



July 1, 2013

Ms. Frances Segovia, Project Manager
Riverside County Department of Transportation
3525 14th Street
Riverside, CA 92501

Subject: Habitat Assessment at Three Locations for the Clinton Keith Road Extension Project, Riverside County, California

Ms. Segovia:

ICF conducted a habitat assessment at three areas along the Clinton Keith Road Extension Project alignment. The project is located in the city of Murrieta and unincorporated Riverside County, California. The three areas studied were Warm Springs Creek in vicinity of Los Alamos Road, a newly created riparian area located just south of Los Alamos Road and west of Briggs Road, and French Valley Creek where it crosses Briggs Road and at Porth Road (Figure 1).

This report provides the methods, results, and conclusions of the habitat assessment performed at each of these three areas.

Methods

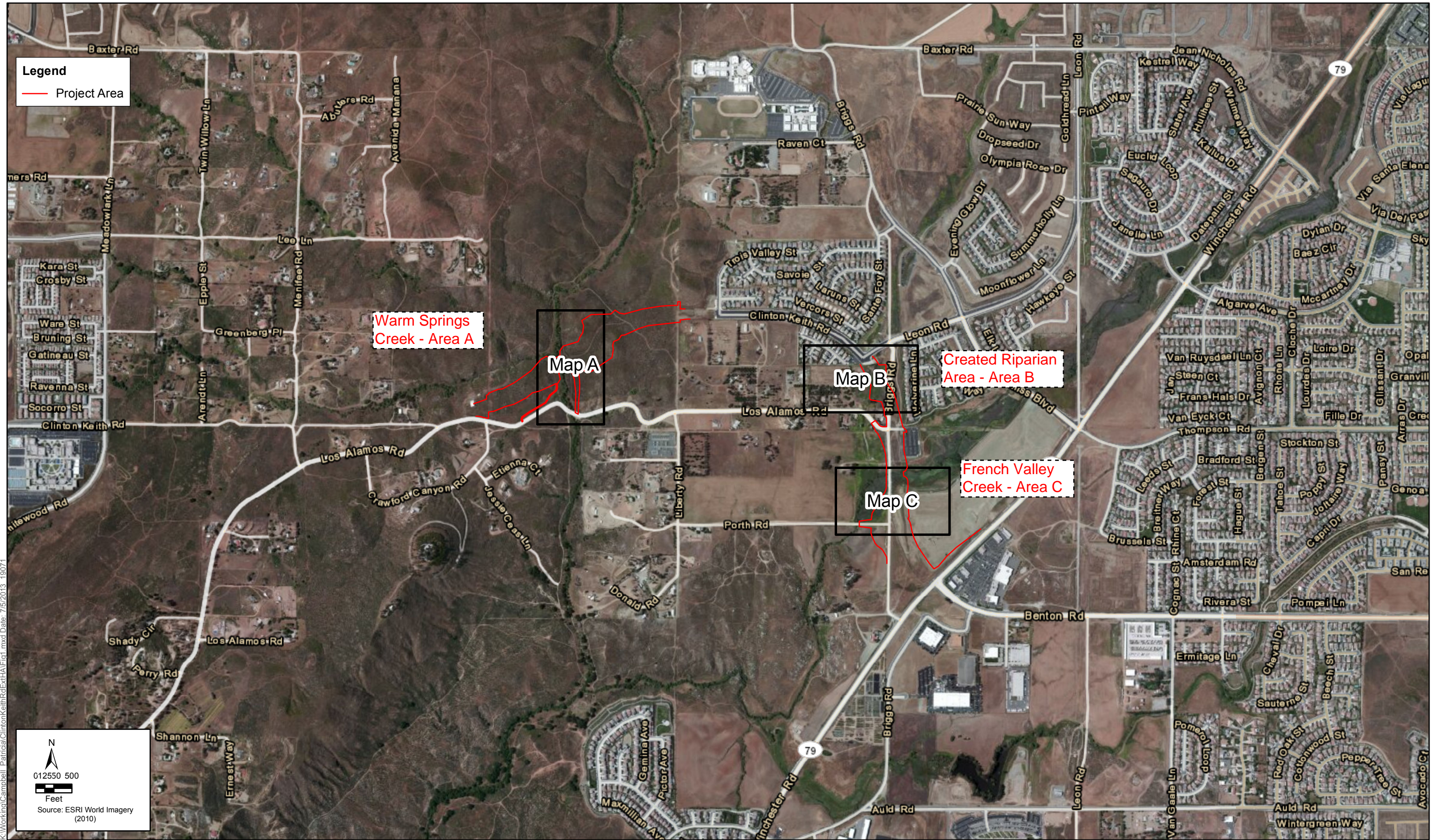
A field visit was made to each of the three study area locations on June 25, 2013 by Tricia A. Campbell. Weather conditions were warm (75 degrees Fahrenheit to 89 degrees Fahrenheit), 0 to 5 mile/hour breeze, partly cloudy skies, no recent rain, and visibility was good. The study area for each location was the proposed Limits of Disturbance and a 200-foot buffer (refer to Figure 2). The current fieldwork was conducted in late June 2013, about 4 to 8 weeks after the peak of vegetation growth after a winter of about half-normal rainfall. Natural vegetation communities were mapped during the field reconnaissance. For the vegetation mapping presented in this report, the minimum mapping unit was 0.05 acre. Appendix A provides photographs taken during the field visit.

Special-status plant and animal species and natural communities in California that have special regulatory or management status were evaluated for potential to occur within the study areas. Appendix B provides a complete list of the species (including scientific names) and natural communities reviewed for the proposed Project. This list was developed using the California Natural Diversity Data Base (CDFG 2013) and the California Native Plant Society's (CNPS) Electronic Inventory (CNPS 2013). Specifically, the database searches were conducted for lands occurring on the U.S. Geological Survey (USGS) 7.5-minute quadrangle maps on which the study areas appear (Murrieta 1976) and also includes the immediately surrounding quadrangles (Bachelor Mountain, Fallbrook, Lake Elsinore, Pechanga, Romoland, Temecula, Wildomar, Winchester). For special-status plants, the database search only included those species known to occur below 5,000 feet. Finally, species were added, as appropriate, based on professional knowledge and experience with prior projects in the vicinity.

The Western Riverside County Multiple Species Conservation Plan (MSHCP, Plan) was reviewed to ensure that those species with survey areas overlapping the three study areas were included. The following species need to be addressed per the MSHCP:

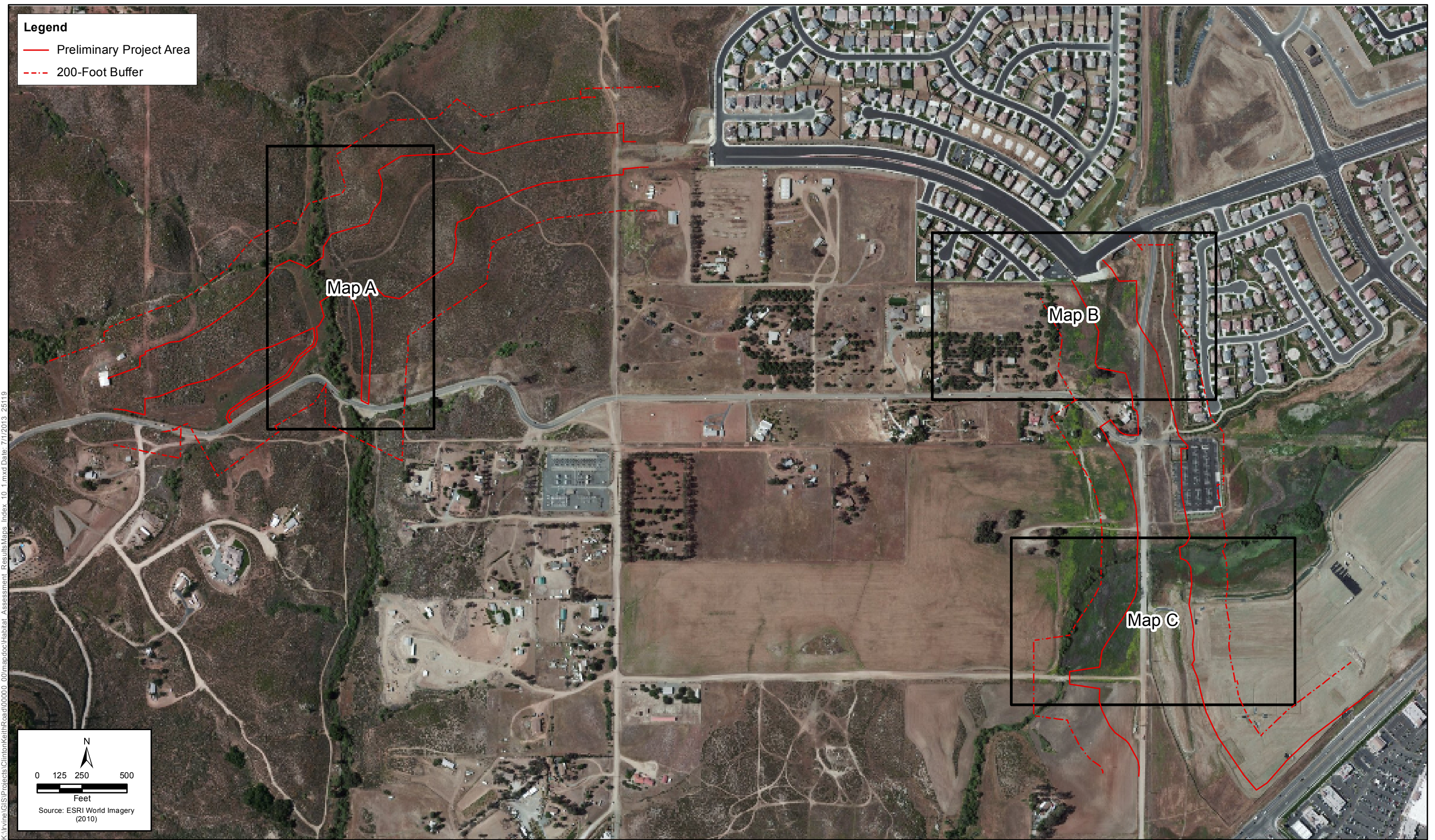
Table 1. Species Requiring Study under the MSHCP by Study Area.

| Species/Resource | MSHCP Requirement | Study Area | Results |
|---|---------------------------|--------------|--|
| California Orcutt Grass (<i>Orcuttia californica</i>) | NEPSA ^a 4 | Area A, B, C | No potential to occur at any of the three study areas. |
| Many-stemmed Dudleya (<i>Dudleya multicaulis</i>) | NEPSA ^a 4 | Area A, B, C | Potential in Area A; no potential in Areas B or C. |
| Munz's Onion (<i>Allium munzii</i>) | NEPSA ^a 4 | Area A, B, C | No potential to occur at any of the three study areas. |
| San Diego Ambrosia (<i>Ambrosia pumila</i>) | NEPSA ^a 4 | Area A, B, C | Potential in Area A; no potential in Areas B or C. |
| Spreading Navarretia (<i>Navarretia fossalis</i>) | NEPSA ^a 4 | Area A, B, C | No potential to occur at any of the three study areas. |
| Wright's Trichocoronis (<i>Trichocoronis wrightii</i> var. <i>wrightii</i>) | NEPSA ^a 4 | Area A, B, C | No potential to occur at any of the three study areas. |
| Coulter's Goldfields (<i>Lasthenia glabrata</i> sp. <i>coulterii</i>) | CAPSA ^b 4 | Area A, B, C | No potential to occur at any of the three study areas. |
| Davidson's Saltscale (<i>Atriplex serenana</i> var. <i>davidsonii</i>) | CAPSA ^b 4 | Area A, B, C | No potential to occur at any of the three study areas. |
| Little Mousetail (<i>Myosurus minimus</i>) | CAPSA ^b 4 | Area A, B, C | No potential to occur at any of the three study areas. |
| Round-leaved Filaree (<i>Erodium macrophyllum</i>) | CAPSA ^b 4 | Area A, B, C | No potential to occur at any of the three study areas. |
| Smooth Tarplant (<i>Centromadia pungens</i>) | CAPSA ^b 4 | Area A, B, C | Potential habitat present at all three study areas; species found north of Area A during current work. |
| Thread-leaved Brodiaea (<i>Brodiaea filifolia</i>) | CAPSA ^b 4 | Area A, B, C | No potential to occur at any of the three study areas. |
| Burrowing Owl (<i>Athene cunicularia</i>) | Burrowing Owl Survey Area | Area A, B, C | Potential habitat present at all three study areas. |
| Los Angeles Pocket Mouse (<i>Perognathus longimembris brevinasus</i>) | Small Mammal Survey Area | Area A | Low potential along the margins of Warm Springs Creek. It is likely that its presence would be related to movement patterns (linkage/connectivity) |



K:\Working\Campbell_Patricia\ClintonKeithRdExt\HA\Fig1.mxd Date: 7/5/2013 1:07:11

Figure 1
Project Location - Areas of Study
Clinton Keith Road Extension Project



K:\Irvine\GIS\Projects\ClintonKeithRoad\00000_00\mapdoc\Habitat_Assessment_Results\Map_Index_10_1.mxd Date: 7/1/2013 2:51:19

Legend
— Preliminary Project Area
- - - 200-Foot Buffer

Map A

Map B

Map C

0 125 250 500
Feet
Source: ESRI World Imagery (2010)



Figure 2 - Map Index
Habitat Assessment Results Map
Clinton Keith Road Extension Project

K:\Irvine\GIS\Projects\ClintonKeithRoad\00000_00\mapdoc\Habitat_Assessment_ResultsMap_A.mxd Date: 7/1/2013 2:51:19



Figure 2 - Map A
Habitat Assessment Results Map
Clinton Keith Road Extension Project



K:\Irvine\GIS\Projects\ClintonKeithRoad\000000_00\mapdoc\Habitat_Assessment_Results\Maps_10_1.mxd Date: 7/1/2013 25119



Figure 2 - Map B
Habitat Assessment Results
Clinton Keith Road Extension Project



K:\live\GIS\Projects\ClintonKeithRoad\000000_00\mapdoc\Habitat_Assessment_Results\Maps_10_1.mxd Date: 7/1/2013 25:19

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



Figure 2 - Map C
Habitat Assessment Results
Clinton Keith Road Extension Project

| Species/Resource | MSHCP Requirement | Study Area | Results |
|--------------------|-------------------|------------|------------------------------|
| | | | rather than live-in habitat. |
| Proposed Core 2 | Cores/Linkages | Area A | n/a |
| Criteria Cell 5569 | Criteria Cell | Area A | n/a |
| Criteria Cell 5572 | Criteria Cell | Area B | n/a |
| Criteria Cell 5677 | Criteria Cell | Area C | n/a |

^a = Narrow Endemic Plant Survey Area

^b = Criteria Area Plant Survey Area

To augment existing condition information, the Southwestern Willow Flycatcher Focused Survey for the Clinton Keith Road Extension Project (Jones & Stokes 2003) was reviewed. Historical satellite images using Google Earth were reviewed to provide historical context to existing and past conditions.

Existing Conditions

Area A

A review of historical satellite images shows basically no change to conditions at Area A. The site and immediate surroundings (within half a mile or so) are dominated by largely natural topography and vegetation, with limited infrastructure (e.g. roads and rural homes) and some evidence of current or recent commercial grazing. Warm Springs Creek empties to Murrieta Creek roughly six miles to the southwest, which in turn empties to the Santa Margarita River and eventually the Pacific Ocean in San Diego County.

The topography at the site is dominated by a north-south trending valley with a nearly flat bottom cut by a meandering creek channel generally incised about three to six feet. This valley is held by rounded, moderately sloped hills rising typically 100 to 200 feet or so on either side. Elevation at the site ranges from around 1,280 feet along the creek at Los Alamos Road up to about 1,350 feet on adjacent slopes. The Warm Springs Creek bed was dry to slightly moist at the surface at the time of the field visit. No ongoing human activities were noted at the site during the work.

Soils are mapped entirely as well-drained, sandy loams, primarily Cieneba rocky sandy loam; mapped soils are described as eroded but not alkali or saline (USDA 2013). Most of the valley's ground surface shows minor evidence of past disturbance such as historic grazing or fire, but with very little indication of recent or ongoing effects. Rills and gullies are almost entirely absent at the site. Biological soil crusts are moderately evident and compaction was noted only at the few roads and trails. The creek channel shows indications of fairly strong scour and deposition in the past, with the bed dominated by sands and the sides of darker, sandy loam often vertically eroded, though active bank collapse appeared to be modest.

Vegetation along the channel appears as a fairly tall but somewhat broken and meandering strip of southern willow scrub, contrasting with adjacent grasslands and Riversidian sage scrub hillsides (Figure 2-Map A). Diversity in both the riparian zone and grasslands appears notably high in a regional context. Shrub diversity in the sage scrub appears moderate and herb-layer plant diversity in the scrub appears moderate to high, although this was difficult to evaluate due to the rather dry and past-peak conditions at the time of the fieldwork. Invasive plant species present are rather diverse, with 20 species detected that are currently classified as invasive (Cal-IPC 2013). However, the only substantial cover by invasive plants was for the 12 invasive grasses present, a nearly

universal condition in regional grasslands today. One relatively minor, special-status plant was detected during current work, Panicle Tarplant (*Deinandra paniculata*).

