

APPENDIX J RECLAMATION PLAN

Reclamation Plan For the El Monte Sand Mining Project

**Project # PDS2015-MUP-98-014W2/PDS2015-RP-15-001;
Record ID #: PDS2015-MUP-98-014W2; PDS2014-RP-15-001; Environmental Log
#: PDS2015-ER-98-14-016B**

Prepared for:
County of San Diego Planning and Development Services
5510 Overland Avenue, Suite 310
San Diego, CA 92123

August 2018

Prepared By:



3511 Camino Del Rio South, Suite 403
San Diego, CA 92108
619-284-8515, Fax 619-284-0115
www.enviromineinc.com

Revised By:

ESA
550 West C Street, Suite 700
San Diego, CA 92101
619.719.4200
August 2018

Table of Contents

Introduction.....	1
1.0 Environmental Setting	2
1.1 Project Location	2
1.3 Land Use and Zoning	2
1.4 General Physiography	6
1.5 Climate	6
1.6 Geology.....	6
1.7 Surface and Groundwater	7
1.8 Soils	7
1.9 Vegetation.....	1
1.10 Wildlife.....	1
1.11 Mineral Resources.....	25
2.0 Reclamation Plan Details	26
2.1 Owner/Operator/Agent	26
2.2 Operational Characteristics	28
2.3 Topsoil Removal	28
2.4 Extraction and Phasing	29
2.5 Equipment and Personnel	34
2.6 Waste.....	35
2.7 Traffic	35
2.8 Storm Water and Erosion Control.....	37
2.9 Utilities	44
2.10 Safety and Security	46
3.0 Reclamation and Revegetation	46
3.1 Roads	47
3.2 Removal of Equipment	47
3.3 Slope Grading & Compaction.....	47
3.4 SMARA Revegetation	50
3.5 Irrigation.....	59
3.6 Interim Seeding.....	59
3.7 Timing	60
3.8 SMARA Revegetation Performance Standards	60
3.9 Test Plots Locations and Treatment	61
3.10 Weed Control	61

3.11	Post Extraction Land Use	61
3.12	Post Extraction Drainage and Erosion Control	61
3.13	Post-Extraction Public Safety	62
3.14	Effect of Reclamation on Future Recovery of Mineral Resources	62
3.15	Reclamation Monitoring and Maintenance	63
4.0	Financial Assurances	63
5.0	Compliance with Reclamation Standards.....	63
5.1	Purpose	63
5.2	Financial Assurances (§3702)	63
5.4	Backfilling, Regarding, Slope Stability, and Recontouring (§3704)	64
5.5	Revegetation (§3705)	64
5.6	Drainage, Diversion Structures, Waterways, and Erosion Control (§3706)	64
5.7	Prime Agricultural Land Reclamation (§3707)	65
5.8	Other Agricultural Land (§3708)	65
5.9	Building, Structure and Equipment Removal (§3709).....	65
5.10	Stream Protection, Including Surface and Groundwater (§3710).....	65
5.11	Topsoil Management (§3711)	65
5.12	Tailing and Extraction Waste Management (§3712)	66
5.13	Closure of Surface Openings (§3713)	66
5.14	Public Safety	66
5.15	Administrative Contacts	66
6.0	Project Summary.....	67
7.0	Statement of Responsibility	68
8.0	References	69

List of Figures

1.1-1	Regional Location	3
1.1-2	Site Vicinity	4
1.2-1	APN Map	5
1.8-1	Soils Map	9
1.9-1	Site Vegetation	3
1.9-2	Mature Riparian Woodland	5
1.9-3	DOC Mineral Classification.....	27
2.4-1	Processing Pad Area	30
2.5-2	Truck Parking Area	36
3.3-1	Reclaimed Bench Design	49
3.4-1	Habitat Mitigation and Reclamation / Revegetation	57

List of Tables

1.	Acres Mined & Volumes.....	28
2.	Daily Truck Trips	37
3.	Other Traffic Trips	37
4.	Impacts to Jurisdictional Resources	43
5.	Mitigation for Impacts to Jurisdictional Resources (acres)	44
6A	Vegetated Streambed Seed Mix	50
6B	Riparian Forest Seed Mix.....	51
6C	Riparian Scrub Seed Mix	52
6D	Coastal Sage Scrub Seed Mix.....	53
6E	Vegetated Streambed Container Plants	54
6F	Riparian Forest Container Plants	54
6G	Riparian Scrub Container Plants	55
6H	Coastal Sage Scrub Container Plants	55
7.	Revegetation Performance Standards	60
8.	Project Summary.....	67

Attachments

- Attachment A. Hydraulic Analyses and CEQA Drainage Study
- Attachment B. Plot Plan
- Attachment C. Groundwater Evaluation Technical Memorandum
- Attachment D. Geologic Reconnaissance and Slope Stability Analysis

Introduction

El Monte Nature Preserve, L.L.C. (Proponent) is currently proposing the El Monte Sand Mining Project. The proponent is applying for a Major Use Permit (MUP) and Reclamation Plan (RP). The proposed project includes extraction of approximately 12.5 million tons of construction sand and gravel (aggregate) over a 12-year period, subject to market conditions. Excavated material would total 13.5 million tons with approximately 12.5 million tons of construction aggregate produced and 1.0 million tons of overburden retained onsite. Reclamation of the project site would be continuous and follow the four mining phases across the site from east to west, followed by four years of reclamation activities in each phase. This RP area is located in El Monte Valley on land that is zoned for extractive use. As mining is completed in phases, the site will be restored to open space with recreational trail easements as the end use of the property. The RP and MUP boundaries would occupy a 479.5-acre area, which is currently owned by El Monte Nature Preserve LLC. Extraction and reclamation activities would impact approximately 243 acres of the 479.5-acre area. An additional approximately 19 acres would be impacted by fuel modification zones and trails outside of the proposed mining phases. The remaining approximately 217 acres would be buffer zones and open space.

At full site development, mining and extraction activities would impact approximately 243 acres and produce approximately 12.5 million tons of construction aggregate. Final reclamation would continue for approximately four years following Phase 4 of the proposed sand mining operations. Associated activities include a movable aggregate processing plant and all support structures

The project would be developed in four phases. Initial activity in each phase would involve the creation of a sub-grade (below the existing ground surface) processing area. This plant area would be served by a sub-grade road that would be used by over-the-road trucks to access the plant and loading area. Access to the site would have separate ingress and egress points on El Monte Road.

It is also appropriate to note as part of this project that mitigation requirements from grading impacts to a sensitive vegetation community (i.e., disturbed riparian/tamarisk scrub) that occurred on the El Monte property in 2005 from a previously approved golf course project have been incorporated into the sand mining project's final determination of habitat mitigation and remaining areas of reclamation (see Conceptual Revegetation Plan, ESA 2018a). Additional impacts from golf course grading in 2005 to areas outside the mine project footprint were to agriculture lands which do not require mitigation.

Reclamation of the project site would be continuous and phased with mining. Successful reclamation would return the project site to a beneficial end use of open space with recreational trail easements.

1.0 Environmental Setting

1.1 Project Location

The proposed project is situated in the San Diego River watershed, and is in the floodplain which flows through the central part of the project site. It is located parallel to and between El Monte Road and Willow Road in the community of Lakeside in an unincorporated area of San Diego County (Figures 1.1-1 and 1.1-2). The RP boundary for the project site is 1.2 miles east of the closest CalTrans Bridge on Highway 67 where the highway crosses the San Diego River, and 4.8 miles west/ southwest of the El Capitan Reservoir dam.

The entrance to the project site is 0.5-mile northeast of the intersection of El Monte Road and Lake Jennings Project Road. El Monte Road would serve as the route used by the proposed project, and also serves as the primary route to the Van Ommering Dairy Farm, El Monte County Park and El Capitan Reservoir. Residents use both El Monte Road and Willow Road to access their properties.

1.2 Legal Description

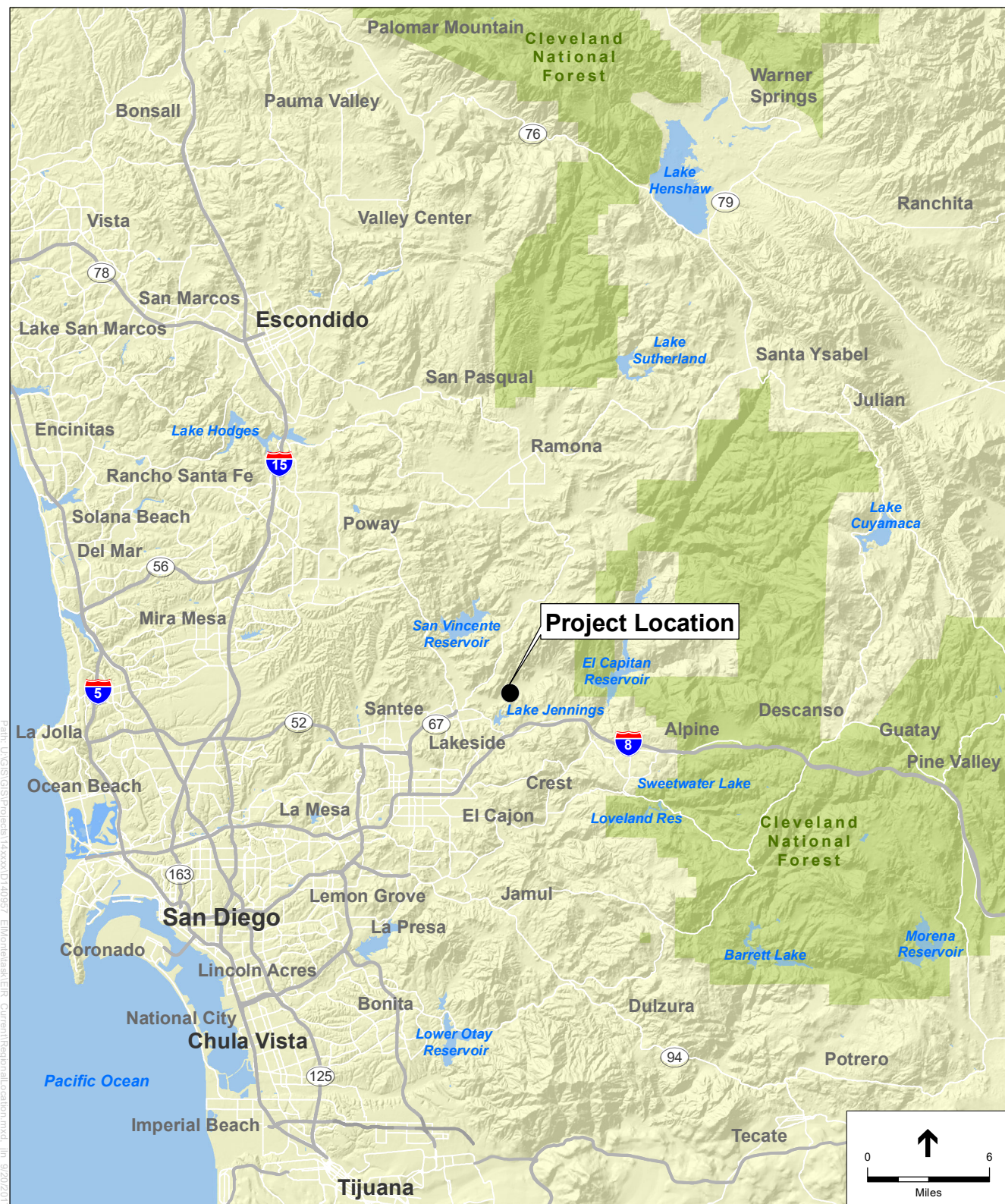
The project site is described by the San Diego County Assessor's Office as Parcel Numbers: 390-040-51, 391-061-01, 391-071-04, 392-060-29, 392-150-17, 393-011-01.

It is located in portions of Sections 9, 10, and 16, Township 15 South, Range 1 East of the El Cajon Mountain, California, U.S. Geological Survey (USGS) 7.5-minute quadrangle, San Bernardino Base and Meridian, County of San Diego, California at approximately 32°52' 38.53" N latitude -116° 52' 50.00 W longitude (Figure 1.2-1).

