APN 0298-321-32.44
San Bernardino County, California

Source: Soil Survey Staff 2016

Figure 3. Project Soils

Mentone Mixed Use Development
APN 0298-321-32.44
San Bernardino County, California

Photo 1. Disked portion of the site. Center of the parcel looking northeast.

Photo 2. Disking rows. Center of the parcel looking southeast.

4.2 Land Uses

The project site is a vacant lot that has been disked, probably for weed control (Photos 1 and 2).

4.3 Plant Communities

Ruderal (weedy) plant community is the only plant community on site (Photo 3). Common species found include Russian thistle (*Salsola tragus*), Mediterranean grass (*Schismus barbatus*), mouse barley (*Hordeum murinum*), and fiddleneck (*Amsinckia menzesii*). At the time of the survey, there were only remnants left from the disking. The property is probably covered in annual plant growth after winter rains.

A list of all plant species observed is provided in Appendix A.

4.4 Wildlife

Birds were the most common group of species on site. Bird species observed included mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), and western kingbird (*Tyrannus verticaulis*).

Bottae's pocket gopher (*Thomomys bottae*) was observed, along with side-blotched lizard (*Uta stansburiana*). No amphibian species were observed, probably due to the lack of surface water.

A list of all wildlife species observed is provided in Appendix A.

4.5 Sensitive Biological Resources

Sensitive species potentially present include but are not limited to those listed, or candidates for listing by the U. S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW) and California Native Plant Society (CNPS). Our review included the following sources:

- California Natural Diversity Data Base (CNDDB 2016) report for the Yucaipa and Redlands U.S. Geological Survey (USGS) 7.5 topographic quadrangles.
- Calflora website for information on plant species.
- CNPS Inventory for information on plant species
- Information, Planning, and Conservation System (IPAC) data.
- Biogeographic Information & Observation System (BIOS) data.

The USFWS identified 35 federal resources of concern in the vicinity of the project, and the CNDDB and BIOS websites collectively identified 70 resources for the Yucaipa 7.5 USGS topographic map and 62 resources on the adjacent Redlands map (with some resources occurring on all three lists).

Of the 33 species identified by the USFWS, eight are federally listed species: Santa Ana sucker (*Catostomus santaanae*), mountain yellow-legged frog (*Rana muscosa*), coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), San Bernardino kangaroo rat (*Dipodomys merriami parvus*), Santa Ana River woolly star (*Eriastrum densifolium* var. *sanctorum*), and slender-horned spineflower (*Dodecahema leptoceras*).

Only three, the San Bernardino kangaroo rat, Santa Ana River woolly star and the slender-hornec spineflower may have been present on site.

The USFWS also identified a number of migratory bird species as potentially present or using the site during migration.

Photo 3. Ruderal (weedy) plants. Looking south across the property.

Of the 70 and 62 species identified by the CNDDB as occurring on the Yucaipa and Redlands 7.5 topographic maps, fourteen are state listed. Of these fourteen, only four are likely to occur in the vicinity of the project area: Nevin's barberry (*Berberis nevinii*), slender-horned spineflower (*Dodecahema leptoceras*), Santa Ana River woolly star, and thread-leaved brodiaea. The latter two are also federally listed as noted above.

There were a total of seven listed (federal and/or state) listed species potentially present on site.

The remaining resources include:

- Species of special concern, such as the San Diego desert woodrat (*Neotoma lepida intermedia*), that are not formally listed,
- Fully protected species such as the golden eagle (*Aquila chrysaetos*),
- Watch list species (for plants) such as Plummer's mariposa lily (*Calochortus plummerae*),
- Migratory species such as Bell's sage sparrow (*Artemisiospiza belli belli*), and,
- Species of no special status. These latter species are included in the CNDDB printout simply because they were observed and recorded on the Yucaipa and Redlands 7.5 USGS topographic quadrangles, not because of any particular legal status. They include such relatively common species as black-chinned sparrow (*Spizella atrogularis*) and San Bernardino ringneck snake (*Diadophis punctatus modestus*).

Many of the sensitive resources identified by the agencies include either species for which habitat does not exist on site (such as the Santa Ana sucker, *Rana muscosa*) or they are species such as California horned lark (*Eremophila alpestris actia*), that may forage or move over the site, but would not be resident.

