BIOLOGICAL TECHNICAL REPORT
WITHIN THE STUDY AREA OF THE
SAN DIEGO RIVER RESTORATION PROJECT
EDGEMOOR PROPERTY
SANTEE, CALIFORNIA

April 12, 2005

Prepared for:

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TABLE OF CONTENTS

FIGURES

TABLES

ATTACHMENTS

1.0 INTRODUCTION

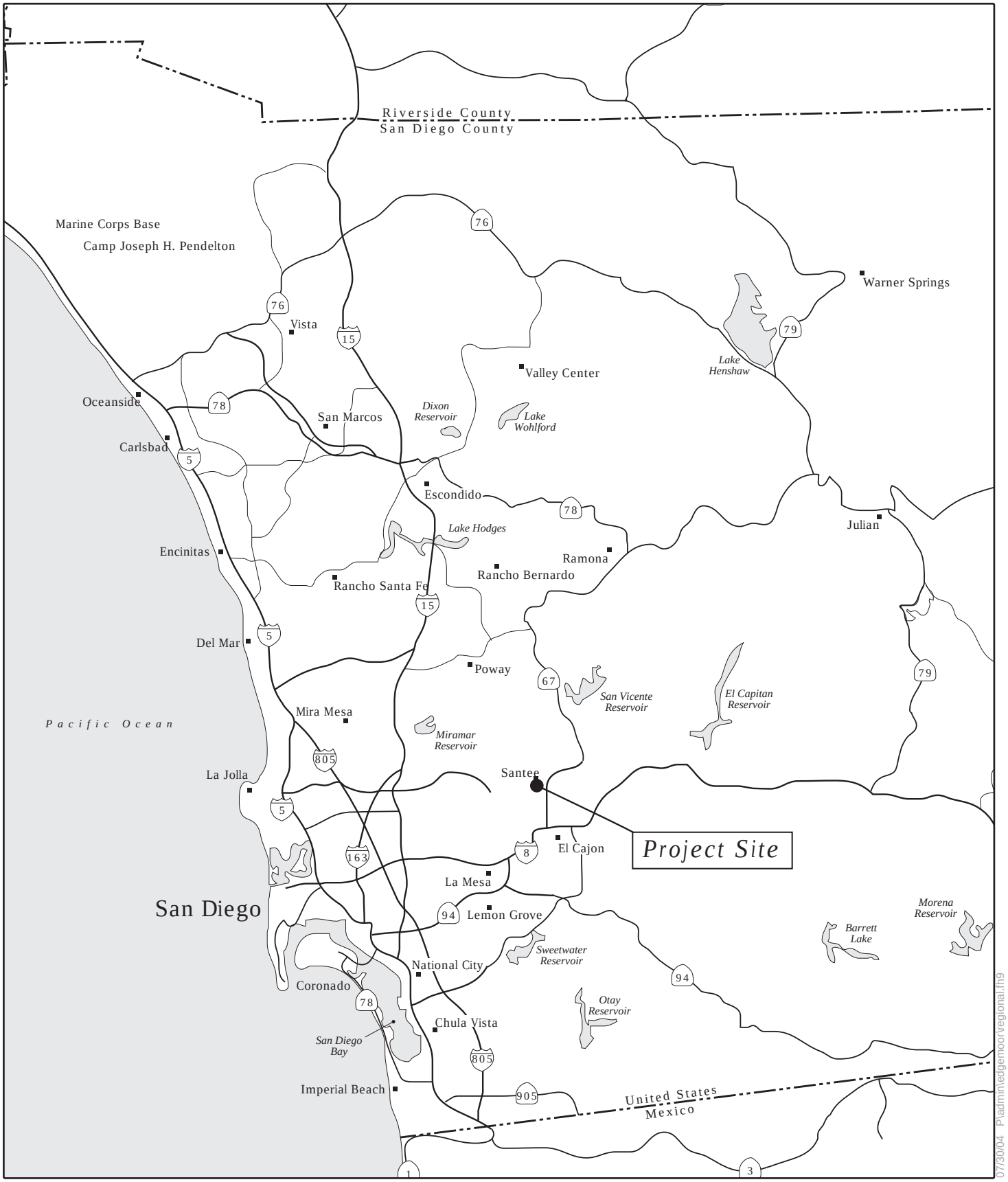
This report presents the results of the preliminary biological surveys conducted by P&D Environmental (P&D) on behalf of the County of San Diego, pertaining to the proposed San Diego River Restoration Project at the Edgemoor Property in Santee, California. The site was evaluated for biological resources over several site investigations conducted in June, July and December 2003 and November 2004.

1.1 PURPOSE

The purpose of this biological technical report was to evaluate and discuss the biological resources which have been detected or determined to be potentially present, within the project boundaries by field reconnaissance and available scientific literature. P&D performed general biological surveys and a wetland delineation within the proposed project area to identify the potential for the property to be used for habitat restoration and wetland creation as off-site mitigation for potential future County of San Diego Department of Public Works projects and potentially other public agencies or utilities. The results of these surveys were used to determine the sensitive plant and wildlife species with the potential to occur within the project area, to assess impacts to sensitive biological resources, and to recommend mitigation measures that would reduce these impacts to below a level of significance. This report discusses the results of the surveys and potential project impacts to the ecological components and habitats within and adjacent to the project area.

1.2 PROJECT LOCATION

The property is located in the City of Santee, San Diego County, California (Figure 1), and is bounded by Cuyamaca Street, Magnolia Avenue, and generally along the southern boundary of the 100-year floodplain for the San Diego River. The northern edge of the site included the San Diego River. The property is included in unsectioned lands of Township 15 South, Range 1 West of the United Stated Geological Survey (USGS) 7.5-minute *El Cajon Mountains Quadrangle,* San Bernardino Base Meridian (Figure 2). Nearby land uses include a recently constructed shopping center, the proposed Ryan Corporate Office Park, Las Colinas Women's Detention Facility, and the Edgemoor Hospital to the south, and a Community Park and RCP Block and Brick (a block and



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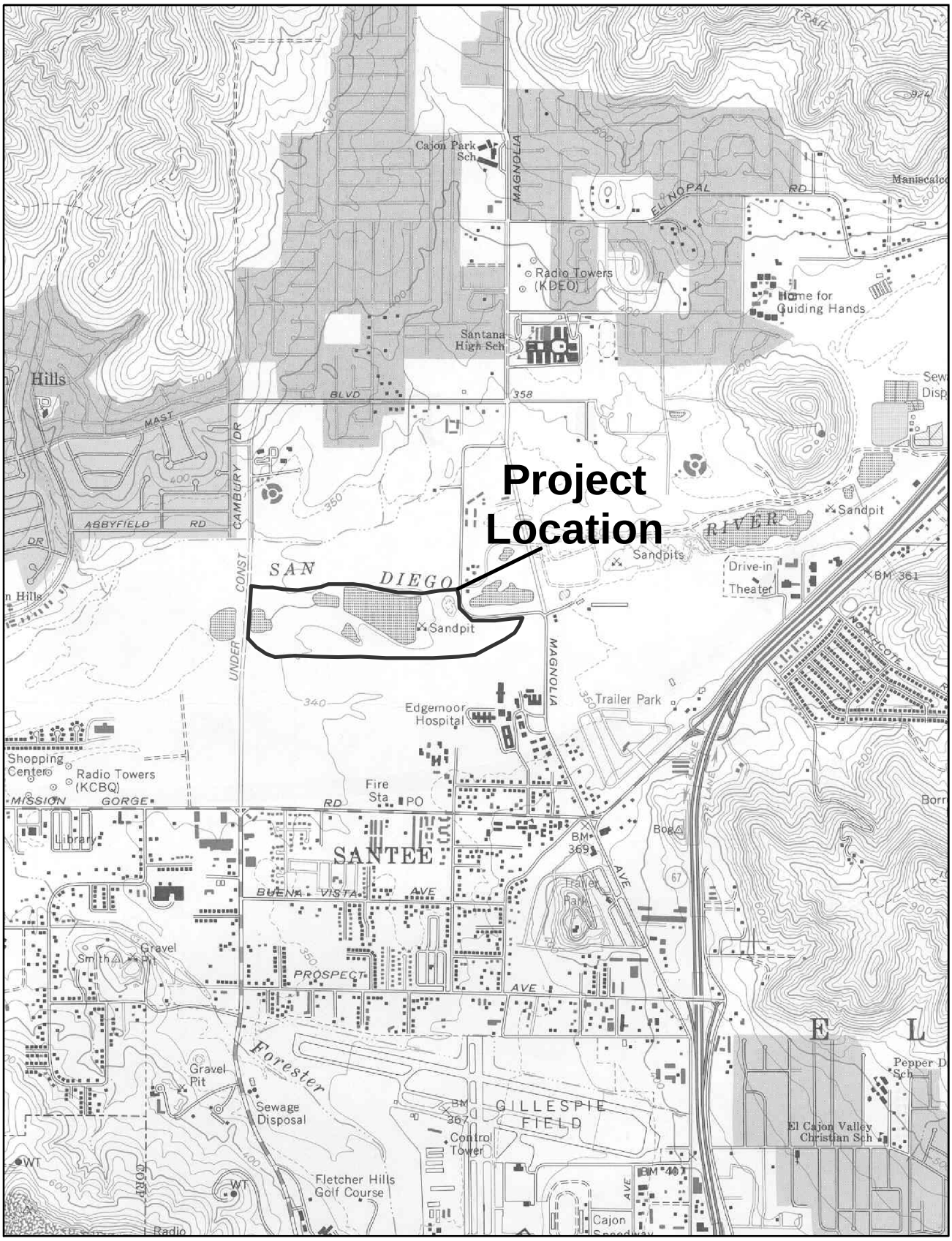
No Scale

Regional Map

P&D Environmental Services

Figure 1



Source: USGS 7.5 Minute Topo, El Cajon Quadrangle

Scale: 1" = 24,000'

Project Vicinity Map

Figure 2

P&D Environmental Services

brick manufacturing, sales, and storage facility) to the north. Residential and commercial land uses are located east and west of the site.

1.3 PROJECT DESCRIPTION

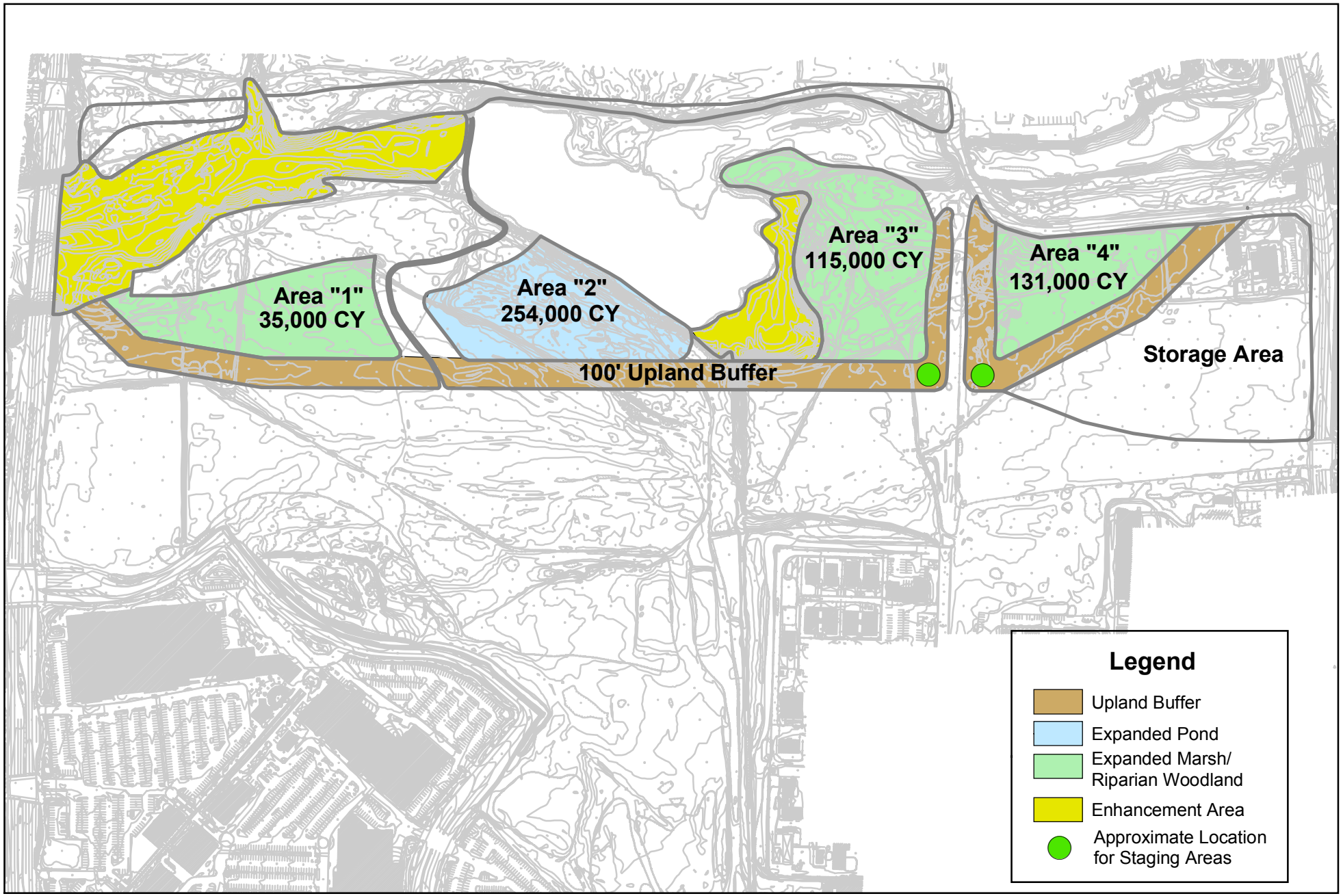
The main objective of the project is to provide off-site mitigation for potential future County of San Diego Public Works projects or potentially other public agencies or utilities. This will involve both habitat enhancement and creation. Habitat creation would convert nonnative grassland, tamarisk scrub, and disturbed habitat into open water, riparian scrub/woodland, and freshwater marsh. Habitat enhancement would improve riparian scrub/woodland and freshwater marsh by removing invasive species, cleaning up trash, and, if needed, re-planting select areas with native plants.

In order to expand wetland habitats at the site, excavation of sand from four designated areas at the site will occur. A storage and stockpile area for the excavated material will be located at the eastern end of the project site. Alternative locations for equipment staging areas are located approximately at the southern end of Areas 3 and 4 as depicted in Figure 3. Figure 3 also depicts the habitat creation and enhancement areas. In addition, site photographs are included in Attachment A.

2.0 STUDY METHODOLOGIES

2.1 LITERATURE AND AERIAL PHOTOGRAPH REVIEW

Data regarding biological resources on the project site were obtained through a literature review of the pertinent scientific literature, topographical and soil maps, and an aerial photograph. More specifically, the *El Cajon Mountains, California* 7.5-minute series quadrangle (USGS, 1967) and an aerial photograph (Eagle Aerial, 2003) were reviewed for evidence of U.S. Army Corps of Engineers (ACOE) or California Department of Fish and Game (CDFG) jurisdictional areas, pursuant to Section 404 of the Clean Water Act (CWA) and Section 1601 of the Fish and Game Code, respectively, on the site. In addition, the *Water Quality Control Plan – San Diego Basin, Region 9* was reviewed to determine the beneficial uses of the water in the San Diego River at the site (Regional Water Quality Control Board [RWQCB], 1994).