Riparian vegetation is dominated by willows of three native species. The shrub and herb layers showed above average diversity in a regional context and considering the apparent hydrology and the channel width and incision; the incision may primarily reflect historic rather than ongoing disturbances.

Despite the presence of many nonnative plants, the grasslands at the site were most notable for the presence of a high diversity of native grasses and herbs. Common or locally common species included Small-flowered Marsh Elder (*Iva axillaris*) and Alkali Mallow (*Malvella leprosa*). Scratchgrass Muhly (*Muhlenbergia asperifolia*) was locally common and was one of at least five native grass species present. The diversity, limited expression of invasives present, and the native dominants together indicate grassland conditions of good soil moisture availability, moderate alkalinity and/or salinity, and moderate to low disturbance both currently and historically.

Adjacent shrub vegetation was strongly dominated by California Buckwheat (*Eriogonum fasciculatum*), with smaller patches or isolated individuals of a typical to above-average diversity of shrubs typical of this community. The scrub was of moderate height and high canopy cover and condition appeared to be very good in consideration of the dry conditions during the fieldwork.

Wildlife detections during the fieldwork were limited, as is expected give the time of year, prevailing conditions, and the time of day the work was conducted. A total of 27 species of vertebrate animals included only 3 nonnatives were detected. Detections of Bobcat (*Lynx rufus*), Gray Fox (*Urocyon cinereoargenteus*), and Coyote (*Canis latrans*) indicates a healthy and functioning wildlife community. Coastal California Gnatcatcher (*Poliophtila californica californica*) was detected several times in the sage scrub on the east and west sides of Warm Spring Creek. Given this context, the evidence of wildlife gathered indicates at least a moderately high diversity of reptiles, birds, and mammals in a high-functioning ecosystem. Refer to Attachment C for a complete list of the plants and animals detected at each of the three study areas.

The natural functions and value of the site appear fairly high to high, due to the evidence of a combination of factors: moderately high to high species diversity; fairly low to very low disturbance; detected presence on or near the site for multiple, special-status species; and an intact natural landscape context. For both plants and wildlife the site appears to provide high wildlife value for available hydrology, source populations of wildlife, buffering value for surrounding areas, and connectivity (corridor movement and habitat linkage).

Area B

Based on satellite images, it appears that Area B was historically agricultural lands that were routinely disced around the perimeter and was part of an unnamed drainage that connected to French Valley Creek to the south (image dated September 1996). A December 2005 image shows the drainage with what appears to be green herbaceous vegetation. Historically, soils in Area B were Wyman Loam (Soils Survey). By January 2006, residential development began to the north and east of Area B and included the northern portion of Area B. By September 2006, the northern

half of Area B was graded and by January 2007, a dirt road extension of Clinton Keith Road had been graded across Area B and the remaining northern portion of Area B was graded. By June 2009, the existing improvements to the drainage and Clinton Keith Road were made such that Area B now supports drainage flows from upstream of Clinton Keith Road. Given the riparian scrub vegetation that Area B currently supports, water flows have increased from upstream development.

The site and immediate surroundings within a one-half mile or so are primarily developed (modified) topography with ornamental to weedy vegetation, relatively new, residential housing and related infrastructure (e.g. roads and channelized drainages). Surroundings show evidence of recent or past agriculture as well as rapid growth (ongoing development and new commercial development). Area B itself is a relatively newly constructed wetland in a shallow lowland within a fairly flat area topography. Drainage immediately above (north of) and below (south of) the site appears to be engineered (channelized); hydrological connectivity was not further evaluated during current fieldwork. Elevation at the site appears to fall entirely within the range of about 1,300 to 1,350 feet. No ongoing human activities were noted at the site during the work, except that vehicle tracks were noticed crossing the area east-west; trash was light to moderate.

The existing ground surface has been engineered for drainage with a mostly-earthen basin bottom and mostly concrete armoring on slopes. There is little evidence of substantial soil erosion or deposition. Biological soil crusts are limited, with dried algae and some areas of cyanobacteria noted during current fieldwork.

Vegetation in Area B reflects the basin hydrology dominated by ponding and slow-moving flows (Figure 2-Map B). During the current work standing water was present at the north end of the site. A vegetated marsh and riparian zone extends from there southward, with dried to moist, previously saturated soils present in eastern and western edges. Plant diversity appears moderate given the conditions and regional context. Invasive plant species present are moderate in diversity among regional wetlands, with nine species detected that are currently classified as invasive (Cal-IPC 2013). Cover and dominance by invasive plants is significant but not extreme. One relatively minor, special-status plant or animal species was detected during current work, Paniculate Tarplant.

Vegetation cover was dominated by zones of dense cattails (*Typha* spp.) and willows (*Salix* spp.), but more open, drying soils held a moderate diversity of low-growing plants. Species with significant cover in those areas included a mix of native and nonnative herbs such as Alkali Mallow, California Loosestrife (*Lythrum californicum*), and Annual Beardgrass (*Polypogon monspeliensis*).

Wildlife detections during the fieldwork were limited, as is expected give the time of year, prevailing conditions, and time of day the work was performed. The total of 13 species of vertebrate animals detected included no nonnatives. All wildlife detected, are common in manmade landscapes such as residential areas and small, constructed wetlands within a context of developed land. No native predators were detected but small numbers may be present at this time. Refer to Attachment C for a complete list of the plants and animals detected at each of the three study areas. Given this context, the evidence of wildlife gathered indicates a moderate to somewhat low diversity of reptiles, birds, and mammals at a recently constructed site with some potential

wildlife value, especially accessible water and common wetland vegetation subject to a partly natural flow regime. Depending on site connectivity, management and ongoing human disturbance, moderate or low biological value may be present in the future. For example, such areas can provide either linkages among regional wetlands but also provide focused exposure to toxins and ecological traps (e.g. sites attractive for native bird nesting but with excessively high failure rates due to unnatural conditions or domestic pets).

Overall, the natural functions and value of this site appear moderate due to the evidence of moderate to low diversity, fairly low to very low disturbance, and intact larger context. The site potentially provides some valuable functions and value as a source of available water and connectivity (movement and linkage) for both wildlife and plants. However, it also potentially provides similar functions for invasive species.

Area C

Historically, Area C was active farming with French Valley Creek consisting of a relatively narrow natural drainage feature that was principally ephemeral in hydrology but with some patches of riparian scrub (image September 1996). By December 2005, the routine disking appears to have been stopped and lands outside of the Creek were left fallow. A December 2005 image shows what appears to be fallow lands and a second drainage feature between French Valley Creek and Briggs Road. January 2006 through June 2012 images, again show fallow field conditions and a second drainage between French Valley Creek and Briggs Road. The amount of water that is transported by French Valley Creek appears to have increased over the past decade with considerably more riparian vegetation now being supported by the Creek at both the Porth Road crossing and the Briggs Road crossing.

The site and immediate surroundings within one-half mile or so are primarily rural, partly modified topography. The general area shows evidence of recent or past agriculture as well as rapid growth (ongoing development and new commercial development). This site itself appears fallow with mostly low, ruderal vegetation, cut across by a drainage with a meandering willow riparian strip easily noted in the otherwise largely open, gently rolling landscape. A short way south of the site, the width and height of willow vegetation increases; the drainage meanders south and then west to Warm Springs Creek about one mile beyond the Porth Road crossing.

Elevation at the site appears to fall entirely within the range of about 1,315 to 1,340 feet. No ongoing human activities were noted at the site during the work; trash was light to moderate. Soils are mapped primarily as Cienega rocky sandy loam or Chino silt loam, drained, saline-alkali. Topography on the site appears to have received no substantial, manmade alteration, though the slopes to the west of the drainage appear to have been reduced slightly through disking or modest leveling for agriculture. The French Valley Creek channel is only slightly incised or entrenched and not confined by the surrounding natural slopes, which rise gently to the east and moderately to the west. There is no evidence of substantial soil erosion or deposition at the channel. Biological soil crusts are minimal beyond the channel, in part because there is very limited open soil surface in the dense ruderal areas.

The riparian channel is dominated by willows and Mediterranean Tamarisk, with some open areas dominated by tall, herbaceous species such as cattails and Giant Creek Nettle (*Urtica dioica*). Refer to Figure 2-Map C for vegetation mapping of Area C. Understory and riparian edge species were patchy but overall fairly dense. Mule Fat Baccharis was common at riparian edges and open patches, and willow understory was dominated by recruits of taller species along with varied annuals and herbaceous perennials, especially Yerba Mansa (*Anemopsis californica*), Giant Creek Nettle (*Urtica dioica*), Poison Hemlock (*Conium maculatum*), rushes (*Juncus* spp.), and dock (*Rumex* spp.). The channel bottom was mostly dry to moist soils, but with a few areas of ponded water. Western Mosquitofish (*Gambusia affinis*) and Western Toad tadpoles (*Anaxyrus boreas*) were conspicuous in ponded water at the Briggs Road crossing. No wildlife was noted in the standing water on the south side of the crossing at Porth Road; the channel bed was moist with light grayish brown soils and no flooding or ponding immediately on the north side of that crossing. Refer to Attachment C for a complete list of the plants and animals detected at each of the three study areas.

At the time of fieldwork, vegetation in ruderal areas on the site had nearly 100% canopy cover (i.e. cover by plant outer outlines) and very dense foliar cover (i.e., leaf and stem shading cover) and ranged in height from a few centimeters inches) to about 6 feet. The density, height and species mix of plants present across ruderal areas indicates (1) alkaline and/or saline soils that are seasonally moist but at least predominantly not saturated, flooded or ponded for extended periods, (2) patchy dominance among a mix of disturbance-dominated natives and nonnatives, and (3) a gradual decrease in moisture moving away from the riparian zone. Plant species noted as dominant or co-dominant in at least some moderate to extensive patches on ruderal areas of the site were Western Ragweed (*Ambrosia psilostachya*), Stinking Chamomile (*Anthemis cotula*), Bull Thistle (*Cirsium vulgare*), Canada Horseweed (*Erigeron canadensis*), Salt Heliotrope (*Heliotropium curassavicum*), Short-pod Mustard (*Hirschfeldia incana*), Alkali Sea-heath (*Frankenia salina*), Alkali Mallow, Spanish Brome (*Bromus madritensis*), Swamp Prickle Grass (*Crypsis schoenoides*), Salt Grass (*Distichlis spicata*), and Annual Beard Grass.

Wildlife detections during the fieldwork were limited, as is expected give the time of year, prevailing conditions, and the time of day the work was conducted. The total of 26 species of vertebrate animals included 2 nonnatives. All wildlife detected are common in riparian and/or moist, ruderal vegetation in the region. No native predators were detected but small numbers are likely present at this time. Given this context, the evidence of wildlife gathered indicates a moderate diversity of vertebrate wildlife. A White-tailed Kite (*Elanus leucurus*), a state Species of Special Concern was observed foraging over the ruderal vegetation to the northeast of the Porth Road and French Valley Creek crossing.

Overall, the natural functions and value of Area C appear moderate due to available moisture, complex vegetation structure, currently fairly low disturbance, and partly intact landscape context. In past years, the uplands were routinely disced which would reduce the functionality of the area. The site potentially provides important functions and value for connectivity (movement and linkage) for both wildlife and plants. However, it also potentially provides similar functions for invasive species.

Results

All three areas of study (Areas A, B, and C) support valuable linkage/connectivity for plants and animals. The discussions provide the results by Study Area.

Area A

Area A is natural open space that shows high herbaceous plant diversity and supports the federally Threatened and state Species of Special Concern, Coastal California Gnatcatcher. This species was detected in the Riversidian Sage Scrub on both sides of Warm Springs Creek. The grasslands between the Creek and sage scrub support several species of native grasses and a wide range of native herbs.

MSHCP Resources

Of the MSHCP species required for study at Area A, the following have potential to occur: Many-stemmed Dudleya, San Diego Ambrosia, Smooth Tarplant, Burrowing Owl, and Los Angeles Pocket Mouse. These species have low potential for occurrence except for Smooth Tarplant which has moderate potential for occurrence. Smooth Tarplant was observed several hundred feet north of the study area. There are a number of other special-status plants with potential to occur, such as Intermediate Mariposa Lily (*Calochortus weedii* var. *intermedius*), but are fully covered species under the MSHCP and do not require surveys or further study. Any potential impacts to these types of species would be fully mitigated by the plan. Refer to Attachment B for additional information on these species. There are also several species of special-status plants (e.g., Plummer's Mariposa Lily [*Calochortus plummerae*]) for which Area A is not within the survey area for the species and thus, no survey is required and any proposed impacts to these species would also be fully covered by the Plan.

Area supports riparian-riverine vegetation in the form of Southern Willow Scrub that has low potential to support Southwestern Willow Flycatcher (*Empidonax traillii extimus*) and Least Bell's Vireo (*Vireo bellii pusillus*). The riparian scrub lacks the breadth, hydrology, and structure to support Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*). There are no vernal pool resources and no potential for fairy shrimp to be present.

Non-MSHCP Resources

Paniculate Tarplant, a CNPS List 4.2 plant was found in the grasslands on the east side of Warm Springs Creek, between the Creek and the sage scrub. Other special-status species with potential to occur that are not MSHCP covered species are Palmer's Grapplinghook (*Harpagonella palmeri*), Graceful Tarplant (*Holocarpa virgata* ssp. *elongata*), Mesa Horkelia (*Horkelia cuneata* ssp. *puberula*), Ramona Horkelia (*Horkelia truncata*), Santa Lucia Dwarf Rush (*Juncus luciensis*), Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*), Ocellated Humboldt Lily (*Lilium humboldtii* ssp. *ocellatum*), Bottle Liverwort (*Sphaerocarpos drewei*), Parry's Tetracoccus (*Tetracoccus dioicus*), California Screw-Moss (*Tortula californica*), California Legless Lizard (*Anniella pulchra*), Coronado Skink (*Eumeces skiltonianus interparietalis*), Coast Western Patch-nosed Snake (*Salvadora hexalepis virgulata*), Pallid Bat (*Antrozous pallidus*), California Western Mastiff Bat (*Eumops perotis californicus*), Pocketed Free-tailed Bat (*Nyctinomops [Tadarida] femorosaccus*), Big Free-tailed Bat (*Nyctinomops macrotis*), Dulzura Pocket Mouse (*Chaetodipus californicus femoralis*), Southern Grasshopper Mouse (*Onychomys torridus ramona*), and American Badger (*Taxidea taxus*). For the bats, only potential foraging habitat may be present; no roosting potential habitat.

Area B

This area has been artificially created into a low-lying drainage that holds water permanently at the Clinton Keith Road crossing. The riparian vegetation present is young and is dominated by willows, cattails, and herbaceous riparian plants.

MSHCP Resources

Of the MSHCP species required for study at Area B, Smooth Tarplant and Burrowing Owl have potential to occur, albeit both having a low likelihood of occurrence. There is riparian-riverine vegetation in the form of cattails, sapling Southern Willow Scrub, and herbaceous riparian. There is no potential for Southwestern Willow Flycatcher, Least Bell's Vireo, or Western Yellow-billed Cuckoo and there are no vernal pool resources present; thus, no potential for fairy shrimp.

Non-MSHCP Resources

Paniculate Tarplant, a CNPS List 4.2 special-status plant, was confirmed present in Area B with no other non-MSHCP covered plants with potential to occur. Of the non-MSHCP special-status animals known to occur in the region, the bats (Pallid Bat, California Western Mastiff Bat, Western Yellow Bat, Pocketed Free-tailed Bat, and Big Free-tailed Bat) have potential to occur in a foraging capacity, but not roosting.

Area C

Based on past satellite images, French Valley Creek appeared to transport less water than it currently does and Area C was active farming agriculture with the uplands routinely disced. The uplands now support ruderal weedy vegetation and the Creek supports more riparian vegetation than it had in the past. Additional water has likely come from upstream development in the area.

MSHCP Resources

Of the MSHCP resources needing study in Area C, riparian-riverine vegetation and potential for Smooth Tarplant, Least Bell's Vireo, and Burrowing Owl is present. There are no vernal pool resources and no potential for fairy shrimp. Only the Porth Road crossing has potential to support vireo. The riparian is far too limited in structure and breadth to support the potential for either Southwestern Willow Flycatcher or Western Yellow-billed Cuckoo.

Non-MSHCP Resources

Of the non-MSHCP covered special-status plants and animals known to occur in the region, Paniculate Tarplant and several special-status bats (Pallid Bat, California Western Mastiff Bat, Western Yellow Bat, Pocketed Free-tailed Bat, and Big Free-tailed Bat) have potential to forage over Area C; no potential roosting habitat present.

Conclusions

A habitat assessment was performed at three focus areas for the Clinton Keith Road Extension Project in June 2013. Existing conditions at the focus area (Area A for this report) at Warm Springs Creek, north of Los Alamos Road appear to be very similar to those documented by Jones and Stokes (2003). Coastal California Gnatcatcher and Paniculate Tarplant were confirmed present and of the MSHCP survey species for this location, Many-stemmed Dudley, San Diego Ambrosia, Smooth Tarplant, Burrowing Owl, and Los Angeles Pocket Mouse were found to have potential to occur. Riparian-riverine resources are

present in the form of Southern Willow Scrub and it has low potential to support Southwestern Willow Flycatcher and Least Bell's Vireo. No vernal pool resources are present and no potential for fairy shrimp.

