APPENDIX V PAMA BOUNDARY LINE ADJUSTMENT REQUEST

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memorandum

date	August 24, 2018
to	County of San Diego Department of Planning and Development Services Heather Steven, Project Manager
from	Barbra Calantas, ESA, Biology Director
subject	El Monte Sand Mining Project (PDS2015-MUP-98-014W2, PDS2014-RP-15-001, PDS2015-ER-98-14-016B) Boundary Line Adjustment Request

1. Introduction

El Monte Nature Preserve, LLC (applicant) is proposing the El Monte Sand Mining Project (project), located in an unincorporated portion of San Diego County approximately 3 miles west of El Capitan Dam (**Figure 1**). The project is a combined mineral extraction and reclamation project. The project would extract, process, and market aggregate using conventional earth moving and processing equipment. Extractive and reclamation operations for the project are expected to continue for approximately 16 years (12 years of mining and reclamation, with an additional 4 years of reclamation following completion of mining). The project would impact approximately 262 acres of land located in El Monte Valley on an approximate 479.5-acre project site currently owned by the applicant.

The project area is bordered by El Monte Road to the south and Willow Road to the north, and is 1.5 miles east of State Route 67 where it crosses the San Diego River. The project area is currently located within a "doughnut hole" of the Metro-Lakeside-Jamul Segment of the County of San Diego Multiple Species Conservation Program (MSCP) Subarea Plan (County Subarea Plan). Pre-approved Mitigation Area (PAMA) lands within the Metro-Lakeside-Jamul Segment immediately surround the project area. Areas designated as "hard line" preserve areas are located in the general vicinity (nearest hard line preserve is about 1.5 miles to the northwest) but not immediately adjacent to the project area. Refer to **Figure 2** for a depiction of the project area's existing location relative to the Metro-Lakeside-Jamul Segment and relevant land designations of the Subarea Plan.

As part of the project, the applicant is proposing a Boundary Line Adjustment (BLA) to the County Subarea Plan's PAMA. Section 10.11 of the County Subarea Plan Implementing Agreement (County of San Diego 1998) allows for BLAs, and Section 5.4.2 of the MSCP (Ogden Environmental and Energy Services 1998) and Section 1.4 of the County Subarea Plan (County of San Diego 1997) outline the preserve boundary adjustment process. In accordance with the MSCP, adjustments to the preserve boundaries can be made without amending a subarea plan if the adjustment will result in the same or higher biological value of the preserve and with concurrence from the wildlife agencies (i.e., California Department of Fish and Wildlife [CDFW] and U.S. Fish and Wildlife Service [USFWS]). The BLA is being requested as the project site ownership recently transferred from Helix Water

District (public) to El Monte Nature Preserve, LLC (private). Public agency/district lands were not originally included in the MSCP. The proposed BLA would contribute the total 479.5-acre project site to the County Subarea Plan's PAMA without any alteration to the boundaries of existing PAMAs. Thus, the proposed BLA would increase the total size of the County Subarea Plan's PAMA by a total of 479.5 acres.

This BLA request has been prepared in accordance with the MSCP and guidance received from County of San Diego staff, and provides a summary of existing biological conditions of the BLA area (i.e., the 479.5-acre project site) and analysis of the potential effects associated with the proposed BLA. This request is submitted to the wildlife agencies (USFWS and CDFW) for concurrence. Public notice of the proposed BLA is required; public notice will be accomplished through the California Environmental Quality Act process for the project. It is understood that if this BLA request is not approved by the wildlife agencies, another process as identified by the agencies may be determined.

2. Existing Conditions

Per County guidance, the BLA request must include a vegetation community map, quantitative summary of vegetation communities within the BLA area, and a summary of sensitive species known to occur or with potential to occur within the BLA area. The biological data related to vegetation communities and sensitive species are based on field surveys performed on the BLA area between 2006 and 2016, as well as a review of publically accessible databases and scientific literature. The information presented in this section is synthesized from the Biological Resources Report (BRR) prepared for the El Monte Sand Mining Project (Environmental Science Associates [ESA] 2018a) which is included as Appendix G to the project's Environmental Impact Report (County of San Diego 2018).

2.1. Vegetation Communities

Nine distinct habitat/land cover types as defined by the Holland classification system as modified by Oberbauer (Holland 1986, Oberbauer et al. 2008) were mapped within the BLA area, including four riparian/wetland habitats (southern cottonwood-willow riparian forest, southern willow scrub, tamarisk scrub, non-vegetated channel), three upland habitats (Diegan coastal sage scrub, non-native grassland, eucalyptus woodland), and two other land cover types (disturbed habitat and developed areas). Riparian/wetland habitats within the BLA area are primarily associated with the San Diego River, which bisects the BLA area in an east-west direction. Disturbed habitat includes areas that were primarily bare at the time of habitat mapping. Existing vegetation communities within the BLA area are depicted on **Figure 3**, and the acreages of each habitat and vegetation community are listed in **Table 1**. In addition to these vegetation communities defined by Holland/Oberbauer, Mature Riparian Woodland, which is defined in the County of San Diego RPO, was mapped as an overlay atop the Holland/Oberbauer mapping.

A total of approximately 262 acres of the existing vegetation and land cover within the BLA area would be disturbed by the project; however, the project would reclaim and, as part of mitigation requirements, restore and enhance the majority of the BLA area to native habitats following completion of the project (refer to Section 3.2, *Effects on MSCP Plan Goals and Criteria*, for a summary of anticipated post-project conditions). Reclamation and restoration of the BLA area would be performed in accordance with the project's approved Conceptual Revegetation Plan (ESA 2018b) and Reclamation Plan (ESA 2018c). These plans are included as Appendix I and Appendix J, respectively, to the project's EIR (County of San Diego 2018).

TABLE 1
EXISTING VEGETATION COMMUNITIES WITHIN THE BOUNDARY LINE ADJUSTMENT AREA

Vegetation Communities	Acreage
Riparian and Wetlands[1]	
Southern Cottonwood-Willow Riparian Forest (Holland Code 61330)	11.18
Southern Willow Scrub (Holland Code 63320)	0.71
Tamarisk Scrub (Holland Code 63810)	85.69
Non-Vegetated Channel (Holland Code 64200)	1.66
Uplands	
Diegan Coastal Sage Scrub (Holland Code 32500)	10.38
Non-Native Grassland (Holland Code 42200)	135.75
Eucalyptus Woodland (Holland Code 79100)	2.62
Other Cover Types	
Disturbed Habitat (Holland Code 11300)[2]	228.52
Developed (Holland Code 12000)	3.03
TOTAL[3]	**479.5**[3]

[1] A total of 8.45 acres was mapped as "Mature Riparian Woodland," pursuant to the County Resource Protection Ordinance definition. Mature Riparian Woodland is not Holland (1986)/Oberbauer et al. (2008) category and was mapped as a GIS overlay on top of the Holland/Oberbauer-based vegetation mapping, primarily southern cottonwood-willow riparian forest.
[2] Disturbed habitat includes highly degraded areas with ruderal, weedy species, or unvegetated areas such as roads, trails, and vacant lots.
[3] Total acreage may differ slightly from summation of the acreage column due to rounding.

2.2. Sensitive Species

Twenty-one sensitive wildlife species were observed on and within 100 feet of the BLA area during field surveys performed between 2006 and 2016. In addition, one sensitive plant species, Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*), was observed within the BLA area in 2010 and 2015. An additional ten species (two plant species and eight wildlife species) have moderate to high potential to occur based on documented habitat conditions and known species' ranges. One of the two sensitive plant species with potential to occur, San Diego sagewort (*Artemisia palmeri*), was detected about 500 feet west of the BLA area; this species has high potential to occur given confirmation of these nearby occurrences. Moderate and high potential to occur are defined as follows:

- **Moderate Potential:** The BLA area or immediate vicinity provides suitable habitat for a particular species. However, the habitat or substrate may be limited or the desired vegetation assemblage or density is less than ideal.
- **High Potential:** The BLA area or immediate vicinity provides high-quality, suitable habitat conditions for a particular species. Additionally, known populations of the species may occur in the immediate vicinity.

Table 2 provides a summary of sensitive plant and wildlife species that are known to occur or have moderate to high potential to occur within the BLA area. Recorded occurrences of sensitive species are depicted on **Figure 4**.

TABLE 2
SENSITIVE SPECIES KNOWN OR WITH POTENTIAL TO OCCUR WITHIN THE BOUNDARY LINE ADJUSTMENT (BLA) AREA

Species	Listing Status[1]	MSCP Covered Species (Yes/No)	Habitat Requirements	Potential to Occur within the BLA Area
Sensitive Plants				
Artemisia palmeri San Diego sagewort	--, 4.2, List D	No	Chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland. Sandy or mesic soils. 15 - 915m.	**High** - observed adjacent to BLA area (to the west) during 2010 and 2015 surveys.
Ericameria palmeri var. palmeri Palmer's goldenbush	--, 1B.1, List B, Narrow Endemic	Yes	Coastal scrub, chaparral on granitic soils, steep slopes, mesic sites. 100-600m.	**Present** - observed within the BLA area during 2015 surveys.
Isocoma menziesii var. decumbens Decumbent goldenbush	--, 1B.2, List A	No	Chaparral, coastal scrub, often in sandy, disturbed areas. 10-135m.	**High** - not observed during 2006, 2010, or 2015 surveys; however, suitable habitat present on BLA area.
Sensitive Amphibians and Reptiles				
Spea hammondii Western spadefoot toad	--, SSC, Group II	No	Grasslands, scrub, chaparral, and oak woodland habitats with soft substrate suitable for burrowing.	**Present** – detected during U.S. Geological Survey (USGS) herpetofaunal surveys performed in 2015/2016 (Richmond et al. 2016).
Aspidoscelis hyperythrus Orange-throated whiptail	--, SSC, Group II	Yes	Low elevation coastal scrub and chaparral. Prefers loose soil and rocks, washes and other sandy areas. Perennial plants necessary for major food - termites.	**Present** - detected during USGS herpetofaunal surveys performed in 2015/2016 (Richmond et al. 2016), and during surveys in 2006 and 2010.
Aspidoscelis tigris stejnegeri Coastal whiptail	--, SA, Group II	No	In hot and dry open areas with sparse foliage within chaparral communities, open woodlands and riparian forests.	**Present** - detected during USGS herpetofaunal surveys performed in 2015/2016 (Richmond et al. 2016).
Coleonyx variegatus abbotti San Diego banded gecko	--, SSC, Group I	No	Coastal sage scrub, chaparral, creosote sagebrush, often associated with granite or rocky outcrops with crevices.	**Present** – detected during USGS herpetofaunal surveys performed in 2015/2016 (Richmond et al. 2016).