NRAI includes in our field surveys and analyses such species and resources based on their current known habitat distributions and locations, their past historical distribution, their likelihood of occurrence on the project site and our professional knowledge regarding these resources.

We have limited the discussion to the seven listed species discussed above that may be present on site. We have also included a discussion of the burrowing owl (*Athene cunicularia*) because it is of sufficient local concern to require inclusion in this report, as well as the northwestern San Diego pocket mouse, San Diego desert woodrat and Los Angeles pocket mouse, species which might have been present on site.

Impacts to sensitive but non-listed species that may be present, such as the coast horned lizard, (*Phrynosoma blainvillii*), are not considered significant because of 1) Prior impacts to the area have already reduced suitable habitat; 2) Ongoing disturbances (such as traffic along adjacent streets) continue to deny use of or degrade the project area habitat; and 3) The status of the species is such that the loss of any remaining suitable habitat is small relative to the overall distribution and available habitat for that species.

4.5.1 Slender-horned Spineflower

The slender-horned spineflower (*Dodecahema leptoceras*) is a diminutive annual plant that is found primarily on sandy river terraces and washes below 2200 feet (670 meters). It blooms from April through June. The preferred habitats are chaparral, cismontane woodland, coastal sage scrub, and Riversidian alluvial fan scrub.

The habitat requirements of this species is poorly known. The spineflower is a floodplain endemic. Unlike some species, slender-horned flower is not restricted to any one floodplain type, and seems to occur in all stages of scrub cover provided there are open areas of sandy soils within the scrub habitats. The greatest number of individuals has been found on recent alluvial deposits, including unconsolidated sediments in streams, river channels and alluvial fan deposits. It occurs on various floodplain types, ranging from small mountain streams to large alluvial systems like the Santa Ana River (Rey-Vizgirdas 1994).

The microhabitat for this species tends to be sandy, relatively clear patches within scrub, often associated with junipers. Other species commonly found are leathery spineflower (*Chorizanthe coriacea = Lastarriaea coriacea*) and stonecrop (*Crassula* spp.).

Historically, the range was believed to extend from the San Fernando Valley to the San Bernardino Valley and into the area around Lake Elsinore (Munz 1974). The historical elevation ranged from 500 to 2500 feet (150 to 770 meters) and included the Cajon Pass area (California Native Plant Society 1985a).

This species has been extirpated from most of its historic range. The 1985 California Native Plant Society report identified 18 recorded localities, most of them from collections older than 30 or 40 years. Only four known sites were known in 1985.

The range of this species as of 1994 covered only eight locations: Bee Canyon and Big Tujunga Wash in Los Angeles County; Bautista Creek, Indian Creek, the San Jacinto River and Vail Lake in Riverside County; and Lytle Creek and the Santa Ana River in San Bernardino County (Rey-Vizgirdas 1994).

The principal threats to the spineflower are: The loss of upper floodplain habitat to development and agriculture, and the loss of scouring action due to the control of flood waters. For this prostrate annual, the changes in hydrology along rivers and the loss of scouring action is possibly a larger threat than other

human uses. When floodplains are not scoured, annual weedy grasses such as red brome (*Bromus madritensis* ssp. *rubens*), soft chess (*Bromus mollis*) and slender wild oats (*Avena barbata*) become established and create a dense grass cover. Cheatgrass (*Bromus tectorum*) is most abundant in the Santa Ana River wash. This cover precludes colonization of a site by the spineflower (California Native Plant Society 1985a). Other activities affecting the plant and its habitat include sand and gravel mining, groundwater recharge facilities and grazing (Rey-Vizgirdas 1994).

The spineflower was listed as an endangered species in 1987 by the USFWS and the CDFW.

Project Findings

The field survey was conducted outside of the flowering season for this annual. However, the project area does not include the alluvial fan habitat preferred by this species, and most of the flat area has been highly disturbed by disking. Slender-horned spineflower is not expected to be present.

4.5.2 Santa Ana River Woolly Star

The Santa Ana River woolly star (*Eriastrum densifolium* var. *sanctorum*) is a short-lived perennial subspecies that only occurs along the Santa Ana River drainage in San Bernardino County (Wheeler 1988). It is found in chaparral, coastal sage scrub, and Riversidian alluvial fan scrub. Shrub cover in these areas is typically very open; woolly star generally occurs where there are few or nor shrubs and little herbaceous cover. The elevation range is from 150 to 610 meters (490 to 2000 feet).

