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October 6, 2017

Myra Herrmann, Senior Planner/Archaeologist/Tribal Liaison
City of San Diego Planning Department
1010 2nd Avenue, Suite 1200
Executive Complex East Tower, MS 413
San Diego, California 92101

Subject: Archaeological Survey Results Report for the Ashley Falls Large-Scale Storm Flow Storage Lid Project, San Diego, California (LSA Project No. RKE1701)

Dear Ms. Herrmann:

LSA has completed a cultural resources survey for the Ashley Falls Large-Scale Storm Flow Storage Lid Project and is pleased to provide the City of San Diego Public Works Department (City) with this summary report.

ABSTRACT

LSA completed a cultural resources survey for the Ashley Falls Large Scale Storm Flow Storage Lid Project on October 3, 2017. The survey was completed by LSA archaeologist Spencer Bietz, B.A. Mr. Bietz was accompanied by Ms. Gina Sutton, a Native American Observer representing the Iipai Nation of Santa Isabel. No cultural resources were observed during the survey effort. The majority of the project area has been developed into residential neighborhoods. Undeveloped areas within the project area appeared to be previously disturbed from grading activities associated with creation of the surrounding neighborhoods. The potential for intact buried resources is remote. Cultural resource monitoring by archaeologists is not recommended.

PROJECT DESCRIPTION AND LOCATION

The proposed project is located within the community of Carmel Valley in the City of San Diego, California (attached Figure 1). The Ashley Falls Large Scale Storm Flow Storage Lid Project proposes to improve the existing Ashley Falls retention basin, redesigning it into a large scale storm flow storage basin. The existing retention basin is located at the northwest corner of the intersection of Carmel Knolls Drive and Pearlman Way. Improvements to the existing retention basin include:

- Installation of an 18-inch wing-type headwall for an 18-inch diameter Reinforced Concrete Pipe (RCP) connecting to the existing storm drain within Carmel Knolls Drive (Line A);
- Installation of a modified 18-inch wing-type headwall for a 12-inch diameter RCP connecting to the existing storm drain at two locations in Carmel Knolls Drive (Line B);
- Installation of two 8-inch biofiltration basin cleanouts, connected via an 8-inch diameter perforated PVC pipe to a Type F Catch Basin with four openings and a trash rack. The Type F

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Catch Basin will connect to the existing storm drain within Pearlman Way via a 24-inch diameter RCP (Line C);

- Installation of a modified 18-inch wing-type headwall for a 12-inch diameter RCP that connects to a Type F Catch Basin. The Catch Basin will connect to the existing storm drain within Pearlman Way via a 12-inch diameter RCP (Line D).

The areas surrounding the existing basin will be cleared of vegetation, with mature trees being salvaged and relocated to a temporary location during construction activities. The bottom of the basin will be graded down to approximately 172 feet above mean sea level in elevation. The perimeter of the basin will be contoured to join with existing slopes. Following the completion of the retention basin construction, the exposed areas will be revegetated and landscaped. The salvaged trees will be replanted. A pedestrian trail composed of decomposed granite will be created to traverse the open space along the north and west edges of the basin, connecting to existing sidewalks on Carmel Knolls Drive and Pearlman Way (attached Figure 2).

The survey area for the project extends north from Pearlman Way, and includes areas adjacent to Carmel Knolls Drive and Seagrove St. The survey area totaled 8.7 acres in area, and included several developed areas within the immediate vicinity of existing storm drain infrastructure. All areas identified for storm drain basin improvements are located on canyon slopes within the Carmel Valley community. The project area is located within Township 14 South, Range 3 West, Section 17, on the United States Geologic Service (USGS) 7.5-minute topographic quadrangle *Del Mar, California* (1975) (attached Figure 1). The project area is located approximately 0.35 mile southeast of Del Mar Heights Road, 0.4 mile north of State Route (SR) 56, and 2.2 miles east of Interstate 5.

REGULATORY CONTEXT

The project is subject to the California Environmental Quality Act (CEQA) review process. Cultural resources investigations are required by law to comply with local, state, and federal laws, regulations, and ordinances. Most of these laws overlap and complement each other providing protection of cultural resources at various jurisdictional levels. The regulatory framework and methods used for this project for determining impacts to cultural resources are defined in Section 15064.5 of the *CEQA Guidelines* (California Natural Resources Agency 2016). These guidelines require that the effects of a proposed project on historical resources must be considered during the planning process. The process requires (a) the identification of cultural resources that may be affected by the project, (b) an evaluation of the significance of the resource, (c) an assessment to determine whether a project may have a significant effect on archaeological resources, and finally (d) the development of a research design and data recovery program to address or avoid impacts that may occur to the resource as a result of the project.

SETTING

Natural Setting

The project is located in the western portion of San Diego County within the canyon areas southeast of Del Mar and northeast of Carmel Creek. The project site is situated on the slopes of an uplifted terrace in a highly developed residential area, and is bordered by Ashely Falls Park to the northwest,

Cathedral Catholic High School to the north-northeast, and Seabreeze Farms Equestrian School to the northeast. The San Dieguito River, located north of the project area, and Carmel Creek, located south of the project area, would have served as primary water sources during the prehistoric and historic periods.

The geomorphology of the area has been formed as a result of three major geologic processes: Tectonic uplift, fluvial sediment deposition, and denudation of the landscape. The terrace is displaced by recent movement along the Rose Canyon Fault forming the La Jolla and Scripps Canyon submarine canyons.

Three different geologic formations are present within the vicinity of the project area: T_{mv} (Mission Valley Formation), T_f (Friars Formation), and Q_{vop} (Quaternary Very Old Paralics).

- The Mission Valley Formation is present discontinuously from Otay Valley to Miramar Reservoir in the north, and from old Town to Spring Valley, El Cajon Valley, and Santee. The formation dates to the Eocene and is the only Eocene unit in southern California to have a radiometric date associated within fossil mammal localities. The Mission Valley Formation also contains marine strata, which have produced specimens of marine microfossils, macroinvertebrates, and vertebrates. Terrestrial portions of the unit have produced a large, diverse assemblage of land mammals as well as specimens of petrified wood (City of San Diego 2008).
- Friars Formation soils also date to the Eocene and consists of nonmarine and lagoonal deposits forming sandstones, siltstone, mudstones, and cobble conglomerate. The formation is documented as extending north from Mission Valley to Rancho Bernardo and Rancho Santa Fe, south to Tecolote Canyon, and east to Santee and Lakeside. Friars Formation soils contain a high paleontological sensitivity and are rich in vertebrate fossils including primates, rodents, artiodactyls, and perissodactyls. Fossil leaves as well as marine microfossils and macroinvertebrates are also present (City of San Diego 2008).
- Quaternary Very Old Paralic deposits originate from very old lacustrine, playa, and estruarine deposits, and have been dated to the middle to late Pleistocene. These deposits can include coarse-grained, gravelly sandstones, pebble and cobble conglomerates, and claystones. Although these deposits contain a low-to-moderate sensitivity for vertebrate fossil specimens, fossils of mammoth, wolf, camel, and mastodon have been recovered. A well-preserved ground sloth specimen was recovered within Q_{vop} deposits within the San Dieguito Valley (City of San Diego 2008).