Area A has a relatively high plant diversity and there are a number of non-MSHCP covered special-status plant that have potential to occur including those that are not yet adequately conserved under the Plan (e.g., Plummer's Mariposa Lily, Parry's Spineflower). There are also non-MSHCP special-status animals (e.g., Coronado Skink) that has potential to occur. Refer to the Results section above for Area A and Attachment B for a full list and details regarding these species.

The second focus area (Area B) is located just south of Clinton Keith Road, west of Briggs Road. It is a constructed low-lying area that water ponds in and now supports cattails, sapling Southern Willow Scrub, and herbaceous riparian vegetation. This area does not have the necessary structure to support riparian-listed birds such as Least Bell's Vireo. There is potential for Smooth Tarplant and Burrowing Owl but no vernal pool resources or potential to fairy shrimp. A single special-status plant, Paniculate Tarplant was found during the habitat assessment work. There is no potential for any other special status plants and of the non-MSHCP special-status animals known in the region, only the special-status bat have potential to occur (in a foraging role only).

The third focus area is at two crossings along French Valley Creek – Briggs Road crossing and Porth Road crossing. Both crossings support riparian-riverine vegetation with the Porth Road crossing also potentially supporting Least Bell's Vireo, Burrowing Owl (adjacent agricultural lands), and Smooth Tarplant. Based on past satellite images, the amount of water being transported by French Valley Creek has increased over the past decade thus increasing the ability of the Creek to support riparian vegetation. We recommend that careful review of past federal and state jurisdictional delineation results be performed. Wetland conditions may be present on the west side of the Briggs Road crossing and on both sides of the Porth Road Crossing.

It has been pleasure to provide this report to you. Please contact me at tricia.campbell@icfi.com or at (909) 717-9602 if you have any questions

Sincerely,

Tricia A. Campbell
Fellow Technical Director/Senior Biologist

Attachments

Attachment A – Photo Log

Attachment B – Special-Status Species & Resources

Attachment C – Plants and Animals Detected at Three Study Areas

cc: Russell Williams, RCTD
Brian Calvert, ICF

Citations

- Brattstrom, B. H. 2000. The range, habitat requirements, and abundance of the Orange-throated Whiptail, *Cnemidophorus hyperythrus beldingi*. *Bulletin of the Southern California Academy of Sciences* 99(1):1-24.
- [CBOC] California Burrowing Owl Consortium. 1997. Burrowing Owl Survey Protocol and Mitigation Guidelines. *Journal of Raptor Research Report* 9:171-177.
- [Cal-IPC] California Invasive Plant Council. 2013. New Weeds Added to Cal-IPC Inventory. *WebUpdate2007.pdf*>. Berkeley, CA: California Invasive Plant Council. Dated March 2013. Accessed at: <http://www.cal-ipc.org/ip/inventory/ on June 25, 2013.
- [CNDDDB] California Natural Diversity Data Base. 2013. California Natural Diversity Database, RareFind 4. Element reports for Murrieta, California and immediately surrounding USGS 7.5-minute quadrangle maps. Available: <<http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>> Accessed: June 24, 2013.
- [CNPS] California Native Plant Society. 2023. Inventory of Rare and Endangered Plants (online edition). Sacramento, CA: California Native Plant Society. Available at <http://www.cnps.org/inventory>. Accessed June 24, 2013.
- Chester, T., W. Armstrong,, and K. Madore. 2007. *Brodiaea santarosae*. The Santa Rosa Basalt Brodiaea. *Madroño* 54:187-198.
- Eriksen, C. H., and D. Belk. 1999. Fairy Shrimps of California's Puddles, Pools, and Playas. Eureka, CA: Mad River Press, Inc.
- Goldwasser, S. 1981. Habitat requirements of the Least Bell's Vireo. California Dept. Fish and Game, Nongame Wildlife Investigations Report 81.09, Project E-W-4, Job IV-38.1. Nongame Bird and Mammal Section Report 81.09. 16 pp.
- Haug, E. A., B. A. Millsap, and M. S. Martell. 1993. Burrowing Owl (*Speotyto cunicularia*). In *The Birds of North America*, No. 61 (A. Poole and F. Gill, editors). Philadelphia: The Academy of Natural Sciences; Washington, D.C: The American Ornithologists' Union.
- Jennings, M. R., and M. P. Hayes. 1994. Amphibian and reptile Species of Special Concern in California. Sacramento: California Dept. of Fish and Game. 255 pp.
- Jones & Stokes, Inc. 2003. Southwestern Willow Flycatcher Focused Survey for Clinton Keith Road Extension Project, Riverside County, California. Prepared for Ecological Services, Inc. Dated August 25, 2003.
- Roberts, Jr., F. M., S. D. White, A. C. Sanders, D. E. Bramlet, and S. Boyd. 2004. *The Vascular Plants of Western Riverside County, California: An Annotated Checklist*. San Luis Rey, California: F. M. Roberts Publications.
- [USDA] United States Department of Agriculture. 2013. Web Soil Survey. U.S. Department of Agriculture, Natural Resources Conservation Service. Data date January 1980. Available: <<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>>. Accessed June 25, 2013.
- Unitt, P. 2004. San Diego County Bird Atlas. *Proceedings of the San Diego Society of Natural History*, No. 39. San Diego, CA: San Diego Natural History Museum.



Photograph:

Photo Date: 6/25/2013

Location: Area A – Warm Springs Creek

Direction: Looking north/northeast

Comment: View of culvert and creek conditions on north side of Los Alamos Road crossing with Warm Springs Creek.



Photograph:

Photo Date: 6/25/2013

Location: Area A – Warm Springs Creek

Direction: Looking north

Comment: View of riparian and Warm Springs Creek channel on north side of Los Alamos Road crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area A – Warm Springs Creek

Direction: Looking south

Comment: View of riparian and sage scrub on south side of Los Alamos Road at Warm Springs Creek. Car in background is located on Los Alamos Road.



Photograph:

Photo Date: 6/25/2013

Location: Area A – Warm Springs Creek

Direction: Looking west/southwest

Comment: View of riparian scrub along Warm Springs Creek upstream of Los Alamos Road crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area A – Warm Springs Creek

Direction: Looking north/northwest from east side of Warm Springs Creek.

Comment: View of riparian and sage scrub along Warm Springs Creek (on east side), north of and upstream of Los Alamos Road crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area A – Warm Springs Creek

Direction: Looking northwest

Comment: View of east side of Warm Springs Creek channel north of and upstream of Los Alamos Road crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area A – Warm Springs Creek

Direction: Looking south

Comment: View of west side of Warm Springs Creek riparian scrub and adjacent grasslands north of and upstream of Los Alamos Road crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area A – Warm Springs Creek

Direction: Looking north/northeast

Comment: View of riparian and grassland on west side of Warm Springs Creek on north of Los Alamos Road Crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area A – Warm Springs Creek

Direction: Looking southwest

Comment: View of riparian vegetation at Warm Springs Creek and Los Alamos Road crossing; south side of road.



Photograph:

Photo Date: 6/25/2013

Location: Area A – Warm Springs Creek

Direction: Looking southwest

Comment: View of riparian vegetation at Warm Springs Creek and Los Alamos Road crossing; south side of road.



Photograph:

Photo Date: 6/25/2013

Location: Area B – Clinton Keith Road

Direction: Looking east/northeast

Comment: View of constructed basin on north side of Clinton Keith Road. Crossing headwall in foreground.



Photograph:

Photo Date: 6/25/2013

Location: Area B – Clinton Keith Road

Direction: Looking southwest

Comment: View of riparian and standing water on south side of Clinton Keith Crossing; headwall in view.



Photograph:

Photo Date: 6/25/2013

Location: Area B – Clinton Keith Road

Direction: Looking south/southwest

Comment: View of riparian scrub/cattail mosaic on south side of Clinton Keith Road.



Photograph:

Photo Date: 6/25/2013

Location: Area B – Clinton Keith Road

Direction: Looking southwest

Comment: View of riparian at base of concrete slope on south side of Clinton Keith Road.



Photograph:

Photo Date: 6/25/2013

Location: Area B – Clinton Keith Road

Direction: Looking northeast

Comment: View of riparian at Clinton Keith Road crossing.

**Photograph:****Photo Date:** 6/25/2013**Location:** Area B – Clinton Keith Road**Direction:** Looking southeast**Comment:** View of ruderal and herbaceous riparian on south side and “downstream” of Clinton Keith Road crossing.**Photograph:****Photo Date:** 6/25/2013**Location:** Area B – Clinton Keith Road**Direction:** Looking south**Comment:** View of shallow depressional areas dominated by Alkali Mallow (*Malvella leprosa*) on south side of Clinton Keith Road crossing.**Photograph:****Photo Date:** 6/25/2013**Location:** Area B – Clinton Keith Road**Direction:** Looking south**Comment:** View of algal crusts, soil cracking, and salt crusts in shallow depression on south side of Clinton Keith Road crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area B – Clinton Keith Road

Direction: Looking southeast

Comment: View of depressional areas in “uplands” on south side of Clinton Keith Road crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Porth Road Crossing

Direction: Looking west

Comment: View of French Valley Creek at Porth Road.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Porth Road Crossing

Direction: Looking west/northwest

Comment: View of riparian scrub (background) and ruderal vegetation (foreground) on north side of Porth Road crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Porth Road Crossing

Direction: Looking northwest/west

Comment: View of riparian scrub (background) and ruderal vegetation (foreground) on north side of Porth Road crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Porth Road Crossing

Direction: Looking northwest

Comment: View of ruderal vegetation on north side of Porth Road at French Valley Creek crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Porth Road Crossing

Direction: Looking north/northeast

Comment: View of ruderal vegetation on north side of Porth Road at French Valley Creek crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Porth Road Crossing

Direction: n/a

Comment: View of soils in ruderal uplands on north side of Porth Road.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Porth Road Crossing

Direction: n/a

Comment: View of soil at culvert on north side of Porth Road crossing with French Valley Creek.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Porth Road Crossing

Direction: Looking south/southeast

Comment: View of riparian/tamarisk scrub on south side of Porth Road crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Porth Road Crossing

Direction: n/a

Comment: View of standing water at culvert on south side of Porth Road crossing at French Valley Creek.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Porth Road Crossing

Direction: Looking west/southwest

Comment: View of riparian vegetation (background) and ruderal vegetation (foreground) on south side of Porth Road Crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Briggs Road Crossing

Direction: Looking south/southeast

Comment: View of riparian on east side of Briggs Road crossing with French Valley Creek.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Briggs Road Crossing

Direction: East side of Briggs Road

Comment: View of standing water and cattails on the east side of the Briggs Road crossing with French Valley Creek.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Briggs Road Crossing

Direction: Looking south

Comment: View of riparian vegetation on east side of Briggs Road crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Briggs Road Crossing

Direction: Looking southeast

Comment: View of weedy/riparian vegetation on east side of Briggs Road crossing with French Valley Creek.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Briggs Road Crossing

Direction: Looking southwest

Comment: View of riparian vegetation on west side of Briggs Road crossing with French Valley Creek.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Briggs Road Crossing

Direction: West side of Briggs Road

Comment: View of wet soils on west side of Briggs Road crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Briggs Road Crossing

Direction: Looking south.

Comment: View of riparian vegetation on west side of Briggs Road crossing.



Photograph:

Photo Date: 6/25/2013

Location: Area C – Briggs Road Crossing

Direction: Looking south.

Comment: View of riparian vegetation on west side of Briggs Road crossing.