Source: P&D Consultants, Inc. San Diego, CA

0 0.05 0.1 0.2 Miles

Site Plan

Figure 3

TCB | AECOM

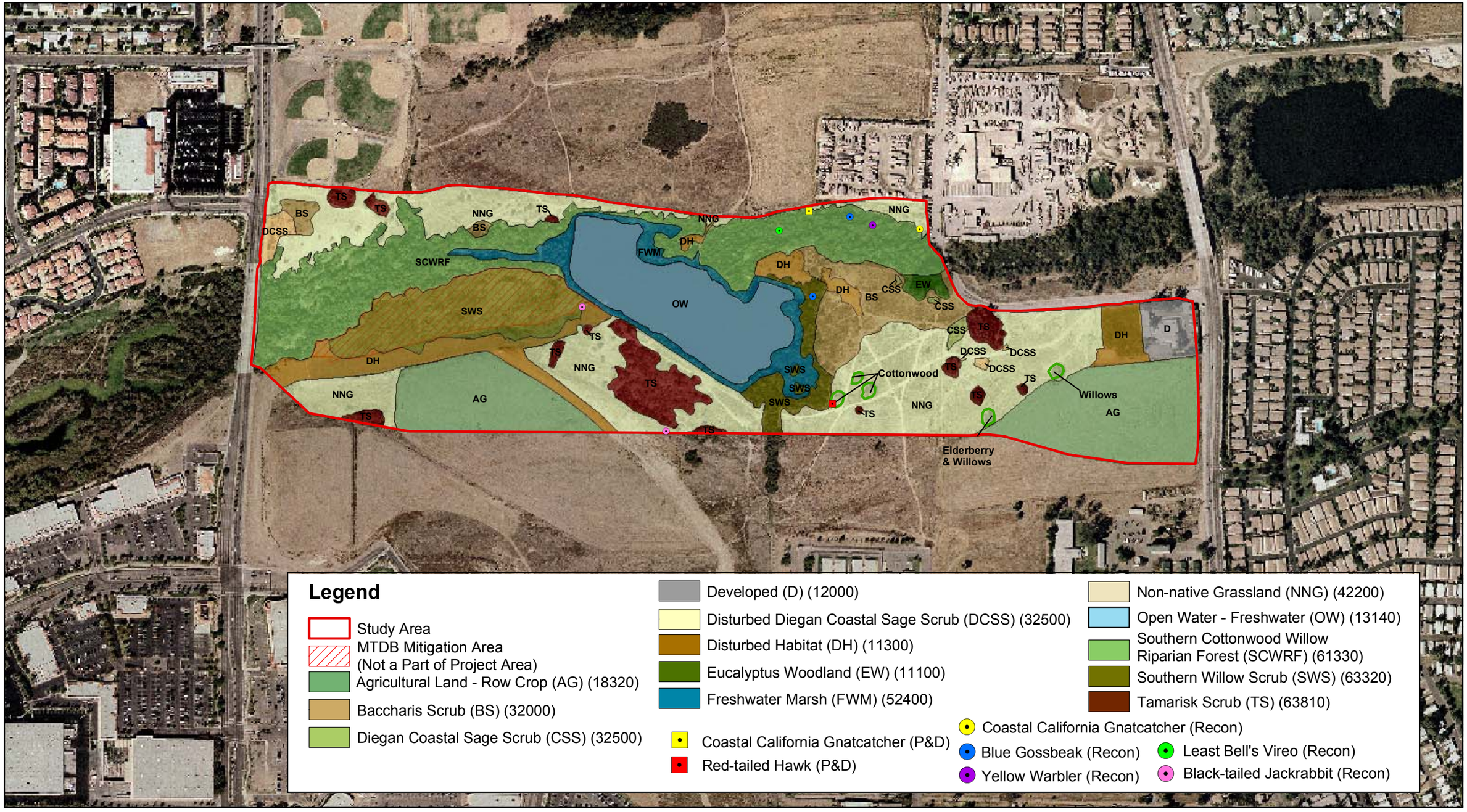
Sensitive biological resources present, or potentially present, on the property were identified using the *California Natural Diversity Data Base* (CNDDB) (CDFG 2000, last updated in October 2004), and the *Inventory of Rare and Endangered Plants* on the California Native Plant Society's (CNPS) website (Skinner and Pavlik 1994, last updated in 2004). The project site is located within the proposed City of Santee Subarea Plan for the Multiple Species Conservation Plan area, which has not been approved, nor has environmental review been completed. Therefore, the Wildlife Agency Review Draft plan, dated April 24, 2002, was reviewed (City of Santee, 2002).

In addition, P&D reviewed the Draft Biological Constraints Report prepared by RECON in August of 2002, and a Wetland Delineation prepared in September of the same year (RECON, 2002a and 2002b).

2.2 BOTANICAL SURVEY

On February 17 and 18, 2004, P&D biologists Melissa Wilson and Adrianne Boyd evaluated the vegetation communities and habitats present at the site and compared them to RECON's previously documented results. On December 3 and 6, 2004, P&D biologists Melissa Wendt and TJ Adkins further evaluated the vegetation communities and habitats while performing a wetland delineation at the site. The purpose of these surveys was to inventory the plant species present and to map vegetation communities. All plant species encountered during the field survey were identified directly, or collected and later inspected using specialized botanical keys to obtain a positive identification. An aerial photograph was acquired and vegetation communities during the field assessment were documented and mapped. The map was then graphically overlain onto an appropriate base map using GIS software and equipment (Figure 4).

Scientific nomenclature and common names of plants used in this report follow *The Jepson Manual – Higher Plants of California* (Hickman, 1993). References to vegetation communities reflect information contained in *Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions* (Oberbauer, revised 1996), *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland, 1986, updated in 1992); *List of California Terrestrial Natural Communities Recognized by the Natural Diversity Database* (CDFG, updated October 2004), and *A Manual of California Vegetation* (Sawyer and Keeler-Wolf, 1995).



P&D Consultants

TCB | AECOM

Vegetation Communities

Figure 5

2.3 WILDLIFE SURVEY

On February 17 and 18, 2004, P&D biologists Melissa Wilson and Adrianne Boyd conducted a general wildlife survey to inventory the animal species that occur within and adjacent to the proposed project area. The site visits spanned the morning and afternoon hours in order to detect the maximum diurnal wildlife species utilizing the site. The presence of wildlife species was determined primarily through direct observation aided by binoculars or otherwise by calls, tracks, scat, pellets, or other signs. All observations were recorded by taxon, family, and identified to species or genus where applicable.

Scientific nomenclature and common names for vertebrate species referred to in this report followed Stebbins (1985) for reptiles and amphibians, Sibley (2000) for birds, and Burt (1998) for mammals.

2.4 SURVEY LIMITATIONS

Due to the timing of the surveys, some annual plant species were not identifiable or only identified to genus when partial specimens of the plant were detected. Due to the nature of the site, migratory birds would be expected to use the site for foraging or shelter. Therefore, some migratory species which could potentially utilize the site were not detected during this evaluation. In addition, no focused surveys or nocturnal surveys were conducted in association with this evaluation and therefore these potential biological resources are not accounted for.

3.0 BIOLOGICAL RESOURCES

3.1 PHYSICAL CHARACTERISTICS

According to the *Ecological Subregions of California* (United States Department of Agriculture [USDA], 1997) the site is located in the Coastal Hills subsection (261Bi) of the Southern California Coast ecological section (261B). This subsection consists of foothills along the west side of the Peninsular Ranges from the Santa Ana River southeast to the Mexican border. The climate is described as hot and subhumid but it is modified greatly by oceanic influence.

Based on a review of the San Diego Basin Plan (RWQCB, 1994), the site is located in the Santee Hydrologic Subarea (907.12) of the Lower San Diego Hydrologic Area (907.10) within the San Diego Hydrologic Unit (907.00). Existing beneficial uses for the San Diego River within this subarea include industrial, contact and non-contact water recreation, warm freshwater habitat, cold freshwater habitat, and wildlife habitat.

Soils within and adjacent to the proposed project area were determined through use of the United States Department of Agriculture (USDA) Soil Survey for the San Diego Area (USDA, 1973). Soils within the study area are representative of the Riverwash, Tujunga Sand Series, Visalia Sand Series, and the Grangeville Series. Along the San Diego River and within and adjacent to the pond, soils are classified as Riverwash (Rm) Series. In the northeast corner of the site, the soils are classified as Visalia sandy loam with 0 to 2% slopes to the northeast (VaA) and soils north of the San Diego River are classified as Tujunga sand with 0 to 5% slopes. The soils located south of the San Diego River and the Visalia sandy loam (VaA) are classified as Grangeville fine sandy loam with 0 to 2 percent slopes (GoA).

The Riverwash Series (Rm), the Visalia sandy loam (VaA), the Tujunga sand (TuB), and the Grangeville fine sandy loam (GoA) are listed on the Hydric Soils List for San Diego County Area, California (NRCS, 2004).

3.2 BOTANICAL RESOURCES

3.2.1 Vegetation Communities and Habitats

The vegetative communities and habitats within the project site can be classified as Southern Cottonwood-Willow Riparian Forest, Southern Willow Scrub, Freshwater Marsh, Open Water, Tamarisk Scrub, Diegan Coastal Sage Scrub, Baccharis Scrub, Non-native Grassland, Eucalyptus Woodland, Disturbed Habitat, Agricultural Land, and Developed. The total acres of each vegetation type within the study area are noted along with the total acres of each vegetation type which fall within the habitat creation and enhancement areas of the project site. These vegetation communities are described further below and mapped on an aerial photograph in Figure 4. In addition, a floral compendium of all the species noted at the site is included in Table 1.

3.2.1.1 Southern Cottonwood-Willow Riparian Forest (61330)

This series is characterized by tall, open, broadleafed winter-deciduous riparian forests dominated by various tree species. Understories usually are shrubby willows. Sub-irrigated and frequently overflowed lands along rivers and streams. The dominant species require moist, bare mineral soil for germination and establishment. This is provided after flood waters recede, leading to uniform-aged stands in this seral type. This series occurs along perennially wet stream reaches of the Tranverse and Peninsular ranges, from Santa Barbara County south to Baja California Norte and east to the edge of the deserts.

The Southern Cottonwood Willow Riparian Forest community at the site is present within the San Diego River basin area. This community is the most dominant within the project boundaries and consists of a well-developed tree canopy and a persistent shrub and herbaceous layer. The dominant tree species include arroyo willow (*Salix lasiolepis*), Goodding's black willow (*Salix gooddingii*), and Fremont's Cottonwood *(Populus fremontii fremontii)*. Mulefat *(Baccharis salicifolia)* dominates the shrub stratum and broad-leaved cattail *(Typha latifolia)* and bulrush *(Scirpus californica)* are present within portions of the active channel. Other areas of understory include tall yellow evening primrose (*Oenothera elata* ssp. *hirsutissima*), baby sun rose (*Aptenia cordifolia*), and wild celery (*Apium graveolens*).

Common wildlife species associated with Southern Cottonwood Willow Riparian Forest include the common yellowthroat (*Geothlypis trichas*), ruby-crowned kinglet (*Regulus calendula*), and house finch (*Carpodacus mexicanus*). This habitat also supports such sensitive species as the two-striped garter snake (*Thamnophis hammondii*), least Bell's vireo *(Vireo bellii ssp. pusillus)*, southwestern willow flycatcher *(Empidonax traillii ssp. extimus)*, and Cooper's hawk *(Accipiter cooperii)*.

Oberbauer and Vanderwier (1991) report a 61 percent reduction in riparian woodland communities in San Diego County since the pre-European era. Southern Cottonwood Willow Riparian Forest is considered sensitive by the CDFG and, because it can be classified as a wetland.

The Southern Cottonwood Willow Riparian Forest community comprises a total of **15.7 acres** within the study area, but this community will not be adversely affected by project implementation. In turn, the existing Southern Cottonwood Willow Riparian Forest will actually be enhanced (10 acres) and expanded (17 acres) as a result of this restoration project.

3.2.1.2 Southern Willow Scrub (63320)

The Southern Willow Scrub community is present along the eastern pond margin and within a drainage that enters the site from the southern central portion of the property. This community is rather similar to the Southern Cottonwood Willow Riparian Forest but is typified by shorter shrubby trees and a higher component of mulefat and a more prevalent herbaceous understory. Immature Southern Willow Scrub is present onsite as part of the Metropolitan Transit Development Board (MTDB) Mission Valley East Light Rails mitigation area, and is being actively managed (planted, irrigated, etc.). Approximately 6.0 acres of this area was planted and 0.66-acre has been naturally recruited adjacent to the planted and irrigated area.

The Southern Willow Scrub community comprises a total of approximately **8.48 acres** within the study area, including the mitigation area which is not a part of this project. No Southern Willow Scrub is anticipated to be impacted by project implementation and 3 acres of existing Southern Willow Scrub will be enhanced.

3.2.1.3 Freshwater Marsh (52400)

This series is dominated by perennial, emergent monocots to four to five meters tall, often forming completely closed canopies. *Scirpus* and *Typha* dominated types and their environmental and floristic distinctions require clarification. Plants are grown in quiet sites (lacking significant current) permanently flooded by fresh water (rather than brackish, alkaline, or variable). Prolonged saturation permits accumulation of deep, peaty soils. Occasionally found along the coast and in coastal valleys near river mouths and around the margins of lakes and springs.

The areas of Freshwater Marsh present onsite are located in a fringe around the pond and within the understory of much of the Southern Cottonwood Willow Riparian Forest and Southern Willow Scrub. The dominant vegetation consists of broad-leafed cattail *(Typha latifolia),* yerba mansa (*Anemopsis californica*), California bulrush *(Scripus californica)*, and rush (*Juncus* sp.).

Common wildlife species associated with Freshwater Marsh habitats include the American coot (*Fulica americana*), common moorhen (*Gallinula chloropus*), song sparrow (*Melospiza melodia*), and great egret (*Ardea alba*). This habitat also supports

such sensitive species as the osprey (*Pandion haliaetus*) and the tri-colored blackbird (*Agelaius tricolor*).

Oberbauer and Vanderwier (1991) report a 91 percent reduction in Freshwater Marsh community in San Diego County since the pre-European era and is considered a sensitive wetland habitat.

The Freshwater Marsh community comprises approximately **3.72 acres** within the study area and only 0.45 acres of freshwater marsh will be removed to allow the expansion of the pond and the installation of a trail. A combination of freshwater marsh and riparian woodland habitat creation measuring approximately 17 acres will be a major component of this restoration project.

3.2.1.4 Open Water-Freshwater (13140)

A large freshwater pond is present within the San Diego River basin in the north central portion of the site. This pond is likely a remnant of past mining activities conducted onsite. The pond receives surface runoff from the immediate area and overflow from the San Diego River.

Open water habitat is of great ecological value for migratory and resident waterfowl and many other wildlife species dependent on a year-round source of water.

The freshwater pond at the site measures approximately **8.44 acres** and is considered jurisdictional "waters of the U.S" by the ACOE and jurisdictional wetland by the CDFG. The open water habitat will be expanded approximately 7.0 acres as a result of project implementation.

3.2.1.5 Tamarisk Scrub (63810)

The areas of tamarisk scrub present onsite are dominated by the nonnative and highly invasive saltcedar *(Tamarix ramosissima)*. This weedy vegetation community is usually a monoculture of tamarisk that has supplanted native wetland plant species. Tamarisk usually invades following habitat disturbance. A few of the areas classified as Tamarisk Scrub are located adjacent to the Southern Willow Scrub and Southern Cottonwood Willow Riparian Forest habitats.

Approximately **4.23 acres** of Tamarisk Scrub are present within the study area of which 3.61 acres will be converted to riparian and wetland habitat as a result of the restoration component of this project. The remaining acreage of Tamarisk Scrub will be removed as part of the habitat enhancement component of the project to prevent re-infestation.