1.3 Land Use and Zoning

The project site is zoned as follows:

- S-82, Extractive Use (479.5 acres), Minimum Lot Size: 8 acre(s), Special Area Regulation: F, S
- A-70, Limited Agriculture (76 acres), Minimum Lot Size: 4 acre(s), Special Area Regulation: S



SOURCE: ESRI; SanGIS 2015

El Monte Sand Mining Project . 140957

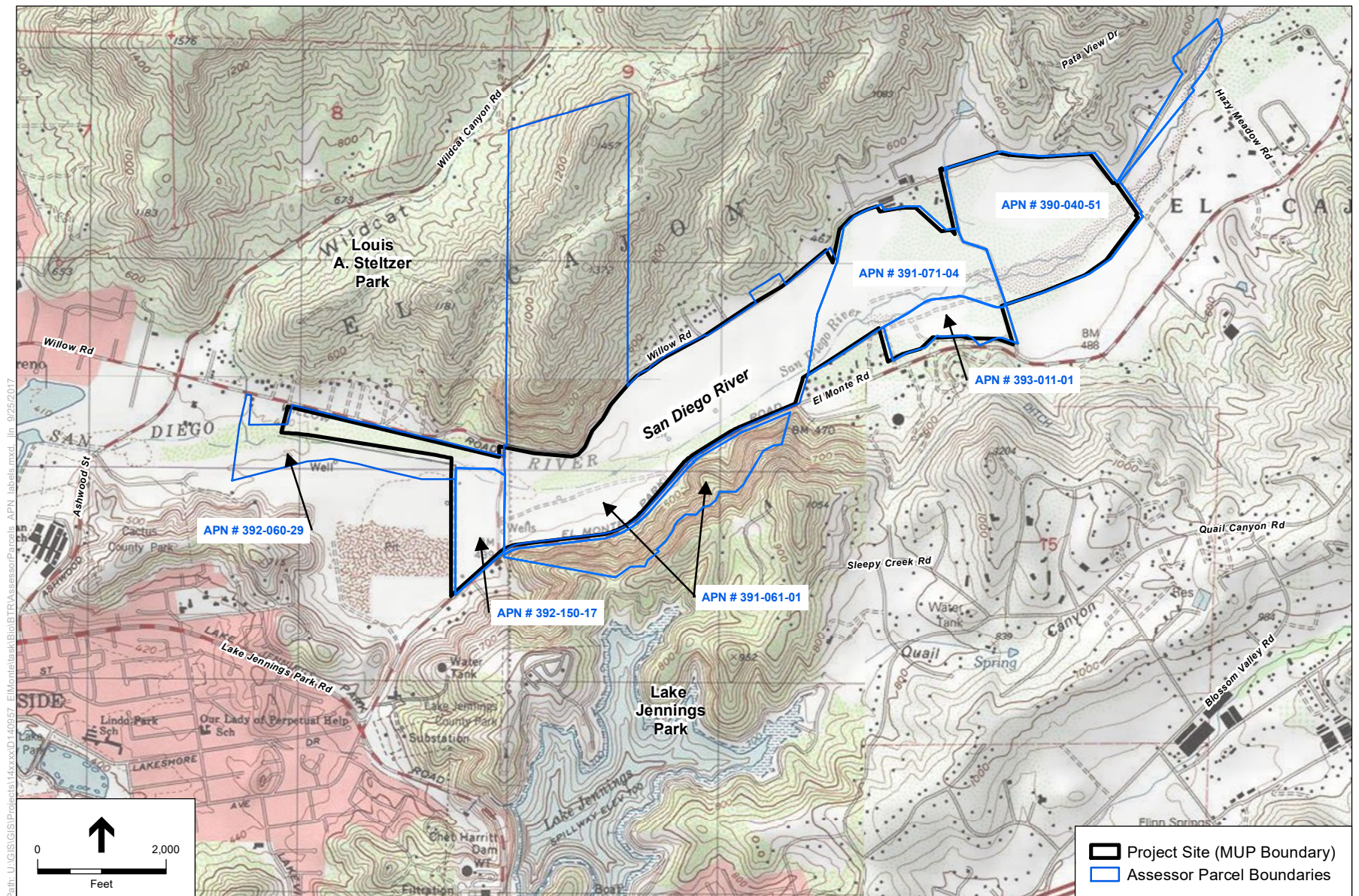
Figure 1.1-1
Regional Location



SOURCE: ESRI

El Monte Sand Mining Project . 140957

Figure 1.1-2
Site Vicinity



SOURCE: ESRI; EnviroMine; The Altum Group; Chang Consultants; ESA;
USGS 7.5' Topo Quad El Cajon 1975, 1978; San Vicente Reservoir 1971, 1973, 1975;
El Cajon Mountain 1980, 1985

El Monte Sand Mining Project . 140957

Figure 1.2-1
APN Map

1.4 General Physiography

The RP area is located within the Foothills Physiographic Province of the Peninsular Ranges of Southern California. Site geology is composed of Quaternary Alluvium underlain by granodiorite of the Woodson Mountain Granodiorite Formation.

The topography in the vicinity of the RP area is characterized by steep mountains north and south of the alluvial valley. Elevations range from approximately 3,600 feet above mean sea level (MSL) in the mountains to 430 feet near the river channel.

The topography of the project site is generally flat; but grading activities associated with the development of the golf course in 2005-2006 have created undulating terrain in the eastern portion of the property. This area includes several large basins. Elevations range from approximately 490 feet above mean sea level (AMSL) at the eastern portion of the property to approximately 430 feet AMSL at the western end of the site. Elevations within the excavation area range from approximately 475 feet AMSL to 430 feet AMSL. The San Diego River extends in a general east-west direction and consists of a low-flow channel and the associated floodplain.

1.5 Climate

Average rainfall in the project vicinity is approximately 18 inches per year with average daily temperatures ranging from 43 to 89 degrees Fahrenheit.

1.6 Geology

Regional Geology

The project site lies atop the southern California batholith consisting of Cretaceous granitic rocks. These rocks form the majority element of this massive feature that underlies roughly two-fifths of San Diego County. In the mountains surrounding the proposed project, exposed granitic bedrock is comprised of the Woodson Mountain Granodiorite Formation consisting principally of granodiorite with minor granite and quartz diorite (tonalite) (Strand 1962; Weber 1963). The San Diego River drains east-west through the project area and has contributed deposits of Late Quaternary alluvium on the river's floodplain.

Site Geology

The RP area is underlain by recent alluvium. Geologic units encountered or observed during subsurface exploration include fill, alluvium, granitic rock, and metavolcanic rock. Groundwater was encountered at depths ranging from approximately 30 to 47 feet in previous drilling efforts. The alluvium is considered potentially compressible and the onsite soils are susceptible to erosion.

Storm Water control management activities that will be implemented under the project's Storm Water Pollution Prevention Plan (SWPPP) to prevent erosion in accordance with the Industrial General Permit ORDER 2014-0057-DWQ (Effective July 1, 2015) will include minimum best management practices (BMPs) (per the SWPPP Checklist) will include (1) good housekeeping, (2) preventative maintenance, (3), spill

response, (4) material handling and waste management, (5) erosion and sediment controls, (6) employee training program, and (7) quality assurance and record keeping. Erosion and sediment controls would include, but not limited to, silt fence, fiber rolls, mulch, rock energy dissipaters, and temporary sediment collection basins.

1.7 Surface and Groundwater

1.7.1 Surface Water

The proposed project is located in an arid part of the state; therefore, surface water on site is only present during precipitation. The site lies within the San Diego River drainage basin about 4.8 miles west of El Capitan Reservoir dam. Designated beneficial uses for the San Diego River and its tributaries include: municipal and domestic supply; agricultural supply; industrial service supply; industrial process supply; contact and non-contact water recreation; warm freshwater habitat; cold freshwater habitat; wildlife habitat; and rare, threatened, or endangered species habitat (California RWQCB 1994). Jurisdictional waters consist of the main low-flow channel of the San Diego River between 3.1 and 5.5 miles downstream of the El Capitan Reservoir.

Although within the County's effective floodway, the proposed project would not raise the 100-year water surface elevations, so meets the County and FEMA's floodway regulations. In addition, the project would not create adverse flood impacts within the study reach, which is consistent with the goals of floodplain regulations (Attachment A, Hydraulic Analyses and CEQA Drainage Study).

1.7.2 Groundwater

An alluvial aquifer underlies the project site. The maximum depth to bedrock at the site is approximately 240 feet, with the alluvium pinching out along the northern and southern limits of the aquifer along the steeply rising bedrock valley walls. The width of the alluvial aquifer from north to south ranges from less than 1,000 feet to greater than 3,000 feet at the project site. Groundwater levels are currently about 40 to 50 feet below the ground surface (AECOM 2018), but have been as shallow as 5 to 10 feet from ground surface in months following dam overtopping/releases. Groundwater flows regionally from east to west, and locally toward groundwater wells when they are pumping. Onsite groundwater wells are shown on Sheet 2 of the Plot Plan. Natural groundwater recharge in the area is highly variable and is dependent on climatic conditions.

1.8 Soils

Three soil series represent the vast majority of the soil within the project site. These include the Tujunga series, Riverwash, and the Visalia series (Figure 1.8-1). Other soil mapping units are identified in the 1973 Soil Survey but these occur as very narrow strips or small pockets of mapped soils immediately adjacent to El Monte and Willow Road. Where present, these minor units are on the outer fringes of the project and most likely will not be disturbed. They are very minor in comparison to the three main soils mapped. The three dominant soil mapping units are described as follows:

Tujunga sand, 0 to 5 percent slopes (TuB). The soil occurs on alluvial fans and flood plains. Slopes are dominantly 2 percent. This unit represents the largest area of mapped soil material within the project's boundary.

The Tujunga series consists of very deep excessively drained sands derived from granitic alluvium. These soils are on alluvial fans and flood plains and have slopes of 0 to 5 percent. The elevation ranges from sea level to 1,500 feet. The native vegetation generally occurring in uncultivated areas is chiefly annual grasses, forbs, and a few scattered oaks.

In a representative profile, the surface layer color is brown, neutral sand about 14 inches thick. The colors of the next layers are pale-brown, neutral sand and coarse sand. This material extends to a depth of more than 60 inches. Fertility is low. Permeability is very rapid. The available water holding capacity is 3 inches. Runoff is very slow to slow and the hazard is slight. Roots easily penetrate to a depth of 60 inches. Short periods of flooding are probable during wet years.