Based on U.S. Department of Agriculture (USDA) soil maps (1973), Redding-Olivenhain Association (Group IV) soil types overlay the geologic formations within the project area:

- Group IV, Redding-Olivenhain Association: Well-drained gravelly loams and cobbly loams that have a subsoil of gravelly clay and very cobbly clay over a hardpan or cobbly alluvium; 9 to 50 percent slopes. Redding-Olivenhain soils are developed on old gravelly and cobbly marine terraces dissected by numerous drainages. These soils occur on the Coastal Plains and characterize the terraces with tortuous divides and deep V-shaped valleys with steep side slopes.

- Corralitos Series soils are also present within the project area. These soils consist of excessively drained, very deep loamy sands formed from alluvium derived from marine sediments. Corralitos Series soils are typically found within narrow valleys and upon small alluvial fans, with slopes ranging between 0 and 15 percent. Within the limits of the project area are Corralitos loamy sands (CsB) are present. CsB loamy sands are typically present upon 0–5 percent slopes and usually form a 12-inch surface layer (USDA 1973).

The climate of the region can generally be described as Mediterranean, with cool, wet winters and hot, dry summers. Lack of rainfall limits vegetation growth and habitat types adapted to the dry conditions of the region occur in the project area. Prior to disturbance, the project area would have been dominated by coastal sage scrub. Animal resources in the region include deer, fox, raccoon, bobcat, coyote, rabbit, and various rodent, reptile, shellfish, fish, sea mammals, and bird species. Small game, dominated by rabbits, is relatively abundant.

Prehistoric Setting

San Diego County archaeological investigations indicate humans have inhabited the area for at least 10,000 years. Malcolm Rogers (1926) was the first to develop a cultural chronology of the region. In general, they can be divided into five consecutive periods: Paleoindian, Archaic, Late Prehistoric, Ethnohistoric, and Historic (Bull 1983; Ezell 1987; Moriarty 1966; Warren et al. 1993).

The earliest sites in San Diego County are identified as the Paleoindian period (9000 to 8000 YBP [years before present]), and include the San Dieguito, La Jolla and Pauma complex. Most of these sites are located around inland dry lakes, on old terrace deposits in the California desert, and on or near the coast on mesas or terraces. The artifacts associated with this period are heavily patinated felsite tools primarily consisting of scrapers, scraper planes, choppers, large blades, and large projectile points.

Around 8,000 years ago, changes in technology begin to appear in the archaeological record. During the Early Archaic period, there is an increase in the use of grinding and seed processing technology and a change in mortuary practices, indicating population movements or internal change (Moratto 1984). There is a marked increase in the exploitation of plant and animal resources inland and on the coast. Artifacts associated with this period include an increase of Pinto and Elko series projectile points, large bifaces, manos, metates, and core tools.

The Late Prehistoric period is characterized by a series of dramatic technological changes indicating that around 2000 YBP, people from the Colorado River area migrated to the Southern California region. This period is characterized by the appearance of smaller projectile points, ceramics, permanent bedrock milling sites, and cremation burials. There also appears to be an increase in the establishment of permanent or semi-permanent seasonal villages indicating a shift to inland plant food collection and processing.

The Ethnohistoric period occurred shortly before Europeans colonized Southern California. Documentation by the Spanish and the material culture left by the native people indicates that at the time of contact there were four distinct native groups in the area: Luiseño, Diegueño, Cupeño,

and the Cahuilla (Kroeber 1925). During this period, the Native American populations dramatically decreased and were quickly assimilated into the mission system.

Ethnographic Setting

The present project area lies within the traditional territory of the Kumeyaay. The Kumeyaay have been identified by a variety of names, including Diegueño, Tipai-Ipai, and Kamia. The term "Diegueño," no longer used by the Native American people or by most researchers, incorporated various geographic subdivisions including Western, Eastern, Southern, Northern, Mountain, and Desert Diegueño (Drucker 1937; Kroeber 1970:709–725; Luomala 1978:592; Spier 1923). According to Shipek (1982:296), the terms "Ipai" and "Tipai" are now used to specify "Indian" in contrast to non-Indians. Ipai were identified living in the northern portion of Kumeyaay territory, including present-day San Pasqual, Ramona, Santa Ysabel, and Julian. The Tipai area includes the remainder of Kumeyaay territory, including San Diego, northern Baja California, Pine Valley, Cuyamaca Rancho State Park, and Anza-Borrego Desert State Park (Luomala 1978:Fig. 1; Spier 1923:297–298). The current project area falls within the recognized boundary of the Tipai.

Kumeyaay traditional territory includes a significant portion of present-day San Diego County up to Agua Hedionda and inland along San Felipe Creek (just south of Borrego Springs). The territory is bounded to the east by the Sand Hills in Imperial County and included the southern end of the Salton Basin and all of the Chocolate Mountains. Kumeyaay territory extended southward to Todos Santos Bay, Laguna Salada, and along the New River in northern Baja California (Bean 1978:Fig. 1; Hedges 1975:Fig. 1; Luomala 1978:593). The Luiseño, Cupeño, Cahuilla, Quechan, Cocopa, and Paipai border Kumeyaay territory.

Estimates of Kumeyaay population prior to Spanish contact are difficult to obtain. Kroeber (1970:712), in his early 20th century research, stated that the population reached around 3,000 people. This figure is low, since Kroeber apparently relied upon information gathered from baptismal records of Mission San Diego. Shipek (1981:296) estimates that 10,000 Kumeyaay were living at the time the Spanish arrived. Carrico (1986:8) identified the number of large villages known to exist at Spanish contact and estimated the total number of individuals as approximately 17,000. Diseases introduced by the Spanish and later the Mexicans resulted in profound decreases in Kumeyaay populations (Shipek 1986:16–17).

According to Shipek, the Kumeyaay were organized into territorial bands (1982:297). The band territory consisted of a section of a major drainage and its tributaries. "Each band had a central primary village and a number of outlier homesteads located at small water sources, springs, or at the mouths of secondary creeks" (Shipek 1982:297). A sib form of kinship structure crosscut these territorial bands, in which 5 to 15 sibs (shiimull) might hold lineage affiliation within a band. Each sib was represented by bands from a variety of environmental zones. Kumeyaay social structure was "flexible" enough to allow movements between bands. The possibility among the Kumeyaay to move in with sib relatives living in distant areas provided a potential to exploit a wide range of environmental zones (Shipek 1981:297). Kumeyaay society was patrilocal and patrilineal (Kroeber 1970:719–720; Luomala 1978:592, 602; Spier 1923:299). This societal principle meant, for example, that a young married woman went to live in her husband's village and she and any children then became known by her husband's family name and/or his clan affiliation.