Species	Listing Status[1]	MSCP Covered Species (Yes/No)	Habitat Requirements	Potential to Occur within the BLA Area
Anniella stebbinsi Southern California legless lizard	--, SSC, --	No	Primarily found in oak woodland, chaparral, coastal sage scrub, pinhyon-juniper woodland, and urban areas.	**Present** – detected during USGS herpetofaunal surveys performed in 2015/2016 (Richmond et al. 2016).
Phrynosoma blainvillii Coast horned lizard	--, SSC, Group II	Yes	Coastal scrub, chaparral. Prefers friable, rocky or shallow sandy soils where harvester ants are present.	**Present** – detected during USGS herpetofaunal surveys performed in 2015/2016 (Richmond et al. 2016).
Salvadora hexalepis virgultea Coast patch-nosed snake	--, SSC, Group II	No	Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites.	**Present** – detected during USGS herpetofaunal surveys performed in 2015/2016 (Richmond et al. 2016).
Arizona elegans Glossy snake	--, SSC, --	No	Most often found in desert habitats but also occur in chaparral, sagebrush and annual grasslands. Prefers open, sandy areas, but also found in rocky areas.	**Present** - detected during USGS herpetofaunal surveys performed in 2015/2016 (Richmond et al. 2016).
Crotalus ruber Red-diamond rattlesnake	--, SSC, Group II	No	Chaparral, woodland, grassland and desert areas Riverside, Orange, San Diego Co to eastern slopes of mountains. Rocky areas and dense vegetation, needs rodent burrows, cracks in rocks or surface cover objects.	**Present** – detected during USGS herpetofaunal surveys performed in 2015/2016 (Richmond et al. 2016).
Thamnophis hammondii Two-striped garter snake	--, SSC, Group I	No	Near water sources, commonly in rocky areas within oak woodland, chaparral, shrubland, and coniferous forest.	**High** – not observed during 2006, 2010, or 2015 surveys; however, suitable habitat present within BLA area.

Species	Listing Status[1]	MSCP Covered Species (Yes/No)	Habitat Requirements	Potential to Occur within the BLA Area
Sensitive Birds				
Accipiter cooperii Cooper's hawk	--, SA, Group I	Yes	Woodland, chiefly of open interrupted or marginal type, nests mainly in riparian, deciduous trees, canyon bottoms, river flood plains, also in live oaks.	**Present** - observed during 2006, 2010, and 2015 surveys.
Accipiter striatus Sharp-shinned hawk	--, SSC, Group I	No	Ponderosa pine, black oak, riparian deciduous, mixed conifer & Jeffrey pine habitats. Prefers riparian areas. This species does not nest in coastal California.	**Present** - observed during 2010 surveys.
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	--, Group I	Yes	In foothills, lower canyons, pine-oak woodlands, chaparral, and coastal sage scrub. Prefers rocky areas.	**Moderate** - not observed during 2006, 2010, or 2015 surveys; marginally suitable habitat present.
Aquila chrysaetos Golden eagle	BEPA, FP, Group I	Yes	Rolling foothills, mountain areas, sage-juniper flats, and desert. Nests in cliffs, walled canyons, and large trees in open areas.	**High** - not observed during 2006-2016 surveys. Eagles have high potential to forage in the large expanse of non-native grassland on the BLA area. Suitable nesting habitat is not present; therefore, eagles are not expected to nest within the BLA area.
Buteo lineatus Red-shouldered hawk	--, Group I	No	Riparian and oak woodlands, as well as eucalyptus groves and some residential areas.	**Present** - observed during 2006, 2010, and 2015 surveys.
Buteo swainsoni Swainson's hawk	--, ST, Group I	Yes	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	**Moderate** - not observed during 2006, 2010, or 2015 surveys; marginally suitable habitat present. Expected as a rare migrant only; species not known to currently breed in southern California (Unitt 2004).

Species	Listing Status[1]	MSCP Covered Species (Yes/No)	Habitat Requirements	Potential to Occur within the BLA Area
Cathartes aura Turkey vulture	--, Group I	No	Forests, shrublands, deserts, and foothills; also in open areas including mixed farmland, forest, and rangeland.	**Present** - observed during 2006, 2010, 2015 surveys.
Elanus leucurus White-tailed kite	--, FP, Group I	No	Nests near wet meadows and open grasslands, dense oak, willow or other tree stands.	**Present** - observed during 2006 and 2010 surveys.
Icteria virens Yellow-breasted chat	--, SSC, Group I	No	Known to occur within riparian forest, scrub and woodland habitats.	**Present** - observed during 2006 surveys.
Lanius ludovicianus Loggerhead shrike	--, SSC, Group I	No	Occurs in open habitats, specifically prefers open foothill and valley woodlands with some canopy and foraging perches. Forages in edge habitats, and in particular prefers shrubs adjacent to grasslands.	**Present** - observed during 2006 surveys.
Pandion halliaetus Osprey	--, Group I	No	Nests on platform of sticks at the top of large snags, dead-topped trees, on cliffs, or on human made structures. Nest usually within 400 meters of fish-producing water, but may nest up to 1.6 kilometer from water (Airola and Shubert 1981). Forages in rivers, lakes, reservoirs, bays, estuaries, and surf zones.	**High** - observed immediately adjacent to the BLA area near Hanson Pond during 2010 and 2015 surveys. No nests or breeding behavior was observed. However, Hanson Pond and nearby Lake Jennings provide appropriate habitat for prey and habitat onsite is potential nesting habitat.
Polioptila californica californica Coastal California gnatcatcher	FT, SSC, Group I	Yes	Obligate permanent resident of coastal sage scrub below 2500ft. Arid washes, mesas and slopes.	**Present** - observed during 2015 surveys.

Species	Listing Status[1]	MSCP Covered Species (Yes/No)	Habitat Requirements	Potential to Occur within the BLA Area
Setophaga petechia Yellow warbler	--, SSC, Group II	No	Riparian plant associations in close proximity to water. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	**Present** - observed within and adjacent to the BLA area during 2006 and 2015 surveys.
Vireo bellii pusilus Least Bell's vireo	FE, SE, Group I	Yes	Summer resident in So. California, willow riparian, mulefat, mesquite. Nests along margins of bushes.	**Present** - observed within and adjacent to the BLA area during 2010 and 2015 surveys.
Sensitive Mammals				
Antrozous pallidus Pallid bat	--, SSC, Group II	No	Deserts, grasslands, shrublands, woodlands and forests. Open dry habitats with rocky areas for roosting. Roost sites must protect bats from high temperature. Sensitive to disturbance of roost sites.	**Moderate** - not observed during 2006, 2010, or 2015 surveys; suitable roosting habitat is fairly sparse.
Lepus californicus bennettii San Diego black-tailed Jackrabbit	--, SSC, Group II	No	Coastal scrub habitats, intermediate canopy with open shrubs and trees, as in woodland edges.	**Present** - observed during 2006 surveys.
Myotis yumanensis Yuma myotis	--, Group II	No	Caves, although some make use of hollow trees, rocky crevices of western lowland habitats. Their distribution is closely tied to bodies of water.	**Moderate** - not observed during 2006, 2010, or 2015 surveys; suitable habitat present.
Nyctinomops macrotis Big free-tailed bat	--, SSC, Group II	No	Low lying arid areas, needs high cliffs or rocky outcrops for roosting sites.	**Moderate** - not observed during 2006, 2010, or 2015 surveys; marginally suitable habitat is present.

Species	Listing Status[1]	MSCP Covered Species (Yes/No)	Habitat Requirements	Potential to Occur within the BLA Area

[1] Status Codes: (Federal, State, County of San Diego)

Federal:
FE = Federally endangered;
FT = Federally threatened;
BGEPA = Bald and Golden Eagle Protection Act.

State:
FP = Fully protected;
SE = State endangered;
ST = State threatened;
SSC = State Species of Special Concern;
SA = State Special Animal

California Rare Plant Rank (CRPR)
1B = plants rare, threatened, or endangered in the states and elsewhere
1B.1 = seriously threatened in California
1B.2 = rare, threatened, or endangered in California and elsewhere; fairly threatened in California
2 = plants rare, threatened, or endangered in the state, but common elsewhere
2.2 = rare, threatened, or endangered in California, not elsewhere; fairly threatened in California
2.3 = rare, threatened, or endangered in California, not elsewhere; not very threatened in California
3 = plants about which more information is needed - a review list
4 = plants of limited distribution - a watch list

County of San Diego:
Sensitive Plant Lists
List A = plants rare, threatened, or endangered in the states and elsewhere
List B = plants rare, threatened, or endangered in the state, but common elsewhere
List C = may be rare, but more information is needed - a review list
List D = of limited distribution and are uncommon, but not rare or endangered

Sensitive Wildlife Groups
Group I = listed as threatened or endangered or has very specific natural history requirements that must be met
Group II = not common but not so rare that extirpation or extinction is imminent without immediate action

In addition to sensitive species occurrences, Critical Habitat has been designated by USFWS within the BLA (see Figure 4). Approximately 184 acres of the 479.5-acre BLA area are designated as Critical Habitat for the coastal California gnatcatcher (*Polioptila californica californica*). This species was documented within and adjacent to the western portion of the BLA area during protocol-level surveys performed in 2015 (ESA 2015; refer to Figure 4).

The BLA area is also located entirely within arroyo toad (*Anaxyrus californicus*) Critical Habitat. This federally endangered species requires slow-moving streams and rivers with shallow, gravelly pools next to sandy beaches for breeding and adjacent scrub or grassland habitat for non-breeding adults. These conditions do not exist in this portion of the San Diego River channel and the nearest documented location is approximately 7.45 miles north in the San Vicente Creek, north of the San Vicente Reservoir. Therefore, this species is unlikely to occur within the BLA area despite its designation of the Critical Habitat.