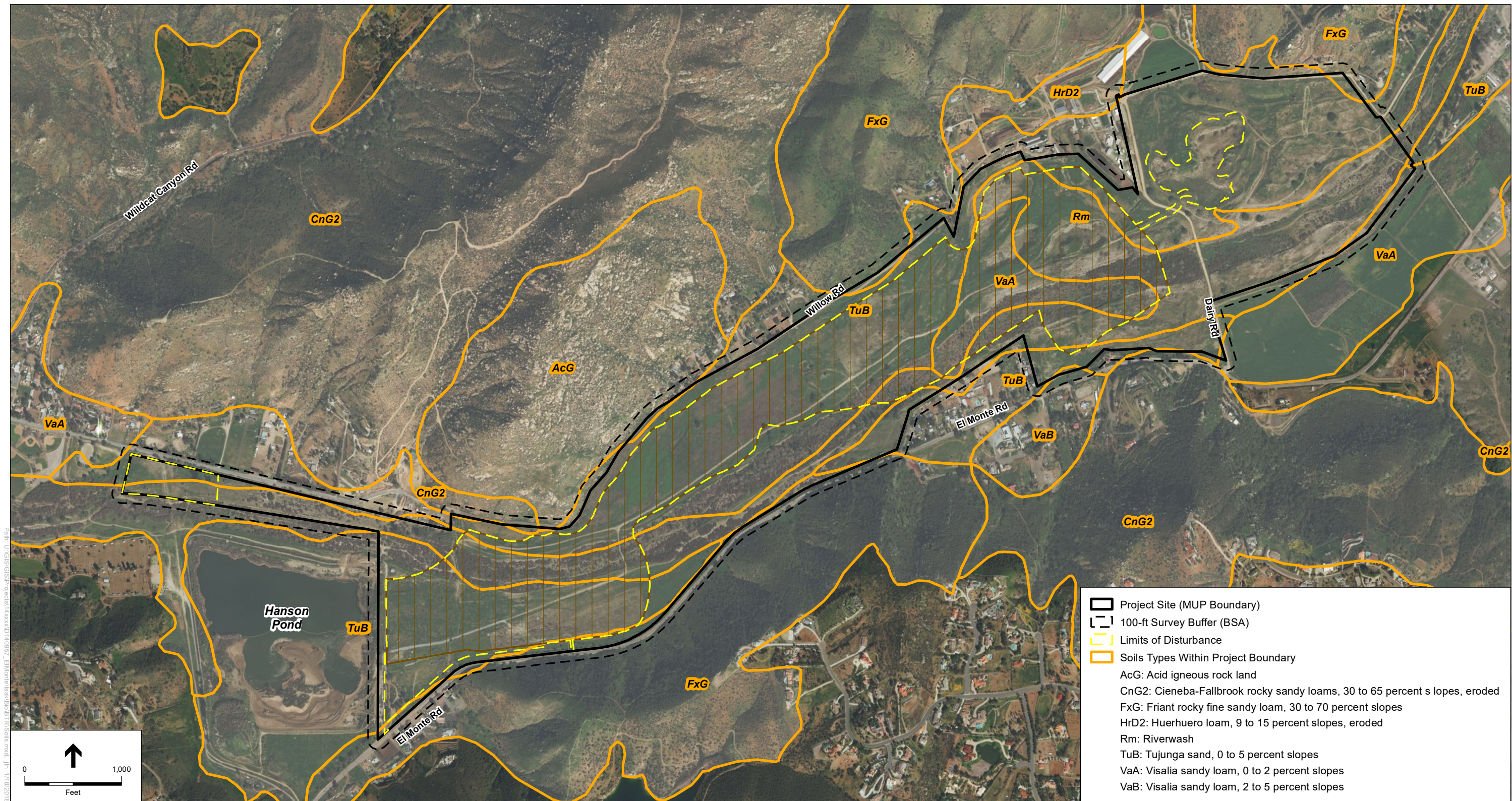
Tujunga soils are used mainly for range and golf courses. A few small areas are used for avocados, flowers, and truck crops when farmed.

Riverwash (Rm). The Riverwash soil mapping unit occurs in intermittent stream channels. The material is typically sandy, gravelly or cobbly. It is excessively drained and rapidly permeable. Many areas are barren. Scattered sycamores and coast live oaks grow along the banks. Sparse shrubs and forbs occur in patches.

Visalia sandy loam, 0 to 2 percent slopes (VaA). This nearly level to level soil is on floodplains. Slopes are dominantly 2 percent.

The Visalia series consists of moderately well drained, very deep sandy loams derived from granitic alluvium. These soils are on alluvial fans and flood plains and have slopes of 0 to 15 percent. The elevation ranges from 400 to 2,000 feet. The native vegetation in uncultivated areas is chiefly annual grasses, chamise, flattop buckwheat, California live oak, and scrub oak.

In a representative profile, the surface layer is dark grayish-brown, slightly acid sandy loam about 12 inches thick. The next layers are dark grayish brown, slightly acid sandy loam and loam. This material extends to a depth of more than 60 inches. In some areas the soil is gravelly throughout.



SOURCE: ESRI; EnviroMine; The Altum Group; Chang Consultants; SSURGO

El Monte Sand Mining Project . 140957

Figure 1.8-1
Soils Map

This page left intentionally blank

1.9 Vegetation

The majority of the plant species on the project site are nonnative, exotic, and invasive species. Native habitats occur on fewer than 50 acres of the project area. The most abundant habitat type on the site is “disturbed habitat,” which is dominated by weedy mustards, tree tobacco, other invasive herbs, and an understory mainly of non-native grasses. Non-native grassland and tamarisk scrub are second and third most abundant, respectively. Tamarisk scrub habitat on the project site is largely a monoculture that ranges in density from loosely spaced to dense and impassable, leaving little to no space for other species to germinate or emerge.

Of the native habitat types within the project site, roughly half are coastal sage scrub and half are southern cottonwood-willow riparian forest, both of which are predominantly disturbed. The northeastern-most region of the site contains a sparse, loosely-spaced grouping of cottonwood trees emerging from mainly sandy soils, indicating that the region may have functioned as a riparian community at one time; however, that area is overall dominated by Coastal Sage Scrub grasses and buckwheat shrubs and is therefore most appropriately considered a disturbed CSS community. Coast live oak trees (*Quercus agrifolia*) are scattered within the floodplain and along the borders of the project site (Figure 1.9-1).

An area defined as Mature Riparian Woodland, as defined in the County of San Diego’s Resource Protection Ordinance, was identified and mapped during biological surveys of the site (Figure 1.9-2). It is located in the existing channel on the south central portion of the project area. This woodland area would be provided a 50-foot buffer from the excavation and would not be disturbed by mining.

1.10 Wildlife

Habitats on the project site are suitable for a variety of wildlife commonly observed in areas that have undergone modification and/or degradation, such as in the disturbed areas, non-native grassland, tamarisk scrub, and nearby agricultural parcels.

Common wildlife observed onsite during field surveys included house finch (*Carpodacus mexicanus*), common raven (*Corvus corax*), mourning dove (*Zenaidura macroura*), California towhee (*Pipilo crissalis*), side-blotched lizard (*Uta stansburiana*), western fence lizard (*Sceloporus occidentalis*), California ground squirrel (*Spermophilus beecheyi*), and Audubon’s cottontail (*Sylvilagus audubonii*). Common bat species with the potential to forage in the project area include California myotis (*Myotis californicus*), big brown bat (*Eptesicus fuscus*), and Brazilian free-tailed bat (*Tadarida brasiliensis*).

Indirect observations of various larger species, which included scat and prints, indicated that coyote (*Canis latrans*) and bobcat (*Lynx rufus*) are present onsite. Larger mammals that may occur within the project area include raccoon (*Procyon lotor*), western spotted skunk (*Spilogale gracilis*), striped skunk (*Mephitis mephitis*), mountain lion (*Felis concolor*), and mule deer (*Odocoileus hemionus*).

1.10.1 Sensitive Wildlife Species

Special-status wildlife species were evaluated for their potential to occur on or adjacent to the project area based on field surveys and the literature review conducted. Table 7 of the Biological Resources Report (BRR) (ESA 2018b) includes a summary of species with a moderate or high potential to occur onsite, as well as all state or federally listed species, regardless of their potential to occur. Twenty-one special-status wildlife species were observed within the Biological Study Area (BSA) throughout all four survey years. Two wildlife species have a high potential to occur within the BSA based on suitable habitat present onsite; these include two-striped garter snake (*Thamnophis hammondi*) and golden eagle (*Aquila chrysaetos*). Five wildlife species have a moderate potential to occur within the BSA due to the presence of marginally suitable habitat onsite; these include southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Swainson's hawk (*Buteo swainsoni*), pallid bad (*Antrozous pallidus*), Yuma myotis (*Myotis yumanensis*), and big free-tailed bat (*Nyctinomops macrotis*). The remaining 56 species evaluated were considered to have a low to unlikely potential to occur within the BSA due to a lack of suitable habitat, such as piñon-juniper woodlands or coastal habitats. Additional details (e.g., habitat preferences, number of individuals observed) for observed species and species with a high potential to occur are given below.

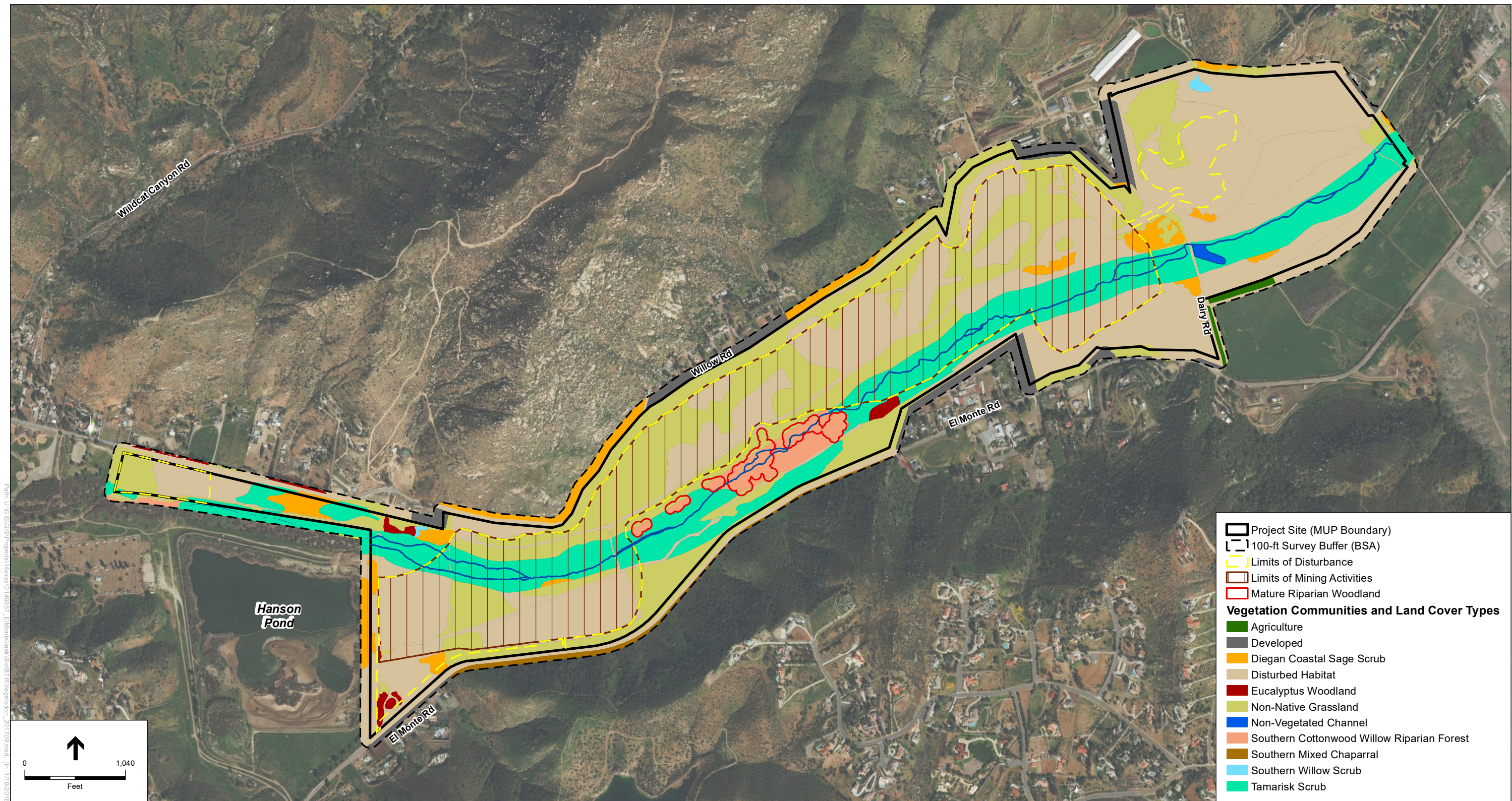
1.10.2 Special-Status Wildlife Species Known to Occur Onsite

Western spadefoot toad (*Spea hammondi*)

The western spadefoot toad is a state Species of Special Concern and a San Diego County Group II species. This nocturnal species prefers soil soft enough for burrowing, found within grasslands, scrub, chaparral, and oak woodlands (Lemm 2006). Its distribution occurs at elevations from sea level to approximately 4,650 feet. This species was detected during USGS surveys; while it was noted generally that amphibian diversity was relatively low with three species, western spadefoot toad was the second most detected amphibian with at least 48 observations (Richmond et al. 2016).