Bands were the primary land ownership unit among the Kumeyaay. The Kumeyaay also recognized certain lands as open to all use. Shipek (1982:301) provides some examples of aboriginal ownership concepts: "Certain sections of the Laguna and Cuyamaca Mountains were tribal gathering areas for acorns and various 'wild' products. ... Major portions of the desert and desert foothills were tribal gathering areas to which any Kumeyaay from any part of Kumeyaay territory might come for 'wild' foods. The Kumeyaay had a well-developed network of trails throughout their lands. The trails belonged to all Kumeyaay for their use" (Shipek 1982:302).

Some level of "national" organization, leadership crossing over all Kumeyaay, did exist. Kumeyaay did work together for various causes, such as to resist the Spanish (Castillo 1989:384–387; Shipek 1982:300). The Kumeyaay recognized a Kuuchult kwataay who managed interactions with other groups, for example, the Quechan, Cahuilla, and others. The Kuuchult kwataay along with the Kwaaypaay maintained knowledge of tribal and band territories.

The Kumeyaay in prehistoric times were semi-sedentary residents of certain favored locations or base camps. Kumeyaay could travel to outlying areas seasonally to harvest food resources and those who lived in mountain areas could travel to avoid inclement weather such as winter snows of the higher elevations. Camps were selected for their favorable environmental circumstances including access to water, access to plant foods and hunting areas, access to outcrops suitable for food-processing activities, a natural microclimate, or protection from strong winds, and other factors (Lucas 1995:6–7; Luomala 1978:597; McDonald 1992:53–54; Shipek 1970). Kumeyaay who occupied the Imperial Valley and Salton Basin did not move camps an appreciable distance during a year, as their practice of agriculture sufficiently complemented locally-available wild food resources (Gifford 1931:21–24; Hicks 1963:323, 326–327).

Plant foods represented the most important basis of subsistence for hunter-gatherer people such as the Kumeyaay, and availability of important plant foods greatly influenced movements of groups (cf. Bean and Saubel 1972:15–23; Cline 1979:29–30; Hicks 1963:322–327; Luomala 1978:599–600). Various plants with potential food uses within Kumeyaay territory ripened earliest on the lower elevations of the desert floor such as cacti (*Opuntia* spp.), chía (*Salvia columbariae*), grasses (Poaceae family), ocotillo (*Fouqueria splendens*), and yucca (*Yucca whipplei*). The harvest of agave (*Agave deserti*) occurred primarily in April or May, but could begin as early as February (cf. Bean and Saubel 1972:31–36; Hedges and Beresford 1986:13; Hicks 1963:110; Shipek 1970:32, 1991:32). People living in or close to coastal areas may have traded with interior people for agave. The Kumeyaay would have occupied the mountains by late spring and remained through the fall to gather grass seeds, greens, bulbs, seeds, and berries from shrubs (e.g., elderberry [*Sambucus* spp.], chokecherry [*Prunus virginianus*], and holly-leaf cherry [*P. ilicifolia*]), acorns, pine seeds, and other plant products. Food resources not available on and near the coast, such as some of the latter plant foods, could have been obtained by trade or through participation in regional gatherings. Hedges and Beresford (1986), Hicks (1963), and Lucas (1995:51) identified a variety of plants used by Kumeyaay for food or other uses. Numerous trails existed throughout traditional Kumeyaay territory, including the coastal plain, interior valleys, the mountains, and the Colorado Desert, demonstrating the wide-ranging nature of prehistoric food-gathering forays (Carrico 2008; Lucas 1995; Schaefer 1994:66).

The Kumeyaay hunted a variety of animals, such as, rodents (Order Rodentia), chuckwalla (*Sauromalus ater*), jackrabbits (*Lepus californicus*), cottontail (*Sylvilagus* spp.), deer (*Odocoileus hemionous*), bighorn sheep (*Ovis canadensis*), and other animals (Luomala 1978:601; McDonald 1992:309–310). Kumeyaay bands living to the east of the desert also hunted waterfowl and fished in the Colorado River and its sloughs (Gifford 1931:25). According to Tom Lucas, Kumeyaay bands living in the mountains would travel to Lake Cahuilla to fish (Cline 1984:24). Hunting equipment included bows made from mountain ash (*Fraxinus* spp.), huckleberry (*Vaccinium ovatum*), mesquite (*Prosopis* spp.), or willow, arrows made from arrowweed, a curved throwing stick, and traps and snares (Cline 1984:21–24; Gifford 1931:28; Luomala 1978:601; Spier 1923:350–351). Fishing equipment included hooks, a basketry scoop, nets, and stone fish traps (Cline 1984:24; Gifford 1931:25).

Ceramic implements played a key role in the everyday life of the Kumeyaay. A variety of vessel forms are known to have been made by the Kumeyaay, including large storage ollas (pahatc), water ollas, cooking pots and bowls, pipes (mokwin), and rattles (Cline 1979:39–48; Hohenthal 2001:Fig.7.2; Rogers 1936:18–19). Tom Lucas identified the Kwaaymii word for olla as saakaay (Cline 1979:39). Among the Kumeyaay, clay sources for pottery-making could be used by all, but individual potters obtained raw material from specific spots within the source (Hedges and Beresford 1986:46–47; Hohenthal 2001:166-167; Rogers 1936:4). Hedges and Beresford (1986:47) identified the Kumeyaay word for pottery clay as mathwatt, meaning "red dirt." Rogers (1936:4) reported "jagged rocks and sharpened sticks" as aboriginal clay-quarrying tools. Rogers (1936) contains a good description of the traditional pottery-making process as performed by an early 20th century Kumeyaay potter. See also the description of the pottery-making process as documented by Hohenthal (2001:170–172) among Tipai Kumeyaay people in northern Baja California.

The Kumeyaay manufactured both coiled and twined baskets for a variety of uses. Basket types included seed beaters, hoppers for mortar holes, winnowing baskets, leaching baskets, granaries, basketry caps, and nets (Cline 1979:30–39; Elsasser 1978:631; Hedges and Beresford 1986:12; Hohenthal 2001:165–166; Luomala 1978:600, 602). Principal raw materials used in Kumeyaay basket-making are *Muhlenbergia rigens, Rhus trilobata, Juncus textilis*, and the needles of *Pinus jeffreyi* or *Pinus ponderosa* (Hedges and Beresford 1986:9). These plants would have been available in various locations throughout the traditional territory. Modern-day Indian basket makers rely on plants from public lands and have been able to sustain this traditional craft. An awl for sewing, a small knife for cutting tasks, and one's own teeth represent the only tools used in the basket making process (Hedges and Beresford 1986:11; Hohenthal 2001:163–166).