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|--|---|---|
| PLANTS | | | | |
| Chaparral Sand-Verbena (<i>Abronia villosa</i> var. <i>aurita</i>) | -/-/1B.1/- | Found in sandy soil within coastal scrub and mostly broad alluvial fans and benches. Known to occur in northern Orange County, western Riverside County, San Diego County and southern Imperial County. It blooms from January to August at elevations from 262 feet (ft.) to 5,248 ft. It is threatened by flood control activities. | HA-Areas A, B, & C | No potential habitat is present for any of the three study areas. Soils inappropriate. |
| Munz's Onion (<i>Allium munzii</i>) | E/T/1B.1/MSHCP(b) | Found on mesic exposures or seasonally moist microsites in grassy openings in coastal sage scrub, chaparral, juniper woodland, valley, and foothill grasslands in clay soils. Associated with a special "clay soil flora" found in southwestern Riverside County. At least one population (Bachelor Mountain) is reported to be associated with pyroxenite outcrops instead of clay. | HA-Areas A, B, & C | Clay and pyroxenite soils and associated species appear absent; no reasonable potential at any of the three sites. This species is an MSHCP Narrow Endemic (Area 4) for the proposed project. |
| San Diego Ambrosia (<i>Ambrosia pumila</i>) | E/-/1B.1/MSHCP(b) | Occurs in open floodplain terraces or in the watershed margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse nonnative grasslands or ruderal habitat in association with river terraces, vernal pools, and alkaline playas. San Diego ambrosia generally occurs at low elevations generally less than 1,600 ft. in the Riverside populations and less than 600 ft. in San Diego County. | HP-Area A HA-Areas B & C | This species is an MSHCP Narrow Endemic (Area 4) for the proposed project. Based on soil conditions and vegetation, only the Warm Springs Creek study area has (in this case, low) potential for this species in the riparian and adjacent grasslands. No potential at Areas B and C. |
| Rainbow Manzanita (<i>Arctostaphylos rainbowensis</i>) | -/-/1B.1/MSHCP(e) | Restricted to ultramafic southern mixed chaparral, principally on gabbro soils or related soils rich in ferro-magnesian minerals. Within Riverside County locally common west of Murrieta and occasional elsewhere (southern Santa Ana | HA-Areas A, B, & C | All three study areas have no potential habitat for this species; soils and vegetation communities inappropriate. |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|---|---|--|
| | | Mountains and Agua Tibia Mountains (Roberts et al., 2004). | | |
| Jaeger's Milk-Vetch (<i>Astragalus pachypus</i> var. <i>jaegeri</i>) | -/-/1B.1/MSHCP | Occurs on dry ridges and valleys and open sandy or rocky slopes in coastal scrub, chaparral, valley and foothill grassland, and cismontane woodland habitats at elevations of 1,200 to 3,000 ft. | HP-Area A HA-Areas B & C | Fully covered species by MSHCP, however potentially suitable habitat is present at the Warm Springs location; low potential. |
| San Jacinto Valley Crownscale (<i>Atriplex coronata</i> var. <i>notatior</i>) | E/-/1B.1/MSHCP(d) | Occurs primarily in floodplains (seasonal wetlands) dominated by alkaline scrub, playas, vernal pools, and to a lesser extent, alkaline grasslands. Restricted to highly alkaline, silty-clay soils in association with the Traver-Domino-Willows soil association; the majority (approximately 80 %) of the populations are associated with the Willows soil series. | HA-Areas A, B, & C | This species is not a Criteria Area species for the proposed project. Study Area C at the Porth Road crossing has potentially suitable soils, but due to the history of past agriculture and discing, potential for the species is less than reasonable. |
| Parish's Brittscale (<i>Atriplex parishii</i>) | -/-/1B.1/MSHCP(d) | Vegetation types where species is found include chenopod scrub, alkaline vernal pools and playas. Blooms from June to October and ranges from 82 to 6,232 ft. in elevation. | HA-Areas A, B, & C | This species is not a Criteria Area species for the proposed project. Study Area C at the Porth Road crossing has potentially suitable soils, but due to the history of past agriculture and discing, potential for the species is less than reasonable. |
| Davidson's Saltscale (<i>Atriplex serenana</i> var. <i>davidsonii</i>) | -/-/1B.2/MSHCP(d) | Found in alkaline soils in coastal bluff scrub and coastal sage scrub from 10 to 820 ft. Within Riverside County; uncommon on alkaline flats along the San Jacinto River, and west of Hemet (Roberts et al., 2004). | HA-Areas A, B, & C | This species is a Criteria Area species (Area 4) for the proposed project. Area C has alkaline soils, but due to high levels of past and ongoing disturbances in the form of discing and farming, there is |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|--|---|--|
| | | | | no reasonable potential for the species to be present. |
| California Ayenia (<i>Ayenia compacta</i>) | -/-/2B.3/- | Perennial herb / low shrub in dry, desert scrub within rocky canyons and desert arroyos. Restricted to desert regions except for an almost certainly erroneous 1929 record for, “near Elsinore”, Riverside County. 500 to 3593 feet elevation. | HA-Areas A, B, & C | Desert climate and vegetation absent from all three locales; no reasonable potential for the species. |
| Nevin’s Barberry (<i>Berberis nevini</i>) | E/E/1B.1/MSHCP(d) | This evergreen shrub is very rare and local; found on steep north facing slopes or in low-grade sandy washes in chaparral, coastal sage scrub, riparian scrub, and cismontane woodland from 968 ft to 2700 ft. In western Riverside County; known only in the vicinity of Vail Lake (Roberts et al., 2004). | HA-Areas A, B, & C | Not a Criteria Area species for the proposed project, thus any potential for impact to this species would be fully mitigated by the MSHCP. However, there is also no potential for the species to be present. |
| Thread-leaved Brodiaea (<i>Brodiaea filifolia</i>) | T/E/1B.1/MSHCP(d) | Found in heavy soils (e.g., clay) in coastal sage scrub, chaparral, cismontane woodland, and vernal pools from 1,575 ft – 4,000 ft. Within western Riverside County found in southern Santa Ana Mountains, Santa Rosa Plateau, and alkaline flats of the San Jacinto River flood plain and west of Hemet (Roberts et al., 2004). | HA-Areas A, B, & C | Heavy soils appear absent in all 3 areas except for ruderal portions of Area C, where marginally heavy (silty) and where also strongly alkaline-saline. At that location the vegetation is dense, ruderal growth that would exclude this species. No potential at any of the three Areas. This species is a Criteria Area species (Area 4) for the proposed project. |
| Orcutt’s Brodiaea (<i>Brodiaea orcuttii</i>) | -/-/1B.1/MSHCP | Occurs in clay soils in mesic native grasslands often associating with vernal pools. This plant is also known to occur in moist meadows and along | HA-Areas A, B, & C | This species is fully covered by the MSHCP; no survey is required. No further action is |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|--|---|--|
| | | stream courses at higher elevations. Within western Riverside County occurrences are scattered but often locally abundant where found; found in southern Santa Ana Mountain and Santa Rosa Plateau (Roberts et al., 2004). | | necessary. Heavy soils appear absent in all 3 areas except for ruderal portions of Area C, where marginally heavy (silty) and where also strongly alkaline-saline. At that location the vegetation is dense, ruderal growth that would exclude this species. No potential at any of the three Areas. |
| Santa Rosa Basalt Brodiaea (<i>Brodiaea santarosa</i>) | -/-/3/- | The species has only recently been discovered (Chester et al. 2007) and is restricted to basaltic soils of the Santa Rosa Plateau, typically within the valley and foothill grasslands. | HA-Areas A, B, & C | No potential habitat is present; basaltic soils are absent. |
| Round-leaved Filaree (<i>California macrophylla</i>) | -/-/1B.1/MSHCP(d) | Restricted to open cismontane woodland and valley and foothill grassland habitats on very friable deep clay soils between about 50 and 6,560 ft. Within western Riverside County, two of the mapped localities occur on Bosanko clay soils. Records reviewed for this species indicate that this species tends to be associated primarily with Wild Oats (<i>Avena fatua</i>). | HA-Areas A, B, & C | No deep, clay soils present in any of the three areas; no reasonable potential for occurrence. This species is a Criteria Area species (Area 4) for the proposed project. |
| Plummer's Mariposa Lily (<i>Calochortus plummerae</i>) | -/-/4.2/MSHCP(e) | Found on rocky and sandy areas with granitic or alluvial material in coastal sage scrub, chaparral, and valley and foothill grasslands from 295 ft to 5,280 ft. | HP-Area A HA-Areas B & C | Potential habitat is present in the grassland and sage scrub at Area A; moderate potential. No potential for the species at Areas B and C. |
| Intermediate Mariposa Lily (<i>Calochortus weedii</i> var. <i>intermedius</i>) | -/-/1B.2/MSHCP | The typical blooming period extends from May to July, and the plant is a perennial. This species is known to occur in dry chaparral, valley grassland and coastal sage scrub. It is often on sandstone | HP-Area A HA-Areas B & C | This species is fully covered by the MSHCP; no survey required. Potential habitat is present in the grasslands and |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|--|---|---|
| | | outcrops in areas from elevation 590 to 2,805 ft. Soil affinities include sandy or clay soils. | | sage scrub at the Warm Springs Creek location; moderate potential. |
| Payson's Jewel-flower (<i>Caulanthus simulans</i>) | -/-4.2/MSHCP | Occurs within chaparral and coastal sage scrub in sandy/granitic rock. Fairly tolerant of lands disturbed by fire. Blooms between February and June and has been recorded at elevations between 300 to 7,225 ft. | HP-Area A HA-Areas B & C | This is a fully covered species by the MSHCP; no survey required. Potential habitat is present in the grasslands and sage scrub at Area A; moderate. |
| Lewis' Evening-primrose (<i>Camissoniopsis lewisii</i>) | -/-3/- | Habitat includes coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grasslands within sandy or clay soils. Severely declining in San Diego County. Known in coastal lowlands from Baja California, Mexico north into Los Angeles County. Historic records from Riverside County are rejected by both CNPS and Roberts et al. (2004). Blooming typically occurs between March and May but uncommonly extends into June. Occurs at elevations ranging from 0 to 1,000 ft. | HA-Areas A, B, & C | All three areas are well outside the known distribution as well as the elevation range of the species. No reasonable potential at any of the three areas. |
| Lakeside Ceanothus (<i>Ceanothus cyaneus</i>) | -/-1B.2/- | Perennial shrub in closed-cone coniferous forest and chaparral in restricted portions of San Diego County. Historic records from Los Angeles, San Bernardino, and Riverside counties now widely disregarded. 770 to 2477 ft. elevation. | HA-Areas A, B, & C | Locales are far from known range and required vegetation communities are absent; no reasonable potential at all three locales. |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|---|---|--|
| Vail Lake Ceanothus (<i>Ceanothus ophiochilus</i>) | T/E/1B/MSHCP(d) | Found in dry habitats along ridgetops and north-northeast-facing slopes in chamise chaparral. Vail Lake ceanothus is restricted to shallow soils originating from ultra-basic parent rock and deeply weathered gabbro, which are both phosphorous-deficient. Found only in Vail Lake area and is endemic to western Riverside county (Roberts et al., 2004). | HA-Areas A, B, & C | Soils and vegetation inappropriate; no reasonable potential. |
| Smooth Tarplant (<i>Centromadia pungens</i> ssp. <i>laevis</i>) | -/-/1B.1/MSHCP(d) | Found in fine or alkaline soils of seasonally wet chenopod scrub, meadows and seeps, playas, riparian woodland, fallow fields, drainage ditches, and moist situations within valley and foothill grasslands below about 1,575 ft elevation. Tolerant of rural and agricultural land use. Found primarily in southwestern Riverside County, but also a few sites in the interior valleys of San Bernardino, Los Angeles, and San Diego Counties. | HP-Areas A, B, & C | Smooth tarplant is a Criteria Area species (Area 4) for the proposed project. Potential habitat is present in the riparian and adjacent grasslands at Area A; high potential. This species was observed north of Area A during the habitat assessment. Although Areas B and C are highly disturbed, this species has low potential to occur in the riparian and closely adjacent uplands; soils are potentially appropriate. |
| Orcutt's Pincushion (<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>) | -/-/1B.1/- | Associated with sandy soils within coastal bluff scrub and coastal dune habitats. Elevation range is 10 to 350 ft. | HA-Areas A, B, & C | No potential habitat present. |
| Parry's Spineflower (<i>Chorizanthe parryi</i> var. <i>parryi</i>) | -/-/1B.1/MSHCP(e) | Found on dry sandy soils on slopes and flats, within coastal sage scrub and chaparral. | HP-Area A HA-Areas B & C | Potentially suitable habitat is present within the grasslands and sage scrub adjacent to Warm Springs Creek; moderate potential. |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|---|---|--|
| Long-spined Spineflower (<i>Chorizanthe polygonoides</i> var. <i>longispina</i>) | -/-/1B.2/MSHCP | Associated primarily with heavy, often rocky, clay soils in southern needlegrass grassland, and openings in coastal sage scrub and chaparral. The species has been described as occurring on sandy and gravelly soil but this appears to be infrequently the case. | HP-Area A HA-Areas B & C | Species is fully covered by the MSHCP; no survey required. Potential habitat is present in the grassland and sage scrub in Area A; moderate potential. |
| San Miguel Savory (<i>Clinopodium chandleri</i>) | -/-/1B.2/MSHCP(b) | Associated with rocky, gabbroic and metavolcanic substrates in coastal sage scrub, chaparral, cismontane woodland, and riparian woodland. | HA-Areas A, B, & C | This is not a Narrow Endemic survey species for the proposed project; no survey required. Soils are inappropriate at all three areas. |
| Small-flowered Morning-glory (<i>Convolvulus simulans</i>) | -/-/4.2/- | Annual herb on open, friable to crumbling clay soils and serpentine seeps in openings within chaparral, sage scrub, and grasslands from Baja California, Mexico north to central California. Vulnerable to competition from nonnative plants. Not associated with alkaline or saline conditions. 100 to 2300 feet elevation. | HA-Areas A, B, & C | Required soils and open microsites are absent; no reasonable potential for occurrence at any of the three locales. |
| Wiggin's Cryptantha (<i>Cryptantha wigginsii</i>) | -/-/1B.2/- | Annual herb in coastal scrub, often on clay soils; Santa Catalina Island, Carlsbad area, San Diego County, and Bachelor Mountain area, Riverside County. Discovered in California in 2010 and status poorly known. 67 to 900 feet elevation. | HA-Areas A, B, & C | All three locales are well outside of and farther inland than known occurrences, as well as above the known elevation range; no reasonable potential for occurrence. |
| Paniculate Tarplant (<i>Deinandra paniculata</i>) | -/-/4.2/- | This annual herb has a limited distribution with the species known from Orange, western Riverside, southwestern San Bernardino, and southwestern San Diego counties. It regularly grows in mesic conditions within sage scrub, valley and foothill grassland, and vernal pools but can also occur in dry nonnative grasslands. Blooming period is | P-Area A & B HP-Area C | Species was confirmed within the study area including the project area (footprint). Species is not an MSHCP covered species. |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|--|---|---|
| | | April thru November. | | |
| Slender-horned Spineflower (<i>Dodecahema leptoceras</i>) | E/E/1B.1/MSHCP(b) | Found on flood deposited fine sand terraces and washes in Riversidian alluvial fan sage scrub from 656 to 2,493 ft. Also associated with cismontane woodland and chaparral having suitable hydrology and fine sands. | HP-Area A HA-Areas B & C | This Narrow Endemic species is not a survey species for the proposed study areas. Small amounts of potential habitat are present in Area A adjacent to the Creek; low potential. No potential in Areas B and C. |
| Many-stemmed Dudleya (<i>Dudleya multicaulis</i>) | -/-/1B.2/MSHCP(b) | Found on the coastal slopes of southern California from Los Angeles and San Bernardino counties south, from about 50 ft to 2,600 ft elevation. It usually grows on poor soils, often on clay or at the margins of gabbroic rock outcrops in coastal sage scrub and grassland communities. | HP-Area A HA-Areas B & C | This species is a Narrow Endemic (Area 4) for the proposed project. Potential habitat is present in the grassland and sage scrub in Area A; moderate potential. No potential in Areas B or C. |
| Sticky Dudleya (<i>Dudleya viscida</i>) | -/-/1B.2/MSHCP (f) | Found on mesic, mostly north-facing, and often steep, rocky canyon slopes below about 1,804 ft elevation in Orange, Riverside, and San Diego counties. Known to occur in chaparral, sage scrub, and coastal bluff scrub. In the San Mateo Wilderness, this species is most common on meta-sedimentary and intrusive volcanic substrates. In San Diego County, it has been associated with exposed gabbroic rock or in very shallow soils and cracks on vertical rock faces. Blooms from May to June in clay soils. | HP-Area A HA-Areas B & C | Potentially suitable habitat is present in the grassland and sage scrub within Area A; low potential. No potential at Areas B or C. |
| San Diego Button-Celery (<i>Eryngium aristulatum</i> var. <i>parishii</i>) | E/E/1B.1/MSHCP | Occurs only in vernal pools with clay soils. Within western Riverside County very local to Santa Rosa Plateau (Roberts et al., 2004). | HA-Areas A, B, & C | This is a fully covered species by the MSHCP; no survey required. No vernal pool habitat present at any of the three areas. |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|---|---|--|
| Campbell's Liverwort (<i>Geothallus tuberosus</i>) | -/-/1B.1/- | Occurs in undisturbed, mesic environments of coastal scrub and vernal pool margins at elevations between 32 and 1,968 ft. | HA-Areas A, B, & C | No potentially suitable habitat is present. Mesic sage scrub and vernal pools are absent from the three areas. |
| Palmer's Grapplinghook (<i>Harpagonella palmeri</i>) | -/-/4.2/- | Found within chaparral, coastal scrub, and valley and foothill grasslands. Often associated with clay soils. Occurs at elevations of 65 to just over 3,130 feet. Blooming period begins in March and ends in May. | HP-Area A HA-Areas B & C | There is potential habitat for this species in the grassland and sage scrub at Area A; low potential. No potential at Areas B and C. |
| Tecate Cypress | -/-/1B.1/- | Species is a perennial evergreen tree that occurs in clay, gabbroic, and metavolcanic soils within closed-cone coniferous forest and chaparral. | A-Areas A, B, & C | Confirmed absent from all three locations. |
| Graceful Tarplant (<i>Holocarpha virgata</i> ssp. <i>elongata</i>) | -/-/4.2/- | Annual herb in comparatively level, open grasslands and grassy openings within other upland, natural plant communities; San Diego, Orange, and western Riverside counties. Tolerates moderate disturbance and grazing. Not associated with clay or alkaline/saline soils. 200 to 3600 feet elevation. | HP-Area A HA-Areas B & C | Low but reasonable potential in grassland portions of Area A. No potential in Areas B or C due to saline/alkaline conditions and hydrology. |
| Vernal Barley (<i>Hordeum intercedens</i>) | -/-/3.2/MSHCP | Associated with mesic grasslands, vernal pools, and large saline flats or depressions. In Riverside County, found in the Domino, Willows and Traver soils series and is associated with alkaline flats and flood plains within the alkaline vernal plains community. Within this community vernal barley is primarily associated with alkaline annual grasslands and vernal pools and to a lesser extent alkaline scrub and alkaline playa. | HP-Area A HA-Areas B & C | Fully covered species by the MSHCP; no survey required. Potential habitat present in the grassland and sage scrub adjacent to the Creek of Area A; low potential. No potential at Areas B and C. |
| Mesa Horkelia (<i>Horkelia cuneata</i> ssp. <i>puberula</i>) | -/-/1B.1/- | This perennial herb blooms from February until September. It grows in sandy and gravelly soils in chaparral, cismontane woodland, or coastal scrub | HP-Area A HA-Areas B & C | Potentially suitable habitat is present within the grassland and sage scrub at Area A; low |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|---|---|---|
| | | at elevations from 230 to 2,657 feet. | | potential. No potential at Areas B and C. |
| Ramona Horkelia (<i>Horkelia truncata</i>) | -/-/1B.3/- | This perennial herb blooms from May through June, within open chaparral and cismontane woodland. It is typically associated with clay soils from about 1,312 to 4,264 ft elevation. This species is known in California from fewer than twenty occurrences. | HP-Area A HA-Areas B & C | This species has potential to occur within the grassland and sage scrub at Area A; low potential. No potential habitat at Areas B or C. |
| Santa Lucia Dwarf Rush (<i>Juncus luciensis</i>) | -/-/1B.2/- | This annual herb is found in chaparral, great basin scrub, lower montane coniferous forest, meadows and seeps, and vernal pools. It blooms from April to July and is found only in California but from Modoc to central San Diego County. Known elevation range is 960 to 6,500 feet. | HP-Area A HA-Areas B & C | Small amount of potentially suitable habitat is present within the margins of the riparian in Area A; low potential. |
| Coulter's Goldfields (<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>) | -/-/1B.1/MSHCP(d) | Wide-ranging annual herb in southern California, with known occurrences including Los Angeles, Orange, Riverside, San Bernardino, and San Diego and other counties. Blooms from February through June in saline places such as coastal saltmarsh, inland playas, and vernal pools below about 4,002 feet elevation. | HA-Areas A, B, and C | This species is a Criteria Area species (Area 4) for the proposed project. Soils and hydrology inappropriate at Area A. Historically, Area B did not have potentially suitable soils and lacked the necessary hydrology. Currently saline-salty soils are present in portions of Area B, but given past disturbances to this area, these conditions were created artificially and lack the potential to support this species. The past agricultural practices in Area C along with inadequate hydrology and ongoing |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|--|---|---|
| | | | | discing and/or dense growth of native and nonnative perennial and annual weeds in the upland areas, reduces the potential for this species to less than reasonable. |
| Robinson's Pepper-Grass (<i>Lepidium virginicum</i> var. <i>robinsonii</i>) | -/-/1B.2/- | Found in dry soils in chaparral and coastal sage scrub openings up to 3,100 foot elevation. | HP-Area A HA-Areas B & C | Potentially suitable habitat is present within the grassland and sage scrub in Area A; moderate potential. |
| Ocellated Humboldt Lily (<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>) | -/-/4.2/ | Species is a perennial bulbiferous herb that occurs in the openings within chaparral, cismontane woodland, sage scrub, lower montane coniferous forest, and riparian woodland. Blooming period is March through August. Elevation in southern California is roughly 400 to 5,400 feet. | HP-Area A HA-Areas B & C | Potential habitat is present in the riparian and closely adjacent grassland and sage scrub in Area A; low potential. |
| Lemon Lily (<i>Lilium parryi</i>) | -/-/1B.2/MSHCP(f) | Occurs in montane coniferous forest, meadows and seeps, riparian forest, and upper montane coniferous forest. Also in mesic soils. Elevation ranges from 4003 ft to 9006 ft. | HA-Areas A, B, & C | Required vegetation communities absent. Areas are far outside the elevation range of this species. No potential for occurrence. |
| Parish's Meadowfoam (<i>Limnanthes gracilis</i> ssp. <i>parishii</i>) | -/E/1B.2/MSHCP | Occurs on gentle slopes or in swales, in forest glades, among mima mounds and in areas likely to be inundated. Limited to ephemeral wetlands in southern California mountains at elevations between 3609 ft and 5577 ft. This species is thought to exist mostly in sandy loam soils. Within Riverside County, known from a single vernal pool on the Santa Rosa Plateau (Roberts et al., 2004). | HA-Areas A, B, & C | No potential at any of the three locations. Soils and hydrology both inappropriate. |
| Intermediate Monardella | -/-/1B.2/- | Perennial herb usually in the understory of | HA-Areas A, B, | The vegetation communities this species typically occupies |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|---|---|--|
| <i>(Monardella hypoleuca</i> <i>ssp. intermedia)</i> | | chaparral, woodland, or forest; known occurrences are restricted to Santa Ana and Palomar mountains of San Diego, Orange and western Riverside counties. First described in 2009. 1300 to 4100 feet elevation. | & C | are absent from all three locales; outside known range; no reasonable potential. |
| Felt-leaved Monardella <i>(Monardella hypoleuca</i> <i>ssp. lanata)</i> | -/-/1B.2/- | Perennial herb in chaparral and cismontane woodland from 984 to 5167 feet elevation. | HA-Areas A, B, & C | The vegetation communities this species typically occupies are absent from all three locales; no reasonable potential. |
| Hall's Monardella <i>(Monardella macrantha</i> <i>ssp. hallii)</i> | -/-/1B.3/MSHCP | This perennial herb blooms from June through August and is found in chaparral, cismontane woodland, lower montane conifer forest, broadleaved upland forest, and valley/foothill grassland, from about 2,394 to 7,200 feet elevation. Within Riverside County, species is uncommon on north-facing slopes in chaparral or conifer forest; found in the Santa Ana and Agua Tibia Mountains. | HP-Area A HA-Areas B & C | This species is fully covered by the MSHCP; no survey required. Low potential for species in the grassland and sage scrub in Area A. |
| Little Mousetail <i>(Myosurus minimus</i> <i>ssp. apus)</i> | -/-/3.1/MSHCP(d) | Occurs in association with vernal pools and within the alkaline vernal pools and alkaline annual grassland components of alkaline vernal plains. Little Mousetail is found in areas that have semi-regular inundation with gradual drying. Within Riverside County species is locally common in the alkaline vernal pools near Hemet; otherwise scarce and local in Perris Basin and Santa Rosa Plateau (Roberts et al., 2004). | HA-Areas A, B, & C | This species is a Criteria Area species (Area 4) for the proposed project. Although soils are heavy at Area C (Porth Road crossing) the discing and historical farming reduces the potential for this species to less than reasonable. The dense perennial and annual weedy natives and nonnatives also greatly reduce species potential; no sign of ponding present outside the |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|---|---|--|
| | | | | active stream channel. |
| Spreading Navarretia (<i>Navarretia fossalis</i>) | T/-/1B.1/MSHCP(b) | Associated with vernal pools and depressions and ditches in areas that once supported vernal pools. In western Riverside County, Spreading Navarretia has been found in relatively undisturbed and moderately disturbed vernal pools, within larger vernal floodplains dominated by annual alkaline grassland or alkaline playa. The alkaline vernal playa/pool habitat found in the Hemet area is based primarily on silty clay soils in the Willows and Travers series. These soils are usually saline-alkaline in nature and reliably pond water for long durations. | HA-Areas A, B, & C | This species is a Narrow Endemic (Area 4) for the proposed project. Area A lacks suitable hydrology and/or soils. Area B and C lack potential for the same reasons indicated for Coulter's goldfields (see above). |
| Prostrate Navarretia (<i>Navarretia prostrata</i>) | -/-/1B.1/MSHCP(d) | This annual herb is found in mesic environments such as vernal pools, meadows, seeps, and alkaline grasslands. Within Riverside County local to Santa Rosa Plateau (Roberts et al., 2004) | HP-Area A HA-Areas B & C | The project study area lies outside MSHCP survey area for the species; therefore, there is no survey requirement. There is low potential for the species in the grasses and sage scrub adjacent to the Creek in Area A. No potential in Areas B and C due to past and/or ongoing disturbances. |
| Peninsular Nolina (<i>Nolina cismontana</i>) | -/-/1B/- | Inhabits sandstone or gabbro soils in chaparral and coastal scrub at elevations of 459 to 4,182 ft. It is found in mountainous areas along the coast such as Ventura, Matilija, Thousand Oaks, Calabasas, San Juan Capistrano, Santiago Peak, Pala, Sitton Peak, Pechanga, and Viejas Mountains. | HA-Areas A, B, & C | Soils inappropriate at all three areas. |
| California Orcutt Grass (<i>Orcuttia californica</i>) | E/E/1B.1/MSHCP(b) | Restricted to the deeper portions of undisturbed vernal pools. In Riverside County, this species is found in southern basaltic claypan vernal pools at | HA-Areas A, B, & C | This is a Narrow Endemic (Area 4) for the proposed project. None of the three |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|---|---|---|
| | | the Santa Rosa Plateau and alkaline vernal pools as at Skunk Hollow and at Salt Creek west of Hemet. | | locations support vernal pool conditions and topography. Refer to Coulter's goldfields above for a full explanation. |
| Gander's Ragwort (<i>Packera ganderi</i>) | -R/1B.2/- | This perennial herb blooms in the period from April to May in recent burns and gabbroic outcrops in the understory of chaparral from about 1312 to 3,936 ft elevation. It is known from fewer than fifteen occurrences in San Diego and far southwestern Riverside counties. | HA-Areas A, B, & C | Soils inappropriate at all three areas. No potential. |
| Woolly Chaparral Pea (<i>Pickeringia montana</i> var. <i>tomentosa</i>) | -/-/4.3/- | Evergreen shrub widely scattered in gabbroic, granitic, and clay soils in chaparral and adjacent washes. Known from the southern San Gabriel Mountains, western San Bernardino Mountains, Santa Ana Mountains south to Camp Pendleton, and foothills of south-central San Diego County; 0 to 5577 ft. elevation. | HA-Areas A, B, & C | Associated soil and vegetation types absent at all three areas; no reasonable potential. |
| White Rabbit-tobacco (<i>Pseudognaphalium</i> [<i>Gnaphalium</i>] <i>leucocephalum</i>) | -/-/2.2/- | This perennial herb is found in seasonally dry portions of broad and/or sunny, sandy to gravelly creek bottoms with natural hydrology within chaparral, cismontane woodland, coastal scrub, and riparian woodland habitats; known regionally in San Timoteo Canyon, Temescal Wash and Santa Ana Mountains. Elevation range 0 to nearly 7000 feet. | HA-Areas A, B, & C | No reasonable potential for this species in the narrow, shaded riparian and adjacent grassland and sage scrub in Area A. No potential for species in Areas B and C. Both of these areas historically did not support the amount of riparian now present with more water present since development upstream. |
| Engelmann Oak (<i>Quercus engelmannii</i>) | -/-/4.2/- | Species is a perennial, semi-deciduous tree in chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland. | A-Areas A, B, & C | Species confirmed absent at all three locations. |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|---|---|--|
| Coulter's Matilija Poppy | -/-/4.2/MSHCP(e) | Species is a perennial rhizomatous herb often found in burns within chaparral and sage scrub. Blooming period is March through July. Locally common along eastern margins of the Santa Ana mountains. | A-Areas A, B, & C | Species confirmed absent at all three locations. |
| Southern Skullcap (<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>) | -/-/1B.2/- | Found in mesic conditions within cismontane woodland, lower montane coniferous forest, and chaparral from 1,400 to 6,500 ft. Within Riverside County species is scarce. | HA-Areas A, B, & C | Vegetation communities this species is associated with are absent from all three areas. No potential. |
| Shevock's Copper Moss (<i>Schizymenium shevockii</i>) | -/-/1B.2/- | Occurs on metamorphic rocks in cismontane woodlands, especially along roads, in same habitat as <i>Mielichhoferia elongata</i> , at elevations of 2,460 to 4,600 ft. The only southern California record is from the undisturbed, Santa Margarita River Ecological Reserve south of Temecula. | HA-Areas A, B, & C | Outside known elevation range; all three sites appear subject to past and/or current disturbances likely to exclude this moss. No potential. |
| Hammitt's Clay-cress (<i>Sibaropsis hammittii</i>) | -/-/1B.2/MSHCP(b) | This species occurs in openings in chaparral and valley and foothill grassland habitat and is associated with clay soils. | HP-Area A HA-Area B & C | This is not a Narrow Endemic survey species for the proposed project; no survey required. There is potential for this species at Area A. No potential in Areas B and C. |
| Bottle Liverwort (<i>Sphaerocarpos drewei</i>) | -/-/1B.1/- | This species occurs in chaparral and coastal scrub openings with low disturbance. | HP-Area A HA-Area B & C | Potential for species in Area A; moderate potential. No potential in Areas B and C. |
| San Bernardino Aster (<i>Symphotrichum defoliatum</i>) | -/-/1B.2/- | Found in sites with seasonally moist, gradually drying and physically undisturbed soils within cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and valley and foothill grassland. Some records are near established ditches and stream springs. Blooms from July to | HA-Areas A, B, & C | No potential in Area A due to incised channel and mostly ephemeral hydrology; adjacent uplands too alkaline/saline and not vernal moist enough. No potential in Areas B and C. |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|---|---|--|
| | | November at elevations from 6 to 6700 ft. | | |
| Parry's Tetracoccus (<i>Tetracoccus dioicus</i>) | -/-1B.2/- | Inhabits chaparral and coastal sage scrub, at about 541 to 3280 ft elevation, and is often associated with dry, stony slopes. It is found from around the Ortega Highway in Orange County southward, including Riverside and San Diego counties to Baja California. Within Riverside County, the species is scarce and occurs in vicinity of the Santa Rosa Plateau and western slopes of the Agua Tibia Mountains; often associated with basic (basalt or gabbro) substrates (Roberts et al., 2004). | HP-Area A HA-Areas B & C | There is low potential for the species in sage scrub in Area A; soils may be inappropriate. No potential for species in Areas B or C. |
| California Screw-Moss (<i>Tortula californica</i>) | -/-1B.2/- | Found in chenopod scrub and valley and foothill grassland directly on undisturbed, sandy soil at elevations between 32 ft – 4800 ft. | HP-Area A HA-Areas B & C | There is low potential for this species within the grassland adjacent to Warm Springs Creek. No potential at Areas B or C. |
| San Diego Bahiopsis (San Diego County Viguiera) (<i>Viguiera [Bahiopsis] laciniata</i>) | -/-4.2/- | Perennial shrub in chaparral and sage scrub from central San Diego County south to Baja California and Sonora, Mexico; used heavily in restoration and as an ornamental in native range and northward, with nonnatives recorded north to Santa Clara County. Elevation range about 200 to 2460 ft. | HA-Areas A, B, & C | All three locales are well outside the native range; no reasonable potential for natural occurrence. |
| Wright's Trichocoronis (<i>Trichocoronis wrightii</i> var. <i>wrightii</i>) | -/-2.1/MSHCP(b) | In western Riverside County, found in alkaline vernal plains and associated with alkaline playa, annual grassland, and vernal pool habitats. This species occupies the more mesic portions of these habitats. | HA-Areas A, B, & C | This is a Narrow Endemic (Area 4) species for proposed project. No potential at Area A; soils and hydrology are inappropriate. Although hydrology may appear somewhat suitable in Area C (Porth Road crossing only), past and current disturbances |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|---|---|---|
| | | | | preclude the species. Area B historically did not have suitable soils or suitable hydrology. As the current basin was created over the past decade, soils now appear saline, but show signs of continued mechanical disturbances. No potential for species. |
| INVERTEBRATES | | | | |
| Vernal Pool Fairy Shrimp (<i>Branchinecta lynchi</i>) | T/-/-/MSHCP(a) | Restricted to seasonal vernal pools. The vernal pool fairy shrimp prefers cool-water pools that have low to moderate dissolved solids, are unpredictable, and often short-lived. | HA-Areas A, B, & C | None of the areas have potential. Area A lacks suitable hydrology and topography. Area B was created in past several years. The two shallow areas west of the drainage show signs of fairly high salinity (salt crust). Area C lacks any open shallow ponding. The vegetation is dense and weedy in nature. |
| San Diego Fairy Shrimp (<i>Branchinecta sandiegonensis</i>) | E/-/-/- | A commonly found fairy shrimp on coastal mesas of San Diego County. Also documented within Orange and Riverside counties but not as frequently. Occurs within shallow (< 30 cm deep), unpredictable, and seasonally astatic pools (Erikson & Belk, 1999). Soils where species has been found are often associated with chaparral, coastal sage scrub and annual grasslands. | HA-Areas A, B, & C | No potential. See Vernal Pool Fairy Shrimp above for more details. |
| Riverside Fairy Shrimp | E/-/-/MSHCP(a) | Restricted to deep seasonal vernal pools, vernal pool like ephemeral ponds, and stock ponds and | HA-Areas A, B, | No potential. See Vernal Pool Fairy Shrimp above for more |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|--|---|--|
| <i>(Streptocephalus woottoni)</i> | | other human modified depressions. Species prefers warm-water pools that have low to moderate dissolved solids, are less predictable, and remain filled for extended periods of time. Basins that support Riverside fairy shrimp are typically dry a portion of the year, but usually are filled by late fall, winter, or spring rains, and may persist through. All known habitat lies within annual grasslands, which may be interspersed through chaparral or coastal sage scrub vegetation. In Riverside County, found in pools formed over the following soils: Murrieta stony clay loams, Las Posas series, Wyman clay loam, and Willows soils. | & C | details. |
| Quino Checkerspot Butterfly <i>(Euphydryas editha quino)</i> | E/-/-/MSHCP | Habitat associations seem to be tied to both host plant species and topography. Larvae feed on <i>Plantago erecta</i> , <i>Plantago patagonia</i> , <i>Antirrhinum coulterianum</i> , <i>Cordylanthus rigidus</i> (and possibly other <i>Plantago</i> species) and <i>Collinsia concolor</i> and <i>Castilleja exserta</i> . Adults nectar mostly on small annuals; often occur on open or sparsely vegetated rounded hilltops, ridgelines, and occasionally rocky outcrops. Habitat components have been found in association with, but not restricted to vernal pools, sage scrub, chaparral, native and nonnative grassland, and open oak and juniper woodland communities. The key component seems to be open-canopied habitats. | HP-Area A HA-Area B & C | Potentially suitable habitat is present throughout the uplands of Area A (grassland and sage scrub). No potential at Areas B or C. |
| FISHES | | | | |
| Arroyo Chub <i>(Gila orcuttii)</i> | -/CSC/-/MSHCP | Occur within warm, fluctuating streams and found within slow moving sections of stream containing sandy or muddy bottoms. In Riverside County, | HA-Areas A, B, & C | Hydrology insufficient at all three areas. |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|---|---|--|
| | | occurs within the Santa Ana and Santa Margarita River tributaries. | | |
| AMPHIBIANS | | | | |
| Coast Range California Newt (<i>Taricha torosa torosa</i>) | -/CSC/-/MSHCP | Species frequent terrestrial habitats, but breed in ponds, reservoirs, and slow-moving streams. Limited information on movement between wetland sites hampers characterization of requirements at this potentially critical period in the life cycle. Loss of wetland habitats and introduction of nonnative predators, including crayfishes, appear to be the main causes of declines. | HP-Area A HA-Areas B & C | This is a fully covered species under the MSHCP. Any potential impacts to it would be fully mitigated by the plan. There is low potential for this species to be present in Area A. No potential in Areas B and C. |
| Western Spadefoot (<i>Scaphiopus hammondi</i>) | -/CSC/-/MSHCP | Found primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools and seasonal ponds are essential for breeding and egg laying. It is found at sea level to 4,500 ft. in elevation. | HA-Areas A, B, & C | This species is fully covered under the MSHCP, there is no survey requirement. All three areas lack the necessary hydrology and depressions to support this species. |
| Arroyo Toad (<i>Bufo/Anaxyrus californicus</i>) | E/CSC/-/MSHCP(c) | Found in rivers with willows, cottonwoods, and sycamores. This species prefers sandy/gravelly areas in drier parts of its range near washes or intermittent streams with clear standing water that is required for egg deposition. | HA-Areas A, B, & C | Project occurs outside of MSHCP survey area for species; thus no focused survey is required. In addition, no potential habitat is present at any of the three areas. Hydrology and soils inappropriate. |
| California Red-legged Frog (<i>Rana aurora draytonii</i>) | T/CSC/-/MSHCP(c) | This large frog inhabits the quiet pools of streams, marshes, and ponds up to about 4,920 foot elevation. Adults feed on aquatic and terrestrial insects, snails, and a wide variety of other aquatic prey, and will also move up to a mile through | HA-Areas A, B, & C | Project occurs outside of MSHCP survey area for species; thus no focused survey is required. None of the areas have the perennial |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|---|---|---|
| | | riparian communities under wet conditions, such as rainfall. It prefers shorelines with extensive vegetation, and is vulnerable to the introduction of exotic competitors such as Bullfrogs (<i>Rana catesbeiana</i>), crayfishes, and a variety of nonnative fishes. | | hydrology, water quality or riparian structure needed for this species. |
| REPTILES | | | | |
| Southwestern Pond Turtle (<i>Clemmys marmorata pallida</i>) | -/CSC/-/MSHCP | Found in association with permanent or nearly permanent water in a fairly wide variety of habitat types. It is omnivorous, taking a wide variety of plant and animal food. The pond turtle requires basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks. | HA-Areas A, B, & C | This species is fully covered under the MSHCP. No potential habitat is present at any of the three areas; insufficient natural hydrology. |
| San Diego Coast Horned Lizard (<i>Phrynosoma coronatum blainvillei</i>) | -/CSC /-/MSHCP | Found in arid and semi-arid climate conditions in chaparral, coastal sage scrub, primarily below 2,000 ft in elevation. Critical factors are the presence of loose soils with a high sand fraction; an abundance of native ants or other insects, especially harvester ants (<i>Pogonomyrmex</i> spp.); and the availability of both sunny basking spots and dense cover for refuge. | HP-Area A HA-Areas B & C | Potentially suitable habitat occurs within grassland and sage scrub at Area A; moderate to high potential. This species is fully covered under the MSHCP. No potential for the species in Areas B or C. |
| Belding's Orange-throated Whiptail (<i>Cnemidophorus hyperythrus beldingi</i>) | -/CSC/-/MSHCP | Most California populations occur on or adjacent to floodplains or the terraces of streams, in or by open sage scrub and chaparral communities. The presence of perennial shrubs appears to be important, with the most strongly associated species being California Buckwheat (<i>Eriogonum fasciculatum</i>), Chamise (<i>Adenostoma fasciculatum</i>), White Sage (<i>Salvia apiana</i>), and Black Sage (<i>S. mellifera</i>). Termites are reported to constitute 57 - 95% of the diet, and foraging | HP-Area A HA-Areas B & C | Potentially suitable habitat occurs within grassland and sage scrub at Area A; moderate to high potential. This species is fully covered under the MSHCP. No potential for the species in Areas B or C. |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|--|---|---|
| | | microsites are primarily under shrubs in leaf litter (Brattstrom 2000). | | |
| California (Coastal) Legless Lizard (<i>Anniella pulchra</i>) | -/CSC/-/- | Habitat is primarily areas with sandy or loose loamy soils under the sparse vegetation of beaches, chaparral, or pine-oak woodland, and open, well-shaded terraces in mature riparian natural communities. Leaf litter is commonly present. Soil disturbances such as agriculture and mining, as well as requirements for soil moisture and relatively cool microclimates limit distribution, and account in part for local declines and extirpations (Jennings and Hayes 1994). | HP-Area A HA-Areas B & C | Potentially suitable habitat occurs within the riparian and grassland at Area A; low potential. This species is fully covered under the MSHCP. No potential for the species in Areas B or C. |
| Coronado Skink (<i>Eumeces skiltonianus interparietalis</i>) | -/CSC/-/- | Found in a variety of communities (incl. sage scrub, chaparral, grassland) but is most common in early successional stages or open areas within habitats in which they occur. Heavy brush and densely forested areas are generally avoided. Cover for this secretive lizard is provided by rotting logs, surface litter, large flat stones, and sometimes trash or other human debris. | HP-Area A HA-Areas B & C | Potentially suitable habitat is present within sage scrub, grassland, and riparian vegetation in Area A; no potential in Areas B and C due to high disturbance levels. This species is relatively common throughout western Riverside County, and the number of individuals directly affected is expected to be low (if present). |
| Coast Western Patch-nosed Snake (<i>Salvadora hexalepis virgultea</i>) | -/CSC/-/- | Mostly restricted to communities with a strong but broken shrub component, especially somewhat open chaparral and black sage (<i>Salvia mellifera</i>) or relatively mature, dense coastal sage scrub (personal communication, W. E. Haas, Varanus Biological Services), and may require ground burrows of unknown characteristics for overwintering and refuge. | HP-Area A HA-Areas B & C | Potentially suitable habitat is present within sage scrub, grassland, and riparian vegetation in Area A. This species is relatively common throughout western Riverside County, and the number of individuals directly affected is |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|--|---|---|
| | | | | expected to be low (if present). |
| Two-striped Garter Snake (<i>Thamnophis hammondi</i>) | -/CSC/-/- | Often in water and rarely found far from it, though it is also known to inhabit intermittent streams having rocky beds bordered by willow thickets or other dense vegetation. Will also inhabit large riverbeds if riparian vegetation is available, and even occur in artificial impoundments if both aquatic vegetation and suitable prey items (small amphibians and fish) are present (Jennings and Hayes 1994). | HA-Areas A, B, & C | Insufficient hydrology at Area A and although water is present in narrow drainage features in Areas B and C, the riparian is insufficient in extent or condition to support this species. No potential at all three locales. |
| Northern Red Diamond Rattlesnake (<i>Crotalus ruber ruber</i>) | -/CSC/-/MSHCP | Occurs as far north as Puente Hills in Yorba Linda and southwest San Bernardino County, and occurs south to Loreto, Baja California, Mexico; known elevation range is sea level to just under 15,000 ft., but apparently rare above about 3,940 ft.; greatest frequency in areas of heavy brush, such as Chamise chaparral, but also in open areas at lower densities; boulders and rocky outcrops. | HP-Area A HA-Areas B & C | Potential habitat is present in Area A throughout; high potential. No potential at Areas B and C. |
| BIRDS | | | | |
| White-tailed Kite (<i>Elanus leucurus</i>) | -/CFP/-/MSHCP | Hunts in short or open grasslands; non-hydric meadows and grassy vernal pool margins; and mesic, herb-dominated vegetation communities with varied dominants. Generally avoids foraging in wetlands unless within an otherwise suitable landscape, but will utilize wetland/upland ecotones. In foraging, tolerates scattered trees and adjacent woodlands, windrows and forests; often nests at riparian margins. This is a strongly lowland species, apparently rare anywhere in California above 2,000 ft. Nests are flimsy and are located low in trees or tall shrubs near foraging | Nesting: HP-Area C; HA-Areas A & B Foraging: HP-Area C; HA-Areas A & B | Detected foraging in ruderal area east of riparian in Area C. No potentially suitable foraging habitat at or adjacent to Areas A or B. Low but reasonable potential for nesting in riparian vegetation at Area C, but nowhere in Areas A or B. The removal of foraging habitat of this species would be fully mitigated by the MSHCP. This is a fully |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|---|---|--|
| | | areas. Diet is largely restricted to small mammals, especially voles (e.g., <i>Microtus californicus</i>) and House Mouse (<i>Mus musculus</i>). | | protected species and as such, direct take could not be mitigated. |
| Northern Harrier (<i>Circus cyaneus</i>) | -/CSC/-/MSHCP | Species hunts low to the ground mostly in open country, nesting on the ground. Prey diversity is high, though small mammals are most commonly taken. It was formerly a fairly common breeder in much of coastal southern California, but now is nearly extirpated in this role due to loss of native open habitats, especially marshes. It remains fairly common in open country with low human disturbance during migration and in winter. | Nesting: HA- Areas A, B, & C Foraging: HP- Areas A, B, & C | This species is now a rare breeder in southern California beyond a few miles from the coast. The requirement for extensive, undisturbed grassland or marsh for ground nesting by this large, wary bird is not met at or adjacent to any of the three locales. Removal of potential foraging habitat would be fully mitigated by the MSHCP. |
| Golden Eagle (<i>Aquila chrysaetos</i>) | -/CFP/-/MSHCP | Forages in grassland and open savannah of many types. It tolerates considerable variation in topography and elevation. It prefers to hunt moderate-sized prey, especially California Ground Squirrels (<i>Spermophilus beecheyi</i>) and rabbits, but will occasionally take larger prey, such as Mule Deer (<i>Odocoileus hemionus</i>) fawns. It is very sensitive to human disturbance, especially near nest sites. | Nesting: HA- Areas A, B, & C Foraging: HP- Area A HA-B & C | No reasonable potential for nesting at any of the three locales. Low but reasonable potential for foraging at Area A; no reasonable potential for foraging at Areas B or C due to the extensive landscape context of human activity and lack of sufficiently open, undisturbed foraging habitat at either area. Removal of potential foraging habitat would be fully mitigated by the MSHCP. |
| Bald Eagle (<i>Haliaeetus leucocephalus</i>) | D/E,CFP/-/MSHCP | Primarily in or near extensive open water with suitable prey base (e.g. fish, waterfowl) and low disturbance over a large area. Eats mainly fish | Nesting/foraging: HA-Areas A, B, & C | No reasonable potential for suitable nesting or foraging habitat at any of the three |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|---|---|---|
| | | and carrion, and formerly nested locally along the coast of southern California. This species is a localized winter resident, rare migrant, and very rare breeder in southern California (e.g., Lake Skinner, Riverside County). | | locations. |
| American Peregrine Falcon (<i>Falco peregrinus anatum</i>) | D/D,CFP/-/MSHCP | Foraging habitat in all seasons is primarily areas with low human disturbance, accessible open water and high densities of prey species such as ducks and shorebirds. Nest sites are cliffs and tall structures (rural or urban) with very low levels of human or potential predator activity at the nest site. | Nesting: HA-Areas A, B, & C Foraging: HP-Areas A, B, & C | Species would only occur as a winter visitor or migrant with low potential to forage within the three areas. Removal of potential foraging habitat would be fully mitigated by the MSHCP. |
| Western Yellow-billed Cuckoo (<i>Coccyzus americanas occidentalis</i>) | FC/E/-/MSHCP(a) | Only a handful of tiny populations remaining in all of California today. Declines are tied to loss of nearly all suitable habitat, but other factors may also be involved. Relatively broad, well-shaded riparian forests with abundant, large invertebrate animal prey (e.g. caterpillars, cicadas) are utilized, although it tolerates some disturbance. Historically a specialist to some degree on tent caterpillars, with a remarkably fast development of young covering only 18 - 21 days from incubation to fledging. | HA-Areas A, B, & C | The riparian vegetation present at all three areas is greatly insufficient in structure and breadth to support this species. |
| Burrowing Owl (<i>Athene cunicularia</i>) | -/CSC/-/MSHCP(c) | Inhabits open, dry, nearly or quite level, grassland; prairie; desert floor; shrubland should be considered potential habitat if shrub cover is below 30% (CBOC 1997). In coastal southern California, a substantial fraction birds are found in microhabitats highly altered by man, including flood control and irrigation basins, dikes, and banks, abandoned fields surrounded by agriculture, and road cuts and margins. Strong association | HP-Areas A, B, & C | All three areas occur within the MSHCP survey area for burrowing owl. All three have low potential to support the species. |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|--|---|--|
| | | between Burrowing Owls and burrowing mammals, especially ground squirrels (<i>Spermophilus</i> spp.); however they will also occupy man-made niches such as banks and ditches, piles of broken concrete, and even abandoned structures (Haug et al. 1993). | | |
| Southwestern Willow Flycatcher (<i>Empidonax traillii extimus</i>) | E/E/-/MSHCP(a) | The subspecies occurs (or occurred) from west Texas to coastal southern California; in most of this range summer rain is an important factor in providing abundant food through summer breeding. Highly restricted distribution in cismontane southern California, where the Mediterranean climate rarely supports summer rain. With populations in regional decline, it occupies extensive, lowland riparian forests and lower montane riparian communities, primarily below 4,000 ft. Structure of occupied vegetation is complex, nearly always with shaded or dappled openings within a mid- to upper- story canopy, ample low vegetation, and hydrology that includes saturated soils, ponding, or slow and shallow flooding at least through May. May or may not co-occur in areas with Least Bell's Vireos. Unlike other subspecies of Willow Flycatcher, which are fairly common migrants through California and occur in nearly all natural and manmade areas with vegetation, migrant Southwestern Flycatchers are very rarely detected and when found appear to restrict themselves to migration habitat that is similar to breeding habitat. | HP-Area A HA-Areas B & C | The riparian vegetation at Area A appears marginally sufficient in hydrology, width, and vegetation structure to support this subspecies. A presence/absence survey was recommended and performed for this species in 2003, with the species confirmed absent at that time. Conditions appear unchanged since 2003 at Area A. There remains low potential for the species. Riparian vegetation at Areas B and C still had ponding in some areas at the time of the current field work, but the extent and structure clearly insufficient at this time. No reasonable potential at Areas B or C. |
| Loggerhead Shrike (<i>Lanius ludovicianus</i>) | -/CSC/-/MSHCP | Found as a common resident and winter visitor throughout California in lowland and foothill habitats, where it frequents open areas with sparse | Nesting: HP-Area C; HA-Areas A & B | Potentially suitable nesting habitat is present within Area C (low potential). There is |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|---|---|---|
| | | shrubs and trees. | Foraging: HP-Areas B & C; HA-Area A | moderate potential for the species to forage in Area C and low potential for the species to forage in Area B. There is no potential for the species to occur in a nesting or foraging role in Area A. This species is fully covered under the MSHCP. |
| Least Bell's Vireo (<i>Vireo bellii pusillus</i>) | E/E/-/MSHCP(a) | Found as a summer resident of southern California where it inhabits low riparian growth in the vicinity of water or in dry river bottoms below 2,000 ft. Species selects dense vegetation low in riparian zones for nesting; most frequently located in riparian stands between 5 and 10 years old; when mature riparian woodland is selected, vireos nest in areas with a substantial robust understory of willows as well as other plant species (Goldwasser 1981). | HP-Areas A, & C HA-Area B | The riparian community at Area A holds moderate to low potential. The focused survey performed in 2003 for the species at Area A confirmed the species to be absent at that time. The riparian community at Area C has low but reasonable potential for the species. Area B has less than reasonable potential, as the riparian is far too slight and unstructured to support the species at this time. |
| Coastal Cactus Wren (<i>Campylorhynchus brunneicapillus sandiegensis</i>) | -/CSC/-/MSHCP | Currently considered to range from far northwest Baja California, Mexico north along coastal lowlands in San Diego and southern Orange County, extending up to about 30 miles from the coast at a few points. A non-migratory resident of coastal sage scrub supporting relatively arborescent (over 3-foot tall) stands of any of several species of cactus (<i>Opuntia</i> spp.). | HA-Areas A, B, & C | Although not currently considered to occur in Riverside County, this species is fully covered by the MSHCP with no survey requirement. No potentially suitable habitat is present at or immediately adjacent to any of the three areas. |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|--|---|---|
| Coastal California Gnatcatcher (<i>Polioptila californica californica</i>) | T/CSC/-/MSHCP | Year-round permanent resident of healthy sage scrub vegetation; when adjacent to other natural communities, will sometimes also use those communities for limited foraging or nesting. | Confirmed P-Area A HA-Areas B & C | Fully covered species by MSHCP with no survey requirement. Several individuals were observed at Area A (both sides of Creek). No potential habitat at Areas B and C. |
| Grasshopper Sparrow (<i>Ammodramus savannarum</i>) | -/CSC/-/MSHCP(e) | Widespread but patchy distribution in California and elsewhere. In southern California, nests within extensive, open to moderately open grasslands with complex structure that typically includes a few scattered shrubs (Unitt, 2008). Within Riverside County, has been found on the Santa Rosa Plateau, Lake Mathews, Temescal Wash, and elsewhere. | HA-Areas A, B, & C | Grassland corridors in Area A lack sufficient extent (width); Area B and C lack extensive, grass-dominated communities. No potential at any of the three areas. |
| Western Yellow Warbler (<i>Dendroica petechia brewsteri</i>) | -/CSC/-/MSHCP | Nests in the upper story of riparian woodland and forest in southern California. It is also a common, widespread migrant in spring and fall, occupying a wide variety of communities at that time. | Nesting-Area A Foraging-Areas A, B, & C | This species is fully Covered under the MSHCP. All three areas have potential to support this species during migration. Only Area A may support nesting. |
| Yellow-breasted Chat (<i>Icteria virens</i>) | -/CSC /-/MSHCP | Nests in low thickets in dense riparian habitats. It eats a variety of invertebrates. It is a local and uncommon breeder and rare migrant across southern California. | Nesting/Foraging-Area A HA-Areas B & C | This species is fully Covered under the MSHCP; no survey required. There is low potential for this species to occur in the riparian vegetation in Areas A and C, but not in Area B at this time. This species is mostly detected in migration in vegetation appearing suitable for nesting; thus, low potential for |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|---|--|--|
| | | | | occurrence in migration in Areas B and C. |
| MAMMALS | | | | |
| Pallid Bat (<i>Antrozous pallidus</i>) | -/CSC/-/- | Throughout southern California. from coast to mixed conifer forest; grasslands, shrublands, woodlands, & forest; most common in open, dry habitats w/ rocky areas with cavities for roosting; yearlong resident in most of range. Roosts in caves, crevices, mines, hollow trees, buildings. | Roosting: HA- Areas A, B, & C Foraging: HP- Areas A, B, & C | Suitable foraging habitat is present within all three areas. Roost habitat is much less likely to be present; in Area A, the riparian community is narrow and in the other two locations, Areas B and C, is even more narrow and less developed. No reasonable potential for roosting habitat. |
| California Western Mastiff Bat (<i>Eumops perotis californicus</i>) | -/CSC/-/- | Found throughout the coastal lowlands up to drier, mid-elevation mountains, but avoids the Mohave and Colorado deserts. Habitats include dry woodlands, shrublands, grasslands, and occasionally even developed areas. This big bat forages in flight, primarily taking insects in the order Hymenoptera (bees, wasps, and ants). Most prey species are relatively small, low to the ground, and weak-flying. For roosting, appears to favor rocky, rugged areas in lowlands where abundant suitable crevices are available for day roosts. There appears to be little use of night roosts. Roost sites may be in natural rock or in tall buildings, large trees or elsewhere, but must be at least 2 inches wide and 12 inches deep, and narrow to at most 1 inch at the upper end. Nursery roosts must be deeper yet. All roosts open well up on a cliff or other steep face, at least 6.5 ft vertically above the substrate, to allow flight from the roost. | Roosting: HA- Areas A, B, & C Foraging: HP- Areas A, B, & C | Potentially suitable foraging habitat is present within all three areas. Roost habitat is much less likely to be present; in Area A, the riparian community is narrow and in the other two locations, Areas B and C, is even more narrow and less developed. No reasonable potential for roosting habitat. |