Orange-throated whiptail (*Aspidoscelis hyperythrus*)

The orange-throated whiptail is a state Species of Special Concern and a San Diego County Group II species. This species prefers washes and other sandy areas in coastal sage scrub and chaparral, with patches of brush and rocks for cover. This subspecies is restricted to the extreme southwest of California and northwest of Baja California, Mexico. In California, it is found on the west side of the Peninsular Ranges in Los Angeles, San Bernardino, Orange, Riverside, and San Diego counties, below 3,000 feet in elevation. A limiting factor to the species' range is the availability of its primary food item, the termite (*Reticulitermes hesperus*). The orange-throated whiptail was observed predominately in coastal sage scrub habitat during the 2006, 2010, and 2015 surveys. It was also detected in abundance with 173 captures during USGS herpetofaunal surveys of the property (Richmond et al. 2016).

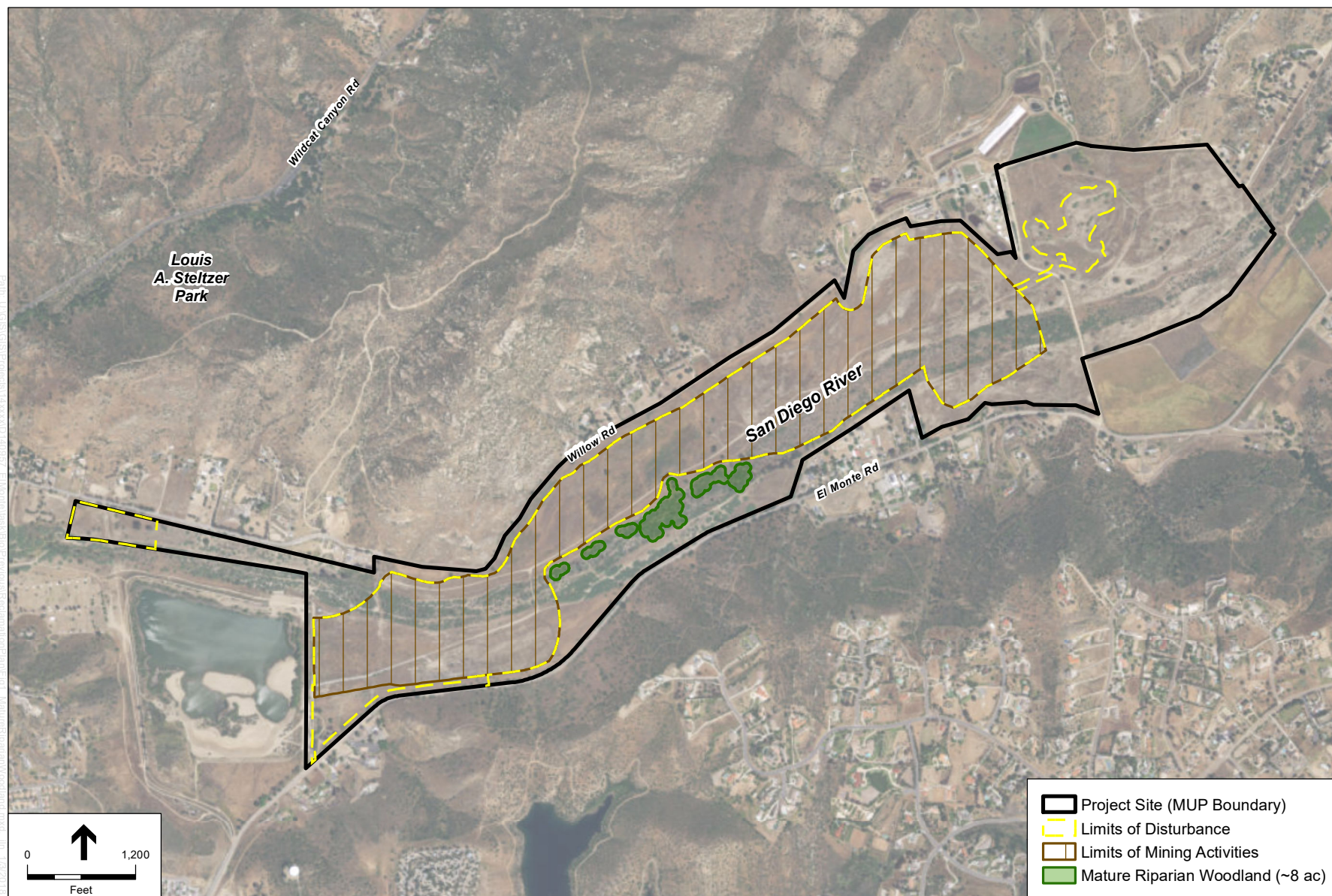


SOURCE: ESRI; EnviroMine; The Altum Group; Chang Consultants; ESA; SanGIS

El Monte Sand Mining Project . 140957

Figure 1.9-1
Site Vegetation

This page left intentionally blank



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

El Monte Sand Mining Project. 140957

Figure 1.9-2
Mature Riparian Woodland

Coastal whiptail (*Aspidoscelis tigris stejnegeri*)

Coastal whiptail is a state Special Animal and a San Diego County Group II species. In San Diego County, this species is found from the coast to the mountains with an estimated elevational range of sea level to approximately 5,000 feet (Lemm 2006). It is found in various habitats including sage scrub, chaparral, riparian areas, oak and pine woodlands, pinyon juniper woodlands, and rocky foothills. Coastal whiptail was the fifth most captured lizard species during the USGS study with 29 observations (Richmond et al. 2016).

Coast horned lizard (*Phrynosoma blainvilliei*)

The coast horned lizard is a state Species of Special Concern and a San Diego County Group II species. This lizard ranges from coastal southern California to the desert foothills and into Baja California, Mexico. In San Diego County, it has a wide range but spotty distribution. This species can be locally abundant in areas where it occurs, with densities near 20 adults per acre. It is often associated with coastal sage scrub, especially areas of level to gently sloping ground with well-drained loose or sandy soil, but it can also be found in annual grasslands, chaparral, oak woodland, riparian woodland, and coniferous forest between 30 and 7,030 feet (Jennings and Hayes 1994). The coast horned lizard typically avoids dense vegetation, preferring 20 to 40 percent bare ground in its habitat. Adults are active from late March to late August, and young are active from August to November or December. They are largely dependent upon native harvester ants (*Pogonomyrmex* sp.) for food. Populations along the coast and inland have been severely reduced by loss of habitat. The coast horned lizard was observed in the BSA in 2015 in tamarisk scrub habitat during the 2015 biological surveys, and was also detected during the USGS surveys (Richmond et al 2016).

Southern California legless lizard (*Anniella stebbinsi*)

The southern California legless lizard is a state Species of Special Concern. It is primarily found in oak woodland, chaparral, coastal sage scrub, pinyon-juniper woodland, and urban areas, and is occasionally found in desert flats, dunes, and beaches. It occurs within an elevational range extending from sea level to 5,940 feet (Lemm 2006). It is a burrower, so it spends most of its time underground. This species was detected during the USGS surveys, with 17 observations (Richmond et al. 2016).

San Diego banded gecko (*Coleonyx variegatus abbotti*)

The San Diego banded gecko is a state Species of Special Concern and a San Diego County Group I species. It is found throughout most of southern California, and north into parts of Nevada and Utah, south into Baja Mexico and Sonora, Mexico, and east into eastern parts on Arizona and New Mexico. This species prefers rocky areas in coastal sage scrub and chaparral and is active at night, burrowing under the surface of rocky and other objects during the day (California Herps 2017).

Coast patch-nosed snake (*Salvadora hexalepis virgulata*)

Coast patch-nosed snake is species of Special Concern and a San Diego County Group II species. It is associated with coastal scrubs and chaparral and other low shrub habitats. This species has been observed foraging in smaller shrubs and trees for prey, and uses burrows of woodrats and gopher holes (Lemm 2006). Its distribution is from the coast to mountains, with an elevational range of sea level to 7,000 feet. One observation of this species was recorded during the USGS study (Richmond et al. 2016).

Glossy snake (*Arizona elegans*)

The glossy snake is a state Species of Special Concern. This species occurs primarily throughout Southern California in deserts and interior Coast Ranges, but has been found as far north as Mount Diablo near San Francisco (Zeiner et al. 1988-1990). It is most often found in desert habitats but also occurs in chaparral, sagebrush and annual grasslands. The glossy snake prefers open, sandy areas, but is also found in rocky areas. It takes cover in abandoned animals' burrows, in rock outcrops and, less often, beneath debris. Its primary source of food is lizards, including juvenile desert iguanas, side-blotched lizards, and zebra-tailed lizards. The glossy snake was recorded within the BSA during the 2015 and 2016 surveys conducted by USGS, with a total of 23 observations (Richmond et al. 2016).

Red-diamond rattlesnake (*Crotalus ruber*)

The northern red diamond rattlesnake is state Species of Special Concern and a San Diego County Group II species. It is often found in chaparral, coastal sage scrub, along creek banks, and in rock outcrops or piles of debris. This species prefers dense vegetation in rocky areas with a supply of burrowing rodents for prey. The northern red diamond rattlesnake is restricted to southern California and Baja California from Morongo Pass to the tip of the Baja Peninsula, with the majority of its California range in western Riverside County and San Diego County. It occurs from sea level to 3,000 feet in elevation. Suitable habitat is prevalent within the BSA, and three observations were made during the USGS surveys (Richmond et al. 2016).

Cooper's hawk (*Accipiter cooperii*)

The Cooper's hawk is a state Special Animal, and San Diego County Group I species. The nesting sites of this species are considered sensitive by the California Department of Fish and Wildlife (CDFW). The Cooper's hawk ranges year-round throughout most of the United States; its wintering range extends south to Central America, and its breeding range extends north to southern Canada (Rosenfeld and Bielefeldt 1993). It is a common breeder in both natural and urban environments, with eucalyptus trees used nearly as often as oaks (Unitt 2004). This hawk mainly breeds in oak and willow riparian woodlands but will also use eucalyptus trees. Breeding occurs from March to July. This hawk forages primarily on medium-sized birds but is also known to eat small mammals, such as chipmunks and other rodents (Rosenfeld and Bielefeldt 1993). The decline of this species has been caused by urbanization and loss of habitat. However, during the last 20 years, the Cooper's hawk has apparently adapted to city

living (Unitt 2004). The Cooper's hawk has been observed in 2006, 2010, and 2015 in the BSA in the vicinity of the riparian habitat along the San Diego River corridor.

Sharp-shinned hawk (*Accipiter striatus*)

The sharp-shinned hawk is a state Special Animal, and San Diego County Group I species. The nesting sites of this species are considered sensitive by the CDFW. It is a woodland hawk that requires a certain amount of dense cover, but this species can be localized and scattered through relatively open country. It prefers wooded areas where it can hunt small birds. This species is distributed throughout North, Central, and South America. In California, it is a fairly common migrant and winter resident, although its breeding distribution is poorly documented. In western Riverside County, it is a common winter migrant and has been frequently documented in the San Jacinto Mountains in the summer. The sharp-shinned hawk was observed in the BSA in 2010 in the vicinity of riparian habitat along the San Diego River corridor.

Red-shouldered hawk (*Buteo lineatus*)

The red-shouldered hawk is a San Diego County Group I species. This species occurs in riparian forest and oak woodland habitat, as well as eucalyptus groves and residential areas. This species occurs along the entire length of the west coast of the United States and Baja California, Mexico. It also occurs in eastern North America from the southern portion of Canada, into eastern Mexico. The red-shouldered hawk builds a stick nest in sycamore, coast live oak, and eucalyptus trees, and occasionally in palm trees. This species frequently reuses its nests in successive years and takes over old nests of other hawks. The red-shouldered hawk was observed in the BSA in 2010 in the vicinity of riparian habitat along the San Diego River corridor.