3.2.1.6 Diegan Coastal Sage Scrub (32510)

Coastal sage scrub is one of the major shrub-dominated vegetation communities within California. Sage scrub species have adaptations that allow for the occurrence of these species on dry south-facing sites with shallow soils (e.g., leaf drop during drought conditions, shallow root systems). There are four floristic associations within the coastal sage scrub formation, all occurring within distinct geographical ranges along the California Coast. Oberbauer (1996) recognizes coastal and inland forms of the Diegan association. Subassociations of Diegan Coastal Sage Scrub are dominated by a variety of different species depending upon site-specific topographic, geographic, and edaphic conditions.

The Diegan Coastal Sage Scrub community is limited to two small inclusions located in the northwest corner of the site and the northeast corner of the site. The Coastal Sage Scrub community located in the northwest corner has been classified as disturbed due to the sparse shrub story and abundance of non-native herbaceous species such as black mustard *(Brassica nigra)*, horehound *(Marrubium vulgare)*, crown daisy *(Chrysanthemum coronatum)*, and filaree *(Erodium cicutarium)* amid the native shrub story consisting predominantly of California buckwheat *(Eriogonum faciulatum)*. The undisturbed Diegan Coastal Sage Scrub has native understory species such as *(Ambrosia psilostachya)*, weak-leaf bursage *(Ambrosia condertifolia)*, horseweed *(Conyza canadensis)*, and California aster *(Lessingia filangifolia var. filangifolia)*.

The Diegan Coastal Sage Scrub community is considered a sensitive habitat by several agencies, including the CDFG, because this community supports a number of sensitive species.

The Diegan Coastal Sage Scrub community comprises approximately **0.81-acre** within the study area, of which 0.58-acre has been classified as disturbed. Approximately 0.22 acres of Diegan Coastal Sage Scrub and 0.08 acres of disturbed sage scrub will be removed to install riparian and wetland habitat; however, approximately 16 acres of Diegan Coastal Sage Scrub will be created as an upland buffer.

3.2.1.7 Coastal Scrub – Baccharis Scrub (32000)

The Coastal Scrub community is found in the eastern portion of the site and a few inclusions in the northwest corner of the property. This community falls under the general classification of Coastal Scrub, because of the dominance of broom baccharis (*Baccharis sarothroides*) and lack of other sage scrub indicator species. This vegetation series does not function as Coastal Sage Scrub and does not support sensitive species such as the California Gnatcatcher. Furthermore, there are no known reports that document California Gnatcatcher nesting in *Baccharis sarothroides*. Instead, this vegetation series represents a monotypic stand of broom baccharis that serves as a transition from the riparian scrub habitats and the upland coastal sage scrub habitats found at the site. The herbaceous layer was comprised of mostly non-native herbaceous species such as black mustard *(Brassica nigra)*, horehound *(Marrubium vulgare)*, and non native grass species *(Poa sp.)*.

The Baccharis Scrub community comprises approximately **4.73 acres** within the study area of which 4.06 acres will be converted into riparian and wetland habitat.

3.2.1.8 Non-native Grassland (42200)

Non-native Grassland community on the site is dominated by nonnative grasses including ripgut grass (*Bromus diandrus*), wild oats (*Avena* sp.), smooth brome (*Bromus hordaceus*), and foxtail chess (*B. madritensis* ssp. *rubens*). A few scattered trees were also present in this community including Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), Mexican elderberry (*Sambucus mexicana*), and willow species (*Salix* sp.). Despite these species having a wetland indicator status of Facultative or higher, the limited expanse of these trees within the non-native grassland matrix does not constitute a wetland habitat type because the overall vegetation composition does not meet wetland classification requirements (greater than 50% hydrophytic vegetation). (Other species observed within this community include false indigo (*Amorpha fruticosa*), calabazilla (*Cucurbita foetidissima*), and four-wing saltbush (*Atriplex canescens*).

The Non-native Grassland community is the most dominate community at the site and comprises approximately **24.85 acres** within the study area. Approximately 17.5 acres of Non-native Grassland will be converted to riparian and wetland habitat. A total of 0.12-acre of Non-native Grassland is located in the storage area and will be graded for development after project completion.

3.2.1.9 Eucalyptus Woodland (11100)

The mature Eucalyptus Woodland community is limited to a small area adjacent to Chubb Lane in the northeastern quadrant of the property. An understory of shade-tolerant grasses, forbs, and small shrubs is present. Because of their height, eucalyptus trees can provide important nesting and perching habitat for many raptors.

The Eucalyptus Woodland Community represents **0.41-acre** of area within the study area and 0.15-acre will be restored to riparian habitat.

3.2.1.10 Disturbed Habitat (11300)

The areas classified as Disturbed Habitat consist of open areas that have been altered through grading or other activities and now support primarily nonnative species. Plants present within these areas include black mustard (*Brassica nigra*), doveweed (*Eremocarpus setigerus*), Russian thistle (*Salsola tragus*), and pigweed (*Amaranthus albus*). A small swath of Disturbed Habitat is located within the MTDB mitigation boundaries and will subsequently be planted with native species.

The area of Disturbed Habitat within the study area measures approximately **6.0 acres** and 3.96 acres of the Disturbed Habitat will be restored to riparian and wetland habitat.

3.2.1.11 Agricultural Land - Row Crops (18320)

An active cropland is located in the southwestern portion of the site which continues offsite. In addition, the project boundaries include a small swath of agricultural land in the southeastern portion of the site.

The area of agricultural land within the study area measures approximately **13.52 acres** of which 5.06 acres is located in the restoration area and will be converted to riparian and wetland habitat and 7.69 acres is located in the storage stockpile area.

3.2.1.12 Urban/Developed (12000)

The area classified as urban and developed is located in the northeastern portion of the property and measures approximately **1.47 acres**. This development may be graded and used as part of the stockpile and material storage area.

3.3 ZOOLOGICAL RESOURCES

3.3.1 Fauna

Wildlife species commonly associated with the vegetation communities that occur within and adjacent to the proposed project area were documented by P&D biologists during the February 2004 biological reconnaissance survey. Wildlife species were detected either through direct observation or indirectly through calls, tracks, scat, and other signs. The wildlife species observed or detected onsite are typical of grasslands, coastal sage scrub, riparian areas, and marshes in San Diego County. Sensitive species observed or potentially occurring are discussed in the Sensitive Biological Resources section, below. For a list of all wildlife species detected within and adjacent to the proposed project area, please refer to Table 2.

3.3.1.1 Birds

A variety of birds were observed at the site and the well-established riparian and freshwater marsh habitats provide excellent foraging and nesting sites for song birds, raptors, and other riparian and waterfowl species. The habitat within the project boundaries would support a large and diverse number of resident and migratory bird species; however, due to the timing and limited number of surveys, many species expected or known to occur were not detected. Bird species most commonly observed in the coastal scrub and riparian habitats include house finch (*Carpodacus mexicanus*), mourning dove (*Zenaida macroura*), American kestrel (*Falco sparverius*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), ash-throated flycatcher (*Myiarchus cinerascens*), violet-green swallow (*Tachycineta thalassina*), western kingbird (*Tyrannus verticalis*), white-crowned sparrow (*Zonotrichia leucophrys*), California towhee (*Pipilo crissalis*), wrentit (*Chamaea fasciata*), and bushtits (*Psaltriparus minimus*). In addition, brown-headed cowbird (*Molothrus ater*) was seen in coastal scrub and riparian woodland habitats. Brown-headed cowbirds are invasive and threatening to native avian species.

Birds observed flying overhead include red-tailed hawk (*Buteo jamaicensis*), sharp-shinned hawk (*Accipiter striatus*), great blue heron (*Ardea herodias*), and great egret (*Ardea alba*). Additionally, red-shouldered hawk (*Buteo lineatus*), American crow (*Corvus brachyrhynchos*), and common raven (*Corvus corvax*) were observed.

Species observed in the pond include mallard (*Anas platyrhynchos*), American coot (*Fulica Americana*), ruddy duck (*Oxyura jamaicensis*), northern shoveler (*Anas clypeata*), pied-billed grebe (*Podilymbus podiceps*), and cinnamon teal (*Anas cyanoptera*). Common yellowthroat (*Geothlypis trichas*) and song sparrow (*Melospiza melodia*) were observed in the freshwater marsh habitat.

3.3.1.2 Mammals

California ground squirrel (*Spermophilus beecheyi*) was observed in the disturbed habitat areas. San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) and cottontail rabbit (*Sylvilagus audubonii*) were observed in Diegan Coastal Sage Scrub. Coyote (*Canis latrans*) scat indicated the presence of this predator onsite. Additionally, domestic dog (*Canis familiaris*) were observed on the site. Other species, such as raccoon (*Procyon lotor*) and Virginia opossum (*Didelphis virginiana*), are likely to be present on the site.

3.3.1.3 Reptiles

Side-blotched lizards (*Uta stansburiana*) were observed in the Diegan Coastal Sage Scrub and Tamarisk Scrub. Western fence lizards (*Sceloporus occidentalis*) are likely to occur in the coastal scrub habitats. The area also likely supports habitat for several species of snakes including San Diego gopher snake (*Pituophis melanoleucus*), coastal rosy boa (*Lichanura trivirgata roseofusca*), and the southern Pacific rattlesnake (*Crotalus viridis helleri*).

3.3.1.4 Amphibians

Bullfrogs (*Rana catesbeiana*) were heard in the marsh onsite during the RECON surveys. The area is suitable habitat for several species, including the pacific treefrog (*Hyla regeilla*), the California treefrog (*Hyla cadaverina*), and western spadefoot (*Scaphiopus hammondii*).

3.3.1.5 Fish

Although no fish species were observed during biological surveys, common freshwater pond species are likely to occur.

3.3.1.6 Invertebrates

The area likely supports a wide variety of terrestrial and aquatic invertebrates. Common invertebrate species were detected at the project site including darkling beetle *(Eleodes sp.)*, cricket *(Stenopelmatus sp.)*, honey bee *(Apis mellifera)* and a cabbage white butterfly *(Pieris rapae)*. In addition, a blue-eyed darner *(Rhionaeschna multicolor)*, various spider species, and argentine ant *(Iridomyrmex humilis)* were noted in the project area.

4.0 SENSITIVE RESOURCES

4.1 SENSITIVE FLORA

P&D reviewed the occurrences reported in the CNDDB's and the CNPS databases within the *El Cajon Mountains, California* USGS quadrangle. In addition, the species covered under the City of Santee's MSCP subarea plan were evaluated for the likelihood of occurrence within the project area. No focused surveys for sensitive plant species were conducted, but one sensitive plant species was observed within the project boundaries during the general surveys.

A complete list of special status species that were evaluated is provided in Table 3, along with their listing status, habitat associations, and their probability for occurrence within the project area.

4.1.1 Sensitive Plant Species Observed Onsite

4.1.1.1 Smooth Tarplant

Smooth tarplant (*Centromadia [Hemizonia] pungens*) is federally listed species of concern, a CNPS List 1B species and covered under the City of Santee's draft MSCP subarea plan. This plant is known from Riverside, San Bernardino, and San Diego Counties. Smooth tarplant occurs in alkaline areas and is found in grasslands, chenopod scrub, meadows, playa, and riparian woodlands. This plant is an annual herb that blooms April through September. Smooth tarplant has spine-tipped leaves and yellow flowers. Smooth tarplant has been reported onsite by RECON and Craig Reiser. A population was recently mapped on the Santee Trolley stop property to the south. This population is reported to extend to the area directly north and west of the active construction area. A few remnants are also reported to occur on the eastern portion of the site near Edgemoor Hospital (RECON, 2002a).

4.1.2 Sensitive Plant Species with Potential to Occur Onsite

No other sensitive or narrowly endemic species were determined to have the potential to occur within the project boundaries.

4.2 SENSITIVE FAUNA

P&D reviewed the occurrences reported in the CNDDB's database and evaluated the species covered under the MSCP in conjunction with habitat observations to identify sensitive or special status wildlife species that could potentially reside or utilize the project area. Six sensitive species were detected during the surveys and are discussed in further detail below. In addition, sixteen species determined to have at least a moderate potential to occur in the project area are noted.

A complete list of special status species that were evaluated is provided in Table 4, along with their listing status, habitat associations, and the probability for occurrence within the project area.

4.2.1 Sensitive Wildlife Species Observed Onsite

4.2.1.1 Least Bell's Vireo

The least Bell's vireo *(Vireo bellii pusillus)* is a federally and state-listed endangered species and is covered under the City of Santee draft MSCP subarea plan. It inhabits low riparian forests, woodlands, and scrub communities with relatively dense undergrowth, typically dominated by willow, baccharis, and mesquite. This subspecies of Bell's vireo ranges from Riverside County south into Baja California, Mexico, with a few individuals spreading as far north as California's central valley. In San Diego County, the least Bell's vireo is a breeding summer visitor.

RECON reported one least Bell's vireo in the Southern Cottonwood Willow Riparian Forest northeast of the pond (RECON, 2002).

4.2.2.2 Coastal California Gnatcatcher

The coastal California gnatcatcher *(Polioptila californica californica)* is a federally listed threatened species, is considered a California state species of special concern, and is covered under the City of Santee's draft MSCP subarea plan. It inhabits low-growing coastal sage scrub in arid washes and on mesas and slopes. This subspecies of the California gnatcatcher ranges from Los Angeles County south to northwestern Baja California, Mexico, typically in elevations below 1640 feet (500 meters). Within San Diego County, the coastal California gnatcatcher is a breeding resident.

RECON detected one coastal California gnatcatcher on the edge of the southern cottonwood willow riparian forest on the northeastern edge of the site and P&D observed one along the northern property boundary in the northeastern portion of the site during a December 2004 wetland delineation.

4.2.2.3 Yellow Warbler

The yellow warbler *(Dendroica petechia)* is considered a California state species of special concern and covered under the City of Santee's draft MSCP subarea plan. It inhabits riparian forests, woodlands, and scrub communities that are typically dominated by willows, cottonwoods, aspens, sycamores, and alders. This species ranges from northern Alaska, across Canada, throughout the United States, and into northern South America. In San Diego County, the yellow warbler is a breeding summer visitor.

RECON observed one yellow warbler in the Southern Cottonwood Willow Riparian Forest.

4.2.2.4 Cooper's Hawk

The Cooper's hawk *(Accipiter cooperii)* is considered a California state species of special concern and covered under the City of Santee's draft MSCP subarea plan. This medium sized raptor ranges throughout most of the United States. It is considered an uncommon resident during the breeding season in southern California, with numbers increasing in winter. This hawk mainly breeds in oak and willow riparian woodlands but will use Eucalyptus trees. This hawk forages primarily on songbirds but is also known to eat small mammals.

RECON observed one Cooper's hawk flying over the site.

4.2.2.5 San Diego Black-tailed Jack Rabbit

The San Diego black-tailed jack rabbit *(Lepus californicus bennettii)* is considered a California state species of special concern. This species can be found throughout southern California, with the exception of the high altitude mountains. It is strictly herbivorous, preferring habitat with ample forage such as grasses and forbs. The San Diego black-tailed jackrabbit breeds throughout the year with the greatest number of births occurring from April to May. This species is generally solitary, except when mating and raising young.

Three San Diego black-tailed jack rabbits were observed onsite in the non-native grassland habitat by RECON in 2002.

4.2.2.6 American White Pelican

The American white pelican *(Pelecanus erythrorhynchos)* is considered a California species of special concern. The species formely nested on large lakes throughout California but now is primarily found on the Salton Sea. The birds observed in San Diego County are primarily transient species. The pond at the site is not large enough to support a breeding colony of American White Pelicans.

P&D biologists observed a colony flying over the site during a wetland delineation in December 2004.

4.2.2 Sensitive Wildlife Species with Potential to Occur Onsite

The following species have been determined to have a moderate or higher probability of occurring at the project site primarily based on existing natural history and occurrence data and the presence of suitable habitat. Additional habitat data and a further assessment of the occurrence potential are included in Table 4.