Historic Setting

The Historic period in San Diego County is generally divided into three politically defined periods: Spanish, Mexican, and American periods. The Spanish colonists first settled the Southern California region in A.D. 1769 and established military and religious institutions along the coast. In 1821, Mexico won its independence from Spain and California came under Mexican rule. By 1834, the Spanish missions had been secularized and large tracts of land, or ranchos were granted to Mexican citizens. Mexican rule ended with the signing of the Treaty of Guadalupe Hildalgo in 1848 when Alta California was ceded to the United States.

San Diego became an American city in 1846 and was incorporated by the end of the decade, but initial growth was slow due to a combination of natural and political causes: a drought, failure of transcontinental railroad promotion, and the Civil War. This would change in the late 1860s with the arrival of Alonzo Horton, entrepreneur and land developer, who was responsible for New San Diego (modern downtown) in the 1870s (City of San Diego Historical Resources Board 2009). As the southernmost port on the west coast of the United States, San Diego experienced a commercial boom that was greatly enhanced by the establishment of multiple naval facilities and an Army airfield by the beginning of World War I (Pourade 1967). The City also enjoyed the establishment of the facilities of major aerospace companies such as Ryan Aircraft and Consolidated Aviation, which went on to design and/or produce large numbers of aircraft, missiles, and aviation components for the military from the 1930s to the present.

Carmel Valley

The project area is located within the community of Carmel Valley and is considered a more recent development within the City of San Diego. The community's original official name was "North City West," according to the master plan commissioned in 1974. During the Rancho period, the area was known as Cordero Valley, after a Spanish "leather jacket" soldier (City of San Diego n.d.). Following the California Gold Rush, the area was settled and homesteaded by miners traveling south. Around 1905, the Carmelite Sisters of Mercy established a dairy farm and monastery on the south side of Carmel Creek, and connected to the St. William of York Church by a bridge. The cemetery at St. William of York Church includes graves from several of the former nuns and priests. Carmel Mountain and Carmel Valley were named after the Carmelite Sisters of Mercy (City of San Diego n.d.). Numerous residential houses were built during the early and mid-20th century, and Torrey Pines High School was constructed in 1974. The first large-scale residential neighborhoods were constructed in the area in 1983, and in the 1990s the local Planning Board brought back the name "Carmel Valley" (City of San Diego n.d.).

METHODS

Records Search

For this cultural resource survey, LSA conducted a records search in August 2016 at the South Coastal Information Center (SCIC), located at San Diego State University. The SCIC retains records of all previously conducted surveys, cultural resource properties, subsurface investigations, and all historic resources over 45 years in age. LSA reviewed site records of archaeological sites and bibliographical references for all surveys and investigations within 0.25 mile of the project area. Historic maps and aerial photographs were examined, and the following inventories were queried:

- National Register of Historic Places (National Register);
- California Register of Historical Resources (California Register);
- California Historical Landmarks;
- California Historic Properties Directory; and
- California Points of Historical Interest.

Survey

The cultural resources survey was conducted by LSA archaeologist Spencer Bietz, B.A., on October 3, 2017. The survey area is shown in Figure 2. Ms. Gina Sutton, on behalf of Misschief Monitoring, accompanied Mr. Bietz as a Native American Observer. Ms. Sutton is a representative of the Iipai Nation of Santa Isabel, a federally recognized tribe located near Santa Ysabel in San Diego County. The survey included inspecting the proposed location for the retention basin and the surrounding areas within the limits of the project area. The basin and adjacent areas were surveyed using 5-meter wide transects in order to determine if potential resources were present. The surface was examined along with subsurface exposures such as rodent burrows and cut banks for physical manifestations of human activity greater than 45 years in age. Resources discovered during the course of the survey were documented on field notes and photographed.

RESULTS

Records Search

The records search (cover sheet attached) results indicated that 29 cultural resource surveys have been conducted within 0.25 mile of the project area (Table A). Eleven of these surveys included portions of the project area, all with negative results for the project area. However, the entirety of the project area has not been previously surveyed.

Table A: Summary of Previous Studies within 0.25 Mile of the Project Area (*Del Mar* Quadrangle)

Report No.	Author	Title	Year
SD-01730	Polan, H. Keith	An Archaeological Reconnaissance of the Sea Breeze Estates Property	1978
SD-01938	McKenna, Jeanette	Archaeological Survey Report: Ukegawa Brothers Agricultural Use Permit Carmel Valley Region Sector	1986
SD-02489	Cottrell, Marie	Archaeological Resources Survey Conducted for the Baldwin North City West Project, Neighborhoods 4, 5, and 6	1982
SD-02500	Gallegos, Dennis, and Ivan Strudwick	Cultural Resource Inventory for Hangar 4 Parking Lot Facility, NAS Miramar, San Diego, California	1992
SD-02698	Gallegos, Dennis, Ivan Strudwick, and Roxana Phillips	Historic/Archaeological Survey and Test Report for Subarea 111 Future Urbanizing Area, San Diego, California	1993
SD-03041	McHenry, Petei, and Dennis Gallegos	Archaeological/Historical Survey for the Sea Breeze Farms Project, City of San Diego, California	1996
SD-03351	City of San Diego	Draft EIR, Pacific Highlands Ranch (Subarea 3) Subarea Plan in the North City Future Urbanizing Area (NCFUA)	1998
SD-03352	Strudwick, Ivan H., Roxana Phillips, and Dennis R. Gallegos	Historical/Archaeological Survey and Test Report for North City Future Urbanizing Area, Subarea 3	1993
SD-03719	Schroth, Adella B., Dennis R. Gallegos, Ivan H. Strudwick, and James D. Eighmey	Addendum to Archaeological Survey Report for the Proposed Alternate Northerly and Central State Route 56 Alignments, City of San Diego, California	1997
SD-03728	McHenry, Petei, and Dennis R. Gallegos	Archaeological/Historical Cultural Resource Study for the Seabreeze Farms Project, San Diego, California	1996

Table A: Summary of Previous Studies within 0.25 Mile of the Project Area (*Del Mar* Quadrangle)