The woolly star prefers recently scoured areas above main watercourses, in areas that are infrequently flooded, allowing for the establishment of shrubs (Zembal and Kramer 1984, Wheeler 1988), but may also occupy sandy patches on older benches. Soil types include sandy soils on the floodplains and fluvial terraces (California Native Plant Society 1985b).

The historical range of the woolly star is believed to include the Santa Ana River, its tributaries and the bordering river plain from Rancho Santa Ana in Orange County to Highland in San Bernardino County (Zembal and Kramer 1984). The historical elevation range was from 152 meters (500 feet) to approximately 457 meters (1500 feet).

The species apparently has been extirpated in Orange and Riverside counties, and persists only in San Bernardino County. In the original study by Zembal and Kramer (1984), known populations in San Bernardino County extended from the mouth of the Santa Ana Canyon off Greenspot Road (elevation 579 meters, 1900 feet), west to Lytle Creek, just south of Highland Avenue, at an elevation of 381 to 396 meters (1250 - 1300 feet). An update by Wheeler in 1988 found no populations west of the former Norton Air Force Base. As a result of his findings, the historical range of this species has been reduced from 60 miles to approximately eight linear miles (Wheeler 1988).

One individual was found in 1997 west of the former Norton Air Force Base, between Tippecanoe and Waterman Avenues by Kirtland Biological Services.

The principal threats to the woolly star include the loss of upper floodplain habitat to development and agriculture, and the loss of scouring action due to the control of flood waters. Other activities affecting the plant and its habitat include sand and gravel mining, groundwater recharge facilities and grazing (Zembal and Kramer 1984). Additional threats that are relatively recent, but becoming commonplace are off-road vehicle use, camping, and trash dumping (Wheeler 1988; Karen Kirtland, personal observation).

The woolly star was listed as an endangered species in 1987 by the USFWS and the CDFW.

Project Findings

The Santa Ana River woolly star is a biennial to perennial species, and would have been visible during the surveys. No plants were seen and none are expected to occur.

4.5.3 Nevin's Barberry

Nevin's barberry (*Berberis nevinii*) is a perennial shrub herb that occurs on clay, sandy and gravelly soils in cismontane woodland, coastal sage scrub chaparral and riparian scrub plant communities. This species is found in scattered populations throughout San Bernardino and Riverside counties, and possibly in Los Angeles County. This plant is a popular cultivar and has been documented from residential areas. Known wild populations include the hills south of Loma Linda in San Bernardino County and in the area around Vail Lake, Riverside County at elevations below 2000 feet. The flowering period is from March through June.

Nevin's barberry is threatened by the loss of habitat from fire, erosion and conversion to development. It is listed as endangered by both the USFWS and the CDFW. It is on List 1B.1 of the CNPS Inventory.

Project Findings

Nevin's barberry is a shrub and is observable year round. It was not observed during the field survey.

4.5.4 Thread-leaved Brodiaea

Thread-leaved brodiaea (*Brodiaea filifolia*) is an annual herb that grows from an underground bulb. It is found in openings in chaparral, cismontane woodland, coastal scrub, valley and foothill grasslands, playas and vernal pools. It is found most commonly on clay. It flowers from March through June at elevations from 25 to 1120 meters (82 to 3700 feet).

Throughout its range, the thread-leaved brodiaea is threatened by the loss of habitat to agriculture and conversion to development. It is listed as threatened by the USFWS, and as endangered by the CDFW. It is on List 1B.1 of the CNPS Inventory.

Project Findings

Thread-leaved brodiaea was not flowering due to the time of year and therefore it could not be observed. This species has not been recorded as part of other studies in the area, and the soil is unsuitable for this species. Given the lack of suitable habitat and the level of disturbance on site, this species is not expected to be present.

4.5.5 California Gnatcatcher

The California gnatcatcher is a small songbird that is a year round resident of sage scrub communities. Sage scrub communities preferred by this species are typically dominated by low-growing, drought deciduous and succulent shrubs, as well as sub-shrub species including California sage (*Artemisia Californica*), California buckwheat (*Eriogonum fasciculatum*), brittlebush (*Encelia farinosa*), sage species (*Salvia* spp.), and cacti (*Opuntia* spp.).