The following sensitive amphibian species have the potential to occur onsite: arroyo toad *(Bufo californicus)* (Federally Endangered [FE]/ state species of special concern [SSC]) and western spadefoot toad *(Spea hammondii)* (SSC).

The following reptile species have the potential to occur onsite: silvery legless lizard *(Anniella pulchra pulchra)* (SSC); Coronado skink (*Eumeces skiltonianus interparietalis*)

(SSC); Coast Range newt (*Taricha torosa torosa*) (SSC); southwestern pond turtle (*Emys [=Clemmys] marmorata pallida*) (Federal Species of Concern [FSC] and SSC; Belding's orange-throated whiptail *(Aspidoscelis hyperythra beldingi)* (FSC and SSC); and two-striped garter snake *(Thamnopis hammondii)* (FSC and SSC).

The following sensitive avian species have the potential to occur onsite: white-tailed kite (*Elanus leucurus*) (California Fully Protected [CFP] - nesting); northern harrier (*Circus cyaneus*) (SSC - nesting); tricolored blackbird (*Agelaius tricolor*) (FSC and SSC); loggerhead shrike (*Lanius ludovicianus*) (SSC); southwestern willow flycatcher (*Empidonax traillii extimus*) (FE, State Endangered [SE]); southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) (SSC); yellow-breasted chat *(Icteria virens)* (SSC); and western bluebird *(Sialia mexicana)*.

The following mammal species have the potential to occur onsite: northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) (SSC) and San Diego desert woodrat *(Neotoma lepida intermedia)* (SSC).

4.3 WILDLIFE MOVEMENT CORRIDORS

Wildlife movement corridors are areas that connect suitable wildlife areas in a region that are otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors for wildlife travel. These corridors provide access to mates, food, and water, and allow the dispersal of individuals away from high population density areas, and facilitate genetic exchange between populations. The proposed project area is surrounded by development; however, the San Diego River basin runs from east to west and provides a movement corridor for birds, amphibians, fish, and some mammals, though the presence of roads across the basin may hinder movement to some extent. The draft Santee Subarea Plan of the San Diego Multiple Species Conservation Program identifies the San Diego River corridor as an east-west wildlife movement corridor.

4.4 SENSITIVE HABITATS

Sensitive habitats are those that are considered rare within the region, are considered sensitive by the City of Santee, the County of San Diego and the CDFG. Below is a tabular summary of the habitats present within the project boundaries that may be subject

to disturbance and the acreage that will be created or enhanced during the restoration phase of the project.

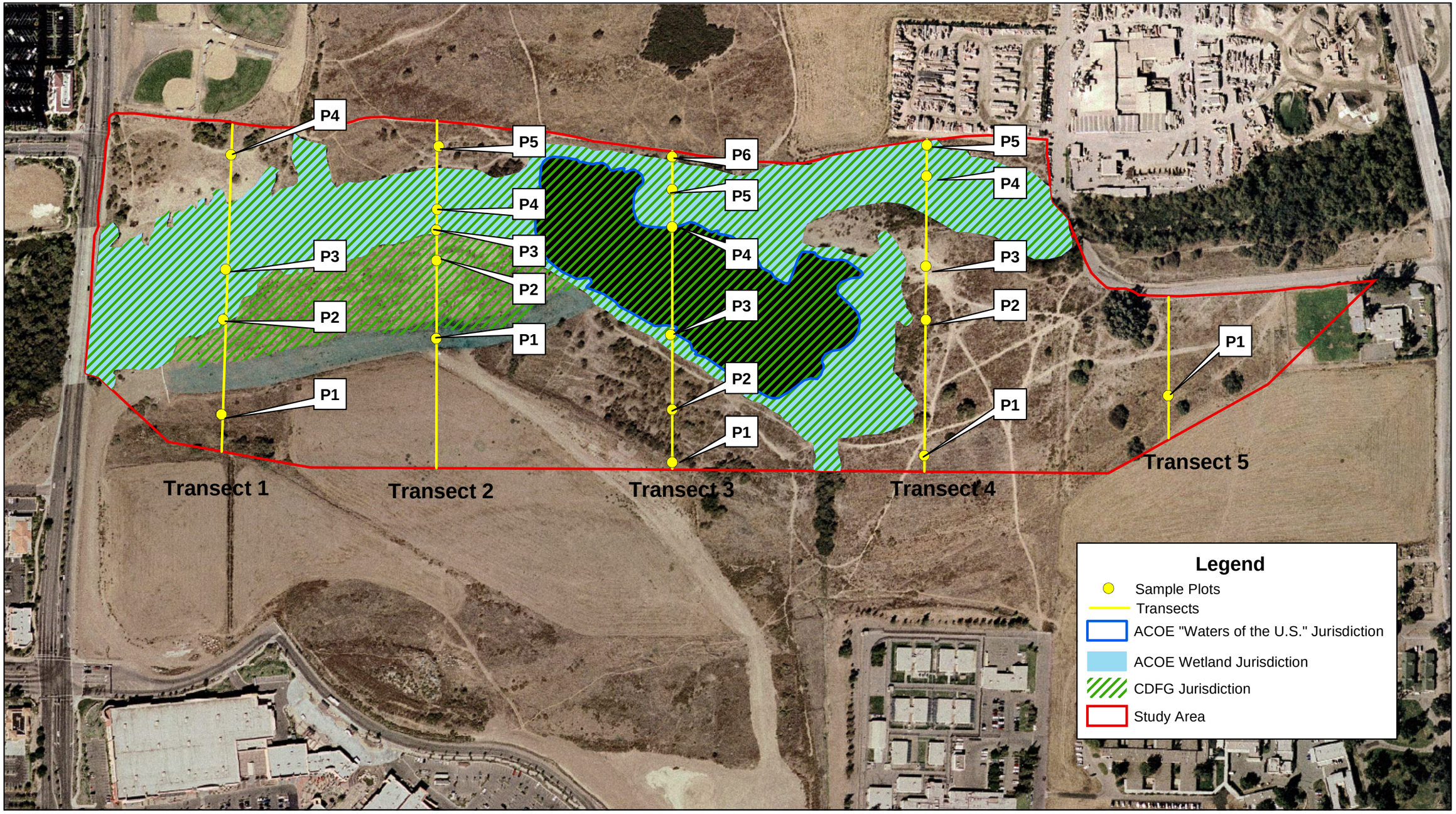
Habitat Type	Total Acreage In Study Area	Total Acreage In Project Area	Total Acreage to be Created	Total Acreage at End Project	Total Acreage to be Enhanced
Southern Cottonwood-Willow Riparian Forest	15.73	0	17.0	32.73	10.0
Southern Willow Scrub	8.48	0	0	8.48	3.0
Freshwater Marsh	3.72	0.45	17.0	20.27	0
Open Water	8.44	0	7.0	15.44	0
Diegan Coastal Sage Scrub	0.81	0.30	16.0	16.51	0
Non-native Grassland	24.85	17.62	0	7.32	0

4.5 JURISDICTIONAL WETLANDS AND "WATERS OF THE U.S."

P&D found a total of **29.71 acres** within the area evaluated that meet ACOE criteria for jurisdictional "waters of the United States" which includes the 8.44-acre pond. Additionally, **21.27 acres** of this amount would be considered jurisdictional wetlands and represents the San Diego River basin and Freshwater Marsh and Southern Willow Scrub vegetation surrounding the pond. In the area studied, CDFG jurisdiction extends to the limits of the associated riparian canopy, including the Southern Willow Scrub habitat established in the existing mitigation area (6.66 acres), and incorporates the open water habitat (8.44 acres) and wetlands subject to ACOE jurisdiction (21.27 acres). This amounts to approximately **36.37 acres** of CDFG jurisdictional wetlands within the study area. These jurisdictional areas are illustrated on Figure 5.

4.6 MULTIPLE SPECIES CONSERVATION PROGRAM (MSCP)

The MSCP is a cooperative effort by the City of Santee and 13 other jurisdictions in southwestern San Diego County to implement a regional habitat conservation plan consistent with the California Natural Communities Conservation Planning Act of 1991. The MSCP is the Natural Communities Conservation Plan (NCCP) for the area, consistent with the federal Endangered Species Act (ESA) Section 4(d) rule that defines conditions under which "take" of a species could occur without violations of the ESA. The MSCP creates a new process for the issuance of federal and State permits and other authorizations under the ESA and California Endangered Species Act (CESA) and the area's NCCP.



Jurisdictional Wetlands and "Waters of the U.S."

Figure 5

P&D Environmental Services

In April 2002, the City of Santee submitted a draft Subarea Plan to the United States Fish and Wildlife Service (USFWS) and CDFG for approval. The Subarea Plan delineates Multiple Habitat Planning Area (MHPA) boundaries and contains policies and directives for each MHPA Subarea. MHPAs are largely composed of core biological resource areas and regional linkages leading to biological core areas within existing reserves and parks. All activities must avoid disturbing the habitat of MSCP covered species and wetlands. If avoidance is infeasible, mitigation will be required.

This report has accounted for all the sensitive species covered under the draft Subarea Plan and all other biological resource considerations.

The proposed project lies entirely within the proposed MHPA planned preserve area. Reference maps from www.sangis.org, which illustrate these areas are included in Attachment B.

5.0 PROJECT IMPACTS AND MITIGATION MEASURES

5.1 TYPES OF IMPACTS

Impacts to biological resources are normally classified as direct, indirect, or cumulative. The following discussion provides a brief description of each of these types and provides typical examples where each would apply.

5.1.1 Direct Impacts

Direct impacts are often the most clear and involve the "taking" of habitats and/or species that are considered sensitive or otherwise unique; these impacts are typically quantified and presented in terms of acres of habitat lost or number of individuals removed/displaced. Mitigation ratios or other types of acquisition/preservation provisions are typically used to identify the appropriate level of compensation.

5.1.2 Indirect Impacts

Indirect impacts to biological resources are far less straightforward to evaluate, as they must be anticipated rather than measured, and are not always quantifiable. Indirect impacts most often result from the long-term, chronic effects of proximal anthropogenic disturbance, which, over time, tends to promote the incremental deterioration of adjacent (non-directly impacted) habitats through such phenomena as people/pet encroachment,

noise/lighting harassment, erosion, promotion of nonnative or noxious plant material, and changes in water quality and water availability. The magnitude of such indirect "edge" effects generally varies, depending on the size and type of project, the intensity of the land use, and the amount of "edge" relative to preserve area. If significant, indirect effects can result in a substantial shift in vegetation type and plant diversity, and promote the displacement of native fauna.

5.1.3 Cumulative Impacts

Cumulative impact assessment must consider the overall impacts of the proposed project, in addition to, and in the face of, other past, present, and foreseeable future activities. In this case, the incremental, collective effect of several non-significant activities can often have cumulatively significant impacts on local or regional biological resources, particularly if projects have not been designed in conformance with an approved resource protection plan or similar conservation plan. Cumulative impacts may be avoided, where feasible, by implementing an appropriate mitigation plan and/or by contributing to the establishment of a viable preserve system.

5.1.4 Temporary Impacts

Temporary impacts generally result in adverse but only transient losses of biological resources and their functions and values. In these cases, impacted areas may recover naturally over time, or be restored relatively quickly by more active means. Typical examples of temporarily impacted areas are minor fill slopes, pipeline trenches, or other areas that allow for the successful recolonization of preexisting native plant communities and their attendant animal species.

5.1.5 Permanent Impacts

Permanent impacts represent irreversible adverse changes to biological resources to the extent that recovery of preexisting biological functions and values cannot normally be achieved passively. Typical examples of permanent impacts to biological resources include habitat displacement resulting from the construction of buildings, roads, or other permanent, non-natural landscape features.

5.2 PROJECT IMPACTS

Potential impacts to sensitive vegetation communities, plant species, and wildlife species resulting from the proposed project are discussed below. The impact acreage was

calculated based on the current limits of grading for the proposed sand excavation. Figure 3 indicates the grading limits for the four areas of interest.

5.2.1 Direct Impacts to Vegetation

The following is a summary of the vegetation community acreage within the disturbance footprint of the project including the four areas of excavation, stockpile/storage area, and the 100-foot upland buffer which will be graded. These impacts, with the exception of the stockpile area and trail creation, are considered temporary because they will be mitigated for as part of the habitat creation and restoration phase of the project. The majority of the acreage that will be impacted will be converted to habitat of higher quality, function, and value as a result of project implementation.

The conversion of 17.62 acres of non-native grassland into wetland and riparian habitat will be mitigated for by the creation of 16 acres of coastal sage scrub habitat with a native grassland understory component. This will increase the area that raptors have to forage at the site and increase the functionality and diversity of the sage scrub habitat. There will still be approximately 7.32 acres of remaining non-native grassland habitat not impacted by the project within the study area, which will reduce impacts to raptors and other grassland dependent species. It should be noted that due to the presence of California gnatcatcher at the site, it will be far more beneficial to install coastal sage scrub habitat as an upland buffer versus grassland habitat. In addition, the creation of coastal sage scrub versus grassland habitat as an upland buffer to the wetland habitats is beneficial in that it protects the wetland resources to a greater extent.

Vegetation Community Type	**Area 1**	**Area 2**	**Area 3**	**Area 4**	**Storage Area**	**Upland Buffer**	**TOTAL**
Southern Cottonwood-Willow Riparian Forest	0	0	0	0	0	0	**0**
Southern Willow Scrub	0	0	0	0	0	0	**0**
Freshwater Marsh *(pond expansion and trail)*	0	0.45	0	0	0	0	**0.45**
Diegan Coastal Sage Scrub	0	0	0.02	0.16	0	0.12	**0.30**
Baccharis Scrub	0	0	3.33	0.08	0	0.65	**4.06**
Non-native grassland	2.5	0	2.29	3.17	0.12	8.56	**7.96**
Agricultural Land	2.15	0.07	0	0	7.69	2.84	**12.75**
Disturbed Habitat	1.78	0.29	0.86	0.01	0.68	1.02	**4.64**
Tamarisk Scrub	0	2.08	0	0.60	0	0.93	**3.61**
Eucalyptus Woodland	0	0	0.03	0	0	0	**0.03**

5.2.2 Direct Impacts to Wildlife Corridors

The proposed project area is located within the San Diego River corridor, which currently acts as a wildlife migration corridor for a variety of animal species including reptiles, birds, and mammals. The San Diego River corridor facilitates wildlife movement from the coast to inland areas by maintaining habitat connectivity through San Diego County. Because the proposed project area is situated within this river corridor, habitat preservation is extremely important to ensure the health of both resident and migratory species and the ecosystems in which they live.

For the most part, the general wildlife movement corridor at the site can be defined by the boundaries of the native habitat types, including non-native grassland habitat, within and adjacent to the San Diego River. The average width of the corridor within the study area measures approximately 900 feet across. Larger mammals, such as mesopredators, may use the adjacent properties traverse along the San Diego River corridor because within the study area the pond extends almost to the northern and southern boundaries. As a result of project implementation, the width of the wildlife corridor for birds and amphibians is expected to increase. In general, the project implementation will not affect the movement of mammals because only small mammals and mesopredators are expected to utilize the site due to the lack of connectivity to other larger habitat areas.

5.2.3 Direct Impacts to Special Status Species

5.2.3.1 Sensitive Plant Species

Smooth tarplant (*Centromadia [Hemizonia] pungens*) has been reported to occur at the site, but because no focused sensitive plant surveys have been conducted for the proposed project to map out the distribution of the species, potential direct impacts to sensitive plant species cannot be adequately analyzed. Thus, before impacts to sensitive plants species can be assessed, focused surveys for those species with a potential to occur within and adjacent to the proposed project area should be conducted. Direct impacts to federally or state-listed endangered or threatened species, narrow endemics, or other rare plant species would be considered significant.