Turkey vulture (*Cathartes aura*)

The turkey vulture is a San Diego County Group I species. It occurs throughout North and South America in a variety of open and forested habitats, and tends to avoid developed areas. Rather than building nests, this species lays its eggs in rock crevices, caves and hollow logs. It roosts in large communal groups but searches for food independently during the day. The turkey vulture is a scavenger, feeding primarily on carrion which it finds with its acute sense of smell, but it will also occasionally eat garbage and rotten vegetation. Mammals are the most common source of carrion; however, birds, amphibians and reptiles are also eaten. Within the BSA, this species was observed in 2006, 2010 and 2015 soaring overhead throughout the site.

Osprey (*Pandion haliaetus*)

The osprey is a County Group I species. It is a long-range migrant breeding in North America and migrating to South America in the winter. This species is associated with large bodies of clear, open water. Its diet consists almost entirely of live fish, but will also occasionally prey on small mammals, birds, reptiles, and amphibians. The osprey is known to consume over 80 species of fresh and saltwater fish in North America. Nesting occurs at the top of large snags and dead trees up to twelve miles from fishing areas; however, nests most commonly occur within one mile of open water (Polite 1990). Occasionally, this species will nest on the ground. In North

America, breeding typically occurs along the coast and near large inland lakes. This species was observed within the BSA near Hanson Pond during 2015 surveys; no nests or breeding behavior was observed. However, Hanson Pond and nearby Lake Jennings provide appropriate habitat for prey, and habitat on the project site is appropriate for potential nesting areas.

Yellow warbler (*Setophaga petechia*)

The yellow warbler is state Species of Special Concern within its nesting habitat and a San Diego County Group II species. It occupies marshes, swamps, streamside groves, willow and alder thickets, open woodlands with thickets, orchards, gardens, and open mangroves. This species breeds from Alaska to Newfoundland and south to western South Carolina and northern Georgia, and west sporadically through the southwest to the Pacific Coast. This species is highly migratory and winters in Central America and the West Indies south to northern Peru. The yellow warbler is a summer visitor in California. In San Diego County the yellow warbler is a common breeding species but is localized to suitable riparian woodland habitats. In 2006 and 2015 the yellow warbler (*Dendroica petechia*) was detected within the riparian woodland along the edge of Hanson Pond just outside of the BSA, and within the tamarisk scrub northeast of the pond.

White-tailed kite (*Elanus leucurus*)

The white-tailed kite is a state Fully Protected species, and its nesting sites are considered sensitive by the CDFW. It is also a San Diego County Group I species. This raptor occurs in coastal lowland areas from Oregon to northern Baja California, Mexico (National Geographic Society 1983). Nesting occurs in riparian woodlands, oaks, or sycamore groves that border grassland or open fields (Unitt 2004). This species is known to roost in large communal groups (Unitt 2004). The white-tailed kite forages over open areas and grasslands feeding primarily on small rodents and insects (National Geographic Society 1983). White-tailed kite populations in southern California have declined as a result of the loss of nesting and foraging habitat. The species nests in trees of variable height in riparian or oak woodland habitats adjacent to grasslands, agricultural areas, and other open vegetation. In the BSA, the white-tailed kite was detected in 2006 in disturbed habitat just east of Dairy Road and northeast of Hanson Pond.

Yellow-breasted chat (*Icteria virens*)

The yellow-breasted chat is a state Species of Special Concern and a San Diego County Group I species. This small songbird breeds from southern Canada into Mexico, and winters in southern Mexico and Central America. Within San Diego County, this species occurs in coastal lowlands in riparian woodland habitat (Unitt 2004). The yellow-breasted chat (*Icteria virens*) was detected in 2006 within the river channel in the eastern portion of the BSA.

Loggerhead shrike (*Lanius ludovicianus*)

The loggerhead shrike is a state Species of Special Concern and a County Group I species. This species inhabits most of the continental United States and Mexico and is

a year-round resident of southern California. The loggerhead shrike prefers open habitat with perches for hunting and fairly dense shrubs for nesting (Yosef 1996). In southern California, loggerhead shrikes inhabit grasslands, agricultural fields, chaparral, and desert scrub (Unitt 2004). Their breeding season is from March to August. Loggerhead shrikes are highly territorial and usually live in pairs in permanent territories (Yosef 1996). They feed on small reptiles, mammals, amphibians, and insects that they often impale on sticks or thorns before eating. Loggerhead shrike populations are declining, likely as a result of urbanization and loss of habitat as well as, to a lesser degree, pesticide use (Yosef 1996). Within the BSA, the loggerhead shrike (*Lanius ludovicianus*) was detected in the disturbed area near Dairy Road

Coastal California gnatcatcher (*Polioptila californica californica*)

The coastal California gnatcatcher is federally threatened, a state Species of Special Concern, and a County Group I species. The coastal California gnatcatcher is a local year-round resident found primarily in coastal sage scrub communities in southern California. Home range size requirements of the coastal California gnatcatcher vary with habitat quality and distance from the coast. Documented home ranges have varied from approximately 6 to 45 acres in San Diego County (Unitt 2004). This species typically forages beyond their nesting sites in habitats of varying quality, including open patches of disturbed coastal sage scrub and adjacent chaparral and grassland areas. The breeding season for this species generally extends from February 15 through August 31. Gnatcatcher pairs attempt several nests each year, each placed in a different location inside their breeding territory; most nest attempts are unsuccessful as they are generally preyed on by various predator species. Clutch size can range from one to five eggs, with three to four eggs most common. Gnatcatchers remain paired through the nonbreeding season and generally expand their home range during this time.

The coastal California gnatcatcher was detected in or adjacent to the BSA within three disconnected patches of coastal sage scrub. One of these patches, located just south of Willow Road to the north of Hanson Pond, is highly disturbed and dominated by California buckwheat and non-native grasses and forbs. A second occupied patch is located due south of this location just north of Hanson Pond. This area consists of a thin, very dense strip of California sagebrush that has grown along an existing unpaved access road. Although this area is outside of the BSA, it is within approximately 1,000 feet of the impact area. The third patch is a very small, highly disturbed fragment dominated by California buckwheat and non-native grasses and forbs, located within the impact area of the BSA southeast of Hanson Pond, just north of El Monte Road. Refer to Appendix H of the BRR (ESA 2018a) for the 2015 Coastal California Gnatcatcher Survey Report.

Least Bell's vireo (*Vireo bellii pusillus*)

Least Bell's vireo is a state and federally endangered and San Diego County Group I species. This small songbird occurs in riparian forest, scrub, and woodland habitats. It nests primarily in willow, mulefat, or mesquite vegetation. The least Bell's vireo is a summer resident in Southern California that typically resides in willow-dominated habitat. The least Bell's vireo is known to establish territories in riparian habitats of

moderate to high quality, such as the remnant riparian woodland patches detected onsite. This species was detected during the 2010 and 2015 protocol surveys in the riparian woodland habitat along the eastern edge of Hanson Pond, just outside of the BSA. In 2010, it was also observed in two locations in the riparian habitat along the San Diego River channel within and adjacent to the BSA. The potential for this species to nest onsite is considered high. Refer to Appendix I of the BRR (ESA 2018b) for the 2015 Least Bell's Vireo Survey Report.

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)

The San Diego black-tailed jackrabbit is a state Species of Special Concern and is a San Diego County Group II species. It ranges from near Mt. Pinos (at the Kern-Ventura County line) southward and west of the Peninsular Range into Baja California, Mexico (Hall 1981). This species can be found throughout southern California, with the exception of high-altitude mountains. It occupies open or semi-open habitats, such as coastal sage scrub and open chaparral areas. Forested and thick chaparral regions are not suitable (Bond 1977). The San Diego black-tailed jackrabbit breeds throughout the year, with the greatest number of births occurring from April through May. The black-tailed jackrabbit is strictly herbivorous, preferring habitat with ample forage such as grasses and forbs. Declines in San Diego black-tailed jackrabbit populations are due to loss of suitable habitat as a result of urban development. This species was observed regularly during 2006 surveys in the upland oak/sandy dune area, but was not observed during 2010 or 2015 surveys.

USFWS Designated Critical Habitat

United States Fish and Wildlife Service (USFWS) Designated Critical Habitat for two species falls within the BSA, including the limits of mining activities. Designated Critical Habitat for arroyo toad (*Anaxyrus californicus*) covers the entire project boundary. 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. Therefore, this species is unlikely to occur in the BSA.

Designated Critical Habitat for the coastal California gnatcatcher encompasses approximately two thirds of the BSA, totaling 183.82 acres within the project area and 18.11 acres within the buffer. Impacts to this habitat would consist of 1.79 acres of permanent impacts from the establishment of permanent fuel modification zones, and 182.05 acres of temporary impacts from staging, processing, and mining activities. Two of the three locations observed in the 2015 surveys are well outside of this Designated Critical Habitat; the third location (southeast of Hanson Pond) is located in the processing area just west of the Designated Critical Habitat.

1.10.3 Special-Status Wildlife Species with a High Potential to Occur Onsite

Two-striped garter snake (*Thamnophis hammondi*)

The two-striped garter snake is a state Species of Special Concern and a County Group I species. The species is found in permanent and semi-permanent waterways

from the coast to the desert. It is frequently found in oak woodlands, brushlands, and sparse coniferous forests (Stebbins 2003). It is known to inhabit vernal pools and seasonally ephemeral waterways. Its altitudinal range is from sea level to 8,000 feet. It is found in most undisturbed habitats provided there is sufficient water and foliage for cover. Rocky and sandy streambeds are favored with the species being active from spring to fall. Winter is spent in burrows or rock crevices and occasionally the species may be found in groups. During winter, this species inhabits coastal sage scrub and grassland locations adjacent to waterways and riparian areas. The two-striped garter snake can be found basking on rocks or in vegetation in the morning and afternoon. The species is more tolerant of lower temperatures and can be active on cold days. The species feeds primarily on fish, fish eggs, tadpoles, frogs, and salamanders. Suitable habitat is prevalent in the BSA along the river channel, especially during the wet season when water is present, indicating high potential for the species to occur onsite.

Golden eagle (*Aquila chrysaetos*)

The golden eagle is a federally protected species under the Bald and Golden Eagle Protection Act, a state Fully Protected species and Species of Special Concern, and a San Diego County Group I species. This species occurs throughout the United States and is a common resident in San Diego County. The nesting population in San Diego County is concentrated in the foothill zone and coastal lowlands. Golden eagles nest on cliffs, boulders, or in large trees. This species requires vast foraging areas to prey upon small mammals. Golden Eagles forage close to and far from their nests as far as 3.7 miles from the center of their territories, but have been observed to move 5.6 miles from the center of their territories in favorable habitat (McGrady et al. 2002). Ideal foraging habitat includes vegetation communities such as of grassland, open chaparral, or coastal sage scrub. Several golden eagle territories in the coastal lowland have been eliminated by urbanization, agricultural development, and other human disturbances (Unitt 2004). There is abundant foraging habitat within the BSA, although much of it is moderate to low quality because of the abundant invasive plant species cover, which may not support a robust small mammal prey base. However, recent golden eagle surveys conducted by USGS in San Diego County suggest that two adjacent golden eagle territories may overlap with the BSA (SDMMP 2016). Therefore, a moderate potential exists for the species to occur within the BSA for foraging, although suitable nesting habitat is not present onsite.

1.10.4 Analysis of Impacts to Special-Status Species

The *County of San Diego Guidelines for Determining Significance for Biological Resources* was used to evaluate adverse environmental effects the project may have on special-status species. The project would have a substantial adverse effect, either directly or through habitat modifications, on one or more species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Mitigation measures to address adverse effects on biological resources are incorporated by reference and listed in the subsection that follows the analysis below.

No federally or state listed plant species were detected on the project area. The proposed project would not affect listed plant species.