California gnatcatchers begin nesting in mid to late February. Re-nesting attempts may be made into August. Territory size ranges from 2 to 40 acres. They have a repetitive, kitten-like mewing call and appear to be most vocal in the early morning and evening. Detection is exceedingly difficult if the birds are not vocalizing.

The original range for this species included all of the coastal sage scrub communities of southern California, from Ventura County south to San Diego and on into Mexico. This species also occurred in extensive coastal sage scrub habitat in Riverside County. Fragmentation or removal of sage scrub plant

communities has reduced the known populations to scattered localities in Los Angeles, Orange, Riverside and San Diego counties. Even these populations are generally found only in the larger open space areas in and around development.

On March 25, 1993, the California gnatcatcher was listed by the Service as a threatened species pursuant to the Federal Endangered Species Act (ESA). The ESA prohibits anyone from "taking" a listed species. Take includes, but is not limited to, harming, harassing or killing individuals of a listed species as well as destruction of habitat occupied by listed species.

Project Findings

The California gnatcatcher requires scrub cover for foraging and nesting. The project site has no shrub cover and does not provide suitable nesting habitat for the gnatcatcher.

4.5.6 Burrowing Owl

The burrowing owl (*Athene cunicularia hypogea*) is a resident species in lowland areas of southern California (Garrett & Dunn 1980). It prefers open areas for foraging and burrowing, and is found widely scattered in open desert scrub. This species is scarce in coastal areas, being found mainly in agricultural and grassland habitats. The largest remaining numbers are in the Imperial Valley, where it is common in suitable habitat adjacent to the agricultural fields.

The burrowing owl prefers large flat open areas for nesting and hunting (Garrett & Dunn 1981). This species lives in burrows constructed by other ground-dwelling species in grassy or sparse shrubby habitat. Burrowing owls also take over other types of burrows, including manmade objects such as pipes. This species forages low over the ground surface for insect prey, and seldom flies very high in the air.

As a result of coastal development, the burrowing owl is declining in coastal habitats. The CDFW has designated the burrowing owl as a California Species of Concern (CSC). These species are so designated because “declining population levels, limited ranges and/or continuing threats have made them vulnerable to extinction.” (California Department of Fish and Wildlife 2012).

Project Findings

Habitat for burrowing owl was assesssesd in accordance with standard practice. The assessment included looking for burrowing owl burows, whitewash, pellets, animal remains and other burrowing owl indicators.

Burrowing owls need sparse shrubby habitat (such as grasslands and desert scrub) to provide food for their insect and other small prey items. The site does not contain any sparse shrubby habitats or similar grassland habitats preferred by this species. No burrows were observed suitable or in use by this species. All Beechey ground squirrel burrows were in use by ground squirrels. No sign of burrowing owl use was observed.

The habitat on site is highly disturbed and is located adjacent to human use areas. The property is unsuitable for burrowing owl use.

4.5.7 San Bernardino Kangaroo Rat

The San Bernardino kangaroo rat is primarily associated with a variety of sage scrub vegetation, where the common elements are the presence of sandy soils and relatively open vegetation structure (McKernan 1997). Flood events break out of the main river channel in a complex pattern, resulting in a braided appearance to the flood plain. This dynamic nature to the habitat leads to a situation where not all the alluvial scrub habitat is suitable for the kangaroo rat at any point in time.

The SBKR prefers open habitat characterized by a low stature open scrub canopy cover of less than 22 percent. Occupied SBKR habitat also typically exhibits a reduced herbaceous cover with a low abundance of European grasses, such as brome species. This type of habitat is best described as early to intermediate phase alluvial sage scrub communities that are subject to frequent flooding/scouring. The open vegetation structure in these communities support the highest densities of SBKR.

Mature phase alluvial chaparral, which are usually located above the active channel or on higher benches are not usually occupied by SBKR, although individuals have been trapped in dense upland scrub adjacent to open habitat and SBKR populations (Vergne 2008).

The property is not within a USFWS Critical Habitat area for the SBKR.

Project Findings

The site is not within critical habitat for the species, and does not support any scrub habitats. The site is heavily disked, and there were no burrows seen that would have been created by kangaroo rats. The SBKR is not expected to be present on site.