| COMMON/SCIENTIFIC NAME | STATUS^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT^b PRESENT/ ABSENT | RATIONALE |
|-----------------------------------|--|---|---|------------------|
| | | Roosts may be communal (up to 100 individuals) or solitary, and commonly include other species of bats. | | |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|---|--|--|
| Western Yellow Bat (<i>Lasiurus xanthinus</i>) | | Occurs from southern California and western Arizona south into Mexico. Apparently non-colonial and non-hibernating. Roosts primarily in the untrimmed, dead fronds of fan palms (native and nonnative) but will also use other trees including cottonwoods. California movement data not yet clear, with indications both of some seasonal movement and year-round residence. Foraging is associated with open water (also lawns, orchards, and riparian vegetation) in grassy and scrub landscapes; feeds on varied insects. No specific threats known apart from cosmetic trimming of dead fronds on ornamentally planted palms. Vulnerable to widespread or intensive use of chemicals such as pesticides. Data indicates range expansion in California in recent decades, perhaps due to increase planting of ornamental palms, but knowledge regarding status and trends is limited. | Roosting: HA-Areas A, B, & C Foraging: HP-Areas A, B, & C | No potentially suitable roost habitat at any of the three areas. Low but reasonable potential for foraging at all three areas. |
| Pocketed Free-tailed Bat (<i>Nyctinomops [Tadarida] femorosaccus</i>) | -/CSC/-/- | Found rarely in southwestern California; present in southeastern deserts of California, with portions of western Riverside County apparently on the periphery of the range. Roosts in high rock crevices and cliffs, foraging primarily on large moths, especially over water. Occupied areas are arid. | Roosting: HA-Areas A, B, & C Foraging: HP-Areas A, B, & C | No suitable roosting habitat within the study areas. Potentially suitable foraging habitat at all three areas; low potential. |
| Big Free-tailed Bat (<i>Nyctinomops macrotis</i>) | -/CSC/-/- | Occurs within low-lying arid areas of southern California. Requires high crevices in cliffs/rock outcrops for roosting. Species feeds on large insects such as moths and grasshoppers. | Roosting: HA-Areas A, B, & C Foraging: HP-Areas A, B, & C | No potentially suitable roosting habitat at any of the three areas. There is low potential for the species to forage over all three areas. |
| San Diego Black-tailed | -/CSC/-/MSHCP | This subspecies occurs from the coastline into | HP-Area A | No potentially suitable habitat |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|---|---|---|
| Jackrabbit (<i>Lepus californicus bennettii</i>) | | lower foothills of the major mountain ranges from around Point Conception (Santa Barbara County) south into Baja California, Mexico. It requires extensive, treeless vegetation such as grasslands or open sage scrub, usually in fairly level situations. The presence of substantial available cover, either dense grasses or shrubs, appears at least sometimes important and is often adjacent to more open foraging areas. Declines are due to extensive development of level areas in the region, though this large rabbit is still locally common. | HA-Areas B & C | is present at Areas B or C, and there is low but reasonable potential at Area A. This species is fully Covered under the MSHCP. |
| Northwestern San Diego Pocket Mouse (<i>Chaetodipus fallax fallax</i>) | -/CSC/-/MSHCP | Sandy herbaceous areas, usually in association with rocks and coarse gravel; found in southwest California coastal areas and desert margins in San Bernardino, Riverside, & San Diego counties. Elevation ranges from sea level to 6,000 ft. Vegetation community preferences include sage scrub, chamise-redshank chaparral, mixed chaparral, sage brush, desert wash, desert scrub, desert succulent scrub, pinyon-juniper, annual grassland. | HP-Area A HA-Areas B & C | This species is fully Covered under the MSHCP. There is low but reasonable potential for occurrence of this species in the grassland and sage scrub communities in Area A. No potential in Areas B and C. |
| Dulzura Pocket Mouse (<i>Chaetodipus californicus femoralis</i>) | -/CSC/-/- | Occupies a wide variety of upland vegetation types year-round within its range. These include montane hardwood, valley foothill hardwood-conifer, valley foothill hardwood, annual grassland, sagebrush, chamise-redshank and montane chaparral, and coastal scrub. This species occurs in greatest abundance in habitats where grassland and chaparral are in close proximity. Found primarily at moderate elevations. | HP-Area A HA-Areas B & C | There is low but reasonable potential for occurrence of this species in the grassland and sage scrub in Area A. No potential in Areas B and C. |
| Stephens's Kangaroo Rat (<i>Dipodomys stephensi</i>) | E/T/-/MSHCP | The Stephens's kangaroo rat is found year-round and almost exclusively in open grasslands or | HP-Area A HA-Areas B & C | This species is fully covered by MSHCP and SKR HCP |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|---|---|--|
| | | <p>sparse shrublands with cover of less than 50% during the summer. Avoids dense grasses (for example, nonnative bromes [<i>Bromus</i> spp.]) and are more likely to inhabit areas where the annual forbs disarticulate in the summer and leave more open areas.</p> <p>Soil type also is an important habitat factor. As a fossorial (burrowing) animal, the species typically is found in sandy and sandy loam soils with a low clay to gravel content, although there are exceptions where they can utilize the burrows of Botta's Pocket Gopher (<i>Thomomys bottae</i>) and California Ground Squirrel (<i>Spermophilus beecheyi</i>). Tends to avoid rocky soils.</p> <p>Slope is a factor in occupation; tends to use flatter slopes (i.e., < 30 %), but may be found on steeper slopes in trace densities (i.e., < 1 individual per hectare). Furthermore, the species may use steeper slopes for foraging, but not for burrows. In general, the highest abundances of species occur on gentle slopes less than 15 percent.</p> | | with no survey requirement. Potential habitat is present in the grassland and sage scrub portions of Area A; there is no potential in Areas B or C. |
| Los Angeles Pocket Mouse (<i>Perognathus longimembris brevinasus</i>) | -/CSC/-/MSHCP(c) | Habitat requirements for this subspecies of Little Pocket Mouse are poorly known; it inhabits open ground, prefers fine sandy soils (for burrowing), but is also often found in gravelly washes and on stony soils within brush and woodland habitats. The original range extended roughly from coastal Ventura County southeast through the Santa Ana Mountains to a line across southern Riverside County extending roughly from Temecula northeast and east across the northern San Jacinto Mountain foothills to Cabazon, just beyond San Gorgonio Pass. Known elevation range is from | HP-Area A HA-Areas B & C | Area A occurs within the MSHCP survey area for this species. There is low potential for its occurrence along the margins of Warm Springs Creek. It is likely that its presence would be related to movement patterns (linkage/connectivity) rather than live-in habitat. The potential habitat is limited and confined to the channel area |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|--|--|---|---|---|
| | | near sea level to at least 3500 feet. | | and directly adjacent lands. The soils in the sage scrub are too loamy for the species. The other two areas (B and C) occur outside of the MSHCP survey area for the species and there is no reasonable potential in these areas. |
| San Diego Desert Woodrat (<i>Neotoma lepida intermedia</i>) | -/CSC/-/MSHCP | Dry and/or sunny shrublands, especially (but not requiring) areas with cacti and abundant boulders and crevices. Does not require a source of drinking water. Sage scrub communities are frequently occupied. This subspecies is found along the coast of California from San Luis Obispo (San Luis Obispo County) southward into Baja California, Mexico. Its range extends inland to San Fernando (Los Angeles County), the western foothills of the San Bernardino Mountains (San Bernardino County), and Julian (San Diego County). | HP-Area A HA-Areas B & C | Potentially suitable habitat for this species occurs within Area A, and a probable den, or midden, of this species was also noted there (as well as several more typical of those from another woodrat species). This species is fully Covered under the MSHCP. No potential habitat in Areas B or C. |
| Southern Grasshopper Mouse (<i>Onychomys torridus ramona</i>) | -/CSC/-/- | Occurs in a wide variety of dry to moderately dry scrub, grassland and open woodland habitats across southern California, from the Mexican border north at least to Mint Canyon in Los Angeles County. Apparently avoids the immediate coastal lowlands of Orange, Los Angeles, and Ventura counties. The upper elevation limit appears poorly documented; it extends at least from sea level up to 2500 feet or more; the species as a whole ranges up to at least 7550 feet. | HP-Area A HA-Areas B & C | Potentially suitable habitat is present in Area A in grasslands and sage scrub, with low to moderate potential. No potential habitat in Areas B or C. |
| American Badger (<i>Taxidea taxus</i>) | -/CSC/-/- | Associated with large grasslands, dry washes, and dry, open shrub vegetation. Covers large areas | HP-Area A HA-Areas B & C | Some potentially suitable habitat for this species occurs |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|---|---|--|
| | | and will move through varied landscapes and across roads. Western Riverside County detections in recent decades are largely in undeveloped foothills such as at Santa Rosa Plateau and the Badlands north of Moreno Valley. Digs large dens or burrows and forages on small mammals (e.g. ground squirrels, rabbits), reptiles, birds, eggs, and insects. | | within Area A, although no burrows or dens large enough to support it were noted. The species' presence there would most likely be related to movement/linkage rather than live-in habitat. While large-scale movement across open portions of Areas B and C is in concept possible, likelihood of occurrence there is less than reasonable. |
| Vegetation Communities of Concern (Depleted Natural Communities) | | | | |
| California Walnut Woodland | CNDDDB | n/a | A | This community is confirmed absent. |
| Canyon Live Oak Ravine Forest | CNDDDB | n/a | A | This community is confirmed absent. |
| Coastal and Valley Freshwater Marsh | CNDDDB | n/a | A | This community is confirmed present in a small, north-central portion of Area B. It is relatively newly established and simple in both species diversity and structure. It also appears likely to have an unnatural flow regime due to nonseasonal urban input. This is in turn is likely to limit beneficial functions and value such as wildlife habitat and promotes invasive wetland species (e.g., the Mediterranean Tamarisk |