3 Analysis

The following subsections provide analysis of the proposed BLA based on specific recommendations from the County and requirements identified in Section 5.4.2 of the MSCP (Ogden Environmental and Energy Services 1998) and Section 1.4 of the County Subarea Plan (County of San Diego 1997).

3.1. Biological Value of Boundary Line Adjustment

The BLA area supports a diversity of riparian and upland habitats but is currently dominated by habitats generally composed of non-native species, including tamarisk scrub, non-native grassland, and disturbed habitat. Disturbed habitat is the most abundant land cover and generally consists of highly degraded areas with ruderal, weedy species, or unvegetated areas such as roads, trails, and vacant lots. Despite being dominated by habitats supporting non-native plants, a diversity of wildlife (including a number of sensitive wildlife species) have been documented or have moderate to high potential to occur. The dominance of non-native plant species perhaps limits potential for sensitive plant species, with only one sensitive plant documented during field surveys (i.e., Palmer's goldenbush). Two additional sensitive plant species were determined to have high potential occur, including the San Diego sagewort which was detected immediately west of the BLA area. A complete species compendium is included as **Attachment A**.

Following completion of the 16-year project duration (12 years of mining and reclamation, with an additional 4 years of reclamation following completion of mining), the BLA area would be reclaimed and restored to native habitats. Post-project reclamation and restoration would increase the biological value of the BLA area as these efforts would increase the distribution and quality of native habitats while removing much of the non-native vegetation. Anticipated acreages of reclaimed and restored habitats are detailed in Section 3.2, *Effects on MSCP Plan Goals and Criteria*; **Figure 5** depicts distribution of habitats post-project.

The BLA area is surrounded by areas of high biological value, including existing PAMA lands (Figure 2). County-owned conserved lands in the vicinity of the BLA area include the Louis A. Stelzer County Park to the northwest, Lakeside Linkage Open Space Preserve to the southwest, El Monte County Park to the east, El Capitan Open Space Preserve to the north, and Lake Jennings County Park to the southwest (Figure 2). In addition, the Cleveland National Forest lies approximately 2 miles to the east and Crestridge Ecological Reserve is located approximately 3 miles to the south. The BLA area would provide an opportunity to partially fill a gap within a

broader area of high biological value and further connect existing conserved lands located on the north and south sides of the San Diego River.

The BLA area is also bisected by a portion of the San Diego River. The San Diego River is of high regional importance and a key movement area for both riparian and terrestrial species and, when flows are sufficient, for aquatic and semi-aquatic species (Penrod et al. 2006). Further, the BLA area is located within the El Monte Valley which is an alluvium-filled basin within the San Diego River's floodplain and designated as a critical sand resource by the California Geological Survey (Weber 1963). Alluvial sand habitat within the BLA area is of high biological value, meeting the definition of a BRCA, providing habitat for several sensitive species and, in the case of the San Diego River corridor, representing a vital habitat linkage in the County. The BLA occurs within the Lake Jennings/Wildcat Canyon BRCA (County of San Diego 1997). This area was originally classified as a BRCA due to the presence of slender-pod jewelflower (*Caulanthus heterophyllus*), a species designated as covered under the MSCP that has subsequently been taxonomically reclassified to a more common species. However, sandy soils provide habitat for additional sensitive species including the San Diego sagewort, decumbent goldenbush (*Isocoma menziesii* var. *decumbens*), orange-throated whiptail (*Aspidoscelis hyperythrus*), and glossy snake (*Arizona elegans*).

3.2. Effects on MSCP Plan Goals and Criteria

The County Subarea Plan has an overarching goal to assemble a preserve that includes approximately 98,379 acres in a configuration that will meet the goals of the MSCP and the County Subarea Plan. As of 2016, the preserve totals 77,552 acres and is approximately 79 percent complete (County of San Diego 2017). In addition to this overarching goal, biological goals and preserve design criteria specific to the Metro-Lakeside-Jamul Segment of the County Subarea Plan, within which the BLA area is located, are detailed in Section 4.2 of the County Subarea Plan. Habitat conservation goals for generalized vegetation community categories (e.g., Coastal Sage Scrub, Riparian Woodland, Oak Woodland, Other Land Cover, etc.) within the northern portion of the Metro-Lakeside-Jamul Segment are provided in Table 4-2 of the County Subarea Plan. **Table 3** summarizes conservation goals applicable to vegetation communities present within the BLA area, the total acreage that has been conserved to-date for each community, and the remaining acreage needed to achieve the goals. This table was compiled based on the County Subarea Plan (County of San Diego 1997) and data provided by County staff. Acreages presented in Table 3 are specific to the Metro-Lakeside-Jamul Segment of the County Subarea Plan. The County Subarea Plan identifies separate conservation goals for the Metro-Lakeside-Jamul Segment for areas north and south of Interstate 8 (i.e., North Metro-Lakeside-Jamul Segment and South Metro-Lakeside-Jamul Segment); the data presented in Table 3 are for areas north of Interstate 8 only, given the BLA area's location.

Table 4 includes reference to conservations levels to-date and remaining acreage needed to achieve conservation goals of the MSCP, and summarizes post-project habitat conditions within the BLA area. The "Post-Project Totals/Contribution to MSCP Conservation Goals" presented in Table 4 represent the total acres of each MSCP habitat type that the proposed BLA would contribute to MSCP Plan Goals. As shown in Table 4, the BLA area provides an opportunity to contribute to conservation goals for coastal sage scrub, grassland, riparian forest, and riparian scrub within the Metro-Lakeside-Jamul Segment. Given that the entirety of the proposed BLA area is currently located outside the boundaries of the County Subarea Plan's PAMA, the proposed BLA would only increase opportunities for conservation; there would be no reduction in conservation potential of any habitats.

TABLE 3
SUMMARY OF METRO-LAKESIDE-JAMUL SEGMENT (NORTH) CONSERVATION GOALS

	County Subarea Plan[1]				Current	
MSCP Vegetation Community Category	**Total (acres)**	**Total Goal (acres)**	**Baseline Conservation (acres)**	**To Be Protected (acres)**	**Total Conservation (acres)2**	**Remaining to Achieve Goal (acres)**
Coastal Sage Scrub	14,859	9,525	1,845	7,680	4,798	2,882
Grassland	2,228	633	185	448	400	48
Riparian Forest	92	51	8	43	74	0
Riparian Scrub	369	236	2	234	32.5	201.5
Natural Flood channel/Streambed	48	34	0	34	3	31
Eucalyptus Woodland	367	41	0	41	0	41
Other Land Cover[3]	17	0	0	0	0	0

[1] The acreages summarized herein are specific to the Metro-Lakeside-Jamul Segment of the County Subarea Plan. The County Subarea Plan presents separate conservation goals for the Metro-Lakeside-Jamul Segment for areas north and south of Interstate 8; the data presented herein are for areas north of Interstate 8 only given the BLA area's location.
[2] Data provided by County of San Diego.
[3] Other Land Cover includes disturbed, developed, and agriculture areas.

TABLE 4
POTENTIAL CONTRIBUTION OF THE PROPOSED BOUNDARY LINE ADJUSTMENT TO CONSERVATION GOALS OF THE METRO-LAKESIDE-JAMUL SEGMENT (NORTH)

MSCP Vegetation Community Category	County Subarea Plan[1]		Potential Contribution of Proposed BLA Area to MSCP Conservation Goals (Post-Project Conditions)					
	Total Conservation (acres)[2]	Remaining to Achieve Goal (acres)	Acres of Permanent Impact[3]	Acres Not Affected by the Project[4]	Acres to be Reclaimed[5]	Acres to be Restored[6]	Acres to be Enhanced[7]	Post-Project Totals/Contribution to MSCP Conservation Goals
Coastal Sage Scrub	4,798	2,882	0	6.77	44.72	50.49	43.87[8]	145.85
Grassland	400	48	0	41.96	0	0	7.24	49.20
Riparian Forest	74	0	0	0	12.43	46.43	11.17	70.03
Riparian Scrub	32.5	201.5	0	0	46.24	17.18	0.58	64.00
Natural Flood channel/Streambed	3	31	0	0	8.55	0.36	1.30	10.21
Eucalyptus Woodland	0	41	0	1.31	0	0	0	1.31
Other Land Cover[9]	0	0	35.94	102.97	0	0	0	138.91
		Totals	35.94	153.01	111.94	114.46	64.16	479.51

[1] The acreages summarized herein are specific to the Metro-Lakeside-Jamul Segment of the County Subarea Plan. The County Subarea Plan presents separate conservation goals for the Metro-Lakeside-Jamul Segment for areas north and south of Interstate 8; the data presented herein are for areas north of Interstate 8 only given the BLA area's location.

[2] Data provided by County of San Diego.

[3] Permanent impacts associated with the project include trails, a drop structure, fuel modification zones, and parking/staging areas. These areas would be identified as developed or disturbed areas post-project.

[4] Acres not affected by the project include areas that would not be impacted by mining operations or other project components, would not be reclaimed, and would not be restored or enhanced.

[5] Reclamation will be performed in accordance with the project's Reclamation Plan (ESA 2018c).

[6] Restoration will be performed in accordance with the project's Conceptual Revegetation Plan (ESA 2018b).

[7] Enhancement will be performed in accordance with the project's Conceptual Revegetation Plan (ESA 2018b).

[8] Of the 43.87 acres of coastal sage scrub enhancement, 10.59 acres will involve removal of tamarisk and other non-natives outside of the San Diego River channel and 33.28 acres will involve removal of tamarisk and other non-natives within the San Diego River Channel. Enhancement of areas dominated by tamarisk within the San Diego River channel are expected to result in an alluvial fan scrub habitat, which is a type of coastal scrub (32000) per Oberbauer et al. (2008).

[9] Other Land Cover includes disturbed, developed, and agriculture areas. The MSCP does not include conservation goals for these habitats.