Report No.	Author	Title	Year
SD-03738	Dolan, Christy C.V.	Research Design for Assessing Site SRH-1 in the Proposed Alternate Northern State Route 56 Alignments, City of San Diego, California	1997
SD-04236	APEC (American Pacific Environmental Consultants, Inc.)	Environmental Impact Report for San Dieguito River Study Draft Conceptual Master Plan	1981
SD-04466	Cottrell, Marie, and Richard Norwood	Preliminary Test Investigations of Nine Sites Located in the Baldwin: North City Wet Project Area	1982
SD-04655	Monserrate, Lawrence	Seabreeze Farms Amendment to the City Progress Guide and General Plan, North City Future Urbanizing Area Framework Plan, Carmel Valley Community Plan, and Carmel Valley Neighborhood	1996
SD-04884	PRC Toups Corporation	Sea Breeze Estates Draft Environmental Impact Report	1978
SD-05114	Monserrate, Lawrence	EIR: Pacific Highlands Ranch Subarea Plan in the North City Future Urbanizing Area	1998
SD-05656	Monserrate, Lawrence	Addendum – EIR – Santa Monica	2001
SD-05748	City of San Diego	DEIR for Seabreeze Farms	1996
SD-05793	Strudwick, Ivan	Historical/Archaeological Survey: Test Report for North City Future Urbanizing Area, Subarea 3, San Diego	1993
SD-06096	City of San Diego	EIR for the Proposed Seabreeze Farms Plan Amendment, San Diego, California	1996
SD-06098	Dolan, Christy	Historic Study Report State Route 56 Between Interstate 8 and Interstate 15, McGonigle Family	1996
SD-06388	City of San Diego	Notice of Preparation of a Draft Subsequent EIR – Neighborhood 10 Plan Amendments	1997
SD-07603	Wade, Sue	Central Catholic High School Property: Cultural Resource Survey	1999
SD-08005	PRC Toups Corporation	Draft Environmental Impact Report for North City West Precise Plan Development Units 4, 5, and 6	1982
SD-08488	Dominici, Debra	Carmel Del Mar, Neighborhoods 5 and 6	1987
SD-08489	Marsh, Debra H.	Environmental Impact Report for the North City West Neighborhoods 4, 5, and 6	1982
SD-08504	PRC Engineering	Environmental Impact Report for Land Development in North City West, Carmel Valley, San Diego, California	1982
SD-08664	Cottrell, Marie, Richard Norwood, and Kathleen de Chario	Preliminary Test Investigations of Nine Sites Located in the Baldwin: North City West Project Area, San Diego, California	1982
SD-11823	Kick, Maureen S.	Cultural Resources Technical Report for the San Diego Vegetation Management Project	2007

*Highlighted item represents a cultural study within the Project Area

The records search also indicated that six previously recorded cultural resources were present within 0.25 mile of the project area (Table B). No previously recorded cultural resources were present within the project area limits. The six resources include one prehistoric habitation debris scatter, two prehistoric artifact scatters, and three prehistoric isolates.

Table B: Previously Recorded Resources within a 0.25-Mile Radius of the Project Area

Site Number	Type	Recorder and Year
P-37-006802 (CA-SDI-6802)	Prehistoric Habitation Debris	I. Strudwick, J. Boughton, R. Collett (1993) K. Polan (n.d.)
P-37-010028 (CA-SDI-10028)	Prehistoric Lithic and Groundstone Scatter, Shell Scatter	T. Miller, P. Haynal, C. Serr (1984)
P-37-010033 (CA-SDI-10033)	Prehistoric Lithic and Artifact Scatter	S. Von Wormer, T. Miller (1984) C. Winterrowd (1985)
P-37-014827 (CA-SDI-14827)	Prehistoric Lithic Isolate	T. Muranaka (1984)
P-37-014828 (CA-SDI-14828)	Prehistoric Groundstone Isolate	T. Muranaka (1984)
P-37-014829 (CA-SDI-14829)	Prehistoric Lithic Isolate	T. Muranaka (1984)

The review of historic maps and aerial imagery found no historic-era resources or structures located within 0.25 mile of the project area. Aerial imagery dating to 1953 indicated that the project area and the surrounding areas were in the initial stages of grading and development for several small residences and access roads through the area. Additional portions of land were graded through 1981; however, the construction of residential structures within the area remained low. Imagery dating to 1989 indicated that many of these graded and developed areas were being used for agricultural purposes, and several small farms appear within a close proximity to the project area. Imagery from 1989 also shows larger-scale grading on bluff tops, primarily for residential structures. Imagery from 1994 indicated that residential neighborhood construction began to occur within areas adjacent to the project area. By 2003, the majority of the project area and the surrounding bluffs had been developed into residential neighborhoods. The lands within the project area were developed into Pearlman Way and Carmel Knolls Drive by 2002, with the undeveloped lands northwest of this intersection contoured into a small basin. The slope west of the current retention basin appeared not to have been altered from its natural form during development activities.

Survey

LSA archaeologist Spencer Bietz, B.A. and Native American Observer Gina Sutton visited the project area on October 3, 2017. The portions of the project area east of Carmel Knolls Drive are thoroughly developed. Seven residences and a small children's playground are present along the east side of the road (Photographs 1 and 4). Open areas along the roadside and sidewalks on Carmel Knolls Drive and Pearlman Way were inspected for evidence of human activity greater than 45 years in age. The eastern boundary of the project area proceeds northwest up a hillside toward the rear boundary of several houses on Vallery Court. The hill was sloped approximately 50 degrees and was undeveloped and covered in annual vegetation and coastal sage scrub (Photographs 2 and 3). The west side of Carmel Knolls Drive and the north side of Pearlman Way was landscaped with ornamental vegetation alongside the boundaries of a concrete sidewalk.

The portions of the project area northwest of Carmel Knolls Drive and north of Pearlman Way were largely undeveloped. The west boundary of the project area is a steep east-facing slope of approximately 60 degrees (Photograph 5). The slope was heavily vegetated with a mix of chaparral and ornamental vegetation, resulting in poor or no surface visibility. The existing retention basin and the open areas to the north contained areas of dense chaparral, ornamental vegetation, and low-lying annual grasses and shrubs (Photographs 6 through 8). Surface visibility ranged from good in

clear, open areas to poor or no visibility in heavily vegetated areas. Soils consisted of a light brown compacted sandy silt alluvium. Numerous volcanic cobbles and cobble fragments were scattered within the retention basin and adjacent areas to the north. The cobbles varied in size from small to medium, and appeared to be eroding out of the western slope. The existing basin and areas to the north appear to have been moderately disturbed within the recent past, most likely associated with grading activities occurring during the creation of the surrounding neighborhood tracts. Several PVC pipes, most likely associated with the surrounding ornamental vegetation, protruded from the surface within the basin. The area, as a whole, appeared to sustain ongoing impacts from light-to-moderate recreational use. Several items of historic-era refuse were observed. No cultural resources were observed.

DISCUSSION

The records search at the SCIC resulted in the identification of six previously identified cultural resources. The six resources consist of one prehistoric habitation debris scatter, two prehistoric artifact scatters, and three prehistoric isolates. All six resources were identified outside of the project area.