The state and federally endangered least Bell's vireo and coastal California gnatcatcher have been observed within the project area and direct and indirect impacts may occur as described in Section 2.2 of the BRR. Additionally, Designated Critical Habitat for arroyo toad and coastal California gnatcatcher occurs within the project area. However, mitigation measures as discussed in Section 3.4 of the BRR would reduce measures below a level of significance. Direct impacts as a result of mortality of individuals and nests and removal of habitat during the breeding season, and construction-generated noise would be avoided through conducting construction and mining activities outside of the bird breeding season, which encompasses the breeding season for these two species. Additionally, preconstruction surveys would be conducted prior to starting work to confirm that gnatcatchers and vireos are absent from the limits of construction prior to work starting. Additionally, habitats lost during construction and mining operations would be compensated through reclamation and revegetation, resulting in additional habitat acreage for use after completion of the project.

Several County and Species of Special Concern occur within the biological study area. One County List B plant species (Palmer's goldenbush) was observed onsite, in addition to nine County Group 1 animal species (Cooper's hawk, sharp-shinned hawk, red-shouldered hawk, turkey vulture, white-tailed kite, yellow breasted chat, loggerhead shrike, coastal California gnatcatcher, least Bell's vireo). All but two of these species, the red-shouldered hawk and turkey vulture, are also Species of Special Concern, along with the orange-throated whiptail, coast horned lizard, yellow warbler, and San Diego black-tailed jackrabbit. A significance determination for impacts to least Bell's vireo and coastal California gnatcatcher are discussed in Section 3.2.A of the BRR.

Grading associated with the proposed project would remove the all or most of the existing onsite suitable nesting and foraging habitat for wildlife species over an approximately 12-year period. However, mitigation measures would be implemented such as avoiding the bird breeding season, conducting preconstruction surveys to confirm absence of special-status species prior to conducting work, biological monitoring during construction, and restoration of habitats that would be impacted. It is anticipated that impacts to special-status species onsite would be minimal, and fall within the threshold of less than 5 percent of individuals. Additionally, the timing for clearing of vegetation would occur in stages, and as one mining phase area is being cleared, the previous mining area would be restored to high-quality native habitats with function and value equal to or greater than those removed during mining. Ultimately, the proposed project would increase suitable nesting and/or foraging habitats for these species by restoring habitats, thus increasing available resources onsite for these species. The avoidance and reduction of the potential for impacts is not likely to affect the long-term survival for County List A or B plant animal species, Group I animal species, or California Species of Special Concern.

No County List C or D plant species were observed within the project area; therefore, there are no impacts to County List C or D plant species.

The following four County Group II wildlife species were observed onsite: orange-throated whiptail, coast horned lizard, yellow warbler, and San Diego black-tailed jackrabbit. Impacts to these species were evaluated in Section 3.2.B in the BRR

because they are also Species of Special Concern. Similarly, the avoidance and reduction of the potential for impacts is not likely to affect the long-term survival of County Group II animal species, or California Species of Special Concern. These direct impacts to the long-term survival of County Group II animal species would be less than significant with implementation of Mitigation Measures MM-BIO1 through MM-BIO7.

Although the project area is within Designated Critical Habitat for the arroyo toad, it does not contain habitat suitable for arroyo toad primarily due to the lack of surface water and associated pools that this species requires for breeding, and substrates required for aestivation. The project area contains riparian habitat along and within the floodplain of the San Diego River and has friable soils; however, the project area is too dry and does not contain the necessary habitat features that arroyo toads use for foraging and breeding. The nearest and most recent arroyo toad sighting listed by the CNDDDB occurred approximately 5 miles north of the site in known suitable habitat. Therefore, the proposed project would not impact arroyo toad aestivation, foraging, or breeding habitat.

No golden eagle nests were detected onsite or within 4,000 feet of the site. The nearest known golden eagle nest listed by the CNDDDB was recorded approximately 2 miles east of the project area at El Capitan Reservoir, well outside of the zone of influence of this project. Recent golden eagle surveys conducted by USGS in San Diego County suggest that two adjacent golden eagle territories may overlap with the BSA (SDMMP 2016). Therefore, a moderate potential exists for the species to occur within the BSA for foraging, although suitable nesting habitat is not present within the project area or adjacent to the project area. The grassland habitat could provide potential golden eagle foraging habitat, however, this is unlikely given the lack of eagle nesting within 4,000 feet of the project area. Therefore, impacts to golden eagle habitat would be less than significant.

The project area provides nesting and foraging habitat for a variety of raptor species. A majority of vegetation within the impact footprint would be removed, however the Mature Riparian Woodland habitat would remain as it is considered an impact neutral area. Greater than five percent of the raptor foraging and nesting habitat within the project area would still be impacted. However, clearing of vegetation would occur in stages, and as one mining phase area is being cleared, the previous mining area would be restored to high-quality native habitats with function and value equal to or greater than those removed during mining. Ultimately, the project would increase suitable nesting and/or foraging habitats for these species by restoring habitats. With the design of the work to occur in stages and the implementation of avoidance and reduction of the potential for impacts, the project is not likely to affect the long-term survival of raptor species. The project would result in less-than-significant direct impacts to functional foraging habitat for raptors with implementation of Mitigation Measures MM-BIO1, MM-BIO5, MM-BIO6, MM-BIO7, and MM-BIO8.

The 479.5-acre project area is set in the midst of a larger rural setting with multiple areas of open space, making the El Monte Valley a core wildlife area, according to the County's definition. Impacts are discussed in Section 3.1 of the BRR. Although cleared areas would lose habitat functionality for wildlife species during each mining phase, upon cessation of mining in each phase, reclamation activities would restore some

function prior to the end of the expected 19-year project life of the proposed project. Since a maximum of two mining areas would be devoid of vegetation at any one time, and then only temporarily, as reclamation of previously mined phases would commence with initiation of mining in the downstream phase, most of the project area would be available for wildlife use at any given time over the 16-year life of the proposed project. Upon the completion of revegetation, the area would be enhanced by the establishment of higher-quality and functional habitat types along the San Diego River corridor. Therefore, with implementation of Mitigation Measures MM-BIO6, MM-BIO7, MM-BIO8, and MM-BIO12, the proposed project would have a less-than-significant direct impact on a wildlife core area or the viability of the wildlife species it supports.

Portions of the project area contain unpaved roads and trails that are currently used by equestrian and recreational users for riding, walking, and hiking. In addition, existing residents access their homes using Willow Road and Dairy Road (both unpaved), and Helix Water District and San Diego Gas & Electric staff access the project area using these same unpaved roads. The proposed project would allow for continued access to the site during the 16-year life of the proposed project, and a trail easement along the periphery of the site would be established in perpetuity at the end of the project. Any future trails built within this easement would be permitted separately from the proposed project. Upon completion of the project and following implementation of the Reclamation Plan and Revegetation Plan (ESA 2018a), the proposed project would not increase human access, predation, or competition from domestic animals, pests, or exotic species; therefore, the proposed project would not cause indirect impacts to species from altered conditions.

The project is anticipated to alter natural drainage features onsite by effectively lowering the substrate elevation on the surface of the San Diego River 25 – 30 feet below the current channel surface, which would be approximately 9 – 19 feet above the water table (AECOM 2018). During extreme storms events, water could overtop the El Capitan dam. In the event of the dam overtopping, the water table may rise above the pit bottom and a pond could form. If ponding does occur, vegetation could form around the fringe of the pond, although vegetation growth would be temporary as it would likely recede as the water recedes. Water has overtopped the dam only four times since 1940 (D. Roff pers. comm), making this a very unlikely event. Because El Capitan Dam effectively cuts off the flow from upstream, the main source of water in the riverbed is runoff from surrounding hillsides. Therefore, the changes to the topography as a result of the project are not expected to substantially affect the hydrology downstream. In addition, erosion control and stormwater measures would be installed to ensure that sediment and runoff do not drain offsite during mining. Post-project reclamation and revegetation would also improve onsite drainage conditions. Therefore, with implementation of Mitigation Measures MM-BIO5, MM-BIO6, MM-BIO7, MM-BIO8, and MM-BIO10, the project would have less-than-significant indirect impacts to sensitive species due to changes in the natural drainage.

Temporary nighttime lighting would be installed at the facility for safety purposes; however, the lighting would be shielded away from adjacent native habitats, and thus is not anticipated to affect breeding or foraging behavior of sensitive species. However, during construction and mining, the ambient noise levels would be increased during

operating hours, which could negatively affect breeding birds by altering breeding behavior or resulting in nest abandonment. However, with implementation of Mitigation Measures MM-BIO1, MM-BIO2, MM-BIO3, and MM-BIO5, indirect impacts to breeding birds from construction and operational activities would be less than significant.

There is no burrowing owl habitat in the project area and burrowing owls were not observed during the 2006, 2010, and 2015 surveys. The proposed project would not impact burrowing owl or its habitat.

There is no cactus wren habitat in the project area (habitat was not present in the project area prior to 2003 Cedar fire), and cactus wren were not observed during the 2006, 2010, and 2015 surveys. The proposed project would not impact cactus wren or its habitat.

Native upland habitat on the project area is not extensive enough or of high enough quality to support Hermes copper, and the host plants required by this species are not present onsite. Additionally, Hermes coppers were not observed during the 2006, 2010, and 2015 surveys. The proposed project would not impact Hermes copper or its habitat.

Clearing and grading associated with project area preparation could directly affect breeding birds by the removal of potential nesting habitat within the river channel and surrounding upland habitats. Proposed mining activities could also indirectly affect breeding birds adjacent to cleared areas during the breeding season due to noise, dust, increased truck traffic, and other human activities, which could impair the breeding behavior of birds, resulting in reduced mating or nest abandonment. Additionally, fuel modification could directly impact nesting bird species through removal of nesting habitat, and indirectly impact nesting birds during breeding season through noise. Direct impacts as a result of mortality of individuals and nests and removal of habitat during the breeding season, and construction-generated noise would be avoided through conducting construction and mining activities outside of the bird breeding season. Additionally, preconstruction surveys would be conducted prior to starting work to confirm that nesting birds are absent from the limits of construction prior to work starting. Additionally, habitats lost during construction and mining operations would be compensated through reclamation and revegetation, resulting in additional habitat acreage for use after completion of the project. With implementation of Mitigation Measures MM-BIO1 through MM-BIO8, direct and indirect impacts to coastal California gnatcatcher, least Bell's vireo, and tree-nesting and ground-nesting raptors from clearing, grading, fuel modification, and/or other noise generating activities would be less than significant. These activities would not impact coastal cactus wren, southwestern willow flycatcher, golden eagle, or light-footed Ridgeway's rail.

The development of planned fencing (and gates) to protect the site from unauthorized public access has been conducted in a manner to preserve and maintain access to the site by wildlife. The project applicant coordinated with the County Department of Planning and Development Services (PDS) to revise the proposed trail system configuration and type of fencing. Fencing to restrict the public from work areas has been changed from four-strand barbed wire to three-strand barbed wire. Fencing

along interior trail segments will include wood split-rail fence with two horizontal poles. The three-strand fencing and wood split-rail fencing will each provide sufficient clearance for wildlife to pass through the fences without restriction.

1.10.5 Mitigation Measures

The following are mitigation measures which have been developed to avoid and/or minimize the potentially significant direct and indirect impacts to sensitive biological resources associated with the proposed project:

MM-BIO1: Raptors and nesting birds covered by MBTA.