3.3. Effects on Covered Species

The proposed BLA would increase conservation potential for species covered by the County Subarea Plan (i.e., covered species). The proposed BLA would result in long-term benefits to the following covered species confirmed to occupy the BLA area:

- Palmer's goldenbush (referred to as Palmer's ericameria in the County Subarea Plan)
- Coast horned lizard (*Phrynosoma blainvillii*) (referred to as San Diego horned lizard in County Subarea Plan)
- Orange-throated whiptail
- Cooper's hawk (*Accipiter cooperii*)
- Coastal California gnatcatcher (referred to as California gnatcatcher in County Subarea Plan)
- Western bluebird (*Sialia mexicana*)
- Least Bell's vireo (*Vireo bellii pusilus*)

In addition to these species which have been confirmed to be present within the BLA area, three covered bird species were determined to have moderate to high potential to occur based on existing habitat conditions and known species ranges: southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; moderate potential), golden eagle (*Aquila chrysaetos*; high potential [foraging only]), and Swainson's hawk (*Buteo swainsoni*; moderate potential [expected as a rare migrant only]). Mountain lion (*Felis concolor*) and southern mule deer (*Odocoileus hemionus*) may also occur within the BLA area (ESA 2018a).

While the BLA will result in a long-term benefit to these covered species, the project would result in short-term impacts to several of these species due temporal habitat loss and potential direct mortality due to grading and mining activities. These are addressed through species-specific and general mitigation measures that avoid and minimize direct impacts and provide compensatory mitigation for temporal impacts.

No direct impacts would occur to the single shrub of Palmer's goldenbush that is known to occur, which would be avoided by the project. Additionally, because only one shrub was found, this occurrence is not considered to be locally or regionally significant. Indirect impacts to sensitive plants, including Palmer's goldenbush that occur in the project vicinity would be avoided through dust control measures.

3.4. Effects on Non-Covered Species of Concern

In addition to benefits to the covered species discussed in Section 3.3, *Effects on Covered Species*, the proposed BLA would benefit 20 non-covered sensitive species confirmed or with moderate to high potential to occupy the BLA area (refer to Table 2). These include six wildlife species designated by CDFW as species of special concern, one plant species with a 1B.2 ranking by CNPS (Decumbent goldenbush), and one California Fully Protected species (white-tailed kite [*Elanus leucurus*]), among other non-covered sensitive species.

Of particular interest, there are several non-covered sensitive reptile species that were documented within the BLA area during a recent herpetofaunal study by the U.S. Geological Survey (USGS). The USGS study, which was limited to a 12-month sampling period, found the alluvial sands present within the BLA area currently support high reptile species richness and diversity despite "severe habitat disturbances" and a longstanding drought (Richmond et al. 2016).

Short-term direct and indirect impacts to these species that could result from temporal habitat loss and potential direct mortality due to grading and mining activities are addressed through species-specific and general mitigation measures. These measures avoid and minimize direct impacts and provide compensatory mitigation for temporal impacts.

3.5. Effects on Conserved Habitats

As discussed in Section 3.2, *Effects on MSCP Plan Goals and Criteria*, the BLA area is located entirely outside the boundaries of the existing County Subarea Plan's PAMA; therefore, the proposed BLA would only increase opportunities for conservation within the PAMA. As depicted in Table 4, the proposed BLA would benefit conservation potential of the following general habitats: coastal sage scrub, grassland, riparian forest, riparian scrub, and eucalyptus woodland. The proposed BLA does not involve altering any existing PAMAs or the broader County Subarea Plan area; thus, the proposed BLA would not negatively impact conserved habitats.

3.6. Effects on Habitat Linkages and Function of Preserve Areas

Figure 4-1 of the County Subarea Plan identifies high and very high habitat value lands that serve as primary linkages connecting Biological Resource Core Areas within the MSCP area or provide connection to habitats outside the MSCP area. The BLA area is located in the vicinity of two of the five linkages located within the Metro-Lakeside-Jamul Segment: Interstate 8 at Lakeside and Dehesa to El Capitan Reservoir. The BLA area is also bisected by the San Diego River, which is recognized as a vital habitat linkage in the County (Penrod et al. 2006). The proposed BLA would improve connectivity of Biological Resource Core Areas north and south of the San Diego River by removing a large portion of an existing "doughnut hole" in the PAMA of the Metro-Lakeside-Jamul Segment. Also, by filling a gap in the PAMA along the San Diego River corridor, the proposed BLA would also benefit connectivity to habitat outside the MSCP area in the Cleveland National Forest.

3.7. Effects on Ecotones and Other Conditions Affecting Species Diversity

The BLA area is bisected by a portion of the San Diego River that is not currently designated as a PAMA by County Subarea Plan. As discussed in Section 3.1, *Biological Value of Boundary Line Adjustment Area*, San Diego River is of high regional importance and a key movement area for both riparian and terrestrial species and, when flows are sufficient, for aquatic and semi-aquatic species (Penrod et al. 2006). Also, as noted in Section 3.4, *Effects on Non-Covered Species of Concern*, the alluvial sands present on the BLA area currently support high reptile species richness and diversity (Richmond et al. 2016). There has been extensive loss of alluvial sand habitats in western San Diego County (Richmond et al. 2016), and many species known to occupy the limited remaining area of this type of habitat are designated as sensitive species.

To preserve the ecological values of the substrate, topsoil would be salvaged from the disturbed area and stored in berms around the pit and at the entrance to the site. Topsoil material stored in the berms would be mixed with wash fines and used as a final cover on areas that have reached final grade. It is expected that reclaimed land will support greater species diversity due to the removal of invasive vegetation and replacement with native vegetation of greater habitat value.

3.8. Effects on Preserve Configuration and Management

The current configuration of the County Subarea Plan's PAMA would be improved upon by the proposed BLA. The BLA area currently represents a large portion of a "doughnut hole" in the PAMA of the Metro-Lakeside-Jamul Segment. By filling a portion of this "doughnut hole," the proposed BLA increases the overall size of the

PAMA and increases connectivity among existing preserve areas north and south of the San Diego River, such as Louis A. Stelzer County Park, Lake Jennings County Park, and El Monte County Park.

As discussed in the Section 2.1, *Vegetation Communities*, existing habitats within the BLA area are generally composed of non-native plant species. While a significant amount of non-native vegetation would be removed during reclamation, restoration, and revegetation efforts associated with the project, approximately 125.5 acres of non-native habitats (eucalyptus woodland [1.31 acres] and disturbed/developed land cover [124.20 acres]) would remain within the BLA area post-project. Thus, the BLA area would benefit from continued restoration and enhancement efforts under a prepared Resource Management Plan if ultimately included as an MSCP preserve area. These continued efforts to address non-native plant species would benefit habitat quality within the BLA area for sensitive species and would also benefit nearby preserve areas by addressing a source of non-native plant material.

In addition, development of a recreational trail system within the BLA area is included as part of the project. The trail system would contribute to the County's Community Trails Master Plan trail system and would be designed to support equestrian users, pedestrians, and bicyclists. The formal trail system would have rules and regulations for trail users such as keeping pets leashed and staying on public trails, as well as timing of trail access limited to daytime hours. Wildlife-friendly split rail fencing may be installed along portions of trails adjacent to sensitive resources. Nonetheless, long-term management of the trail system would be necessary to ensure potential indirect impacts associated with trails are minimized, such as unauthorized access/trespass into sensitive areas, erosion, and introduction and proliferation of invasive exotic plant species.

Refer to Section 3.9, *Conservation Feasibility*, regarding conservation and long-term management obligations to be associated with the BLA area.

3.9. Conservation Feasibility

The BLA area is currently owned by the applicant for the El Monte Sand Mining Project (i.e., El Monte Nature Preserve, LLC). Upon completion of sand mining and reclamation operations, the entire 479.5-acre project site (1) will be transferred in fee title to a qualified land steward conservancy so that it may be maintained and managed in perpetuity for biological values, and (2) a Biological Open Space Easement will be recorded with the County. Establishment of the open space easement is expected as a condition of the Major Use Permit for the project. It is understood, as standard measures, that a conservation easement will be recorded and a long-term manager will be identified/established for designated project habitat mitigation areas, such that these mitigation areas will be preserved and managed. Habitat management funds will be provided for management in perpetuity by the long-term management entity. While only those areas specified for project mitigation would be covered by a Biological Open Space Easement, it is the intent of the property owner to transfer the mitigation areas to a non-profit/conservancy group prior to the completion of the restoration. This transfer is intended help optimize the recreational, habitat and restoration values of the property.

4. Conclusion

While the BLA area is currently dominated by habitats generally supporting non-native vegetation, the majority of the BLA area would either be reclaimed, restored, or enhanced following completion of the project. As discussed herein, the proposed BLA provides an opportunity to contribute to habitat and covered species goals of the County Subarea Plan. In addition, the San Diego River and associated alluvial sand habitat within the BLA

area represent areas of high biological value, provide habitat for several sensitive species and, in the case of the San Diego River corridor, represent a vital habitat linkage in the County. Also, the proposed BLA would improve upon the existing configuration of the County Subarea Plan's PAMA by filling a large portion of an existing "doughnut hole" within the PAMA and increasing connectivity among existing preserve areas. Overall, based on the analysis herein, the proposed BLA would have a net benefit to the MSCP Subregional Plan and County Subarea Plan.