5.2.3.2 Sensitive Wildlife Species

Several sensitive wildlife species are known to occur within and adjacent to the proposed project area. During the biological reconnaissance surveys, the Cooper's hawk *(Accipiter cooperii),* least Bell's vireo *(Vireo bellii ssp. pusillus),* California gnatcatcher *(Polioptila californica californica),* yellow warbler *(Dendroica petechia),* San Diego black-tailed jack rabbit *(Lepus californicus bennettii)* have been observed within the project area. Impacts to the least Bell's vireo and other federally or state-listed species or narrow endemics would be considered significant. Although no focused sensitive wildlife surveys have been conducted for the proposed project, construction activities have been scheduled to take place outside of the traditional breeding season for these species (March 15 – September 15) based on the known presence of sensitive species within and adjacent to the project area. In addition, appropriate avoidance, minimization, and mitigation measures have been incorporated into the proposed project design features to reduce impacts to below a level of significance.

5.2.4 Direct Impacts to Wetlands

The following is a summary of the jurisdictional wetland acreage within the project boundaries. These numbers reflect the maximum area that would be directly impacted sand excavation and site restoration and enhancement activities.

Feature	ACOE "Waters of the US"	ACOE Wetlands	CDFG
Pond Area	0	0.42	0.42
San Diego River Basin (trail)	0.03	0.03	0.03
TOTAL (Acres)	**0.06**	**0.45**	**0.45**

5.2.5 Indirect Impacts

During construction, various stages of work have the potential to generate high activity levels of disturbance in proximity to native habitat. Fugitive dust, unauthorized human trespass, and erosion and sedimentation could adversely affect sensitive vegetation and sensitive plant species. Fugitive dust could potentially alter photosynthetic and respiration rates for plant species. Unauthorized human trespass, including construction equipment, could trample sensitive vegetation and plant species. Sedimentation could alter species composition and community-level processes. These indirect impacts are not expected to occur with implementation of standard dust abatement measures as required

by the Air Pollution Control District (APCD) and the placement of temporary construction fencing/flagging along the work zone. Implementation of standard Best Management Practices (BMPs) as required by the City of San Diego Jurisdiction Urban Runoff Management Plan, the Stormwater Ordinance, and National Pollution Discharge Elimination System (NPDES) regulations would avoid erosion and sedimentation impacts to adjacent sensitive vegetation.

Noise has often been identified as a "barometer" for activity levels and may possibly result in measurable influences on some wildlife. Construction-generated noise, if conducted during the breeding season, could adversely affect the breeding success of several wildlife species, especially sensitive avian species, particularly if noise levels reaching occupied habitat during these species' breeding seasons are in excess of 60 decibels. No focused sensitive wildlife surveys have been conducted for the proposed project. However, indirect impacts to sensitive wildlife species known to occur or with the potential to occur adjacent to the proposed project area (i.e. Cooper's hawk, least Bell's vireo) could occur from increased ambient noise levels resulting from construction equipment. Construction-generated noise impacts would be temporary, occurring only during the construction period.

This project incorporates a trail that traverses through wetland habitat, west of the pond. This would result in the loss of only 0.03-acre of habitat, but will allow for an access route through the area which will reduce encroachment by pedestrians into other habitat areas. The trail will have some "edge effect" in that it will generate some disturbance which will open the margins of the trail up to invasion by noxious weeds.

5.2.6 Cumulative Impacts

Impacts to a given project may contribute to the incremental loss of habitat or sensitive species in an area, even though they may not be significant on the site itself. If the project's incremental contribution is cumulatively considerable, the project's impacts may be considered significant cumulative impacts and would need to be addressed. The loss of the riparian and freshwater marsh habitats would be considered significant and will require additional mitigation requirements. However, all impacts to riparian and wetland habitats will be temporary, thus this project will not contribute to the cumulative loss of biological resources in the area. The loss of 0.30-acre of Diegan Coastal Sage Scrub will be mitigated for directly as this project proposes to create 16 acres of sage scrub habitat as an upland buffer to the wetland and riparian habitats. The conversion of 17.62 acres of non-native grassland to wetland and riparian habitats will contribute to a

cumulative loss of this habitat type in the region; however, this habitat type is very common and 7.32 acres of grassland within the study area will not be impacted by project implementation, thereby maintaining habitat function and supporting the species which currently occupy this habitat at the site.

5.3 MITIGATION MEASURES

In all instances, the preferred mitigation would be the avoidance of significant impacts to sensitive biological resources. For those instances where it is infeasible to completely avoid significant impacts, mitigation measures shall be implemented to reduce impacts to biological resources to below a level of significance. Thus, avoidance and minimization measures have been incorporated into the project design specifications to the extent feasible. The following guidelines include both general and resource-specific measures designed to mitigate all unavoidable impacts to sensitive biological resources to below a level of significance.

5.3.1 General Mitigation Measures

The following erosion control measures and Best Management Practices (BMPs) are included as part of the project design.

1. The construction contractor shall be informed of all biological constraints for the proposed project prior to its initiation. The contractor shall be responsible for all construction related impacts to sensitive biological resources outside of those identified in this report.

2. The construction contractor shall ensure that construction equipment is selected based on high energy-efficiency and low emission factors, is tuned and maintained to manufacture's specifications, and is shut off when not in use.

3. All sensitive habitat areas to be avoided shall be clearly designated on project maps provided to the contractor. These areas will be designated as "no construction" zones. In addition, a qualified biologist will visit the proposed project site prior to the onset of construction activities and flag all sensitive habitat areas to be avoided. The contractor will then flag the area of disturbance, which will be subject to approval by the biologist. The biologist will also evaluate the site to determine if additional fencing or other protection is required to shield biological resources from direct and/or indirect impacts.

4. Trees and shrubs greater than 4 feet in height that must be removed along access roads and staging areas shall be replaced in-kind following construction as part

of the revegetation plan. Construction workers shall be instructed not to park or place equipment outside of designated staging or work areas.

5. Silt fencing and/or straw waddles (other BMPs as established by the Project Engineer) shall be installed adjacent to grading activities to control erosion of soils and runoff. Nontoxic, erosion control spray may be used instead of silt fencing and straw waddles where appropriate.

6. A qualified biologist shall monitor the installation of erosion control devices to ensure that they are installed properly and that no sensitive biological resources are compromised during their installation.

7. The construction contractor shall monitor erosion control devices to ensure that they remain intact. Subsequent corrective measures shall be made when needed.

8. Vehicles shall remain on designated access roads at all times. No new temporary or permanent roads shall be constructed at any time.

9. Vehicle speeds on all unpaved roads shall be reduced to 15 miles per hour (mph) or less.

10. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code Section 23114. (Freeboard refers to the vertical space between the top of the load and the top of the trailer.)

11. Active sites should be watered at least two times per day to reduce the level of dust that could potentially disperse and cover adjacent sensitive habitat. Watering does not need to be done after heavy rain events or in areas where the soil is already damp.

12. All excavating and grading operations shall be suspended when wind speeds and/or gusts exceed 25 mph to protect adjacent sensitive habitat from dust resulting from construction activities.

13. Install wheel washers where vehicles transition from access roads to paved roads, or wash vehicles and any equipment leaving the project site during each trip.

14. No activities shall occur within drainages and wetland areas outside of the construction zone.

15. Fueling of construction equipment shall take place on existing paved roads and not within or adjacent to any drainages, wetlands, or native habitats. The construction contractor shall check all equipment for leaks prior to operation

and shall repair the equipment as needed. "Fueling zones" shall be designated on construction maps. A qualified biologist shall flag the limits of the "fueling zones" and shall evaluate the proposed fueling areas. These "fueling zones" shall be located at least 50 feet (15.2 meters) from all drainages and wetlands.

16. To the degree feasible, staging areas shall be located in disturbed habitat; however, the nature and location of this project may require that sensitive habitat areas be used. Impacts to sensitive areas will be minimized to the greatest possible extent. The approximate alternative locations of the staging area are depicted in Figure 3. If the location of these staging areas are changed, a qualified biologist shall evaluate the areas for sensitive biological resources prior to their use.

17. No more than one week prior to vegetation clearing, a qualified biologist shall conduct a migratory bird/raptor nest survey within the biological survey area (the proposed project site and a 200-foot [61.0-meter] buffer around the site) to ensure that no active nests are located within or adjacent to the proposed project area. Nesting season for raptors begins February 15 and the traditional breeding season for migratory birds begins March 15. If clearing starts after October, there is no need for nesting bird surveys.

18. If sensitive species are detected, appropriate mitigation measures must be implemented to offset any potential impacts to the species and their habitat. If LBV is detected, the construction should take place outside of the traditional breeding season (March 15 to September 15). If nesting raptors are detected, a suitable buffer around the nest should be implemented (as determined by a qualified biologist and in accordance with the requirements of the California Fish and Game Code) and the nest area avoided until after the young have fledged and the nest is no longer in use. P&D recommends that the applicant consult with the appropriate regulatory agency to further discuss mitigation measures if sensitive species are detected.

5.3.2 Resource-Specific Mitigation Measures

In addition to the general mitigation measures outlined above, the following resource-specific mitigation measures are recommended to avoid or minimize impacts to sensitive vegetation communities, plant species, wildlife species, and wetlands.

5.3.2.1 Sensitive Vegetation Communities

Due to the direct impact that will occur to the vegetation communities as a result of sand excavation and site restoration and enhancement activities, the following are recommended mitigation ratios for the proposed project impacts, assuming that all mitigation will take place in the within the MHPA:

Vegetation Community Type	Impacted Acreage	Mitigation Ratio	Required Mitigation Acreage	Proposed Creation Acreage	Proposed Enhancement Acreage
Southern Cottonwood-Willow Riparian Forest	0	3:1	0	17.0 (combined with Freshwater Marsh)	10
Southern Willow Scrub	0	3:1	0	0	3
Freshwater Marsh	0.45	3:1	1.35	17.0 (combined with riparian forest)	0
Diegan Coastal Sage Scrub	0.30	1.5:1	0.45	16.0	0
Baccharis Scrub	4.06	0:1	0	0	0
Non-native grassland	17.62	0.5:1	8.81	0	0
Agricultural Land	5.06	0:1	0	0	0
Disturbed Habitat	3.96	0:1	0	0	0
Tamarisk Scrub	3.61	0:1	0	0	0
Eucalyptus Woodland	0.15	0:1	0	0	0

The following would be required for the habitat creation and restoration efforts:

1. All revegetation areas shall be planted with species naturally occurring in the area and shall include upland, wetland, and erosion control components.

2. Revegetation efforts shall be directed at restoring the area to pre-project conditions with equivalent or better habitat value for listed species.

3. Only native California plant species found in the project area shall be used for the revegetation of the project site. Invasive, exotic weed, or nonnative species identified on the State of California Noxious Weed Species List or the California Exotic Pest Plant Council Exotic Pest Plants of Greatest Ecological Concern in California List shall not be used in the landscaping design for the revegetation efforts.

4. Seeds, cuttings, and potted plants shall be collected from local plant material as appropriate, supplements by material from native plant nurseries. The seed vendor shall furnish certification that the seed has been tested for purity by a certified seed laboratory and does not contain seed of any nonnative, invasive species.

5. All mulches used as part of the project construction or revegetation activities shall be free from invasive species seed.

6. Revegetated areas shall be subject to maintenance during plant establishment (i.e., nonnative species removal).

Indirect impacts to sensitive vegetation communities adjacent to the proposed project area resulting from project construction would be avoided or minimized through the installation of silt fence along all access roads that are adjacent to sensitive habitats, and avoidance of trees and shrubs along the access roads. Because silt fence installation is part of the project design features, no additional mitigation measure would be required for indirect impacts to sensitive vegetation communities.

5.3.2.2 Sensitive Plant Species

Indirect impacts to sensitive plant species with the potential to occur adjacent to the proposed project area could be avoided or minimized through the installation of silt fence along the limits of their distribution and through implementation of the dust control measures outlined in the General Mitigation Measures, above. If smooth tarplant is found adjacent to the project site, additional protection measures should be implemented such as the installation of exclusion fencing and biological monitoring activities to ensure that the population is not impacted.

5.3.2.3 Sensitive Wildlife Species

Direct impacts to wildlife species are not expected to occur as a result of the proposed project. A raptor nest survey will be conducted within a week of project construction initiation, direct impacts to terrestrial species such as Belding's orange-throated whiptail and the Cooper's hawk will be avoided or minimized. If sensitive wildlife species are detected within the project areas prior to and/or during construction activities, impact avoidance areas will be established to reflect MHPA development requirements. For example, if a Cooper's hawk nesting site is identified within or adjacent to the project area, an impact avoidance area measuring 300 feet from the nest will be established. Thus, no additional mitigation would be required for direct impacts to sensitive wildlife species.

Indirect impacts to sensitive wildlife species could potentially occur as a consequence of increased ambient noise levels resulting from construction activities. To avoid or minimize noise impacts to sensitive species such as the least Bell's vireo and southwestern willow flycatcher, all construction activities shall take place outside of the traditional breeding season (March 15 to September 15) for these species. If construction must occur during the breeding season, noise attenuation walls shall be installed to lower

the ambient noise level to at or below 60 decibels, and a qualified biological monitor shall be present during all construction activities to ensure that there are no active nests within or adjacent to the proposed project area. By incorporating these mitigation measures, indirect impacts to sensitive wildlife species would be mitigated to below a level of significance.

5.3.2.4 Minimization of Impacts to Wetlands

Due to the nature of this project, impacts to wetland areas will be unavoidable and thus appropriate mitigation measures will be taken to minimize impacts to the maximum extent practicable. Consultation with the ACOE and CDFG regarding the project impacts will establish necessary state and federal permit and mitigation requirements. At this time the City of Santee's MSCP Subarea Plan is not approved and therefore project mitigation cannot rely on this plan. Instead, project mitigation shall comply with mitigation ratios that are used in areas not covered by an approved Habitat Management Plan. It is anticipated that the outcome of this project will result in a net-gain of wetland habitat within the San Diego River subunit of the Santee MSCP subarea and MHPA.

5.3.3 Long-Term Conservation of Biological Resources /Consistency with MSCP

This project is located in a very important wildlife habitat area and all precautions will be taken to minimize the impact to sensitive resources. The excavation and restoration project will only temporarily impact the area and will not contribute to a permanent loss or degradation of biological components within the San Diego River ecosystem. By implementing the necessary mitigation requisites, this project will be consistent with general guidelines set forth in the MSCP, and state and federal regulations. P&D recommends that a comprehensive mitigation and monitoring plan be drafted prior to project implementation.

6.0 CONCLUSIONS

P&D recommends that focused surveys be performed to assess the presence/absence of the sensitive plant species smooth tarplant (*Centromadia [Hemizonia] pungens*) and sensitive animal species arroyo toad *(Bufo californicus)* within the project boundaries. Temporary direct impacts would occur to sensitive habitats detected within the project area. Impacts to wetlands and associated riparian habitat would require federal, state, and local authorization. Mitigation measures to account for these impacts as well as possible future County of San Diego Department of Public Works projects have been incorporated into the overall project goals.