- 1) To avoid and minimize impacts to nesting coastal California gnatcatchers, least Bell's vireo, raptors and other birds protected by the Migratory Bird Treaty Act, vegetation removal and grading shall occur outside of the nesting bird season (February 1 through August 31). Note that no gravel crushing is required to process the materials extracted from the site; therefore, noise levels would be lower than those typically associated with mining activities. If the breeding season cannot be avoided, the follow measures shall be implemented:
 - a. During the avian breeding season, a qualified Project Biologist shall conduct a preconstruction avian nesting survey no more than 3-5 days prior to vegetation disturbance or site clearing. Surveys need not be conducted for the entire project area at one time; they shall be phased so that surveys occur shortly before a portion of the site is disturbed. If construction begins in the non-breeding season and proceed continuously into the breeding season, no surveys shall be required. However, if there is a break of 3-5 days or more in construction and mining activities during the breeding season, a new nesting bird survey shall be conducted before these activities begin again.
 - b. The preconstruction survey shall cover all reasonably potential nesting locations on and within 300 feet of the proposed construction and mining activities areas. If an active nest is found during the preconstruction avian nesting survey, a qualified Project Biologist shall implement a 300-foot minimum avoidance buffer for coastal California gnatcatcher, least Bell's vireo, and other passerine birds, and a 500-foot minimum avoidance buffer for all raptor species. The nest site area shall not be disturbed until the nest becomes inactive or the young have fledged.
- 2) A preconstruction survey for burrowing owl will be conducted in accordance with Section 3.4.1 "Pre-grading Survey" of the *Strategy for Mitigating Impacts to Burrowing Owls in the Unincorporated County* (Burrowing Owl Strategy; County of San Diego 2010b). If burrowing owls are detected during the preconstruction survey within 300-feet of proposed grading, a translocation plan will be developed and finalized in coordination with the County and the wildlife agencies (USFWS and CDFW). Grading will not occur within 300-feet of an active owl burrow until the young have fledged and are no longer dependent on the burrow. Grading closer than 300 feet may occur within written concurrence from the wildlife agencies and the County Mitigation Monitoring Coordinator;

the distance will depend on the burrow's location in relation to the site's topography and other physical and biological characteristics. In addition, mitigation for impacts to habitat would be required as outlined in the Burrowing Owl Strategy.

MM-BIO2: Least Bell's vireo. In accordance with the project's Revegetation Plan (ESA 2018a), direct impacts to suitable habitat for the state and federally endangered least Bell's vireo shall be mitigated at a minimum of 3:1 ratio through the restoration of southern willow scrub habitat. Approximately 126 acres of riparian habitat suitable to support least Bell's vireo will be revegetated.

MM-BIO3: Coastal California gnatcatcher. In accordance with the project's Revegetation Plan (ESA 2018a), direct impacts to California gnatcatcher-occupied habitat shall be mitigated at a minimum 2:1 ratio through restoration. Restoration may include a combination of in-kind restoration (i.e., coastal sage scrub habitat restored to coastal sage scrub habitat) and out-of-kind restoration (i.e., non-native grassland habitat restored to coastal sage scrub habitat). Approximately 50.5 acres of Diegan coastal sage scrub habitat will be revegetated.

MM-BIO4: Glossy Snake and Other Special-Status Amphibian and Reptile Species. A focused herpetofaunal mitigation plan shall be developed and implemented by a qualified biologist to address potential direct and indirect impacts to glossy snake and other amphibian and reptile state Species of Special Concern. The mitigation plan shall include the following measures to be implemented:

- 1) Trapping and collection of herpetofaunal species shall be conducted prior to any site preparation and mining activities (Appendix J of the BRR). Once the herpetofaunal species are collected, they shall be relocated and set free outside of mining boundaries in the eastern portion of the project site, east of Dairy Road. They shall be marked to track the success of this action over time; the mitigation plan would include detail on the specific methodology of the marking study.
- 2) Exclusionary fencing shall be installed along the project disturbance footprint to preclude special-status herpetofaunal species from moving back into the site. The focused mitigation plan shall include specifications for installing, monitoring, and repairing the fencing to maintain its function and integrity throughout the duration of construction and mining activities.
- 3) Preconstruction surveys for herpetofaunal shall be conducted by a qualified biologist no more than 10 days prior to initiation of excavation activities associated with site preparation and sand mining activities in those specified areas of the project site. Surveys may not need to be conducted for the entire of the project site at once; they may be phased so that surveys occur in portions of the project before excavation occurs (Appendix J of the BRR).
- 4) Overburden excavated and collected during site preparation and mining activities shall be moved (to the maximum extent feasible) to the eastern portion of the site, outside of the mining limits, to improve the habitat for herpetofaunal species at the release location for the project site, particularly as fill into some

of the previously excavated areas in the eastern portion of the site where limited species observations have been documented (Appendix J of the BRR).

MM-BIO5: Mining Best Management Practices and Oversight. A qualified Project Biologist shall be responsible for monitoring the limits of construction and mining activity, mitigation measures, design considerations, and project conditions during all phases of the project. The Project Biologist shall conduct the following:

- 1) Attend the preconstruction meeting with the contractor and other key construction personnel prior to clearing, grubbing, or grading.
- 2) Conduct worker training prior to all phases of construction; this shall include meetings with the contractor and other key construction personnel to explain the limits of disturbance, which shall be delineated with temporary construction fencing with clear signage stating the fenced area is a sensitive habitat area and to keep out, and the importance of restricting work to designated areas prior to clearing, grubbing, or grading. Discussions shall include procedures for minimizing harm to or harassment of wildlife encountered during construction and mining activities prior to clearing, grubbing, and/or grading.
- 3) Conduct pre-construction clearance surveys to detect the presence of nesting birds, burrowing owls, and other sensitive terrestrial wildlife species, such as coast horned lizard, glossy snake, orange-throated whiptail, and two-striped garter snake. The Project Biologist shall use their discretion in ensuring impacts to any sensitive wildlife observed during pre-construction clearance surveys are avoided (e.g., avoidance buffers, relocation from harm's way, etc.).
- 4) Be present onsite to monitor initial vegetation clearing, grubbing, and grading to ensure that mitigation measures are being appropriately followed.
- 5) Periodically monitor the limits of construction and mining operations as needed throughout the life of the project to avoid unintended direct and indirect impacts by ensuring that:
- 6) Confirm construction and mining activity boundaries are marked (e.g., delineated with temporary fencing and sensitive habitat signage) and not breached;
- 7) Monitor Mature Riparian Woodland areas to confirm they are protected from incursion with installation of temporary construction fencing and sensitive habitat signage. Also confirm that the slopes at the edge of protected Mature Riparian Woodland habitat are not eroding, and that appropriate erosion control measures, such as fiber rolls, blankets, gravel bags, etc., are installed;
- 8) Apply AggreBind® to temporary haul roads prior to beginning construction (remove at the end of construction) and spray water on grading areas and at points of ingress and egress of the haul road at the intersection where the haul roads meet dirt roads or paved roads to minimize dust;

- 9) Implement pertinent requirements that address erosion and runoff, including the federal Clean Water Act, National Pollution Discharge Elimination System (NPDES), and Stormwater Pollution Prevention Plan (SWPPP); and
- 10) Prepare a post-construction monitoring report for submittal to the County of San Diego. The report shall substantiate the supervision of the clearing, grubbing, and/or grading activities, and shall provide a final assessment of biological impacts.

MM-BIO6: Reclamation Plan oversight. A qualified Restoration Ecologist shall be designated to oversee implementation of the Reclamation Plan (as it pertains to site preparation, erosion control, hydro seeding, and soil stabilization). The Restoration Ecologist shall have at least 5 years of experience monitoring successful native habitat restoration projects in Southern California, including all habitat types that shall be restored onsite. In addition, the Restoration Ecologist shall:

- Attend all relevant construction meetings.
- Have the authority to redirect construction and maintenance crews in keeping with the goals, objectives, and performance standards of the final Reclamation Plan.
- Approve the seed palette used for hydro seeding
- Regularly monitor reclamation activities to determine if and how remedial actions should be conducted, if needed, for observed issues such as sedimentation and erosion.

MM-BIO7: Revegetation Plan and oversight. A Revegetation Plan shall be implemented to guide and ensure successful revegetation/creation of self-sustaining riparian and upland habitats, which would serve as mitigation for impacts to native vegetation communities. In contrast to the Reclamation Plan, which focuses on landform and soil stabilization, the focus of the Revegetation Plan is to restore the ecological functions and values of the impacted habitats. The Revegetation Plan shall include:

- Sufficient revegetation restoration or enhancement of habitat to fulfill the mitigation obligations described in MM-BIO8.
- The planting plan shall be designed to ensure that the appropriate restored/created habitat is suitable for the coastal California gnatcatcher and least Bell's vireo, and allows for local and regional wildlife movement (e.g., appropriate width and vegetative cover).
- The planting design shall also include adequate wetland buffers (100 to 200 feet wide, measured from the edge of wetland habitat).
- A native planting palette appropriate for each vegetation type being mitigated and appropriate to local conditions.
- Irrigation for upland and wetland habitat types for the first 2 to 3 years. Irrigation should be removed during the final 2 years of restoration to ensure that the habitat is self-sustaining.
- A 120-day plant establishment period plus five-year restoration maintenance period (or until success criteria are met).

- Qualitative and quantitative monitoring methods to ensure that success criteria are met.
- Five-year maintenance methods.
- Success criteria for establishment period and years 1–5.
- Responsibilities and qualifications of restoration and maintenance contractor(s) and restoration ecologist.
- Description of annual reporting.

MM-BIO8: Sensitive vegetation communities.

- In order to be consistent with the Southern California Coastal Sage Scrub NCCP guidelines, direct impacts to more than 5 percent of the coastal sage scrub onsite (i.e., impacts to more than 0.52 acre) shall be avoided. Avoidance shall be targeted at those patches of coastal sage scrub in which a California gnatcatcher was observed during the 2015 surveys. In addition, because the project is outside of the MSCP, a Habitat Loss Permit (HLP) will be required for the loss of coastal sage scrub.
- Direct impacts to sensitive vegetation communities shall be mitigated through implementation of the Reclamation Plan and Revegetation Plan. The Revegetation Plan shall be designed to provide high quality habitat that is compatible with the post-project topography and hydrology. As such, some of the temporarily impacted habitat shall be mitigated out-of-kind (i.e., with a different, but higher quality habitat type), resulting in a net gain of native habitat acreage onsite and improve overall native habitat quality and functions.
- Revegetation mitigation will occur in areas currently supporting non-vegetated channel (will be revegetated as vegetated channel), southern willow scrub, tamarisk scrub (will be revegetated as native cottonwood-willow riparian forest and riparian scrub), coastal sage scrub, and non-native grassland (will be revegetated as coastal sage scrub) (Table 16 and Figure 7 in the BRR). Based on mitigation replacement ratios and projected impacts for the mine project, a total of 126.15 acres of riparian/wetland habitat is required to be revegetated (restored) or enhanced (plus 0.54 acre of riparian habitat restored for the previous golf course project for a total 126.69 acres); and 50.49 acres of upland habitat is required to be revegetated (restored) to mitigate for temporary and permanent impacts.

Based on input from the County, the proposed mitigation for impacts to tamarisk scrub includes restoration of native riparian habitat within post-mining areas and enhancement and restoration of riparian and transitional habitat outside of mining limits. This approach would improve habitat more comprehensively within the project site and improve the functions and sustainability of habitat restoration mitigation areas onsite. Riparian/wetland habitat restoration will consist of high quality vegetated channel (0.36 acre) planted within the channel, cottonwood-willow and transitional species dominated riparian forest (46.43 acres) planted along the edges of the channel for a width of up to 300 feet, and riparian scrub habitat dominated by mule fat along with scattered willows and transitional species (17.18 acres [16.64 acres for the mine project + 0.54 acre for the previous golf course project]) within the excavated mining pit (basin) and lower slopes. The planted riparian forest mitigation (i.e., 46.43 acres) and the majority of riparian

scrub mitigation (i.e., 16.28 acres for the mine project + 0.54 acre for the golf course project) will provide mitigation within post-mining areas for impacts to tamarisk scrub habitat. An additional 0.54 acre of southern willow scrub mitigation will occur as mitigation for the previously approved golf course project impact in 2005 to 0.18 acre of disturbed riparian (tamarisk scrub).