| COMMON/SCIENTIFIC NAME | STATUS^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT^b PRESENT/ ABSENT | RATIONALE |
|---|--|-----------------------------|---|---|
| | | | | currently present). Confirmed absent in Areas A and C. |
| Riversidian Alluvial Fan Sage Scrub | CNDDDB | n/a | A | This community is confirmed absent. |
| Southern California Arroyo Chub/Santa Ana Sucker Stream | CNDDDB | n/a | A | This community is confirmed absent. |
| Southern Coast Live Oak Riparian Forest | CNDDDB | n/a | A | This community is confirmed absent. |
| Southern Cottonwood Willow Riparian Forest | CNDDDB | n/a | A | This community is confirmed absent. |
| Southern Interior Basalt Flow Vernal Pool | CNDDDB | n/a | A | This community is confirmed absent. |
| Southern Interior Cypress Forest | CNDDDB | n/a | A | This community is confirmed absent. |
| Southern Riparian Scrub | CNDDDB | n/a | A | This community is confirmed absent. |
| Southern Sycamore Alder Riparian Woodland | CNDDDB | n/a | A | This community is confirmed absent. |
| Southern Willow Scrub | CNDDDB | n/a | P | Present in all three areas. |
| Valley Needlegrass Grassland | CNDDDB | n/a | P-Area A A-Area B & C | This community is confirmed present along the margins of Warm Springs Creek in Area A. Absent in Areas B and C. |
| Riversidian Sage Scrub | CNDDDB | n/a | P | This community is confirmed present at Area A. Absent in |