No cultural resources were observed during the survey effort. The portions of the project area east of Carmel Knolls Drive are thoroughly developed. Seven residences and a playground are present along the east side of the road. The hillside on the Vallery Court contained a slope of approximately 50 degrees, which was undeveloped and covered in coastal sage scrub and annual vegetation. The west side of Carmel Knolls Drive and the north side of Pearlman Way was landscaped with ornamental vegetation alongside the boundaries of a concrete sidewalk. The portions of the project area northwest of Carmel Knolls Drive and Pearlman Way were largely undeveloped. The west boundary of the project area contained a steep east-facing slope of approximately 60 degrees. The slope was heavily vegetated with a mix of chaparral and ornamental vegetation. The existing retention basin and the open areas to the north contained areas of dense chaparral, ornamental vegetation, and low-lying annual grasses and shrubs. Surface visibility outside of these vegetated areas was moderate to good. Fragments of volcanic cobbles were scattered within the retention basin and adjacent areas, and appeared to be eroding out of the slope. The existing basin and areas to the north appear to have been moderately disturbed within the recent past, most likely due to construction activities associated with the creation of the surrounding neighborhoods.

The topography of the natural landform that encompasses the west boundary of the project area is not conducive for presence of cultural resources as the slope is in excess of 50 degrees. Habitation and food processing sites are generally not observed on steep slopes. The landform is also not conducive for the preservation of intact resources in-situ. Resources observed on steep slopes have typically been transported downhill through gravity and alluvial sheet wash (erosional) mechanisms. The potential for buried resources is remote. The areas surrounding the proposed retention basin have been modified as a result of earlier residential and urban development. These landform modifications raise the potential for a previously unidentified resource to be either displaced from its in-situ location and be negatively altered or affected (i.e., poor integrity).

RECOMMENDATIONS

The potential for intact subsurface cultural resources within the project area is remote. The topographic context of the natural landform adjacent to the proposed retention basin, combined with the potential for resource transport via alluvial mechanisms or mechanical displacement, limits the potential for the discovery of previously unidentified resources in the project area. Any remote potential that resources are discovered have a high probability of not being in-situ. Additionally, the landform upon which the proposed project is located has been modified from its original context during the creation of the surrounding neighborhoods. Evidence of this modification is visible within aerial imagery dating to the early 1990s. Therefore, cultural resource monitoring by archaeologists is not recommended. In the event that cultural resources are encountered during ground-disturbing activities, all work within the vicinity should halt until a City of San Diego qualified archaeologist can be contacted to assess the discovery. No additional work is recommended at this time.

If you have any questions regarding this cultural resources summary report or its findings, please contact me at rod.mclean@lsa.net or at (760) 931-5471.

Sincerely,

LSA ASSOCIATES, INC.

Rod McLean
Associate/Senior Cultural Resources Manager

Attachments: References Cited
Figure 1: Project Location
Figure 2: Storm Drain Improvement Locations
Photographs
Records Search Cover Sheet

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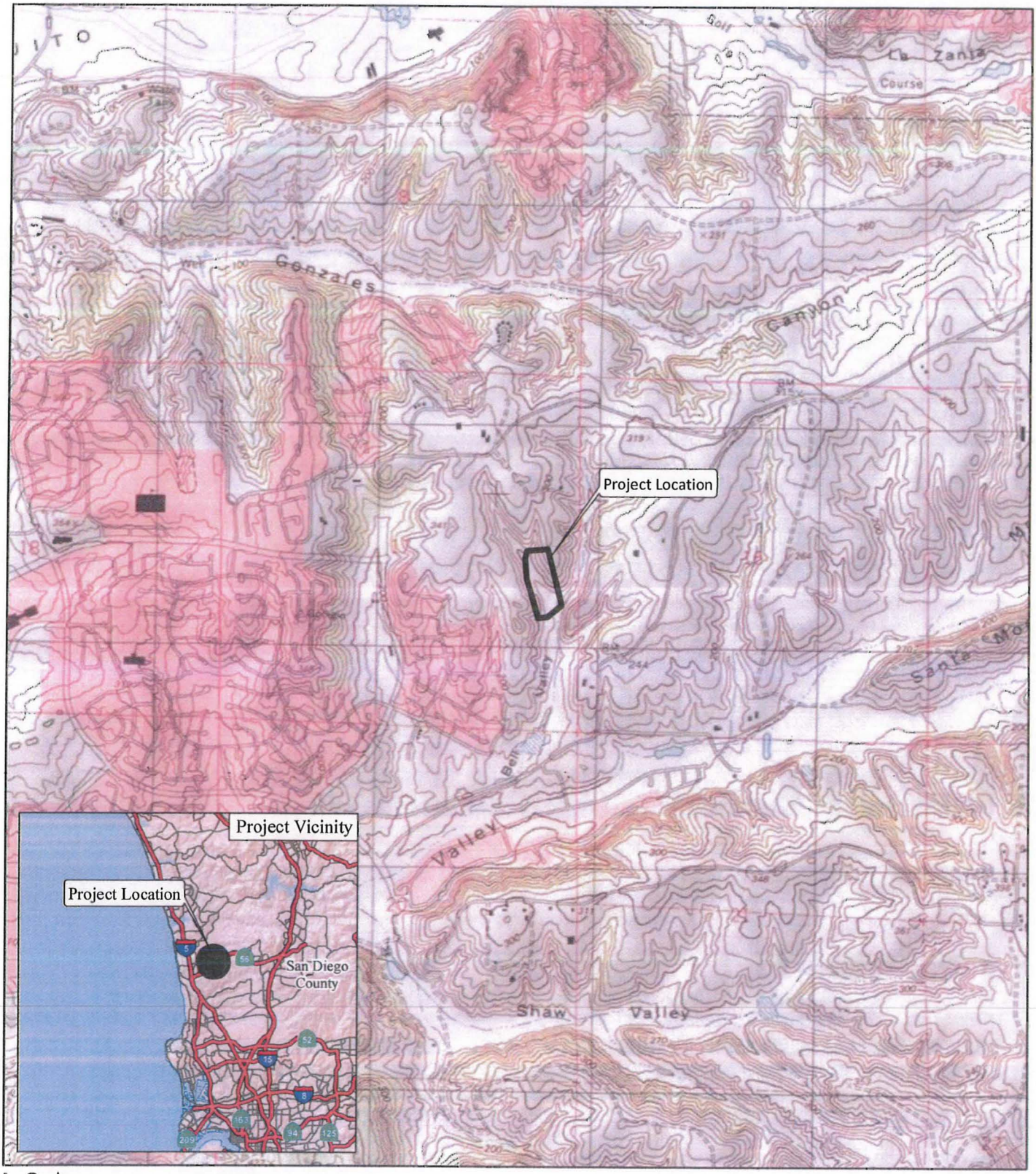