5. References

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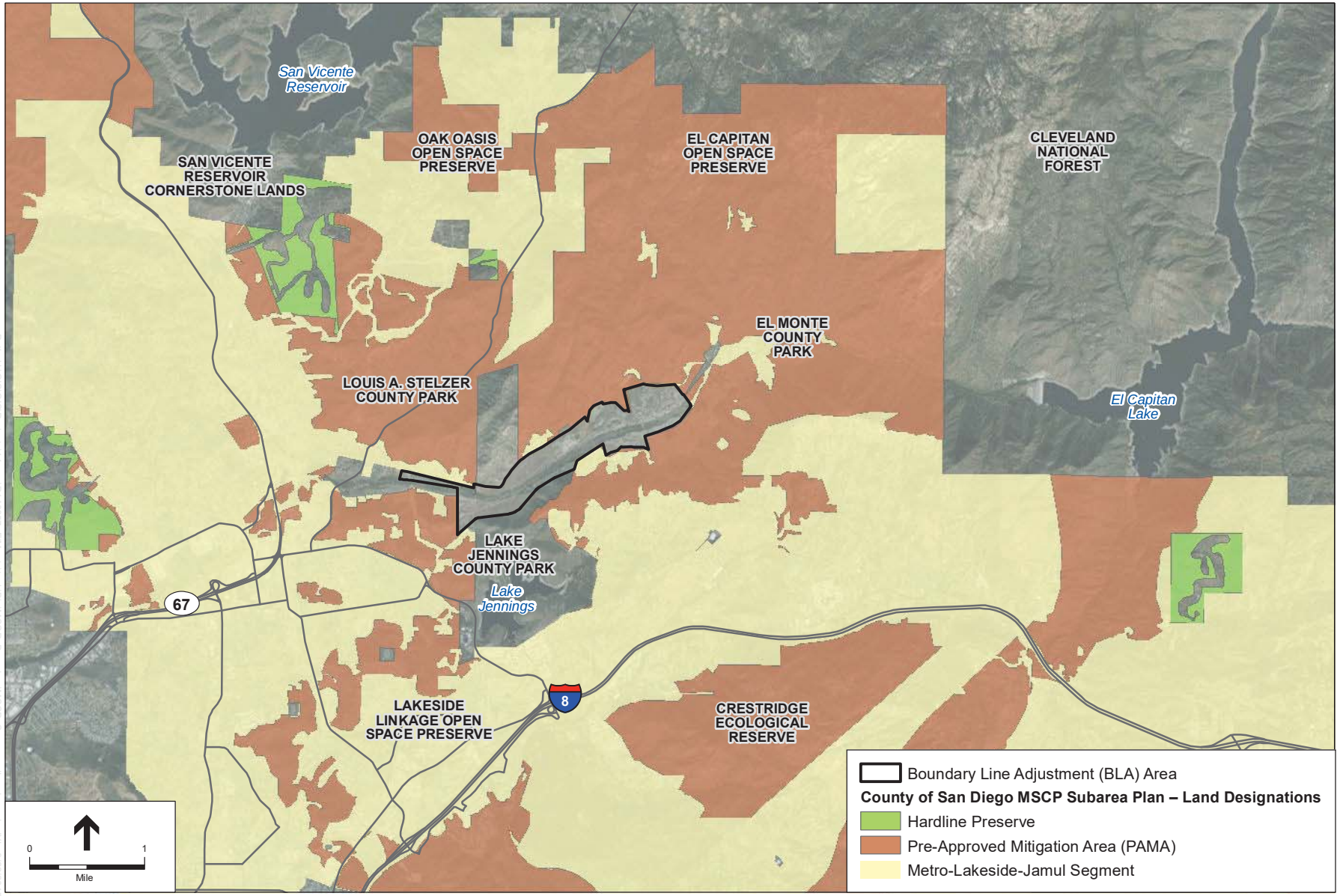
SOURCE: ESRI; SanGIS 2015

El Monte Sand Mining Project – MSCP Boundary Line Adjustment Request. 140957

Figure 1

Regional Location

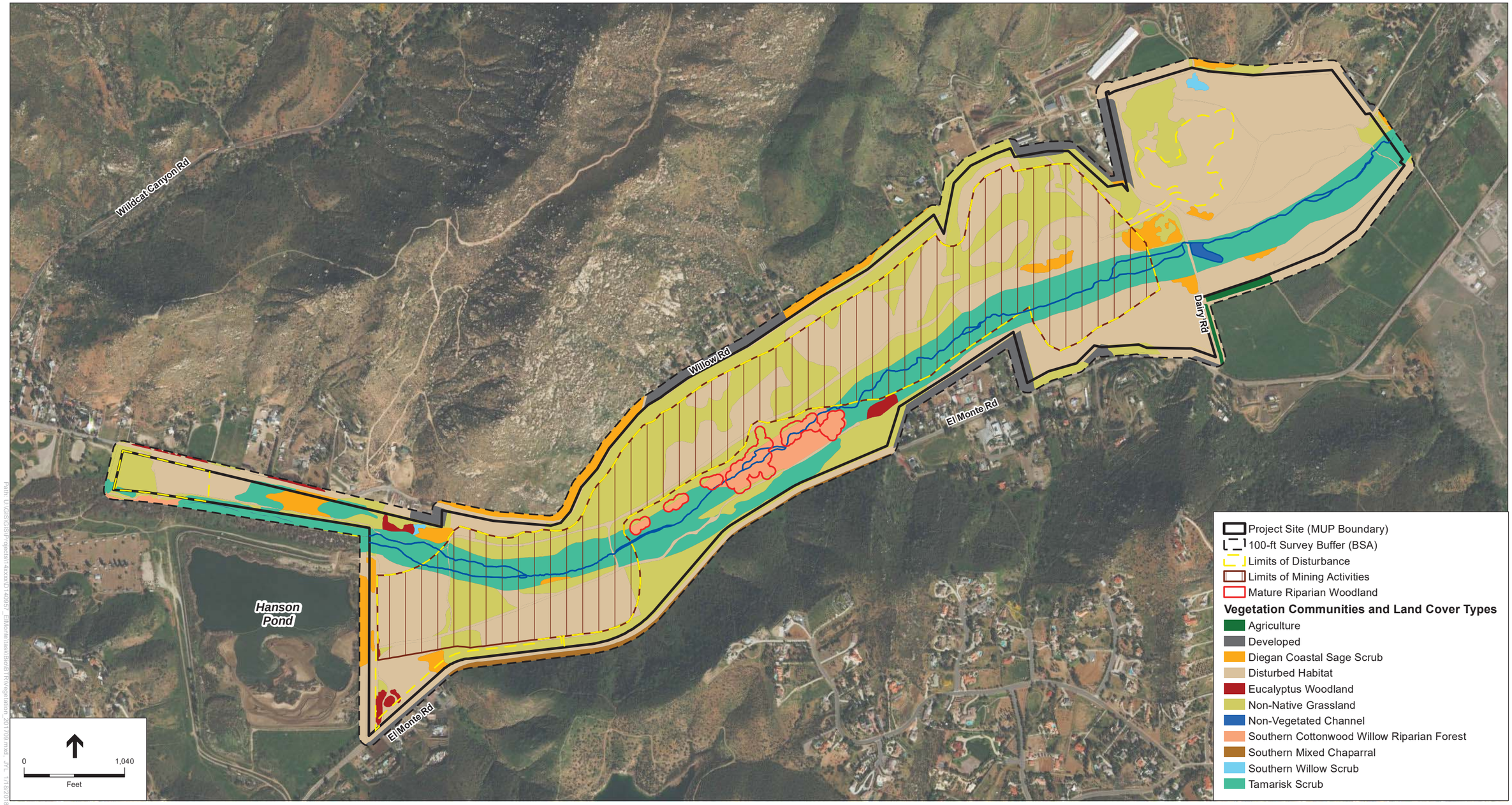


EnviroMine; The Altum Group; Chang Consultants; ESA; SanGIS

El Monte Sand Mining Project – MSCP Boundary Line Adjustment Request. 140957

Figure 2

MSCP Lands



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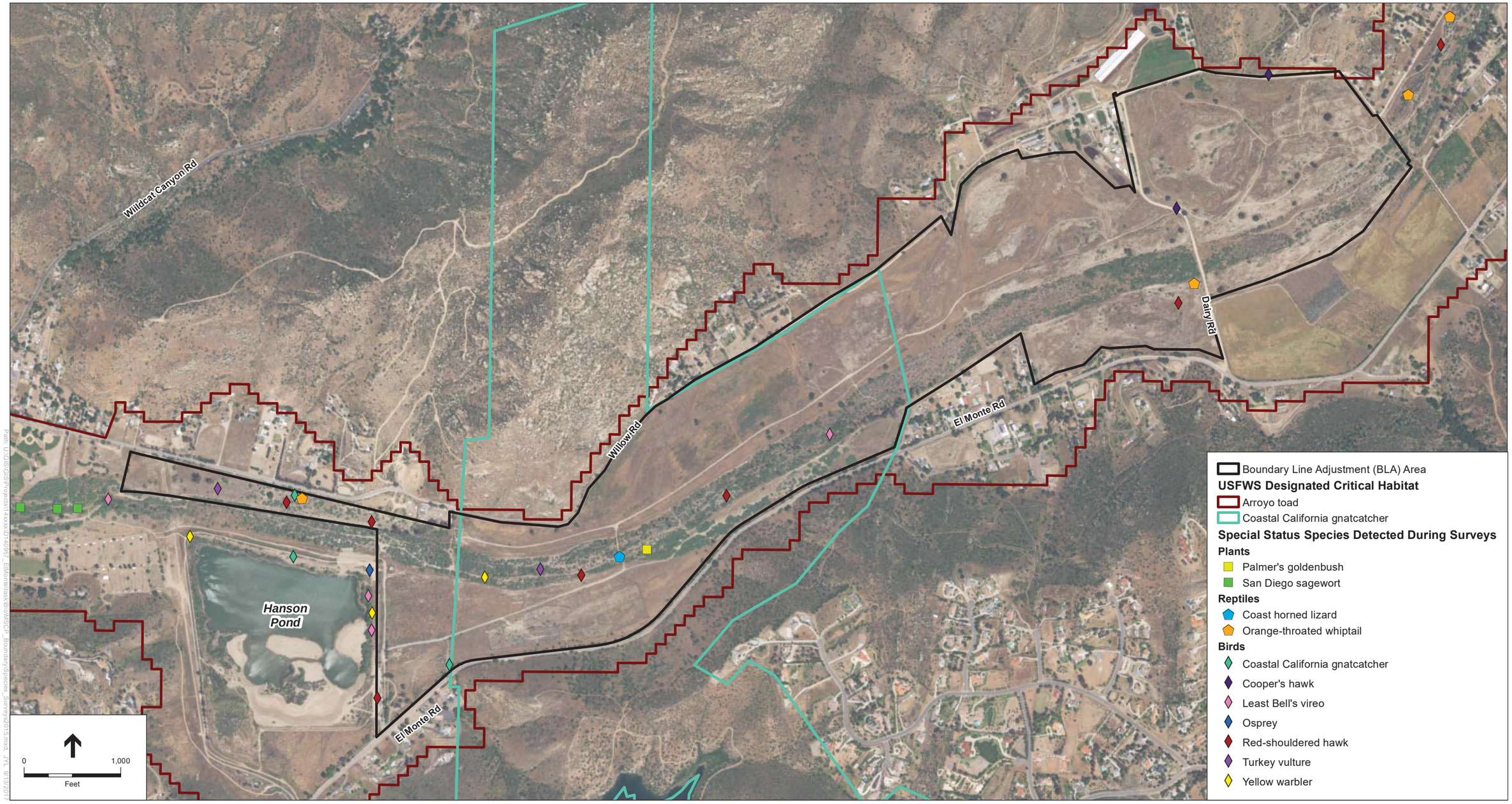
SOURCE: ESRI; EnviroMine; The Altum Group; Chang Consultants; ESA; SanGIS