| COMMON/SCIENTIFIC NAME | STATUS ^a FED/STATE/ CNPS/ MSHCP | SPECIES REQUIREMENTS | SPECIFIC HABITAT ^b PRESENT/ ABSENT | RATIONALE |
|---|--|---|---|-------------------------------------|
| | | | | Areas B and C. |
| Vernal Pool | MSHCP | n/a | A | This community is confirmed absent. |
| <p>^a Status Codes</p> <p>Federal</p> <p>E = Federally listed; Endangered</p> <p>T = Federally listed; Threatened</p> <p>FC = Federal Candidate for Listing</p> <p>D = Delisted</p> <p>State</p> <p>T = State listed; Endangered</p> <p>E = State listed; Threatened</p> <p>R = Rare (Native Plant Protection Act)</p> <p>CSC = California Species of Special Concern</p> <p>CFP = California Fully Protected Species</p> | | <p>MSHCP</p> <p>MSHCP = No additional action necessary</p> <p>MSHCP(a) = Surveys may be required as part of wetlands mapping</p> <p>MSHCP(b) = Surveys may be required within the Narrow Endemic Plant Species survey</p> <p>MSHCP(c) = Surveys may be required within locations shown on survey maps</p> <p>MSHCP(d) = Surveys may be required within Criteria Area</p> <p>MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a Covered Species</p> <p>MSHCP(f) = Covered species when a Memorandum of Understanding is executed with the Forest Service Land</p> <p>Habitat^b Presence/Absence Codes</p> <p>P= The species is present.</p> <p>HP=Habitat is or may be present. The species may be present.</p> <p>HA= No habitat present and no further work needed.</p> <p>A= This species is absent.</p> | <p>CNPS</p> <p>1A = Plants presumed extinct in California</p> <p>1B = Plants rare, threatened, or endangered in California and elsewhere</p> <p>2 = Plants rare, threatened, or endangered in California, but more common elsewhere</p> <p>3 = Plants about which we need more information</p> <p>4 = Limited distribution (Watch List)</p> <p>0.1 = Seriously endangered in California</p> <p>0.2 = Fairly endangered in California</p> <p>0.3 = Not very endangered in California</p> <p>CNDDDB = Vegetation communities classified as depleted</p> <p>Shading = Species or natural vegetation communities for which further study is not needed per the MSHCP or for which have no potential for occurrence and impact.</p> | |