LSA

LEGEND

Project Location

FIGURE 1

Ashley Falls Large Scale Storm Flow Storage Lid
Cultural Resource Survey
City of San Diego, California
LSA Project RKE1701

Project Location

N

0 1000 2000

FEET

SOURCE: USGS 7.5' Quad - Del Mar (1975), CA

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LSA

LEGEND

- Biofiltration Basin Cleanout
- Type F Catch Basin
- Stormdrain Connect
- Retention Basin Limits
- Decomposed Granite Walkway
- Modified 18" Wing Type Headwall
- 8" Perforated PVC
- Reinforced Concrete Pipe
- Survey Area (8.7 acres)

0 25 50
FEET

SOURCE: Bing Maps (2015), Rick Engineering Company (2017)

I:\RKE1701\GIS\Fig2_ProjArea.mxd (10/6/2017)

FIGURE 2

Ashley Falls Large Scale Storm Flow Storage Lid
Cultural Resource Survey
City of San Diego, California
LSA Project RKE1701

Survey Area and Project Design Detail

LSA

LEGEND

- Previously Recorded Resource
- Retention Basin Limits
- Project Area
- Quarter-Mile Search Limit

0 250 500
FEET

SOURCE: Bing Maps (2015), Rick Engineering Company (2017), SCIC (2017)

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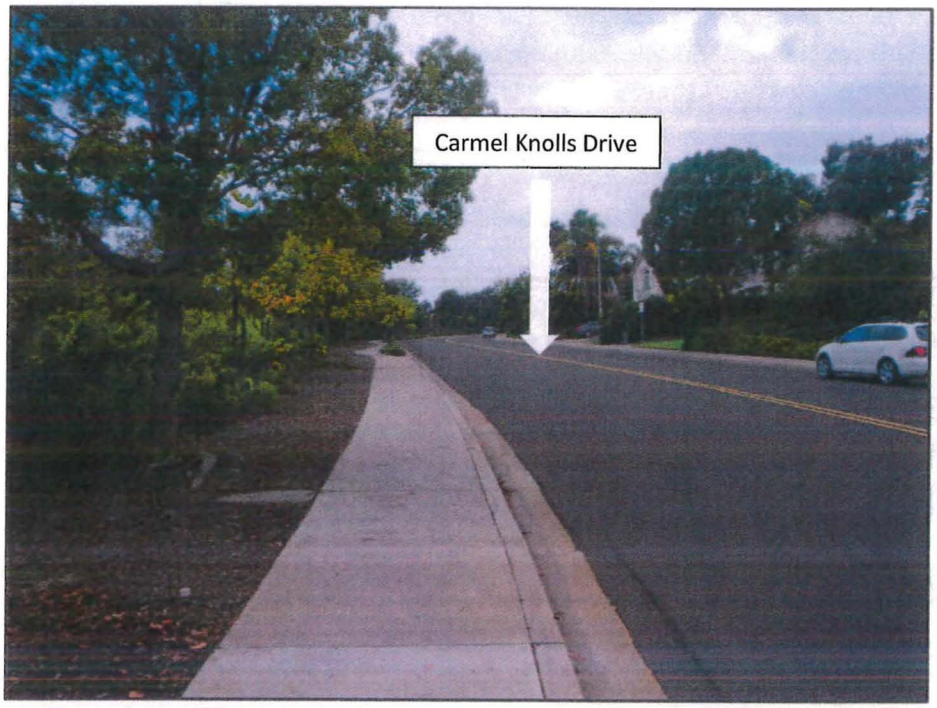
FIGURE 3

Ashley Falls Large Scale Storm Flow Storage Lid
Cultural Resource Survey
City of San Diego, California
LSA Project RKE1701

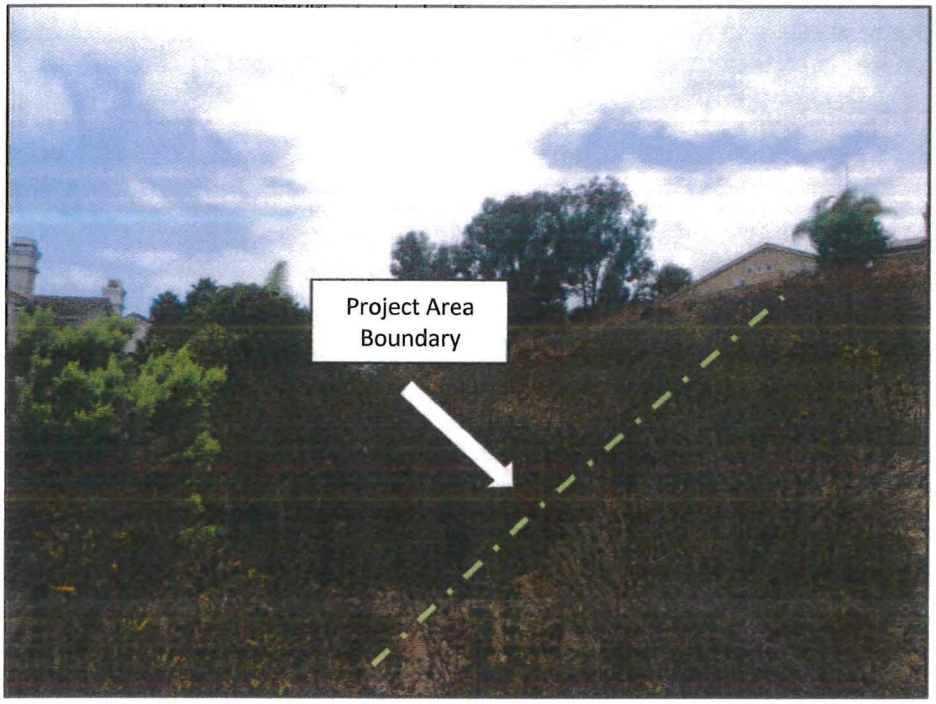
Records Search Results - Previously Recorded Resources

PHOTOGRAPHS



Photograph 1: Landscaping and residential development on Carmel Knolls Drive, view to the north

Photograph 2: Children's playground east of Carmel Knolls Drive, view to the northeast