El Monte Sand Mining Project . 140957

Figure 3

Vegetation Communities and Cover Types

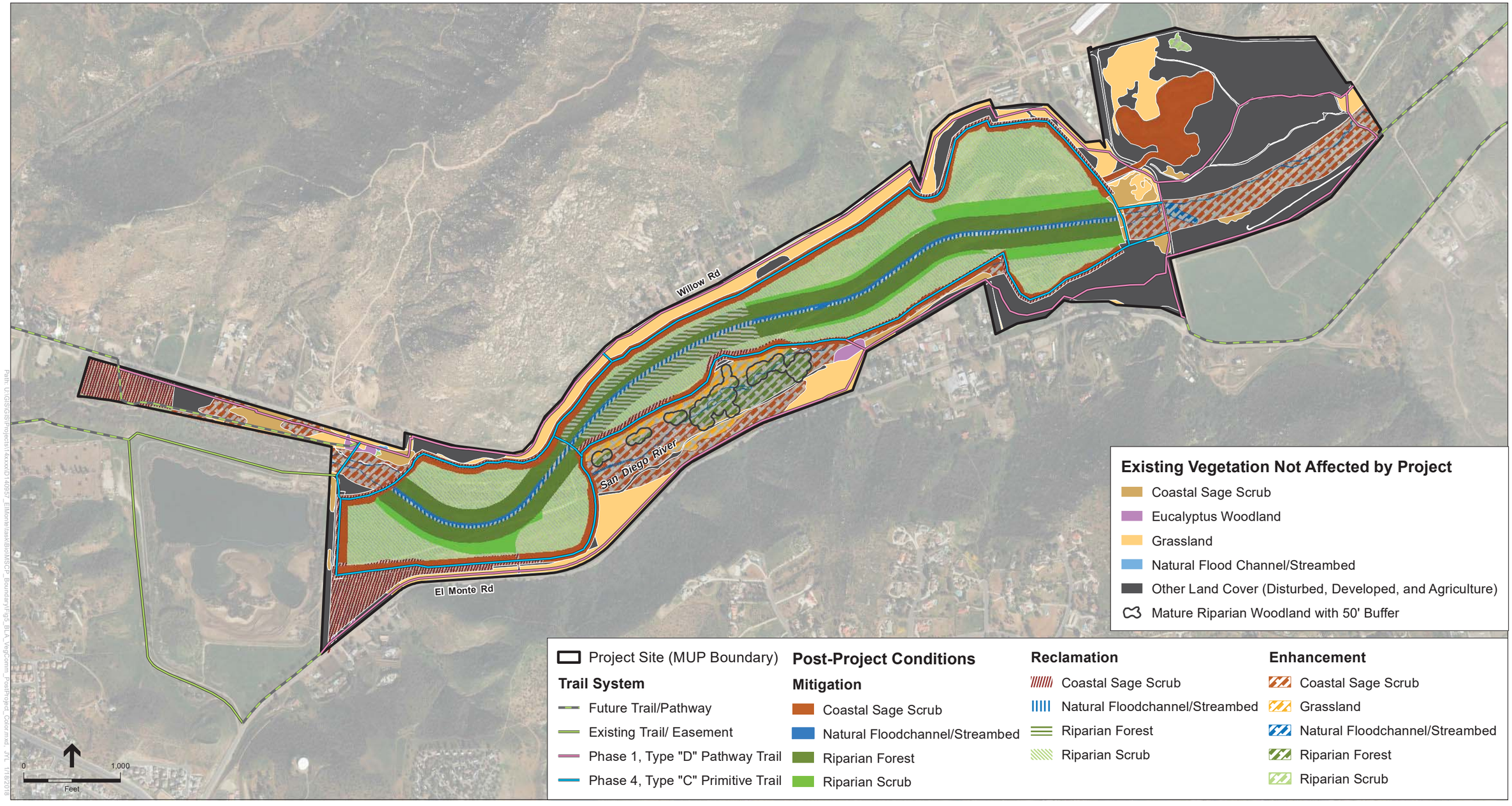


SOURCE: ESRI 2015; EnviroMine 2015

El Monte Sand Mining Project – MSCP Boundary Line Adjustment Request. 140957

Figure 4

Known Locations of Sensitive Species and Critical Habitats



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SOURCE: ESRI; ESA 2016; EnviroMine 2016

El Monte Sand Mining Project . 140957

Figure 5

Vegetation Communities and Cover Types (Post-Project Condition)

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Attachment A:
Species Present within the Project Boundary and Immediate Vicinity

Species Present within the Project Boundary and Immediate Vicinity

Table 1. Plant Species Present within the Project Boundary and Immediate Vicinity

Scientific Name	Common Name	2006 Surveys	2010 Surveys	2015 Surveys	2016 Surveys	2017 Survey
Acmispon argophyllus var. argophyllus	Southern California silver lotus	--	--	--	--	x
Acmispon glaber	Deerweed	x	x	--	x	x
Acmispon maritimus	Coastal bird's-foot-trefoil	x	x	--	x	--
Acmispon strigosus	Strigose lotus	--	--	--	--	x
*Ailanthus altissima**	Tree of heaven	--	--	--	x	x
*Amaranthus albus**	White tumbleweed	--	--	--	x	x
Ambrosia psylostachya	Western ragweed	--	--	--	--	x
Amblyopappus pusillus	Pineapple weed	x	x	--	x	--
Ambrosia acanthicarpa	Annual bur-sage	x	x	x	x	--
Ambrosia psylostachya	Western ragweed	x	x	x	x	x
Amsinckia menziesii var. *intermedia*	Fiddleneck	x	x	x	x	x
*Anagallis arvensis**	Scarlet pimpernel	x	x	x	x	x
Antirrinum nuttallianum ssp. *nuttallianum*	Nuttall's snapdragon	--	--	--	x	--
Artemisia californica	California sagebrush	x	x	x	x	x
Artemisia douglasiana	Mugwort	x	x	x	x	--
Artemisia palmeri	Palmer's sagewort	--	x	x	x	--
*Arundo donax**	Giant reed	x	x	x	x	x
Atriplex canescens	Fourwing saltbush					x
*Atriplex semibaccata**	Australian saltbush	--	x	--	x	--
*Avena barbata**	Slender wild oat	--	x	x	x	x
Avena fatua*	Wild oat	x	--	--	x	x
Baccharis pilularis	Coyote brush	x	x	x	x	x
Baccharis salicifolia	Mule fat	x	x	x	x	x
Baccharis sarothroides	Broom baccharis	x	x	x	x	x
Bebbia juncea	Sweetbush	--	--	x	--	--

Species Present within the Project Boundary and Immediate Vicinity

Scientific Name	Common Name	2006 Surveys	2010 Surveys	2015 Surveys	2016 Surveys	2017 Survey
*Brassica nigra**	Black mustard	--	x	x	x	--
*Brassica rapa**	Field mustard	--	x	x	x	--
Brassica sp.*	Mustard	x	--	x	--	--
*Brassica tournefortii**	Saharan mustard	--	--	--	--	x
Brickellia californica	California brickelbush	--	--	x	x	--
*Bromus diandrus**	Ripgut grass	x	x	x	x	x
*Bromus hordaceus**	Smooth brome	--	x	--	--	x
Bromus madritensis ssp. *rubens**	Foxtail chess	x	x	x	x	x
*Bromus tectorum**	Cheat grass	x	x	--	x	--
Callistemon sp.*	Bottlebrush	--	x	--	x	--
Calystegia macrostegia	California morning-glory	--	--	--	x	--
Camissonia californica	False mustard	--	--	--	x	--
Camissonia strigulosa	Contorted primrose	--	--	--	--	x
Camissoniopsis bistorta	California sun cup	--	--	x		--
Camissoniopsis cheiranthifolia	Beach evening-primrose	x	--	--	x	x
*Carduus pycnocephalus**	Italian thistle	x	x	x	x	--
Carpobrotus edulis	Hottentot fig	--	--	--	--	x
*Centaurea melitensis**	Star-thistle	x	x	x	x	x
*Cerastium glomeratum**	Mouse-eared chickweed	x	--	--	--	--
Chaenactis glabriuscula	Yellow pincushion	x	x	--	x	x
*Chenopodium album**	Lamb's quarters	x	x	x	x	x
Chenopodium californicum	California goosefoot	--	x	--	x	--
*Chenopodium murale**	Nettle-leaf goosefoot	--	--	--	x	x
*Cirsium vulgare**	Bull thistle	--	x	x	x	--
Claytonia perfoliata	Miner's lettuce	x	x	--	x	x
*Cnicus benedictus**	Blessed thistle	--	--	--	x	--
*Conyza canadensis**	Horseweed	--	x	x	x	--