4.5.8 Northwestern San Diego Pocket Mouse

The northwestern San Diego pocket mouse (*Chaetodippus fallax fallax*) prefers habitat similar to that preferred by the SBKR. The northwestern San Diego pocket mouse occurs in open, sandy areas in the valleys and foothills of southwestern California.

The range of this species extends from Orange County to San Diego County, and includes Riverside and San Bernardino counties. This mouse is a California Species of Concern (CSC) whose historical range has been reduced by urban development and agriculture.

Project Findings

The site does provide open, sandy areas, but there is no surrounding scrub habitat. The condition and location of the site is such that the northwestern San Diego pocket mouse is not expected to be present.

4.5.9 Los Angeles Pocket Mouse

The Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) is one of two pocket mice found in this area of San Bernardino County. Both the Los Angeles pocket mouse and the San Diego pocket mouse occupy similar habitats, but the San Diego pocket mouse has a wider range extending south into San Diego County.

The habitat of the Los Angeles pocket mouse is described as being confined to lower elevation grasslands and coast sage scrub habitats, in areas with soils composed of fine sands (Williams, 1986). The present known distribution of this species extends from Rancho Cucamonga east to Morongo Valley and south to the San Diego County border.

Los Angeles pocket mouse forages in open ground and underneath shrubs. Pocket mice dig burrows in loose soil, although this has not been completely documented for this subspecies.

The L.A. pocket mouse is listed as a CSC by the CDFW.

Project Findings

The site does provide sandy areas, but the site is heavily disked and not near known populations for this species. The condition and location of the site is such that the Los Angeles pocket mouse is not expected to be present.

4.5.10 San Diego Desert Woodrat

The desert woodrat (*Neotoma lepida*) is a relatively wide-ranging species extending along the coast of California from south of San Francisco through to the border with Baja California. This species also occurs in the Central Valley and the deserts of southern California and extends along the desert side of the Sierra Nevada into southeastern Oregon.

The coastal race of the desert woodrat, the San Diego desert woodrat (*Neotoma lepida intermedia*), prefers scrub habitats such as coastal sage scrub, chaparral and alluvial fan sage scrub. It is more common in areas with rock piles and coarse sandy to rocky soils throughout coastal southern California. The range of this species extends from just south of Sacramento and the San Francisco area to the border with Baja California.

The coastal subspecies of the widespread *Neotoma lepida* is listed as a CSC; its historical range has been impacted by the conversion of scrub habitats into residential, commercial and industrial use.

Project Findings

The site lacks the appropriate scrub habitat preferred by this species. San Diego desert woodrat is not expected to be present.

4.6 Raptors, Migratory Birds, and Habitat

Most of the raptor species (eagles, hawks, falcons and owls) are experiencing population declines as a result of habitat loss. Some, such as the peregrine falcon, have also experienced population losses as a result of environmental toxins affecting reproductive success, animals destroyed as pests or collected for falconry, and other direct impacts on individuals. Only a few species, such as the red-tailed hawk and barn owl, have expanded their range in spite of or a result of human modifications to the environment. As a group, raptors are of concern to state and federal agencies.

Raptors and all migratory bird species, whether listed or not, also receive protection under the Migratory Bird Treaty Act (MBTA) of 1918, as amended. The MBTA prohibits individuals to kill, take, possess or sell any migratory bird, bird parts (including nests and eggs) except according to regulations prescribed by the Secretary of the Interior Department (16 U. S. Code 703).

Additional protection is provided to all bald and golden eagles under the Bald and Golden Eagle Protection Act of 1940, as amended. State protection is extended to all birds of prey by the California Department Fish and Game Code, Section 2503.5. No take is allowed under these provisions except through the approval of the agencies or their designated representatives.

Project Findings

The project site provides suitable nesting for ground species, but none for shrub or tree nesting bird species. Some of the larger trees in surrounding areas may provide suitable nesting habitat (Photo 4).

4.7 Jurisdictional Waters

4.7.1 Army Corps of Engineers

The Corps regulates discharges of dredged or fill material into waters of the United States. These watersheds include wetlands and non-wetland bodies of water that meet specific criteria. The lateral limit of Corps jurisdiction extends to the Ordinary High Water Mark (OHWM) and to any wetland areas extending beyond the OHWM; thus, the maximum jurisdictional area is represented by the OHWM or wetland limit, whichever is greater.

Photo 4. Trees along the southern border of the property.