| Special Status | Species (scientific name, English common name) | Area A | Area B | Area C |
|------------------------------------|--|--------|--------|--------|
| VASCULAR PLANTS | | | | |
| Saururaceae – Lizard’s-tail Family | | | | |
| | <i>Anemopsis californica</i> , Yerba Mansa | x | | x |
| Adoxaceae – Muskroot Family | | | | |
| | <i>Sambucus nigra</i> subsp. <i>caerulea</i> , Blue Elderberry | x | | |
| Amaranthaceae – Amaranth Family | | | | |
| * | <i>Amaranthus albus</i> , White Amaranth | | | x |
| Anacardiaceae – Sumac Family | | | | |
| | <i>Rhus aromatica</i> , Fragrant Sumac (Skunkbrush) | x | | |
| | <i>Toxicodendron diversilobum</i> , Western Poison-oak | x | | |
| Apiaceae – Carrot Family | | | | |
| * | <i>Apium graveolens</i> , Garden Celery | | x | x |
| ** | <i>Conium maculatum</i> , Poison Hemlock | x | x | x |
| | <i>Daucus pusillus</i> , Rattlesnake Plant | x | | |
| Asteraceae – Sunflower Family | | | | |
| | <i>Acourtia microcephala</i> , Sacapellote | x | | |
| | <i>Ambrosia psilostachya</i> , Western Ragweed | x | x | x |
| * | <i>Anthemis cotula</i> , Stinking Chamomile (Mayweed) | x | x | x |
| | <i>Artemisia californica</i> , California Sagebrush | x | | |
| | <i>Artemisia douglasiana</i> , California Mugwort | x | x | x |
| | <i>Baccharis salicina</i> , Willow Baccharis (Emory’s Baccharis) | x | | |
| | <i>Baccharis pilularis</i> , Coyote Brush | | x | |
| | <i>Baccharis salicifolia</i> , Mule Fat Baccharis | x | x | x |
| | <i>Brickellia californica</i> , California Brickellbush | x | | |
| * | <i>Centaurea benedicta</i> , Blessed Star Thistle | x | | |
| | <i>Bebbia juncea</i> , Sweetbush | x | | |
| | <i>Centaurea melitensis</i> , Maltese Star Thistle | x | x | |
| ** | <i>Cirsium vulgare</i> , Bull Thistle | x | x | x |
| | <i>Corethrogyne filaginifolia</i> , California Sand-aster | x | | x |
| ! | <i>Deinandra paniculata</i> , Paniculate Tarplant | x | x | |
| | <i>Ericameria palmeri</i> , Palmer’s Goldenbush | x | | |
| | <i>Erigeron canadensis</i> , Canada Horseweed | x | x | x |
| | <i>Erigeron sumatrensis</i> , Tropical Horseweed | x | | |
| * | <i>Gazania linearis</i> , Treasureflower | x | | |
| | <i>Gutierrezia</i> sp., matchweed | x | | |
| | <i>Hazardia squarrosa</i> , Sawtooth Goldenbush | x | | |
| | <i>Helianthus annuus</i> , Common Sunflower | x | x | x |
| | <i>Heterotheca grandiflora</i> , Telegraph Golden-aster | x | x | x |
| | <i>Iva axillaris</i> , Small-flowered Marsh Elder | x | | |
| * | <i>Lactuca serriola</i> , Prickly Lettuce | x | | x |
| | <i>Laennecia coulteri</i> , Coulter’s Horseweed | | x | |
| * | <i>Pseudognaphalium luteoalbum</i> , Jersey Everlasting | | x | x |
| * | <i>Sonchus oleraceus</i> , Common Sow Thistle | x | | |
| | <i>Tetradymia comosa</i> , Hairy Horsebrush | x | | |
| | <i>Xanthium strumarium</i> , Rough Cocklebur | x | x | x |
| Boraginaceae – Borage Family | | | | |
| | <i>Amsinckia intermedia</i> , Common Fiddleneck | x | | |
| | <i>Heliotropium curassavicum</i> , Salt Heliotrope | x | x | x |
| | <i>Phacelia cicutaria</i> , Caterpillar Phacelia | x | | |
| Brassicaceae – Mustard Family | | | | |
| ** | <i>Brassica nigra</i> , Black Mustard | | x | x |
| ** | <i>Hirschfeldia incana</i> , Short-pod Mustard | x | x | x |

| Special Status | Species (scientific name, English common name) | Area A | Area B | Area C |
|---------------------------------------|---|--------|--------|--------|
| ?! / *? | <i>Lepidium</i> sp., peppergrass | x | | |
| ** | <i>Sisymbrium irio</i> , London Rocket | x | | |
| * | <i>Sisymbrium officinale</i> , Hedge Mustard | x | | |
| Caryophyllaceae – Pink Family | | | | |
| | <i>Spergularia</i> sp., sand-spurrey | | | x |
| Chenopodiaceae – Goosefoot Family | | | | |
| * | <i>Chenopodium album</i> , Lamb's-quarters | | | x |
| | <i>Chenopodium berlandieri</i> , Pitseed Goosefoot | x | | x |
| * | <i>Dysphania ambrosioides</i> , Mexican-tea Goosefoot | | | x |
| ** | <i>Salsola australis</i> / <i>S. tragus</i> , Southern / Prickly Russian-thistle | | | x |
| Convolvulaceae – Morning-glory Family | | | | |
| | <i>Calystegia macrostegia</i> ssp. <i>tenuifolia</i> , Narrow-leaved Morning Vine | x | | |
| Cucurbitaceae – Gourd Family | | | | |
| | <i>Cucurbita foetidissima</i> , Missouri Gourd (Coyote Melon) | x | | |
| | <i>Marah macrocarpus</i> , Cucamonga Man-root (Wild Cucumber) | x | | |
| Euphorbiaceae | | | | |
| | <i>Chamaesyce polycarpa</i> , Golondrina Sandmat | x | | |
| | <i>Croton setiger</i> , Doveweed Croton | x | | x |
| Fabaceae – Pea Family | | | | |
| | <i>Melilotus albus</i> , White Sweetclover | | x | |
| ** | <i>Robinia pseudoacacia</i> , Black Locust | | | x |
| Frankeniaceae – Frankenia Family | | | | |
| | <i>Frankenia salina</i> , Alkali Sea-heath | x | | x |
| Geraniaceae – Geranium Family | | | | |
| | <i>Erodium cicutarium</i> , Red-stemmed Storksbill | x | | x |
| Lamiaceae – Mint Family | | | | |
| ** | <i>Marrubium vulgare</i> , White Horehound | x | | |
| | <i>Salvia apiana</i> , White Sage | x | | |
| | <i>Stachys albens</i> , White Hedge-nettle | x | | |
| Lythraceae – Loosestrife Family | | | | |
| | <i>Lythrum californicum</i> , California Loosestrife | | x | |
| Malvaceae – Mallow Family | | | | |
| | <i>Malvella leprosa</i> , Alkali Mallow | x | x | x |
| Myrsinaceae – Myrsine Family | | | | |
| * | <i>Anagallis arvensis</i> , Scarlet Pimpernel | x | | |
| Onagraceae – Evening-primrose Family | | | | |
| | <i>Epilobium brachycarpum</i> , Parched Fireplant | | x | |
| | <i>Epilobium canum</i> , California-fuchsia | x | | |
| | <i>Epilobium ciliatum</i> , Fringed Willow-herb | x | x | x |
| Plantaginaceae – Plantain Family | | | | |
| | <i>Keckiella antirrhinoides</i> , Chaparral Beard-tongue | x | | |
| * | <i>Veronica anagallis-aquatica</i> , Great Water Speedwell | | x | x |
| Polygonaceae – Buckwheat Family | | | | |
| | <i>Eriogonum fasciculatum</i> , California Buckwheat | x | | |
| * | <i>Rumex conglomeratus</i> , Clustered Dock | x | | x |
| ** | <i>Rumex crispus</i> , Curly Dock | x | x | x |
| | <i>Rumex salicifolius</i> , Willow Dock | x | | |
| Rhamnaceae – Buckthorn Family | | | | |
| | <i>Rhamnus crocea</i> , Spiny Redberry | x | | |
| Rosaceae – Rose Family | | | | |
| | <i>Rosa californica</i> , California Rose | x | | |
| Rubiaceae – Madder Family | | | | |

| Special Status | Species (scientific name, English common name) | Area A | Area B | Area C |
|-----------------------------------|---|--------|--------|--------|
| | <i>Galium angustifolium</i> , Narrow-leaved Bedstraw | x | | |
| Salicaceae – Willow Family | | | | |
| | <i>Salix gooddingii</i> , Goodding's Black Willow | x | x | x |
| | <i>Populus fremontii</i> , Fremont's Cottonwood | x | | |
| | <i>Salix laevigata</i> , Red Willow | x | | x |
| | <i>Salix lasiolepis</i> , Arroyo Willow | x | x | x |
| Scrophulariaceae – Figwort Family | | | | |
| | <i>Scrophularia californica</i> , California Figwort (California Bee Plant) | x | | |
| Solanaceae – Nightshade Family | | | | |
| | <i>Datura wrightii</i> , Sacred Datura | x | | |
| | <i>Lycium andersonii</i> , Anderson's Boxtorn | x | | |
| ** | <i>Nicotiana glauca</i> , Tree Tobacco | x | | x |
| | <i>Solanum americanum</i> , Small-flowered Nightshade | | | x |
| Tamaricaceae – Tamarisk Family | | | | |
| ** | <i>Tamarix ramosissima</i> , Mediterranean Tamarisk | x | x | x |
| Urticaceae – Nettle Family | | | | |
| | <i>Urtica dioica</i> , Giant Creek Nettle | x | | x |
| Cyperaceae – Sedge Family | | | | |
| | <i>Cyperus eragrostis</i> , Tall Flat-sedge | | x | |
| | <i>Eleocharis macrostachya</i> , Pale Spike-sedge | | x | |
| | <i>Eleocharis</i> sp., spike-sedge | x | | |
| | <i>Schoenoplectus americanus</i> , Winged Three-square Bulrush | | x | |
| | <i>Schoenoplectus / Scirpus</i> sp., bulrush | x | | |
| Juncaceae – Rush Family | | | | |
| | <i>Juncus (balticus?)</i> , (Wire Rush – probable) | | | x |
| | <i>Juncus mexicanus</i> , Mexican Rush | x | | x |
| Poaceae – Grass Family | | | | |
| ** | <i>Avena barbata</i> , Slender Oat | x | | |
| ** | <i>Avena fatua</i> , Common Oat | x | | |
| ** | <i>Bromus diandrus</i> , Rippgut Brome | x | | x |
| ** | <i>Bromus hordeaceus</i> , Soft Brome | x | x | x |
| ** | <i>Bromus madritensis</i> , Spanish Brome | x | | x |
| ** | <i>Bromus tectorum</i> , Downy Brome | x | | |
| * | <i>Crypsis schoenoides</i> , Swamp Prickle Grass | | | x |
| | <i>Distichlis spicata</i> , Salt Grass | x | | x |
| | <i>Elymus condensatus</i> , Giant Wildrye | x | | |
| | <i>Elymus triticoides</i> , Beardless Wildrye | x | | |
| ** | <i>Festuca myuros</i> , Rat-tail Fescue | x | x | x |
| ** | <i>Hordeum marinum</i> , Seaside Barley | x | | x |
| ** | <i>Hordeum murinum</i> , Mouse Barley | x | | x |
| | <i>Muhlenbergia asperifolia</i> , Scratchgrass Muhly | x | | |
| ** | <i>Schismus barbatus</i> , Mediterranean Schismus | x | | |
| ** | <i>Stipa miliacea</i> , Smilo Grass | x | | |
| | <i>Stipa pulchra</i> , Purple Needlegrass | x | | |
| ** | <i>Polypogon monspeliensis</i> , Annual Beard Grass | x | x | x |
| Typhaceae – Cattail Family | | | | |
| * | <i>Typha (angustifolia?)</i> , (Narrow-leaved Cattail – probable) | | x | |
| | <i>Typha domingensis</i> , Southern Cattail | | x | x |
| | <i>Typha latifolia</i> , Broad-leaved Cattail | | x | |
| VERTEBRATE ANIMALS | | | | |
| Poeciliidae – Livebearer Family | | | | |
| * | <i>Gambusia affinis</i> , Western Mosquitofish | | | x |

| Special Status | Species (scientific name, English common name) | Area A | Area B | Area C |
|--|---|--------|--------|--------|
| Bufonidae – True Toad Family | | | | |
| | <i>Anaxyrus boreas</i> , Western Toad | | | x |
| Phrynosomatidae – Spiny Lizard Family | | | | |
| | <i>Sceloporus occidentalis</i> , Western Fence Lizard | x | x | |
| | <i>Sceloporus orcutti</i> , Granite Spiny Lizard | x | | |
| Teiidae – Whiptail Lizard Family | | | | |
| | <i>Aspidoscelis tigris</i> , Western Whiptail | | | x |
| Ardeidae – Heron Family | | | | |
| | <i>Ardea herodias</i> , Great Blue Heron | | | x |
| Threskiornithidae – Ibis Family | | | | |
| | <i>Plegadis chihi</i> , White-faced Ibis | (x) | | |
| Accipitridae – Hawk Family | | | | |
| ! | <i>Elanus leucurus</i> , White-tailed Kite | | | x |
| | <i>Buteo jamaicensis</i> , Red-tailed Hawk | | x | |
| Charadriidae – Plover Family | | | | |
| | <i>Charadrius vociferus</i> , Killdeer | | | x |
| Columbidae – Pigeon and Dove Family | | | | |
| | <i>Zenaida macroura</i> , Mourning Dove | x | x | x |
| Cuculidae – Cuckoo and Roadrunner Family | | | | |
| | <i>Geococcyx californianus</i> , Greater Roadrunner | | | x |
| Trochilidae – Hummingbird Family | | | | |
| | <i>Calypte anna</i> , Anna's Hummingbird | x | | x |
| Picidae – Woodpecker Family | | | | |
| | <i>Picoides nuttallii</i> , Nuttall's Woodpecker | x | | |
| Falconidae – Falcon Family | | | | |
| | <i>Falco sparverius</i> , American Kestrel | | x | |
| Tyrannidae – Tyrant Flycatcher Family | | | | |
| | <i>Sayornis nigricans</i> , Black Phoebe | x | | x |
| | <i>Sayornis saya</i> , Say's Phoebe | x | | x |
| | <i>Myiarchus cinerascens</i> , Ash-throated Flycatcher | x | | |
| | <i>Tyrannus verticalis</i> , Western Kingbird | | | x |
| Corvidae – Jay and Crow Family | | | | |
| | <i>Aphelocoma californica</i> , Western Scrub-Jay | x | | |
| | <i>Corvus corax</i> , Common Raven | x | | x |
| Hirundinidae – Swallow Family | | | | |
| | <i>Petrochelidon pyrrhonota</i> , Cliff Swallow | | x | x |
| Aegithalidae – Bushtit Family | | | | |
| | <i>Psaltriparus minimus</i> , Bushtit | x | x | |
| Troglodytidae – Wren Family | | | | |
| | <i>Thryomanes bewickii</i> , Bewick's Wren | | x | |
| Poliophtilidae – Gnatcatcher Family | | | | |
| ! | <i>Poliophtila californica</i> , California Gnatcatcher | x | | |
| Sylviidae – Old-World Warbler Family | | | | |
| | <i>Chamaea fasciata</i> , Wrentit | x | | |
| Parulidae – Wood-Warbler Family | | | | |
| | <i>Geothlypis trichas</i> , Common Yellowthroat | | x | x |
| Emberizidae – Sparrow Family | | | | |
| | <i>Pipilo maculatus</i> , Spotted Towhee | x | | |
| | <i>Melospiza crissalis</i> , California Towhee | x | x | x |
| | <i>Melospiza melodia</i> , Song Sparrow | x | | x |
| Cardinalidae – Grosbeak and Bunting Family | | | | |
| | <i>Passerina caerulea</i> , Blue Grosbeak | | | x |

| Special Status | Species (scientific name, English common name) | Area A | Area B | Area C |
|---|---|-----------------|--------------|--------------|
| Fringillidae – Finch Family | | | | |
| | <i>Carpodacus mexicanus</i> , House Finch | x | | x |
| | <i>Spinus psaltria</i> , Lesser Goldfinch | x | x | x |
| | <i>Spinus tristis</i> , American Goldfinch | | | x |
| Sciuridae – Squirrel Family | | | | |
| | <i>Spermophilus beecheyi</i> , California Ground Squirrel | | x | x |
| Geomyidae – Pocket Gopher Family | | | | |
| | <i>Thomomys bottae</i> , Botta's Pocket Gopher | x | x | x |
| Cricetidae – Cricetid Family | | | | |
| ! | <i>Neotoma lepida (intermedia)</i> , San Diego Desert Woodrat | x | | |
| | <i>Neotoma macrotis</i> , Big-eared Woodrat | x | | |
| Leporidae – Hare and Rabbit Family | | | | |
| | <i>Sylvilagus audubonii</i> , Desert Cottontail | x | x | x |
| Felidae – Cat Family | | | | |
| | <i>Lynx rufus</i> , Bobcat | x | | |
| Canidae – Dog Family | | | | |
| | <i>Canis latrans</i> , Coyote | x | | |
| * | <i>Canis lupus familiaris</i> , Domestic Dog | x | | x |
| | <i>Urocyon cinereoargenteus</i> , Gray Fox | x | | |
| * | <i>Bos taurus</i> , Cattle (Domestic Cow) | x | | |
| Site totals (plants + animals): | | 92+27(1) | 38+13 | 52+26 |
| SUMMARY OF COMBINED DETECTIONS | | | | |
| The 3 combined sites = 117 plant species and 43 animal species plus 1 overhead only. For plants, 77 are native, 39 (33%) are nonnative with 23 of those (20% of the total) invasive, 1 is of uncertain nativity, and 2 have special status (plus 1 of uncertain special status). For animals, 40 are native (one overhead only), 3 (7%) are nonnative, and 3 have special status. | | | | |
| KEY | | | | |
| * - Nonnative; ** - Invasive (Cal-IPC); ! – Special Status; ? – Uncertain; x – confirmed detection on the site (may refer to evidence such as sign or scat); (x) – Only detected very close to or traveling over the site. | | | | |
| Taxonomy sources | | | | |
| American Ornithologists' Union (AOU). 1998. Check-list of North American Birds, 7th Ed. Washington, DC: American Ornithologists' Union. [1998 checklist, all supplements, and current list available at http://www.aou.org/checklist/north/] | | | | |
| Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, 2nd Ed. Berkeley, CA: University of California Press. | | | | |
| Collins, J. T., and T. W. Taggart. 2009. Standard Common and Current Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodilians, 6th Ed. Lawrence, KS: The Center for North American Herpetology. | | | | |
| Moyle, P. B. 2002. Inland Fishes of California, Revised and Expanded Ed. Berkeley, CA: University of California Press. | | | | |
| Wilson, D. E., and D. M. Reeder. 2005. Mammal Species of the World: A Taxonomic and Geographic Reference, 3rd Edition. Baltimore, MD: Johns Hopkins University Press. Also available online at http://www.bucknell.edu/msw3/browse.asp . | | | | |