Species Present within the Project Boundary and Immediate Vicinity

Scientific Name	Common Name	2006 Surveys	2010 Surveys	2015 Surveys	2016 Surveys	2017 Survey
*Cotaderia jubata**	Pampas grass	x	x	x	x	--
Crassula connata	Pygmy weed	x	x	--	x	x
Croton californicus	California croton	--	--	--	--	x
Croton setigerus	Dove weed	x	x	x	--	--
Cryptantha intermedia	Nievitas cryptantha	--	--	--	x	--
Cucurbita foetidissima	Calabazaill	x	x	x	x	x
Cuscuta californica	Dodder	x	x	x	x	--
Cuscuta salina	Salicornia dodder	x	x	--	--	--
Cuscuta subinclusa	Dodder	x	x	--	--	--
Cynara cardunculus ssp. cardunculus	Globe artichoke	--	--	--	--	x
Cyperus sp.	Sedge	--	x	--	x	--
Datura wrightii	Jimsonweed	x	x	--	x	x
Daucus pusillus	Rattlesnake weed	x	x	--	x	--
Deinandra sp.	Tarplant	--	--	--	x	--
Dichelostoma capitatum	Blue eyed-grass	--	x	--	--	x
Distichlis spicata	Saltgrass	--	x	--	x	--
Emmenanthe penduliflora	Whispering bells	--	--	--	x	--
Encelia californica	California encelia	--	--	--	x	x
Encelia farinosa	Brittlebush	--	--	--	--	x
Ericameria palmeri var. palmeri	Palmer's goldenbush	--	--	x	--	--
*Erigeron canadensis**	Horseweed	--	--	--	--	x
Eriogonum fasciculatum	California buckwheat	x	x	x	x	x
Eriogonum gracile	Slender buckwheat	--	--	--	x	x
Eriophyllum sp.	Yarrow	--	--	--	x	--
*Erodium botrys**	Long-beaked filaree	--	x	x	x	x
*Erodium cicutarium**	White-stemmed filaree	--	x	x	x	x
*Erodium moschatum**	Greenstem filaree	--	x	x	--	x

Species Present within the Project Boundary and Immediate Vicinity

Scientific Name	Common Name	2006 Surveys	2010 Surveys	2015 Surveys	2016 Surveys	2017 Survey
Erodium sp.*	Filaree	x	--	x	--	--
Eschscholzia californica	California poppy	--	--	--	--	x
Eucalyptus camaldulensis	Red gum	--	--	--	--	x
Eucalyptus spp.*	Eucaplyptus	x	x	x	x	--
*Euphorbia maculata**	Spotted spurge	--	--	x	--	x
*Euphorbia peplus**	Petty spurge	x	x	x	--	x
Euphorbia polycarpa	Small seeded spurge	--	--	--	--	x
*Festuca myuros**	Foxtail fescue	--	--	--	--	x
*Foeniculum vulgare**	Sweet fennel	--	x	x	x	--
Galium angustifolium ssp. *angustifolium*	Narrow-leafed bedstraw	x	x	x	x	--
Galium aparine	Common bedstraw	--	--	--	--	x
Geranium sp.	Geranium	--	--	--	--	x
*Glebionis coronarium**	Crown daisy	x	x	x	x	x
Gnaphalium bicolor	Bicolored everlasting	x	x	--	x	--
Gnaphalium californicum	California everlasting	--	--	--	x	--
Gnaphalium leucocephalum	White-head cudweed	--	--	--	x	--
Heliotropium curassavicum	Salt heliotrope	x	x	x	x	x
*Helminthotheca echioides**	Bristly ox-tongue	--	x	x	x	--
Hesperoyucca whipplei	Chaparral candle	--	x	--	--	--
Heterotheca grandiflora	Telegraph weed	x	x	x	x	x
*Hirschfeldia incana**	Perennial mustard	--	x	x	x	x
*Hordeum murinum**	Wild barley	x	x	--	--	x
*Hordeum vulgare**	Common barley	x	--	--	--	--
*Hypochoeris glabra**	Smooth cat's ear	--	x	--	x	x
Isocoma menziesii var. *menziesii*	Coast goldenbush	--	x	x	x	--
Juncus bufonius	Toad rush	--	x	--	x	--
Justicia californica	Chuparosa	--	--	x	--	--
*Lactuca serriola**	Prickly lettuce	x	x	x	x	x

Species Present within the Project Boundary and Immediate Vicinity

Scientific Name	Common Name	2006 Surveys	2010 Surveys	2015 Surveys	2016 Surveys	2017 Survey
*Lamarckia aurea**	Goldentop	x	x	--	x	x
*Lamium amplexicaule**	Dead nettle	x	x	--	x	--
Lastarriaea coriacea	Lastarriaea	--	--	--	x	x
Lasthenia coronaria	Royal goldfields	--	--	--	--	x
Lepidium nitidum	Peppergrass	x	x	--	x	x
Lessingia filaginifolia var. *filaginifolia*	California sand-aster	--	x	--	x	x
*Lobularia maritima**	Sweet alyssum	x	x	--	--	--
*Logfia gallica**	Narrowleaf cottonrose	--	--	--	--	x
*Lolium perenne**	Perennial rye grass	--	x	--	--	--
Lupinus bicolor	Dove lupine	x	x	--	x	x
Lupinus concinnus	Bajada lupine	--	--	--	--	x
Lupinus hirsutissimus	Stinging lupine	x	x	--	x	x
Malacothamnus fasciculatus	Chaparral mallow	--	x	--	x	x
Malosma laurina	Laurel sumac	x	x	x	x	x
*Malva parviflora**	Cheeseweed	x	x	--	x	x
Marah macrocarpus	Wild cucumber	x	x	--	x	x
*Marrubium vulgare**	Horehound	x	x	x	x	x
Matricaria discoidea	Pineapple weed	--	--	--	--	x
*Medicago polymorpha**	Burclover	x	x	--	--	x
*Melia azedarach**	China berry tree	--	--	--	--	x
*Melilotus officinalis**	Yellow sweetclover	x	x	x	x	x
Mentha sp.*	Mint	--	--	--	x	--
*Mesembryanthemum crystallinum**	Crystalline iceplant	--	--	--	x	x
Micropus californicus		--	--	--	--	x
*Nicotiana glauca**	Tree tobacco	x	x	x	x	x
Oenothera californica	California evening primrose	x	--	--	x	--

Species Present within the Project Boundary and Immediate Vicinity

Scientific Name	Common Name	2006 Surveys	2010 Surveys	2015 Surveys	2016 Surveys	2017 Survey
Oenothera elata	Tall yellow evening primrose	x	--	--	--	--
*Opunitia ficus-indica**	Indian-fig	--	x	x	x	x
Opuntia littoralis	Coastal prickly pear	x	x	x	--	x
*Oxalis pes-caprae**	Bermuda buttercup	--	x	--	x	--
Parkinsonia microphylla	Palo verde	--	x	--	x	--
Pectocarya penicillata	Pectocarya	x	x	x	--	--
*Pennisetum setaceum**	African fountain grass	x	x	x	x	x
Phaceclia circutaria	Catterpillar phacelia	x	x	x	x	--
Phacelia parryi	Parry's phacelia	x	x	x	x	--
*Phalaris canariensis**	Canary grass	--	x	--	--	--
*Pholistoma auritum**	Fiesta flower	x	x	--	--	x
Plagiobothrys canescens	Grey popcorn flower	--	--	--	--	x
Plagiobothrys collinus	Cooper's popcornflower	--	--	--	--	x
Platanus racemosa	Western sycamore	x	x	x	x	x
Pluchea sericea	Arrow weed	x	x	x	x	--
*Polypogon monspeliensis**	Annual beard grass	--	x	--	--	x
Populus freemontii	Cottonwood	x	x	x	x	x
Pseudognaphalium beneolens	Fragrant everlasting	--	--	--	x	--
Pseudognaphalium leucocephalum	White-head cudweed	--	--	--	--	x
Pseudognaphalium palustre	Lowland cudweed	--	--	--	--	x
Pseudognaphalium stramineum	Cottonbatting plant	--	--	--	--	x
Quercus agrifolia	Coast live oak	x	x	x	x	x
*Raphanus sativus**	Wild radish	x	x	x	x	x
Rhus ovata	Sugarbush	--	--	--	x	--
*Ricinus communis**	Castor bean	x	x	x	x	--
*Rumex crispus**	Curley dock	--	x	--		x
Salix exigua	Sandbar willow	--	x	--	x	--

Species Present within the Project Boundary and Immediate Vicinity

Scientific Name	Common Name	2006 Surveys	2010 Surveys	2015 Surveys	2016 Surveys	2017 Survey
Salix gooddingii	Goodding's black willow	x	x	x	x	x
Salix laevigata	Red willow	--	--	x	x	x
Salix lasiolepis	Arroyo willow	--	x	x	x	--
*Salsola tragus**	Russian thistle	x	x	--	x	x
Sambucus mexicana	Mexican elderberry	x	x	x	x	x
*Schinus molle**	Peruvian pepper tree	x	x	--	x	x
*Schinus terebinthifolius**	Brazialian pepper tree	--	x	--	x	--
*Schismus barbatus**	Mediterranean schismus	x	x	--	x	--
Scrophularia californica ssp. *floribunda*	California beeplant	--	--	--	x	--
*Senecio vulgaris**	Common grounsel	--	x	--	--	--
*Silene gallica**	Windmill pink	--	x	--	--	x
*Sisymbrium irio**	London rocket	x	--	--	x	x
Solanum americanum	Common nightshade	x	x	--	x	--
*Sonchus asper**	Spiny-leaf sow-thistle	x	x	x	x	x
*Sonchus oleraceus**	Common sow-thistle	--	x	x	x	x
*Spergularia bocconi**	Boccone's sand spurry	--	--	--	--	x
Stephanomeria virgata	Virgate wreath plant	--	x	x	x	--
Stipa lepida	Foothill needlegrass	--	x	--	x	x
Stylocline gnaphaloides	Everlasting nest straw	x	x	--	--	x
*Tamarix ramosissima**	Tamarisk/salt-cedar	x	x	x	x	x
*Taraxacum officinale**	Common dandelion	x	x	--	x	--
Thalictrum fendleri var. *polycarpum*	Many fruit meadow-rue	x	x	--	x	--
Torilis arvensis	Tall sock-destroyer	x	--	--	--	--
Toxicodendron diversilobum	Poison oak	--	x	--	x	--
*Trifolium hirtum**	Rose clover	--	--	--	--	x