7.0 REFERENCES

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TABLES

TABLE 1
FLORAL COMPENDIUM

Latin Name	Common Name	Federal Status[1]	State Status[1]
DICOTS			
Aizoaceae – Fig-marigold Family			
Aptenia cordifolia	baby sun rose*	none	none
Carpobrotus edulis	hottentot fig*	none	none
Amaranthaceae – Amaranth Family			
Amaranthus albus	pigweed	none	none
Apiaceae – Carrot Family			
Apium graveolens	celery*	none	none
Asteraceae – Sunflower Family			
Ambrosia confertiflora	weak-leaf bur-sage	none	none
Ambrosia psilostachya	western ragweed	none	none
Artemisia californica	California sagebrush	none	none
Baccharis sarothroides	broom baccharis	none	none
Chrysanthemum coronarium	crown daisy*	none	none
Conyza canadensis	horseweed	none	none
Corethrogyne (= Lessingia) filangifolia var. filangifolia	California aster	none	none
Hemizonia pungens	Smooth tarplant	none	CNPS List 1B
Xanthium strumarium	rough cocklebur*	none	none
Brassicaceaea – Mustard Family			
Brassica nigra	black mustard*	none	none
Caprifoliaceae – Honeysuckle Family			
Sambucus mexicana	Mexican elderberry	none	none
Chenopodiaceae – Goosefoot Family			
Atriplex canescens	fourwing saltbush	none	none
Salsola tragus	Russian thistle*	none	none
Cucurbitaceae – Cucumber Family			
Cucurbita foetidissima	calabazilla	none	none
Euphorbiaceae – Spurge Family			
Eremocarpus setigerus	dove weed	none	none
Ricinus communis	castor bean*	none	none

Latin Name	Common Name	Federal Status[1]	State Status[1]
Fabaceae – Pea Family			
Amorpha fruticosa	false indigo	none	none
Geraniaceae – Geranium Family			
Erodium sp.	filaree*	none	none
Lamiaceae -- Mint Family			
Marrubium vulgare	horehound*	none	none
Myrtaceae – Myrtle Family			
Eucalyptus spp.	eucalyptus*	none	none
Onagraceae – Evening Primrose Family			
Oenothera elata ssp. hirsutissima	tall yellow evening primrose	none	none
Polygonaceae – Buckwheat Family			
Eriogonum fasciculatum	California buckwheat	none	none
Saururaceae – Lizard's-tail family			
Anemopsis californica	yerba mansa	none	none
Salicaceae – Willow Family			
Populus fremontii ssp. fremontii	Fremont cottonwood	none	none
Salix gooddingii	Gooding's black willow	none	none
Salix laevigata	red willow	none	none
Salix lasiolepis	arroyo willow	none	none
Solanaceae – Potato family			
Nicotiana glauca	tree tobacco*	none	none
Tamaricaceae – Tamarisk Family			
Tamarix sp.	tamarisk*	none	none
MONOCOTS			
Cyperaceae – Sedge Family			
Scirpus californicus	California bulrush	none	none
Poaceae – Grass Family			
Arundo sp.	giant reed*	none	none
Avena sp.	wild oats	none	none
Bromus diandrus	ripgut grass*	none	none
Bromus hordeaceus	smooth brome*	none	none

Latin Name	Common Name	Federal Status[1]	State Status[1]
Bromus madritensis ssp. rubens	foxtail chess*	none	none
Cortaderia jubata	pampas grass*	none	none
Cynodon dactylon	Bermuda grass*	none	none
Distichlis spicata	saltgrass	none	none
Juncaceae – Rush Family			
Juncus spp.	rush		
Typhaceae – Cattail Family			
Typha latifolia	broad-leaved cattail		none

TABLE 2
FAUNAL COMPENDIUM

INVERTEBRATES			
Pierinae – Whites			
Anthocharis sara	Pacific Orangetip	none	none
Polyommatinae – Blues			
Plebeius acmon	Acmon Blue	none	none
Nymphalinae – True Brush-foots			
Nymphalis antiopa	Mourning Cloak	none	none
AMPHIBIANS			
Ranidae – True Frogs			
Rana catesbeiana	bullfrog*	none	none
REPTILES			
Phrynosomatidae – North American Spiny Lizards and Allies			
Sceloporus occidentalis	western fence lizard	none	none
Uta stansburiana	side-blotched lizard	none	none
BIRDS			
Podicipedidae – Grebes			
Podilymbus podiceps	pied-billed grebe	none	none
Ardeidae – Herons and Bitterns			
Ardea alba	great egret	none	none
Ardea herodias	great blue heron	none	none
Egretta thula	snowy egret	none	none
Anatidae – Swans, Geese and Ducks			
Anas clypeata	northern shoveler	none	none
Anas cyanoptera	cinnamon teal	none	none
Anas platyrhynchos	mallard	none	none
Oxyura jamaicensis	ruddy duck	none	none
Accipitridae – Hawks, Old World Vultures and Harriers			
Accipiter cooperii	Cooper's hawk	none	CSC
Accipiter striatus	sharp-shinned hawk	none	CSC
Buteo jamaicensis	red-tailed hawk	none	none

Buteo lineatus	red-shouldered hawk	none	none
Falconidae – Caracaras and Falcons			
Falco sparverius	American kestrel	none	none
Rallidae – Rails, Gallinules and Coots			
Fulica Americana	American coot	none	none
Charadriidae – Plovers and Relatives			
Charadrius vociferus	killdeer	none	none
Columbidae – Pigeons and Doves			
Zenaida macroura	mourning dove	none	none
Trochilidae – Hummingbirds			
Calypte anna	Anna's hummingbird	none	none
Tyrannidae – Tyrant Flycatchers			
Myiarchus cinerascens	ash-throated flycatcher	none	none
Sayornis nigricans	black phoebe	none	none
Tyrannus verticalis	western kingbird	none	none
Vireonidae – Typical Vireos			
Vireo bellii pusillus	least Bell's vireo	FE	SE
Corvidae – Jays, Magpies and Crows			
Corvus brachyrhynchos	American crow	none	none
Corvus corax	common raven	none	none
Hirundinidae – Swallows			
Tachycineta thalassina	violet-green swallow	none	none
Aegithalidae – Bushtit			
Psaltriparus minimus	bushtit	none	none
Sylviidae – Old World Warblers and Gnatcatchers			
Polioptila californica californica	coastal California gnatcatcher	FT	CSC
Timaliidae – Babblers			
Chamaea fasciata	wrentit	none	none
Parulidae – Wood Warblers and Relatives			
Dendroica coronata	yellow-rumped warbler	none	none
Dendroica petechia brewsteri	yellow warbler	none	CSC
Geothlypis trichas	common yellowthroat	none	none

Vermivora celata	orange-crowned warbler	none	none
Emberizidae – Emberizines			
Chondestes grammacus	lark sparrow	none	FSC
Melospiza melodia	song sparrow	none	none
Passerculus sandwichensis	savannah sparrow	none	none
Pipilo crissalis	California towhee	none	none
Zonotrichia leucophrys	white-crowned sparrow	none	none
Cardinalidae – Cardinals, Grosbeaks and Allies			
Guiraca caerulea salicaria	blue grosbeak	none	none
Icteridae – Blackbirds, Orioles and Allies			
Molothrus ater	brown-headed cowbird*	none	none
Sturnella neglecta	western meadowlark	none	none
Fringillidae – Finches			
Carpodacus mexicanus	house finch	none	none
MAMMALS			
Sciuridae – Squirrels, Chipmunks and Marmots			
Spermophilus beecheyi	California ground squirrel	none	none
Leporidae – Rabbits and Hares			
Lepus californicus bennettii	San Diego black-tailed jackrabbit	none	CSC
Sylvilagus audubonii	cottontail rabbit	none	none
Canidae – Foxes, Wolves and Relatives			
Canis familiaris	domestic dog*	none	none
Canis latrans	coyote	none	none

***** Non-native species
[1] Status codes follow Appendix C

TABLE 3
POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
San Diego RIver Excavation Project
Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/CA/CNPS/ MSCP)	LIFE FORM /BLOOMING PERIOD	ELEVATION (meters)	COMMUNITIES
Acanthomintha ilicifolia	San Diego thorn-mint	FT/SE/1B/MSCP	annual herb/ Apr-Jun	10-950	chaparral, coastal scrub, valley and foothill grassland, and vernal pools /clay
Agave shawii	Shaw's agave	N/N/2/MSCP	leaf succulent/ Sep-May	10-75	coastal bluff scrub and coastal scrub
Ambrosia pumila	San Diego ambrosia	FE/N/1B/MSCP	rhizomatous herb/ May-Oct	20-415	chaparral, coastal scrub, valley and foothill grassland, and vernal pools /often in disturbed areas
Aphanisma blitoides	Aphanisma	N/S2/3/MSCP	annual herb/ Apr-May		coastal sage scrub
Arctostaphylos glandulosa ssp. crassifolia	Del Mar Manzanita	FE/N/1B/MSCP	evergreen shrub/ Dec-Apr	0-365	chaparral
Arctostaphylos otavensis	Otay Manzanita	N/N/1B/MSCP	evergreen shrub/ Jan-Apr	275-1700	chaparral
Astragalus deanei	Dean's milk vetch	N/N/1B/N	perennial herb/Apr-Jun	75-670	chaparral, coastal scrub, and riparian forest
Astragalus tener var. titi	coastal dunes milk vetch	FE/SE/1B/MSCP	annual herb/ Mar-May	1-50	coastal bluff scrub, coastal dunes, coastal prairie
Baccharis vanessae	Encinita's coyote bush	FT/SE/1B/MSCP	deciduous shrub/ Aug-Nov	60-720	chaparral, cismontane woodland

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POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
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Edgemoor Property
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SCIENTIFIC NAME	COMMON NAME	STATUS (FED/CA/CNPS/ MSCP)	LIFE FORM /BLOOMING PERIOD	ELEVATION (meters)	COMMUNITIES
Berberis (Mahonia) nevinii	Nevin's barberry	FE/CE/1B/MSCP	evergreen shrub/ Mar-Apr	295-825	chaparral
Brodiaea filifolia	thread-leaved brodiaea	FE/CE/1B/MSCP	bulbiferous herb/ Mar-Jun	25-1220	cismontane woodland, coastal scrub, riparian scrub
Brodiaea orcuttii	Orcutt's brodiaea	N/N/1B/MSCP	bulbiferous herb/ May-July	30-1615	closed-cone forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools
Calamagrostis (Satureja) densa (koelerioides)	dense reed grass	N/N/4/MSCP	perennial herb	0-7545	yellow pine forest, and chaparral
Calochortus stenocarpus (dunnii)	Dunn's mariposa lily	N/N/3/MSCP	bulbiferous herb/ May-Jun	525-550	cismontane woodland
Caulanthus heterophyllus	slender-pod jewelflower	N/N/N/MSCP	annual herb	0-4265	sandy loam soils on chaparral hillsides in rocky, rugged terrain
Ceanothus cyaneus	Lakeside ceanothus	N/N/1B/MSCP	evergreen shrub/ Apr-Jun	235-755	chaparral
Ceanothus verrucosus	wart-stemmed ceanothus	N/N/2/MSCP	evergreen shrub/ Dec-Apr	1-380	chaparral

TABLE 3
POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
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Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/CA/CNPS/ MSCP)	LIFE FORM /BLOOMING PERIOD	ELEVATION (meters)	COMMUNITIES
Centromadia pungens ssp. laevis	smooth tarplant	N/N/1B/MSCP	annual herb/ Apr-Sept	0-480	chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland/ alkaline
Chorizanthe polygonoides var. parishii	long-spined spineflower	N/N/1B/N	annual herb/ Apr-Jun	30-1450	chaparral, coastal scrub, meadows and seeps, valley foothill grassland
Clarkia delicata	delicate clarkia	N/N/1B/N	annual herb/Apr-Jun	235-1000	chaparral and cismontane woodland
Cordylanthus maritimus ssp. maritimus	salt marsh bird's beak	FE/SE/1B/MSCP	annual herb - hemiparasitic /Mar-Sep	0-30	coastal dunes and marshes and swamps
Cordylanthus orcuttianus	Orcutt's bird's beak	N/N/2/N	annual herb - hemiparasitic /Mar-Sep	0-350	coastal scrub
Corethyrogyre filaginiogolia	Del Mar sand aster	N/N/1B/MSCP	perennial herb/ Mar-May	15-150	coastal bluff scrub, chaparral, and coastal scrub sandy
Cupressus forbessi	Tecate cypress	N/N/1B/MSCP	evergreen tree	255-1500	closed-cone conifer forest
Dudleya blochmaniae ssp. brevifolia	short-leaved live-forever	N/SE/1B/MSCP	perennial herb/ Apr	30-250	chaparral (maritime), and coastal scrub / Torrey sandstone.
Dudleya variegata	variegated dudleya	N/N/1B/MSCP	perennial herb/ May-Jun	3-550	chaparral, cismontane woodland, and coastal scrub

TABLE 3
POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
San Diego RIver Excavation Project
Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/CA/CNPS/ MSCP)	LIFE FORM /BLOOMING PERIOD	ELEVATION (meters)	COMMUNITIES
Dudleya viscida	sticky dudleya	N/N/1B/MSCP	perennial herb/ May-Jun	10-550	coastal bluff scrub, chaparral, coastal scrub rocky
Ericameria palmeri ssp. palmeri	Palmer's ericameria	N/N/2/MSCP	evergreen shrub/ Jul-Nov	30-600	chaparral and coastal scrub
Erodium macrophyllum	round-leaved filaree	N/N/2/N	annual herb/ Mar-May	15-1200	cismontane woodland, valley and foothill grassland /clay
Erysimum ammophilum	coast wallflower	N/N/1B/MSCP	perennial herb/ Feb-Jun	0-60	chaparral, coastal dunes, and coastal scrub
Eryngium aristulatum	San Diego button-celery	FE/SE/1B/MSCP	annual/ perennial herb/ Apr-Jun	20-620	coastal scrub, valley and foothill grassland, and vernal pools
Ferocactus viridescens	San Diego barrel cactus	N/N/2/MSCP	stem succulent/ May-Jun	3-450	chaparral, coastal scrub, valley and foothill grassland, vernal pool
Githipsis diffusa ssp. filicaulis	Mission Canyon bluecup	N/N/3/N	annual herb / Apr-Jun	450-700	chaparral (mesic, disturbed areas)
Harpagonella palmeri var. palmeri	Palmer's grappling hook	N/N/2/N	annual herb/ Mar-May	20-955	chaparral, coastal scrub, and valley and foothill grassland / clay
Hemizonia conjugens	Otay tarplant	FE/SE/1B/MSCP	annual herb/		grasslands and coastal sage scrub
Horkelia truncata	Ramona horkelia	N/N/1B/N	perennial herb/ May-Jun	400-1300	chaparral, cismontane woodland / clay

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POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
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Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/CA/CNPS/ MSCP)	LIFE FORM /BLOOMING PERIOD	ELEVATION (meters)	COMMUNITIES
Juncus acutus ssp. leopoldii	southwestern spiny rush	N/N/1B/N	rhizomatous herb/ May-Jun	3-900	coastal dunes (mesic), meadows and seeps (alkaline seeps), marshes and swamps (coastal salt)
Lepchinia cardiophylla	heart-leaved pitcher sage	N/N/1B/MSCP	shrub/ Apr-Jul	520-1370	closed cone conifer forest, chaparral, and cismontane woodland
Lepchinia ganderi	Gander's pitcher sage	N/N/1B/MSCP	shrub/ Jun-Jul	305-1005	closed cone conifer forest, chaparral, cismontane woodland, valley and foothill grassland, coastal scrub
Lotus nuttallianus	Nuttall's lotus	N/N/1B/MSCP	annual herb / Mar-Jun	0-10	coastal dunes and coastal scrub
Monardella hypleuca ssp. lanata	felt-leaved monardella	N/N/1B/MSCP	rhizomatous herb/ May-Oct	300-1190	chaparral, cismontane woodland
Monardella linoides ssp. viminea	willowy monardella	FE/SE/1B/MSCP	perennial herb/ Jun-Aug	50-225	chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland/alluvial ephemeral washes