Corps regulatory jurisdiction pursuant to Section 404 of the Clean Water Act is founded on a connection or nexus between the water body in question and interstate (waterway) commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the Corps regulations.

Project Findings

Water may have historically flowed across the project site, but the natural flow was altered years ago by the development of agriculture and more recently by the construction of adjacent residential development. There are no waters or wetland habitats that would come under the jurisdiction of the Corps.

4.7.2 Regional Water Quality Control Board

The Corps has delegated the authority for use of 404 permits to each individual state. The use of a 404 permit in California is regulated by the State Water Resources Control Board (SWRCB) under Section 401 of the Clean Water Act regulations. The Board has authority to issue a 401 permit that allows the use of a 404 permit in the state, with the authority in the state being vested in regional offices known as Regional Water Quality Control Boards (RWQCB).

Under the Porter-Cologne Act of 2003, the SWRCB has extended its responsibilities to include impacts to water quality from non-point source pollution.

In addition, the SWRCB has the responsibility to require that projects address ground water and water quality issues, which would be evaluated as part of the geotechnical and hydrology studies. Their authority extends to all waters of the State (of California).

Project Findings

Water may have historically flowed across the project site, but the natural flow was altered years ago by the development of agriculture and more recently by adjacent residential development. There are no waters or any riparian habitat that would come under the jurisdiction of the San Diego RWQCB or provide any Beneficial Uses (BUs) that might comer under the RWQCB protection.

4.7.3 California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW), through provisions of the State of California Administrative Code, is empowered to issue agreements for any alteration of a river, stream or lake where fish or wildlife resources may adversely be affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an intermittent flow of water. Lateral limits of jurisdiction are not clearly defined, but generally include any riparian resources associated with a stream or lake, CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream or lake as defined by CDFW.

Project Findings

Water may have historically flowed across the project site, but the natural flow was altered years ago by the development of agriculture and more recently by adjacent residential development. There are no streams, creeks, washes, or similar waterways, or any riparian habitat that would come under the jurisdiction of the CDFW.

4.8 Habitat Fragmentation and Wildlife Movement

Wildlife movement and the fragmentation of wildlife habitat are recognized as important issues that must be considered in assessing impacts to wildlife. In summary, habitat fragmentation is the division or breaking up of larger habitat areas into smaller areas that may or may not be capable of independently sustaining wildlife and plant populations. Wildlife movement (more properly recognized as species movement) is the temporal movement of species along various types of corridors. Wildlife corridors are especially important for connecting fragmented wildlife habitat areas.

Project Findings

The project site is in area already fragmented and is surrounded by paved roads, farms and residential development There are few native habitats left in the nearby surrounding areas, and impacts to wildlife movement and habitat fragmentation have already occurred. There will be no additional fragmentation of habitat.

5.0 Discussion

5.1 General Biological Resources

There will be a loss of approximately 38 acres of ruderal habitat, landscaping and non-native eucalyptus groves. This impact is not considered to be significant.

5.2 Sensitive Biological Resources

Suitable habitat does not exist for any of the sensitive biological species identified as potentially present.

5.3 Jurisdictional Waters

The project site does not have jurisdictional waters. No further action is required.

5.4 Raptors and Nesting Habitats

Suitable nesting habitat occur on site and the proposed construction may impact nests or nesting behavior. We recommend the following:

- A breeding bird survey will be required to determine if nesting is occurring. Occupied nests will not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist verifies through non-invasive methods that either (a) the adult birds have not begun egg-laying and incubation; or (b) the juveniles from the occupied nests are foraging independently and are capable of independent survival.

- If the biologist is not able to verify one of the above conditions, then no disturbance shall occur during the breeding season within a distance determined by the qualified biologist for each nest or nesting site.

5.5 Habitat Fragmentation and Wildlife Movement

The project will not add to the ongoing fragmentation of habitat in this area, nor will it substantially affect wildlife movement in this area of San Bernardino County.

6.0 References Cited or Reviewed

Burt, W. H., 1986. *A Field Guide to the Mammals in North American North of Mexico*. Houghton Mifflin Company, Boston, Massachusetts.