Species Present within the Project Boundary and Immediate Vicinity

Scientific Name	Common Name	2006 Surveys	2010 Surveys	2015 Surveys	2016 Surveys	2017 Survey
Urtica dioica ssp. *holosericea*	Hoary nettle	--	x	x	x	--
*Urtica urens**	Dwarf nettle	x	x	x	x	x
*Vulpia myuros**	Foxtail fescue	--	x	--	--	--
*Washingtonia robusta**	Mexican fan palm	--	x	--	--	--
Xanthium strumarium	Cocklebur	--	x	--	x	--

*=not native to California

Species Present within the Project Boundary and Immediate Vicinity

Table 2. Wildlife Species Present within the Project Boundary and Immediate Vicinity

Scientific Name	Common Name	2006 Surveys	2010 Surveys	2015 Surveys	2016 Surveys
AMPHIBIANS					
Anaxyrus boreas	Western Toad	--	--	--	x
Lithobates catesbeianus	American Bullfrog*	--	--	x	--
Pseudacris hypochondriaca	Baja California Treefrog	--	--	--	x
Spea hammondii	Western Spadefoot	--	--	--	x
REPTILES					
Anniella stebbinsi	Southern California Legless Lizard	--	--	--	x
Arizona elegans occidentalis	California Glossy Snake	--	--	--	x
Aspidoscelis hyperythra	Orange-throated Whiptail	x	x	x	x
Aspidoscelis tigris stejnegeri	Coastal Whiptail	x	x	x	x
Coleonyx variegatus abbotti	San Diego Banded Gecko	--	--	--	x
Coluber flagellum piceus	Red Racer	--	--	--	x
Coluber lateralis	California Striped Racer	--	--	--	x
Crotalus oreganus helleri	Southern Pacific Rattlesnake	--	--	--	x
Crotalus ruber	Red Diamond Rattlesnake	--	--	--	x
Diadophis punctatus similis	San Diego Ringneck Snake	--	--	--	x
Elgaria multicarinata	Southern Alligator Lizard	x	--	x	x
Hypsiglena ochrorhyncha klauberi	San Diego Nightsnake	--	--	--	x
Lampropeltis californiae	California Kingsnake	--	--	x	x
Phrynosoma blainvillii	Blainville'sHorned Lizard	x	--	x	x
Pituophis catenifer annectens	San Diego Gopher Snake	--	--	--	x
Plestiodon gilberti	Gilbert's skink	--	--	--	x
Plestiodon skiltonianus interparietalis	Coronado skink	--	--	--	x
Rena humilis humilis	Southwestern Threadsnake	--	--	--	x
Rhinocheilus lecontei	Long-nosed Snake	--	--	--	x
Salvadora hexalepis virgultea	Coast Patch-nosed Snake	--	--	--	x
Sceloporus occidentalis	Western Fence Lizard	x	x	x	x
Sceloporus orcutti	Granite Spiny Lizard	x	--	x	--
Tantilla planiceps	Western Black-headed Snake	--	--	--	x
Uta stansburiana	Common Side-blotched Lizard	x	x	--	x
Xantusia henshawi	Granite night lizard	--	--	--	x
BIRDS					
Accipiter cooperii	Cooper's Hawk	x	x	x	
Accipiter striatus	Sharp-shinned Hawk	--	x	--	

Species Present within the Project Boundary and Immediate Vicinity

Aeronautes saxatalis	White-throated Swift	x	--	--
Agelaius phoeniceus	Red-winged Blackbird	x	--	--
Anas platyrhynchos	Mallard	x	--	x
Aphelocoma californica	California Scrub-Jay	x	x	x
Archilochus alexandri	Black-chinned Hummingbird	--	x	x
Ardea alba	Great Egret	--	--	x
Ardea herodias	Great Blue Heron	x	--	x
Baeolophus inornatus	Oak Titmouse		--	x
Bubo virginianus	Great Horned Owl	x	--	--
Buteo jamaicensis	Red-tailed Hawk	x	x	x
Buteo lineatus	Red-shouldered Hawk	x	x	x
Callipepla californica	California Quail	x	x	x
Calypte anna	Anna's Hummingbird	x	x	x
Calypte costae	Costa's Hummingbird	x	x	x
Campylorhynchus brunneicapillus	Cactus Wren	--	--	x
Cardellina pusilla	Wilson's Warbler	x	--	--
Cathartes aura	Turkey Vulture	x	x	x
Catharus guttatus	Hermit Thrush	x	--	--
Catherpes mexicanus	Canyon Wren	--	--	x
Chaetura vauxi	Vaux's Swift	x	--	--
Chamaea fasciata	Wrentit	x	--	x
Charadrius vociferus	Killdeer	x	--	x
Chondestes grammacus	Lark Sparrow	x	x	x
Colaptes auratus	Northern Flicker	--	--	x
Columba livia	Rock Pigeon	x	--	--
Contopus cooperi	Olive-sided Flycatcher	--	x	--
Contopus sordidulus	Western Wood-Pewee	x	x	--
Corvus brachyrhynchos	American Crow	x	x	x
Corvus corax	Common Raven	x	x	x
Egretta thula	Snowy Egret	x	x	--
Elanus leucurus	White-tailed Kite	x	--	--
Empidonax difficilis	Pacific-slope Flycatcher	x	--	x
Empidonax hammondii	Hammond's Flycatcher	x	--	--
Eremophila alpestris	Horned Lark	x	--	--
Euphagus cyanocephalus	Brewer's Blackbird	x	x	--
Falco sparverius	American Kestrel	x	x	x
Geococcyx californianus	Greater Roadrunner	x	x	x
Geothlypis trichas	Common Yellowthroat	x	--	x
Haemorhous mexicanus	House Finch	x	x	x
Hirundo rustica	Barn Swallow	x	--	x
Hydroprogne caspia	Caspian Tern	--	--	x
Icteria virens	Yellow-breasted Chat	x	--	--

Species Present within the Project Boundary and Immediate Vicinity

Icterus bullockii	Bullock's Oriole	x	x	x
Icterus cucullatus	Hooded Oriole	x	x	x
Lanius ludovicianus	Loggerhead Shrike	x	--	--
Larus californicus	California Gull	x	x	--
Larus occidentalis	Western Gull	--	x	--
Melanerpes formicivorus	Acorn Woodpecker	x	--	x
Melospiza melodia	Song Sparrow	x	x	x
Melozone crissalis	California Towhee	x	x	x
Mimus polyglottos	Northern Mockingbird	x	x	x
Molothrus ater	Brown-headed Cowbird *	x	x	x
Myiarchus cinerascens	Ash-throated Flycatcher	x	x	x
Nycticorax nycticorax	Black-crowned Night Heron	x	--	--
Oreothylpis celata	Orange-crowned Warbler	x	--	x
Pandion haliaetus	Osprey	--	x	x
Passer domesticus	House Sparrow *	x	x	--
Passerina amoena	Lazuli Bunting	x	--	--
Passerina caerulea	Blue Grosbeak	x	x	--
Petrochelidon pyrrhonota	Cliff Swallow	x	x	--
Phainopepla nitens	Phainopepla	x	x	x
Phalacrocorax auritus	Double-crested Cormorant	x	--	--
Pheucticus melanocephalus	Black-headed Grosbeak	x	x	x
Picoides nuttallii	Nuttall's Woodpecker	x	x	x
Pipilo maculatus	Spotted Towhee	x	x	x
Piranga ludoviciana	Western Tanager	x	x	--
Polioptila caerulea	Blue-gray Gnatcatcher	x	x	x
Polioptila californica californica	Coastal California Gnatcatcher	--	--	x
Psaltriparus minimus	Bushtit	x	x	x
Quiscalus quiscula	Common Grackle	--	--	x
Regulus calendula	Ruby-crowned Kinglet	--	--	x
Salpinctes obsoletus	Rock Wren	x	--	x
Sayornis nigricans	Black Phoebe	x	x	x
Sayornis saya	Say's Phoebe	x	--	x
Selasphorus calliope	Calliope Hummingbird	x	--	--
Selasphorus sasin	Allen's Hummingbird	x	--	--
Setophaga citrina	Hooded Warbler	x	--	--
Setophaga coronata	Yellow-rumped Warbler	x	--	x
Setophaga nigrescens	Black-throated Gray Warbler	x	--	--
Setophaga occidentalis	Hermit Warbler	x	--	--
Setophaga petechia	Yellow Warbler	x	--	x
Setophaga townsendi	Townsend's Warbler	--	x	--
Sialia mexicana	Western Bluebird	x	--	x
Sitta carolinensis	White-breasted Nuthatch	--	--	x

Spinus lawrencei	Lawrence's Goldfinch	x	--	--
Spinus psaltria	Lesser Goldfinch	x	x	x
Spinus tristis	American Goldfinch	x	--	x
Stelgidopteryx serripennis	Northern Rough-winged Swallow	x	--	x
Streptopelia decaocto	Eurasian-collared Dove*	--	--	x
Sturnella neglecta	Western Meadowlark	--	x	--
Sturnus vulgaris	European Starling*	x	x	x
Tachycineta thalassina	Violet-green Swallow	x	x	--
Thryomanes bewickii	Bewick's Wren	x	x	x
Toxostoma redivivum	California Thrasher	x	x	x
Troglodytes aedon	House Wren	x	x	x
Tyrannus verticalis	Western Kingbird	x	x	x
Tyrannus vociferans	Cassin's Kingbird	--	x	x
Tyto alba	Barn Owl	x	--	--
Vireo bellii pusillus	Least Bell's Vireo	--	x	x
Vireo gilvus	Warbling Vireo	x	x	--
Zenaida macroura	Mourning Dove	x	x	x
Zonotrichia leucophrys	White-crowned Sparrow	x	--	x
MAMMALS				
Canis latrans	Coyote	x	x	x
Lepus californicus	Black-tailed Jackrabbit	x	--	--
Lynx rufus	Bobcat	x	x	--
Microtus californicus	California Vole	x	--	--
Neotoma sp.	Woodrat	x	x	--
Otospermophilus beecheyi	California Ground Squirrel	x	x	x
Sylvilagus audubonii	Audubon's Cottontail	x	x	--

*Non-native species