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Edgemoor Property
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SCIENTIFIC NAME	COMMON NAME	STATUS (FED/CA/CNPS/ MSCP)	LIFE FORM /BLOOMING PERIOD	ELEVATION (meters)	COMMUNITIES
Muilla clevelandii	San Diego goldenstar	N/N/1B/MSCP	bulbiferous herb/ Apr-May	50-465	chaparral, coastal scrub, valley and foothill grassland and vernal pool
Myosurus minimus ssp.apus	little mousetail	N/N/3/MSCP	annual herb/ Mar-Jun	20-640	valley and foothill grassland and vernal pool
Navarretia fossalia	spreading navarretia	FT/N/1B/MSCP	annual herb/ Apr-Jun	30-1300	chenopod scrub, marshes and swamps, playas, vernal pools
Navarretia prostrata	prostrate navarretia	N/N/1B/MSCP	annual herb/ Apr-Jun	15-700	coastal scrub, valley and foothill grassland, and vernal pools
Noliona interrata	Dehesa bear-grass	N/SE/1B/MSCP	perennial herb/ Jun-Jul	185-855	chaparral
Opuntia parryi var. serpentina	Snake cholla	N/N/1B/MSCP	stem succulent/ Apr-May	30-150	chaparral, coastal scrub
Orcuttia californica	California Orcutt grass	FE/SE/1B/MSCP	annual herb	15-660	vernal pools
Pinus torreyana	Torrey pine	N/N/1B/MSCP	evergreen tree/NA	75-160	closed-coned coniferous forest, chaparral and coastal scrub
Pogogyne abramsii	San Diego Mesa Mint	FE/SE/1B/MSCP	annual herb/ Apr-Jul	90-200	vernal pools
Pogogyne nudiuscula	Otay Mesa mint	FE/SE/1B/MSCP	annual herb/ May-Jul	90-250	vernal pools

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SCIENTIFIC NAME	COMMON NAME	STATUS (FED/CA/CNPS/ MSCP)	LIFE FORM /BLOOMING PERIOD	ELEVATION (meters)	COMMUNITIES
Ribes canthariforme	Moreno current	N/N/1B/N	perennial deciduous shrub / Feb-Apr	340-1200	chaparral
Rosa minutifolia	small-leaved rose	N/SE/2/MSCP	deciduous shrub/ Jan-Jun	150-160	chaparral and coastal scrub
Satureja chandleri	San Miguel savory	N/N/4/MSCP	perennial herb		chaparral, foothill woodland, coastal sage scrub and valley grassland
Senecio ganderi	Gander's butterweed	N/CR/1B/MSCP	perennial herb/ Apr-May	400-1200	chaparral

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POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
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SCIENTIFIC NAME	COMMON NAME	STATUS (FED/CA/CNPS/ MSCP)	LIFE FORM /BLOOMING PERIOD	ELEVATION (meters)	COMMUNITIES
Solanum tenuilobatum (xanti)	narrow-leaved nightshade	N/N/N/MSCP	perennial herb-sub-shrub	5000-9000	yellow pine forest, red fir forest, lodgepole forest, northern oak woodland, southern oak woodland, foothill woodland, and chaparral
Tetracoccus dioicus	Parry's tetracoccus	N/N/1B/MSCP	deciduous shrub	165-1000	chaparral, coastal scrub
Viguiera laciniata	San Diego County viguiera	N/N/4/N	shrub/ Feb-Jun	60-750	chaparral and coastal scrub

Notes
N = Not Listed
MSCP = Species covered under the City of Santee's draft Multiple Species Conservation Program subarea plan

Federal Species Designations (USFWS 1996, 1997)
FE = Federally Endangered species
FT = Federally Threatened Species
FPE = Taxa proposed to be listed as Endangered
FPT = Taxa proposed to be listed as Threatened
FSC = Species of Concern

State Species Designations (CDFG 1997)
SE = State listed as Endangered
ST = State listed as Threatened
SR = State listed as Rare
SCE = State candidate for listing as Endangered
SCT = State candidate for listing as Threatened
SSC = CDFG "Species of Concern"

TABLE 3
POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
San Diego RIver Excavation Project
Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/CA/CNPS/ MSCP)	LIFE FORM /BLOOMING PERIOD	ELEVATION (meters)	COMMUNITIES

California Native Plant Society Designations (Skinner and Pavlik 1994)
1 = Plants of highest priority
1A = Plants presumed extinct in California
1B = Plants rare, threatened, or endangered in California and elsewhere
2 = Plants rare, threatened, or endangered in California, but common elsewhere
3 = Plants about which we need more information (a review list)
4 = Plants of limited distribution (a watch list)

TABLE 3
POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
San Diego RIver Excavation Project
Edgemoor Property
Santee, California

LIKELIHOOD OF OCCURRENCE
Absent. No suitable habitat within the project boundaries. Listed on CNDDB occurring on ridge at 1450' above msl.
Low. No suitable habitat detected within project boundaries.
Low. Based on historical data for the region and limited availability of suitable habitat within project boundaries.
Low. Based on historical data for the region and limited availability of suitable habitat.
Low. No suitable habitat detected within project boundaries.
Low. No suitable habitat detected within project boundaries.
Low. Based on historical occurrence data for the region and lack of soil association.
Low. No suitable habitat detected within project boundaries.
Low. Based on historical data for the region and limited availability of suitable habitat.

TABLE 3
POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
San Diego RIver Excavation Project
Edgemoor Property
Santee, California

LIKELIHOOD OF OCCURRENCE
Low. No suitable habitat detected within project boundaries.
Low. No suitable habitat detected within project boundaries.
Low. No suitable habitat detected within project boundaries.
Low. No suitable habitat detected within project boundaries.
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Low. No suitable habitat detected within project boundaries.

TABLE 3
POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
San Diego RIver Excavation Project
Edgemoor Property
Santee, California

LIKELIHOOD OF OCCURRENCE
Present. Reported to be present onsite by RECON in 2002.
Low. No suitable habitat detected within project boundaries. Gabbroic clay soils not present.
Low. No suitable habitat detected within project boundaries.
Low. No suitable habitat detected within project boundaries.
Low. No suitable habitat detected within project boundaries.
Low. No suitable habitat detected within project boundaries.
Low. No suitable habitat detected within project boundaries.
Low. No suitable habitat detected within project boundaries.
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TABLE 3
POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
San Diego RIver Excavation Project
Edgemoor Property
Santee, California

LIKELIHOOD OF OCCURRENCE
Low. No suitable habitat detected within project boundaries.
Low. Minimal suitable habitat within the project boundaries.
Low. No suitable habitat detected within project boundaries. No clay soils present.
Low. No suitable habitat detected within project boundaries.
Low. Minimal suitable habitat within the project boundaries.
Low. Minimal suitable habitat within the project boundaries.
Low. No suitable habitat detected within the project boundaries.
Low. No suitable habitat detected within the project boundaries. No suitable soils.
Low. Based on historical data for the region and limited availability of suitable habitat.
Low. No suitable habitat detected within project boundaries.

TABLE 3
POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
San Diego RIver Excavation Project
Edgemoor Property
Santee, California

LIKELIHOOD OF OCCURRENCE
Low. No suitable habitat detected within project boundaries.
Low. No suitable habitat detected within project boundaries.
Low. Minimal suitable habitat within the project boundaries.
Low. No suitable habitat detected within project boundaries.
Low. No suitable habitat detected within project boundaries.
Low. Suitable habitat present onsite. However, all known populations occur between Mission Gorge and Penasquitos Canyon, with most of the populations concentrated in the Miramar area. Not detected during botanical survey.

TABLE 3
POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
San Diego RIver Excavation Project
Edgemoor Property
Santee, California

LIKELIHOOD OF OCCURRENCE
Low. Based on historical data for the region and limited availability of suitable habitat.
Low. No suitable habitat detected within project boundaries.
Low. No suitable habitat detected within project boundaries.
Low. Minimal suitable habitat within the project boundaries.
Low. No suitable habitat detected within project boundaries.
Low. Minimal suitable habitat within the project boundaries.
Low. No suitable habitat detected within project boundaries.
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Low. No suitable habitat detected within project boundaries.
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TABLE 3
POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
San Diego RIver Excavation Project
Edgemoor Property
Santee, California

LIKELIHOOD OF OCCURRENCE
Low. No suitable habitat detected within project boundaries.
Low. Minimal suitable habitat within the project boundaries.
Low. Minimal suitable habitat within the project boundaries.
Low. No suitable habitat detected within project boundaries.

TABLE 3
POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
San Diego RIver Excavation Project
Edgemoor Property
Santee, California

LIKELIHOOD OF OCCURRENCE
Low. No suitable habitat detected within project boundaries.
Low. No suitable habitat detected within project boundaries.
Low. Minimal suitable habitat detected within the project boundaries.

TABLE 3
POTENTIALLY OCCURRING SENSITIVE/NARROW ENDEMIC PLANT SPECIES
San Diego RIver Excavation Project
Edgemoor Property
Santee, California

	LIKELIHOOD OF OCCURRENCE

TABLE 4
POTENTIALLY OCCURRING SENSITIVE OR SPECIAL STATUS WILDLIFE SPECIES
San Diego River Excavation Project
Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/STATE/MSCP)	HABITAT	LIKELIHOOD OF OCCURRENCE
INVERTEBRATES				
Branchinecta sandiegonensis	San Diego fairy shrimp	FE/SSC/MSCP	Endemic to San Diego and Orange County mesas. Vernal pools.	Absent. No suitable habitat on site.
Streptocephalus woottoni	Riverside fairy shrimp	FE/SSC/MSCP	Found in vernal pools. Known from Los Angeles, Orange, Riverside, San Diego, and Ventura Counties, California, and northwest Baja California, Mexico.	Absent. No suitable habitat on site.
Euphydryas editha quino	quino checkerspot	FE/N/MSCP	Inhabits coastal sage scrub habitats with host plants Plantago erecta or Castilleja exserta present.	Absent. No suitable habitat or host plants detected on site.
Euphyes vestris harbison	Harbison's dun skipper	FSC/N/MSCP	Harbison's dun skipper is restricted to riparian areas, intermittent streams, and oak woodlands where its larval host plant, San Diego sedge (*Carex spissa*) is present. The only known records are for San Diego County: Hellhole Creek, Fallbrook, Escondido, Blossom Valley, Elfin Forest, Poway, El Monte Oaks, Old Viejas Grade, Tecate Peak near Barrett Junction, Dulzura, and San Pasqual Academy.	Low. Based on historical range data.
Lycaena hermes	Hermes copper	FSC/N/MSCP	Hermes Copper has a restricted range from San Diego County and Northern Baja California. It lives in mixed woodlands, chaparral and coastal sage scrub.	Low. Minimal suitable habitat present within project boundaries.
Mitoura thornei	Thorne's hairstreak	FSC/N/MSCP	All five populations are located inside of the U.S. Bureau of Land Management's Otay Mountains Wilderness.	Low. Based on historical range data.
Panoquina errans	salt marsh skipper	FSC/N/MSCP	Inhabits salt marshes in coastal California, coastal Baja California, and western mainland Mexico.	Absent. No suitable habitat on site.

TABLE 4
POTENTIALLY OCCURRING SENSITIVE OR SPECIAL STATUS WILDLIFE SPECIES
San Diego River Excavation Project
Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/STATE/MSCP)	HABITAT	LIKELIHOOD OF OCCURRENCE
AMPHIBIANS				
Bufo californicus	**arroyo toad**	FE/SSC/MSCP	Prefers grassland, scrub and chaparral locally but could occur in oak woodlands in semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willow, cottonwoods, and sycamores; loose gravelly areas of streams in drier parts of range.	Moderate. Suitable habitat detected at site and due to recent precipitation, the chances for this species to occur at the site have increased.
Rana aurora	California red-legged frog	FT/SSC/MSCP	Dense riparian habitat with slow moving or deep, still waters.	Low. No suitable habitat on site.
Spea hammondii	**western spadefoot**	N/SSC/N	Vernal pools, flood plains, and alkaliflats within areas of open vegetation.	High. Suitable habitat present at the site.
REPTILES				
Anniella pulchra pulchra	**silvery legless lizard**	N/SSC/N	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with high moisture content.	Moderate. Potentially suitable habitat present at the site.
Aspidoscelis hyperthra	**orange-throated whiptail**	FSC/SSC/ MSCP	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food-termites.	High. Suitable habitat present at the site.
Clemmys marmorata pallida	**southwestern pond turtle**	FSC/SSC/ MSCP	Inhabits ponds, small lakes, marshes, slow moving, sometimes brackish water.	High. Suitable habitat present at the site.
Crotalus ruber ruber	northern red-diamond rattlesnake	FSC/SSC/ MSCP	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Low. Minimal suitable habitat present at the site.
Eumeces skiltonianus interparietalis	**Coronado skink**	N/SSC/MSCP	Grassland, chaparral, pinyon-juniper and juniper sage woodland, pine-oak and pine forests in coast ranges of southern California. Prefers early successional stages of open areas. Found in rocky areas close to streams and on dry hillsides.	Moderate. Potentially suitable habitat present at the site.

TABLE 4
POTENTIALLY OCCURRING SENSITIVE OR SPECIAL STATUS WILDLIFE SPECIES
San Diego River Excavation Project
Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/STATE/MSCP)	HABITAT	LIKELIHOOD OF OCCURRENCE
Phrynosoma coronatum (blainvillii)	coast (San Diego) horned lizard	FSC/SSC/ MSCP	Inhabits coastal sage scrub and chaparral in arid and semi-arid climate conditions. Prefers friable, rocky, or shallow sandy soils.	Low. No suitable habitat and site too isolated from other habitats.
Salvadora hexalepis virgultea	coast patch-nosed snake	N/CSC/N	Grasslands, chaparral, sagebrush, desert scrub. Found in sandy and rocky areas.	Low. Minimal suitable habitat present within project boundaries.
Sceloporus orcutti	granite spiny lizard	N/N/MSCP	This lizard inhabits a wide variety of arid and semi arid environments that are dominated by massive or scattered rock formations.	Low. No suitable habitat present at the site.
Thamnopis hammondii	**two-striped garter snake**	FSC/SSC/ MSCP	Coastal California from vicinity of Salinas to northwest Baja California. From sea level to about 7,000 ft. elevation. Highly aquatic, found in or near permanent fresh water. Often along stream with rocky beds and riparian growth.	Moderate. Potentially suitable habitat present at the site.
Taricha torosa torosa	**coast range newt**	N/SSC/N	Under rocks, in or under logs, in rodent burrows. In or near streams, ponds, and reservoirs.	Moderate. Potentially suitable habitat present on site.
BIRDS				
Accipiter cooperii	**Cooper's hawk**	N/SSC/MSCP	(Nesting) Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Present. Observed onsite.
Agelaius tricolor	**tricolored blackbird**	FSC/SSC/ MSCP	Freshwater marshes, agricultural areas, lakeshores, parks. Localized resident.	Moderate. Potentially suitable habitat onsite. No CNDDB records from vicinity.
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	FSC/SSC/ MSCP	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	Low. Minimal suitable habitat present within project boundaries.
Ammodramus savannarum	grasshopper sparrow	migratory/N/MSCP	Found in tall, dense grasslands.	Absent. No suitable habitat present within the project boundaries.