California Department of Fish and Wildlife, 2012a. *Staff Report on Burrowing Owl Mitigation*. Report prepared by the State of California Natural Resources Agency, Department of Fish and Wildlife, March 7, 2012

California Department of Fish and Wildlife, 2012b. *Special Animals*. The Resources Agency, Department of Fish and Wildlife, Sacramento, California.

California Native Plant Society, California Native Plant Status Report, 1985a. *Centrostegia leptoceras*.

California Native Plant Society, California Native Plant Status Report, 1985b. *Eriastrum densifolium* var. *sanctorum*

Garrett, K. and J. Dunn, 1981. *Birds of Southern California*. Los Angeles Audubon Society. The Artisan Press, Los Angeles, California.

Grenfell, W. E., M. D. Parisi, and D. McGriff, 2003. "*A Check-list of the Amphibians, Reptiles, Birds and Mammals of California*". California Wildlife Habitat Relationship System, California Department of Fish and Wildlife, Sacramento, California.

Hall, E. R., 1981. *The Mammals of North America, Volumes I and II*. John Wiley and Sons, New York, New York.

Hickman, J. C., ed. 1993. The Jepson Manual: *Higher Plants of California*. University of California Press.

Ingles, L. G., 1965. *Mammals of the Pacific States*. Stanford University Press, Stanford, California.

Munz, P.A., 1974. *A Flora of Southern California*. University of California Press, Berkeley, California.

McKernan, R.L., 1997. *The Status and Known Distribution of the San Bernardino Kangaroo Rat (Dipodomys merriami parvus): Field surveys conducted between 1987 and 1996*. Report prepared for the U.S. Fish and Wildlife Service, Carlsbad Field Office.

Remsen, Jr., J. V., 1978. *Bird Species of Special Concern in California*. Non-game Wildlife Investigations. Wildlife Management Branch Administrative Report No 78-1. Report prepared for the California Department of Fish and Wildlife.

Rey-Vizgirdas, E.M., 1994. *Status and Conservation of the Endangered Slender-horned spineflower (Dodecahema leptoceras (Gray) Rev. & Hardham) and Alluvial Fan Scrub Habitat in Southern California*. Master Thesis, California State University, Fullerton.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed August 12, 2016.

Stebbins, R. C., 1985. *A Field Guide to Western Reptiles and Amphibians*. Houghton Mifflin Company, Boston.

U.S. Fish and Wildlife Service, 1998a. *Emergency Rule to List the San Bernardino Kangaroo Rat, San Bernardino and Riverside Counties in Southern California, as Endangered*. Vol. 63, No. 17, pp. 3835 - 3843.

U.S. Fish and Wildlife Service, 1998b. *Endangered and Threatened Wildlife and Plants; Proposed Rule to List the San Bernardino Kangaroo Rat as Endangered; and Notice of Public Hearing*. Vol. 63, No. 17, pp. 3877 - 3878.

U.S. Fish and Wildlife Service, 1998c. *Endangered and Threatened Wildlife and Plants; Final Rule to List the San Bernardino Kangaroo Rat as Endangered*, Vol. 63, No. 185, pp. 51005 - 51017.

U.S. Fish and Wildlife Service, 2000. Graphic showing final California Gnatcatcher Critical Habitat Units.

U.S. Fish and Wildlife Service, 2001. Graphic showing proposed San Bernardino Kangaroo Rat Critical Habitat Units.

Wheeler, J., 1988. *Recent Ecological Investigations and Present Status of the Endangered Santa Ana River Wooly-Star, Eriastrum densifolium* spp. *sanctorum (Milliken) Mason*. Crossosoma, Vol 14, No. 3. pp. 1 - 17.

Zembal, R. and K.J. Kramer, 1984. *The known distribution and unknown future of Santa Ana River woolly-star (Eriastrum)*. Crossosoma, Vol. 10, No. 5.