As previously discussed, the required balance of mitigation for tamarisk scrub for the mine project (i.e., 62.72 acres) will be accomplished by enhancing and restoring 64.16 acres of riparian and transitional habitat that include invasive exotic species within the project site outside of mining limits. Because all remaining riparian habitats onsite are included in the planned enhancement along with some adjacent transitional habitats (i.e., to establish contiguous enhancement area), the planned enhancement area has been rounded up to 64.16 acres (relative to the 62.72-acre requirement). The enhancement of 64.16 acres of riparian and transitional habitat will include initial removal of target exotics, follow-up monitoring and maintenance treatments annually for five years as needed, and measures to promote native plant revegetation including limited seeding and scattered planting. Removal of exotic species will be conducted with hand-tools (shovels, chain-saws, etc.) along with follow-up application of herbicide to kill exotic plant specimens. No vehicular equipment will be driven into the river bed. Maintenance personnel will walk into the enhancement areas, cut exotic vegetation, and carry it in pieces to nearby vehicles (e.g., pickup trucks) or dumpsters located along project access routes and/or disturbed upland staging areas. Exotic plant biomass will then be hauled to an approved green waste facility. Exotic vegetation will be either dug out with shovels (if specimens are small enough and the root system can be effectively removed), or cut within one foot of the ground surface. Cut stems/stumps will then be treated with herbicide. Based on input from County staff during an August 16, 2017 site visit, the removal of large exotics such as eucalyptus trees which provide screening for adjacent residences on the south side of the river should be removed in a phased approach so that sufficient screening with vegetation is provided (e.g., with existing vegetation and new native plant growth) during the enhancement and restoration program.

The existing riparian and transitional habitat areas that will be enhanced lack typical riparian habitat hydrology and are similar to alluvial fan scrub habitat (except for the extensive presence of tamarisk and other exotic species) which includes a mixture of riparian and transitional and upland species. Within this setting, management of natural recruitment is considered the most appropriate method to establish native habitat over time. However, measures will be conducted as part of the enhancement effort to promote native plant establishment including (1) limited seeding (utilizing some species in the project seed mixes and collection and spread of seed collected onsite during maintenance activities), (2) scattered low-density planting (container plants and cuttings) during wet conditions to help establish small patches/"islands" of native plants (which can help promote more natural recruitment), (3) distribution of mulch (not including non-native seed or propagules) to provide improved microhabitat conditions for native plant germination and establishment, and (4) regular periodic follow-up exotic plant control to reduce competition with native plants. Because of the existing grades, depth to groundwater, and sandy alluvial soils, implementation of a planting program and temporary irrigation system are not considered appropriate or a worthwhile use of resources in the proposed enhancement areas. Relying on

natural recruitment and treating exotic species is considered the best approach to establish native vegetation adapted to the site that will be self-sustaining over time. Enhancement mitigation activities are scheduled to start at the beginning of the project concurrent with the initiation of Phase 1 activities. The enhancement areas after the initial five-year maintenance and monitoring period will be managed in perpetuity, consistent with the other project mitigation areas.

- As previously discussed, the remainder of the temporary impact area within the mining phases not designated for habitat mitigation will be subject to reclamation. Based on planned habitat mitigation acreage for the mine project, a total of 112.48 acres of reclamation would be conducted. However, because 0.54 acre of southern willow scrub restoration mitigation required for previous golf course impacts is planned within post-mining Phase 1 area, total reclamation within the mining temporary impact area has been lessened from 112.48 acres to 111.94 acres.

Anticipated impacts, habitat mitigation, and reclamation anticipated at this time are presented by community in Table 16 of the BRR.

- Upland habitat revegetation shall consist of high quality coastal sage scrub habitat. The upland habitat mitigation need is mostly due to projected impacts to non-native grassland habitat, which is dominated by non-native grasses and forbs, providing only low quality habitat. The restored coastal sage scrub will provide an important foraging and breeding resource for the coastal California gnatcatcher, which is known to be onsite. Providing high quality coastal sage scrub in this area is highly beneficial, as all of the habitat surrounding the project area is degraded due to past wildfires. The excess revegetation of riparian habitat, which is of higher value than non-native grassland, will address the remaining upland mitigation need. A summary of anticipated impacts, mitigation ratios, required mitigation, and actual restoration are provided in Table 16 of the BRR. Because the project area is outside of the Multiple Species Conservation Program (MSCP), mitigation ratios shall be based on Table 5 of the County of San Diego Guidelines for Determining Significance for areas outside of the MSCP (County 2010).
- Mitigation (i.e., reclamation and restoration) shall be implemented on a phase-by-phase basis. The mined area shall be progressively reclaimed and restored on disturbed areas previously mined prior to initiation of mining on the next phase. Reclamation and restoration is an ongoing process that commences when mining operations have ceased within a given area (phase) and continues until all mining related disturbance is reclaimed and all equipment involved in these operations have been removed before moving onto the next phase. Tables 17-21 of the BRR show the anticipated breakdown of habitat mitigation and reclamation acres by phase. An overall restoration plan shall be approved by the County prior to the initiation of Phase 1 mining operations, including invasive species removal outside of the mining limits. Individual 40-scale restoration plans will be prepared for each phase and approved prior to the initiation of mining for the phase. Once Phase 1 mining has been completed and prior to the second half of Phase 2 mining operations being initiated, Phase 1 revegetation/restoration shall be implemented including, but not limited to, final restoration grading/slope stabilization, salvaged top soil placement and amendment, container planting, hydro-seed application/imprinting, temporary irrigation, erosion control, fencing and signage. Partial grading/mining of the subsequent mining phase is required to create a safe means of access for equipment and personnel to the previously mined

phase to facilitate initiation the above outlined restoration activities. Once the revegetation/restoration installation has been completed for a particular phase, it will be reviewed by the County for conformance with the approved Revegetation Plan and will trigger the beginning of the monitoring and reporting period. Restoration/revegetation activities may be further broken down into sub-phases at the discretion of the mine operator. Ongoing maintenance is required to manage invasive species and trespass and is not part of the revegetation/ restoration activities that must be completed prior to moving on to the next phase of mining, as it is an ongoing activity. Revegetation/restoration bonding is required by phase prior to phase mining and will be released upon the successful completion of the phase restoration/revegetation installation, as determined by the County.

To minimize temporal loss of habitat values, mitigation for the proposed mine project for impacts outside of the mining footprint (i.e., fuel modification zones and some trail segments) and mitigation for the previous golf course project impact will be mitigated within the post-mine Phase 1 area. In addition, proposed enhancement to 64.14 acres of riparian and transitional habitats (as part of mitigation for impacts to tamarisk scrub) will be initiated at the start the project and Phase 1 mining activities in areas outside the mining footprint.

- Temporary fencing shall be installed as necessary during all mining, reclamation, and restoration activities to protect sensitive habitat, including Mature Riparian Woodland, from unauthorized incursion into areas outside the limits of disturbance. In addition, clear signage shall be installed, stating the fenced area is a sensitive habitat area and to keep out. Permanent fencing shall be installed around the perimeter of protected open space upon completion of the project; however, fencing details (e.g., the type and exact location of fencing) are yet to be determined.
- To protect the habitat mitigation area in the long term, the entirety of the revegetation and enhancement areas shall be protected in perpetuity by placing a Biological Open Space Easement over the revegetation and enhancement areas (Figure 17 of the BRR). At this time, it is anticipated that once the four proposed mining phases are complete, the entirety of the areas proposed for mitigation, including the revegetation and enhancement areas that totals 176.64 acres, (1) will be transferred in fee title to a qualified land steward (non-profit) conservancy so that it may be maintained and managed in perpetuity for biological values, and (2) a Biological Open Space Easement will be recorded. It is understood, as standard measures, that a Biological Open Space Easement will be recorded for the mitigation areas and a long-term manager will be identified/established (and habitat management funds provided) for designated project habitat mitigation areas. It is the intent of the property owner to transfer these areas to a non-profit/conservancy group prior to the completion of the habitat mitigation restoration.
- A Resource Management Plan (RMP) will be prepared for the 176.64 acres of mitigation/enhancement areas designated as Biological Open Space (Figure 17 of the BRR). The RMP will be prepared in accordance with the County's Report Format and Content Requirements for Biological Resources and approved by the County of San Diego and Wildlife Agencies (CDFW and USFWS).

- Permanent fencing and signage shall be installed around the perimeter of the Biological Open Space Easement as proposed in Figure 17 of the BRR. Adjustments to the fencing details (e.g., the type and final location of fencing) would be determined upon finalization of the Revegetation Plan.

MM-BIO9: Mature riparian woodland, as defined by the County RPO. Mature Riparian Woodland and a 50-foot buffer beyond the canopy of trees shall be avoided during preconstruction clearing, grubbing, and/or grading, and during mining activities. This shall be accomplished by having a qualified Project Biologist onsite prior to the start of the project to delineate and protect the Mature Riparian Woodland with temporary construction fencing to avoid incursion during preconstruction clearing, grubbing, and/or grading, and during mining activities. In addition, potential indirect impacts from dust coming from the nearby temporary haul road would be mitigated to a level below significant through the application of an environmentally-friendly water-based polymer binding agent, AggreBind® and use of a water truck, as discussed in MM-BIO5.

MM-BIO10: Jurisdictional resources. Direct impacts to jurisdictional wetlands and waters shall be mitigated through implementation of the Reclamation Plan and Revegetation Plan, resulting in habitat creation and restoration of higher quality than the habitat that is being impacted. Impacts to riparian resources shall be mitigated at a 3:1 ratio. A summary of anticipated impacts, mitigation ratios, and required mitigation are provided in Table 22 of the BRR. Impacts to non-vegetated streambed/non-wetland waters shall be mitigated at a 1:1 ratio. Mitigation ratios shall be based on the requirements in the County's Guidelines for Determining Significance (County 2010) for areas outside of the MSCP and may be modified by finalization of the Boundary Line Adjustment (BLA) process as discussed in Appendix K of the BRR or another process agreed upon by the wildlife agencies (CDFW and UFSWS). Additionally, federal (Section 401 and 404 of the Clean Water Act) and state permits (Section 1600 of the CFGC) require permits for impacts to jurisdictional resources. The project will comply with these regulations and pursue permitting for potential impacts to 41.46 acres of riparian habitat regulated by CDFW, and 0.36 impacts of non-vegetated streambed and non-wetland waters regulated by USACE and CDFW). Final mitigation requirements for impacts to jurisdictional resources will be determined through the permitting process.

MM-BIO11: Groundwater resources. Impacts to groundwater shall be mitigated by removing the Helix Water District Well HWD-101 from production, thereby reducing total demand by about 250 afy and balancing future project demand with annual recharge.

MM-BIO12: Wildlife movement. To ensure the area remains accessible to wildlife upon completion of the project, any fencing that is installed around the project area during the reclamation process shall be three strand, post-and-rail, or other type that allows for movement of terrestrial wildlife.

1.11 Mineral Resources

The California Geological Survey classifies California mineral resources with the Mineral Resource Zones (MRZs) system. These zones have been established based on

the presence or absence of significant sand and gravel deposits and crushed rock source area used as construction aggregate. The following definitions of the zones on or directly adjacent to the project area are as follows: (CGS, 1982 and 1996b).

- MRZ-2 - Areas where adequate information indicates that significant mineral deposits are present or where it is judged that there is a high likelihood for their presence.
- MRZ-3 - Areas containing mineral deposits, the significance of which cannot be evaluated from available data.

The project site is classified as MRZ-2 which consists of alluvial deposits along the San Diego River channel. Surrounding area outside of the project boundary is classified as MRZ-3. The site and vicinity fall within the Sector M of the Upper San Diego River Resource area aggregate resource sector (Figure 1.9-3).

2.0 Reclamation Plan Details

2.1 Owner/Operator/Agent

Applicant

El Monte Nature Preserve, LLC
1335 San Lucas Court
Solana Beach, CA 92075

Name of Mineral Property

El Monte Nature Preserve, LLC

Property and Mineral Rights Ownership

El Monte Nature Preserve, LLC
1335 San Lucas Court
Solana Beach, CA 92075

Operator

El Monte Nature Preserve, LLC
1335 San Lucas Court
Solana Beach, CA 92075
Phone: (619) 889-3397

Agent

William Adams
El Monte Nature Preserve, LLC
1335 San Lucas Court
Solana Beach, CA 92075
Phone: (619) 889-3397