TABLE 4
POTENTIALLY OCCURRING SENSITIVE OR SPECIAL STATUS WILDLIFE SPECIES
San Diego River Excavation Project
Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/STATE/MSCP)	HABITAT	LIKELIHOOD OF OCCURRENCE
Amphispiza belli belli	Bell's sage sparrow	FSC/SSC/ MSCP	(Nesting) Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yards apart.	Low. Minimal suitable habitat within project boundaries.
Aquila chrysaetos	golden eagle	N/SSC/MSCP	The golden eagle is a year-round resident in San Diego County but is restricted in occurrence to areas sustaining undeveloped open terrain with grassland, pasture, sage scrub, and open woodland. It is a regular inhabitant of rugged foothills and backcountry terrain with scattered farms, grassland valleys, and rock outcrops, as well as lakes and rivers. For nesting, golden eagles require isolated sites including caves, ledges, and even large trees.	Low. Due to adjacent land use this species would likely only occur on a transitory basis .
Athene cunicularia	burrowing owl	FSC/SSC/ MSCP	(Burrow sites) Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Absent. No suitable habitat on site.
Branta canadensis	Canada goose	N/N/MSCP	A winter migrant found on ponds, marshes, and farmland.	Low. Minimal suitable habitat present at the site.
Buteo regalis	Ferruginous hawk	N/SSC/MSCP	A winter migrant found in arid grasslands.	Low. Minimal suitable habitat present within project boundaries.
Buteo swainsoni	Swainson's hawk	N/ST/MSCP	A rare occurrence in San Diego forages in grasslands and prairies.	Low. Minimal suitable habitat present within project boundaries.
Camplyorhynchus brunneicapillus couesi	coastal cactus wren	N/SSC/MSCP	Southern California coastal sage scrub. Wrens require tall *Opuntia* cactus for nesting and roosting.	Low. No *Opuntia* cactus onsite.
Charadrius alexandrinus nivosus	Western snowy plover	FT/SSC/MSCP	Found on sandy beaches, barren salt pans, or dry mudflats, rarely on wet mudflats.	Absent. No suitable habitat on site.

TABLE 4
POTENTIALLY OCCURRING SENSITIVE OR SPECIAL STATUS WILDLIFE SPECIES
San Diego River Excavation Project
Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/STATE/MSCP)	HABITAT	LIKELIHOOD OF OCCURRENCE
Chardrius montanus	mountain plover	N/SSC/MSCP	A winter migrant in eastern San Diego County found in upland habitats often far from water on dry barren fields.	Low. Minimal suitable habitat onsite.

TABLE 4
POTENTIALLY OCCURRING SENSITIVE OR SPECIAL STATUS WILDLIFE SPECIES
San Diego River Excavation Project
Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/STATE/MSCP)	HABITAT	LIKELIHOOD OF OCCURRENCE
Chordeiles acutipennis	lesser nighthawk	N/N/MSCP	Summer visitor in eastern San Diego County. Seen often in daylight, especially evening flying over woods, fields, or towns, catching insects.	Low. Minimal breeding habitat onsite.
Circus cyaneus	**northern harrier**	N/SSC/MSCP	(Nesting) Riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging. Alos nests in montane shrubbery in open conifer forests.	High. Suitable foraging and nesting habitat present within the project boundaries.
Dendroica petechia brewsteri	**yellow warbler**	N/CSC/N	Breeds mostly in riparian woodlands.	Present. Observed onsite.
Egretta rufescens	reddish egret	N/N/MSCP	A rare occurrence in San Diego County is usually found in expanses of shallow salt water.	Absent. No suitable habitat found on site.
Elanus leucurus	**white-tailed kite**	FSC/CDFG fully protected/N	(Nesting) Rolling foothills/valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	High. Suitable nesting and foraging habitat present within the project boundaries.
Empidonax traillii extimus	**southwestern willow flycatcher**	FE/SE/MSCP	(Nesting) Riparian woodlands in Southern California, in dense riparian habitats along rivers, streams, or other wetlands. The vegetation can be dominated by dense growths of willows (*Salix* sp.), seepwillow (*Baccharis* sp.), or other shrubs and medium-sized trees. There may be an overstory of cottonwood (*Populus* sp.), tamarisk (*Tamarix* sp.), or other large trees. May nest in habitats dominated by tamarisk and Russian olive (*Eleagnus angustifolia*). Requires dense vegetation, usually throughout all vegetation layers.	Moderate. Habitat in project area of marginal quality for this species.
Falco peregrinus	peregrine falcon	FE/SE/MSCP	A winter migrant in San Diego County, this raptor hunts other birds and nests on cliff ledges.	Absent. Based on historical range data and rarity.
Haliaeetus leucocephalus	bald eagle	FE/SE/MSCP	Found along marshes lakes, coastlines, and rivers. Winters along coasts and large rivers over most of U.S.	Absent. Based on historical range data and rarity.

TABLE 4
POTENTIALLY OCCURRING SENSITIVE OR SPECIAL STATUS WILDLIFE SPECIES
San Diego River Excavation Project
Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/STATE/MSCP)	HABITAT	LIKELIHOOD OF OCCURRENCE
Icteria virens	**yellow-breasted chat**	N/SSC/N	(Nesting) Summer resident ; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forage and nest within 10 feet of ground.	Moderate. Suitable habitat present at the site.
Lanius ludovicianus	**loggerhead shrike**	N/SSC/N	Open foraging areas near scattered bushes and low trees.	Moderate. Suitable habitat present at the site.
Numenius americanus	long-billed curlew	N/SSC/MSCP	Found on fields and dry prairie as well as mudflats.	Low. Minimal suitable habitat within project boundaries.
Passerculus sandwichensis beldingi	Belding's savannah sparrow	FSC/SE/ MSCP	Found in southern California salt marshes.	Absent. No suitable habitat detected within project boundaries.
Passerculus sandwichensis rostratus	large-billed savannah sparrow	FCSC/CSC/ MSCP	During spring, it breeds in the marshes along the northern and northeast coasts of the Gulf of California. During winter, it disperses widely to coastal regions of southern California and the Baja peninsula.	Absent. No suitable habitat detected within project boundaries.
Pelecanus erythrorhynchos	American white pelican (nesting colony)	N/CSC/N	Occurs in lagoons, bays, estuaries, freshwater ponds; inland lakes during spring migration. Migrant winter visitor.	Present. Observed flying over site.
Pelecanus occidentalis californicus	California brown pelican	FE/SE/MSCP	Nesting is restricted to islands in the Gulf of California and along the outer coast from Baja California to West Anacapa and Santa Barbara Islands in Southern California. Non-breeding California brown pelicans range northward along the Pacific Coast from the Gulf of California to Washington and southern British Columbia. Important roosting sites include offshore rocks and islands, river mouths with sand bars, breakwaters, pilings, and jetties along the Pacific Coast.	Low. Based on historical range data and lack of suitable habitat present onsite.
Plegadis chihi	white-faced ibis	N/SSC/MSCP	Occurs in salt marshes, brushy islands, and freshwater marshes.	Low. Based on historical range data and minimal suitable habitat present onsite.

TABLE 4
POTENTIALLY OCCURRING SENSITIVE OR SPECIAL STATUS WILDLIFE SPECIES
San Diego River Excavation Project
Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/STATE/MSCP)	HABITAT	LIKELIHOOD OF OCCURRENCE
Polioptila californica californica	**coastal California gnatcatcher**	FT/SSC/MSCP	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	Present. Observed onsite.
Rallus longirostris levipes	light-footed clapper rail	FE/SE/MSCP	The light-footed clapper rail is a year-round resident (non-migratory). It inhabits coastal salt and freshwater marshes containing cordgrass, cattails or tules, and rushes.	Low. Based on historical range data and minimal suitable habitat present onsite.
Sialia mexicana	**western bluebird**	N/N/MSCP	Inhabits open conifer forests, agricultural lands, and streamside groved where there are scattered trees and grassy areas for foraging.	High. Suitable habitat present onsite.
Sterna antillarum browni	California least tern	FE/SE/MSCP	Occur adjacent to nearshore ocean waters and shallow estuaries and lagoons.	Absent. No suitable habitat onsite.
Sterna elegans	elegant tern	FSC/SSC/MSCP	It is seen only on the coast, frequenting estuaries and beaches along the California coast in summer and fall.	Absent. No suitable habitat on site.
Vireo bellii pusillus	**least Bell's vireo**	FE/SE	(Nesting) Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2,000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, baccharis, mesquite.	Present. Observed onsite.
MAMMALS				
Chaedopus fallax fallax	**northwestern San Diego pocket mouse**	CSC	Coastal scrub, chaparral, grasslands, sagebrush, etc. In western San Diego County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Moderate. Potentially suitable habitat present within the project boundaries.
Felis concolor	mountain lion	N/N/MSCP	Mountain lions inhabit forest and shrubland habitats throughout California where deer, their primary prey, are found.	Low. No suitable habitat present at the site.
Lepus californicus bennettii	**San Diego black-tailed jackrabbit**	SSC	Intermediate canopy stages of shrub habitats and open shrub / herbaceous and tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	Present. Observed onsite.

TABLE 4
POTENTIALLY OCCURRING SENSITIVE OR SPECIAL STATUS WILDLIFE SPECIES
San Diego River Excavation Project
Edgemoor Property
Santee, California

SCIENTIFIC NAME	COMMON NAME	STATUS (FED/STATE/MSCP)	HABITAT	LIKELIHOOD OF OCCURRENCE
Neotoma lepida intermedia	San Diego desert woodrat	SSC	Coastal Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops and rocky cliffs and slopes.	Moderate. Potentially suitable habitat present at the site. No woodrat nest observed during surveys.
Taxidea taxus	American badger	N/N/MSCP	Found in grasslands, sonoran desert scrub.	Low. Minimal suitable habitat present on site.

Notes
N= Not Listed
BOLD = likelihood of occurrence greater than or equal to moderate
MSCP = Species covered under the City of Santee's draft Multiple Species Conservation Program subarea plan

Federal Species Designations (USFWS 1996, 1997)
FE = Federally Endangered species
FT = Federally Threatened Species
FPE = Taxa proposed to be listed as Endangered
FPT = Taxa proposed to be listed as Threatened
FSC = Species of Concern

State Species Designations (CDFG 1997)
SE = State listed as Endangered
ST = State listed as Threatened
SR = State listed as Rare
SCE = State candidate for listing as Endangered
SCT = State candidate for listing as Threatened
SSC = CDFG "Species of Special Concern"

ATTACHMENT A
SITE PHOTOGRAPHS

ATTACHMENT A – SITE PHOTOGRAPHS

San Diego River Restoration Project
Edgemoor Property
Santee, California

Photo 1 – Looking north at the Southern Willow Scrub community planted as MTDB mitigation abuts Riparian Forest along the San Diego River in background (Excavation Area 1).

Photo 2 – Looking south at the Agricultural Land in Southwestern portion of property (Excavation Area 1).

Photo 3 – Looking north within the Tamarisk Scrub community (Excavation Area 2).

Photo 4 – Looking east towards freshwater pond. This area will be used to expand pond (Excavation Area 2).

Photo 5 – Looking north at the pond from within the Freshwater Marsh community.

Photo 6 - Looking north within the Non-native Grassland Community (Excavation Area 3).

ATTACHMENT A – SITE PHOTOGRAPHS

San Diego River Restoration Project
Edgemoor Property
Santee, California

Photo 7 - Looking south within Baccharis Scrub community in central portion of site, east of pond (Excavation Area 3).

Photo 8 - Looking north within Disturbed Habitat in Central portion of site with San Diego River in background (Excavation Area 3)

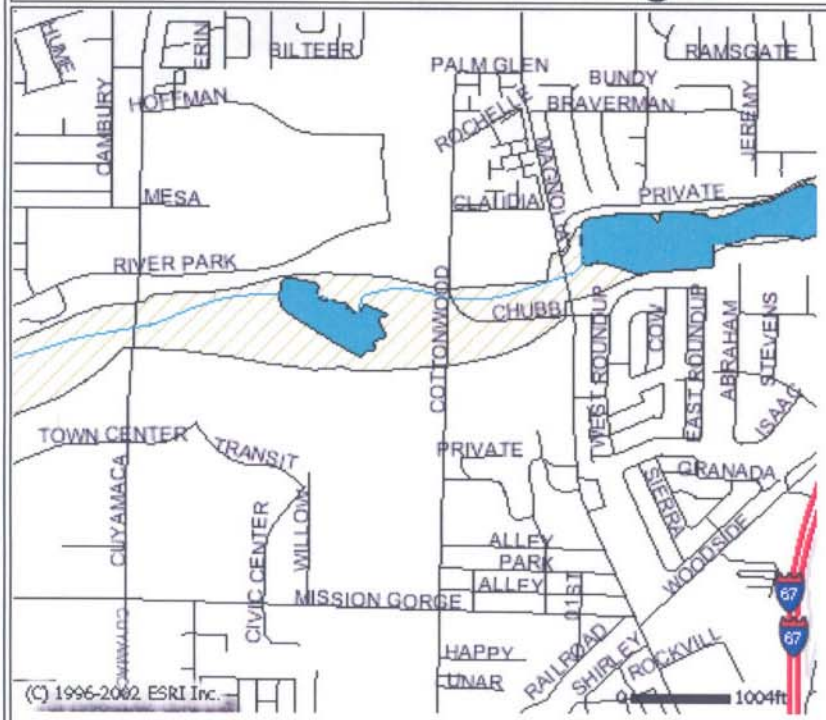
Photo 9 - Looking north within the Non-native Grassland community in the eastern portion of the property (Excavation Area 4).

Photo 10 - Looking east at Coastal Sage Scrub community and Eucalyptus Woodland in northeast portion of site (Excavation Area 4).

Photo 11 - American White Pelicans flying over site.

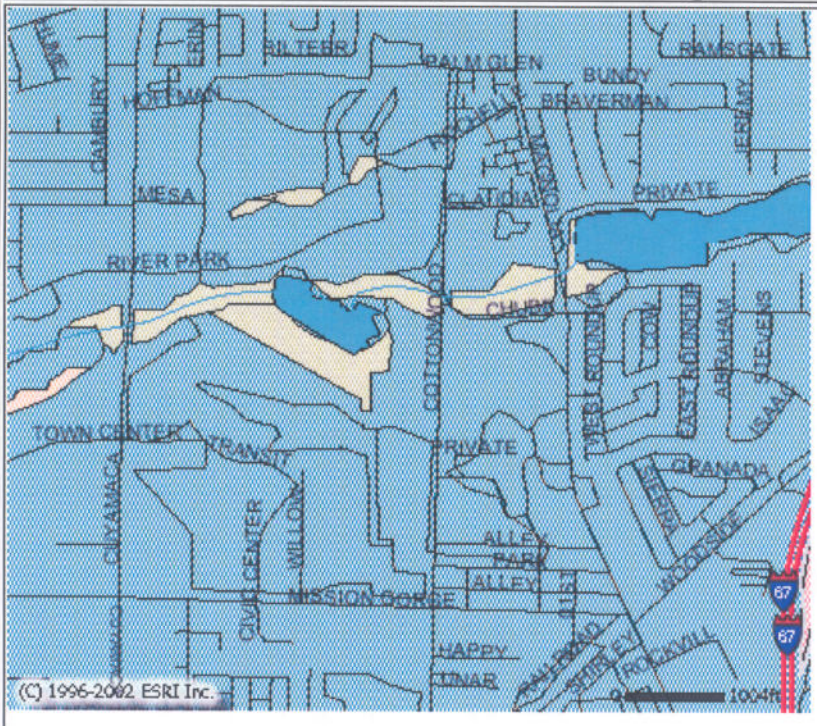
ATTACHMENT B
SANGIS MSCP/MHPA MAPS

Edgemoor Property MSCP Multiple Habitat Planning Area Designation



- MSCP Boundary
- MSCP Subarea Boundary Outlines
- Freeways
- Major Roads
- Rivers
- All Roads
- Lakes
- MSCP Multiple Habitat Planning Area (MHPA)
- 0
- Conserved Areas
- Areas Proposed for Conservation
- County of San Diego, Pre Approved Mitigation Area (PAMA)
- Other

Edgemoor Property MSCP Vegetation Communities



- MSCP Boundary
- MSCP Subarea Boundary Outlines
- Freeways
- Major Roads
- Rivers
- All Roads
- Lakes

Vegetation

- BOG AND MARSH
- DUNE COMMUNITY
- FOREST
- GRASSLANDS, VERNAL POOLS, MEADOWS
- NON-NATIVE VEGETATION
- RIPARIAN & BOTTOMLAND HABITAT
- SCRUB AND CHAPARRAL
- WOODLAND