Appendix A - Plant and Animal Species Observed

*denotes non-native plants

ANGIOSPERMAE: DICOTYLEDONES	**DICOT FLOWERING PLANTS**
Amaranthaceae	**Amaranthus family**
**Amaranthus blitoides*	Prostrate pigweed
**Erigeron canadensis*	Canada horseweed
Asteraceae	**Sunflower family**
Ambrosia psillostachya	Western ragweed
Heterotheca grandiflora	Telegraph weed
Boraginaceae	**Borage family**
Amsinckia intermedia	Fiddleneck
Brassicaceae	**Mustard family**
Descurainia pinnata	Desert tansy mustard
**Hirschfeldia incana*	Short-podded mustard
**Sisymbrium irio*	London rocket
Chenopodiaceae	**Saltbush family**
**Chenopodium album*	Lamb's quarters
**Salsola tragus*	Russian thistle
Solanaceae	**Nightshade family**
Datura discolor	Desert Jimson weed
Fabaceae	**Pea family**
Geraniaceae	**Geranium family**
**Erodium cicutarium*	Red-stemmed filaree
Solanaceae	**Nightshade family**
Datura wrightii	Jimson weed
Zygophyllaceae	**Caltrop family**
**Tribulus terrestris*	Puncture vine
ANGIOSPERMAE: MONOCOTYLEDONAE	**MONOCOT FLOWERING PLANTS**
Poaceae	**Grass family**
**Bromus diandrus*	Ripgut brome
**Cynodon dactylon*	Bermuda grass
**Hordeum murinum*	Mouse barley
**Schismus barbatus*	Mediterranean grass

Taxonomy and nomenclature follow Hickman 2012 and Munz 1974.

Animals

Phryonosomatidae	**Spiny lizards and their allies**
Uta stansburiana	Side-blotched lizard
AVES	**BIRDS**
Accipitridae	**Kites, hawks and eagles**
Buteo lineatus	Red-shouldered hawk
Columbidae	**Pigeons and doves**
Columba livia	Rock dove
Zenaida macroura	Mourning dove
Trochlidae	**Hummingbirds**
Calypte anna	Anna's hummingbird
Picidae	**Woodpeckers**
Picoides nuttallii	Nuttall's woodpecker
Tyrannidae	**Tyrant flycatchers**
Sayornis nigricans	Black phoebe
Tyrannus verticaulis	Western kingbird
Corvidae	**Crows and ravens**
Corvus brachyrhynchos	American crow
Corvus corax	Common raven
Fringillidae	**Finches**
Haemorhous mexicanus	House finch
Carduelis psaltria	Lesser goldfinch
MAMMALIA	**MAMMALS**
Sciuridae	**Squirrels, chipmunks and marmots**
Spermophilus beecheyi	Beechey ground squirrel
Geomyidae	**Pocket gophers**
Thomomys bottae	Botta's pocket gopher

Nomenclature follows Hall 1981 and Grenfell et al. 2003.

Appendix B - Definitions of Species Status Classification

FED: Federal Classifications

END Taxa listed as endangered

THR Taxa listed as threatened

PE Taxa proposed to be listed as endangered

PT Taxa proposed to be listed as threatened

C2* The U.S. Fish and Wildlife Service (USFWS) revised its classifications of candidate taxa (species, subspecies, and other taxonomic designations). Species formerly designated as "Category 1 Candidate for listing" are now known simply as "Candidate". The former designation of "Category 2 Candidate for listing" has been discontinued. The USFWS will continue to assess the need for protection of these taxa and may, in the future, designate such taxa as Candidates. NRAI has noted the change in species status by marking with an asterisk (*) those C2 candidates that were removed from the list.

C Candidate for listing. Refers to taxa for which the USFWS has sufficient information to support a proposal to list as Endangered or Threatened and issuance of the proposal is anticipated but precluded at this time.

BCC Bird of Conservation Concern

ND Not designated as a sensitive species

STATE: State Classifications

END Taxa listed as endangered

THR Taxa listed as threatened

CE Candidate for endangered listing

CT Candidate for threatened listing

CFP California Fully Protected. Species legally protected under special legislation enacted prior to the California Endangered Species Act.

CSC California Species of Concern. Taxa with populations declining seriously or that are otherwise highly vulnerable to human development.

SA Special Animal. Taxa of concern to the California Natural Diversity Data Base regardless of their current legal or protected status.

WL Watch list.

ND Not designated as a sensitive species

CNPS: California Native Plant Society Classifications

1A Plants presumed by CNPS to be extinct in California

1B Plants considered by CNPS to be rare or endangered in California and elsewhere

2P Plants considered by CNPS to be rare, threatened or endangered in California, but which are more common elsewhere.

3 Review list of plants suggested by CNPS for consideration as endangered but about which more information is needed.

4 Watch list of plants of limited distribution whose status should be monitored

CNPS: Threat Codes

.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 or no current threats known)