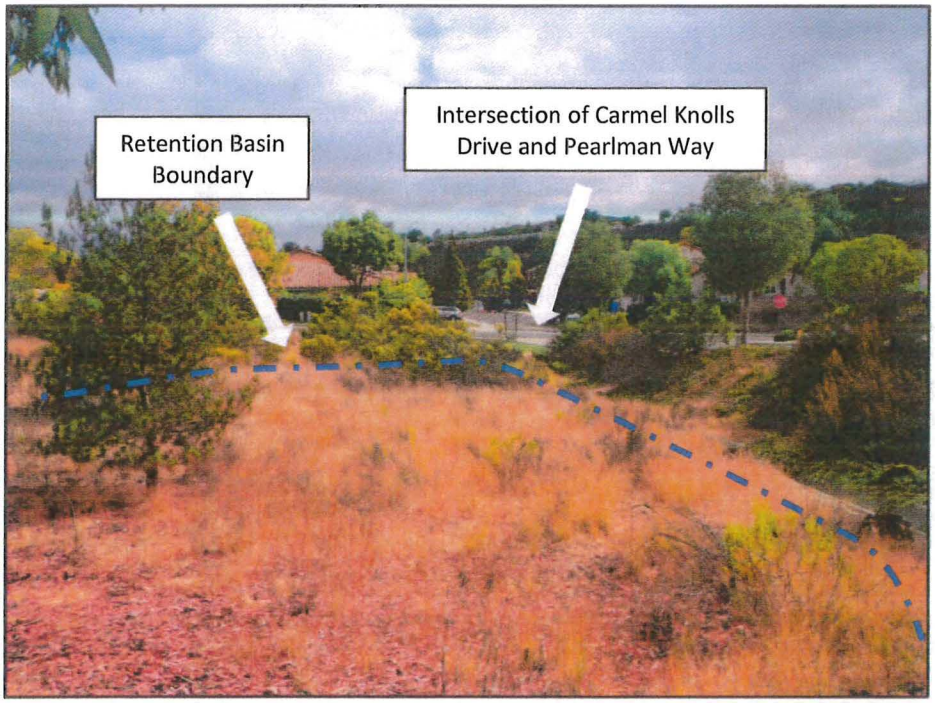


Photograph 3: Eastern project area boundary looking toward Vallery Court, view to the north

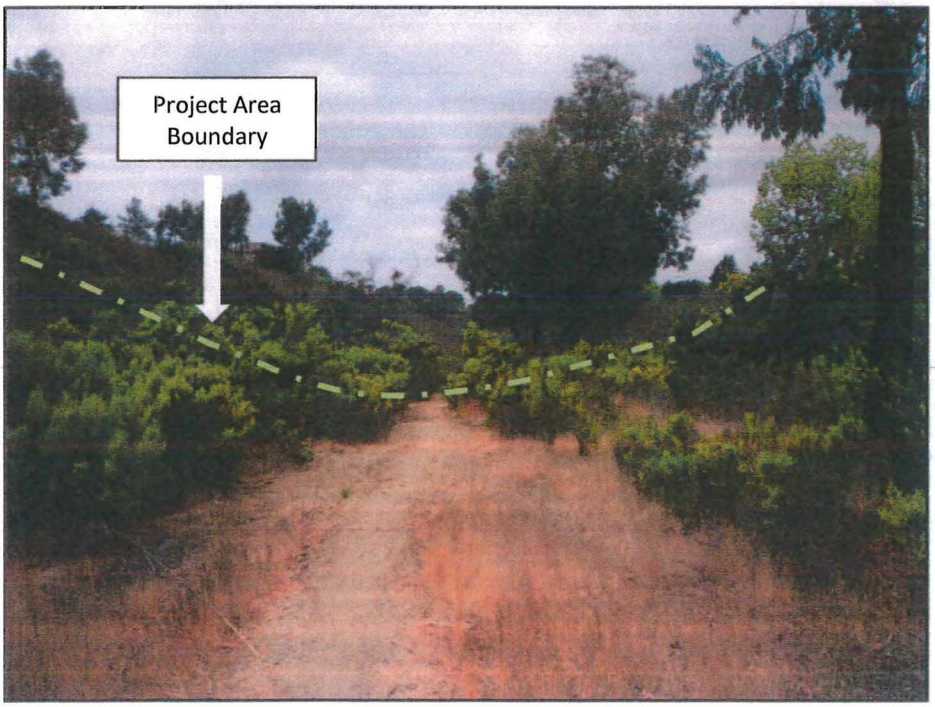
Photograph 4: Overview of Carmel Knolls Drive from Seagrove Street, view to the west

Photograph 5: Slope along west edge of project area, view to the southwest

Photograph 6: West edge of project area and retention basin boundary, view to the north



Photograph 7: South edge of retention basin and intersection of Carmel Knolls Drive and Pearlman Way, view to the east



Photograph 8: Undeveloped area on north side of retention basin, view to the north

South Coastal Information Center
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-5320
Office: (619) 594-5682
www.scic.org
nick@scic.org

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM
RECORDS SEARCH

Company: LSA

Company Representative: Natalie Brodie

Date Processed: 9/28/2017

Project Identification: RKE1701

Search Radius: 1/4 mile

Historical Resources: YES

Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been included for all recorded sites.

Previous Survey Report Boundaries: YES

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been included.

Historic Addresses: YES

A map and database of historic properties (formerly Geofinder) has been included.

Historic Maps: YES

The historic maps on file at the South Coastal Information Center have been reviewed, and copies have been included.

Summary of SHRC Approved CHRIS IC Records Search Elements	
RSID:	2388
RUSH:	no
Hours:	1
Spatial Features:	38
Address-Mapped Shapes:	no
Digital Database Records:	0
Quads:	1
Aerial Photos:	0
PDFs:	Yes
PDF Pages:	40

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February 15, 2017 7643-42

City of San Diego – Public Works Department
Engineering & Capital Projects
Attn: Carrie Purcell
525 B Street, Suite 750 (MS 908A)
San Diego, California 92101-4502

Subject: Biological Resource Letter Report for the Ashley Falls Storm Water Improvement Project (WBS No. B-14007.02.02), City of San Diego, California

Dear Ms. Purcell:

This letter report provides the results of our analysis of existing and potential biological resources associated with the proposed Ashley Falls Storage Project (WBS No. B-14007.02.02) site (study area) located in the City of San Diego (City), California.

In accordance with the current San Diego Land Development Code Biology Guidelines (City of San Diego 2012), this survey letter report provides an introduction, a summary of the pertinent biological resource regulations, a project description, the survey methods, existing biological resources, special-status biological resources, project impacts (direct and indirect), and project mitigation. The project impacts, avoidance, and mitigation measures (MMs) are discussed in accordance with the California Environmental Quality Act (CEQA), Clean Water Act (CWA), Migratory Bird Treaty Act (MBTA), California Fish and Wildlife Code, the *City of San Diego Final Multiple Species Conservation Program (MSCP) Subarea Plan* (City Subarea Plan; City of San Diego 1997), and the City of San Diego's (City's) Environmentally Sensitive Lands (ESLs) regulations.

1 INTRODUCTION

The study area consists of a City-owned parcel that has been previously graded and functions currently as vacant land. As outlined by the City's Public Works Department, the proposed project will consist of a large-scale storm flow storage and multi-pollutant treatment system. The existing outlet structure will be modified, to provide additional storage, with an extended riser to facilitate the retention and infiltration. Storm water will be treated by diverting flow from the drainage pipe flowing along Carmel Knolls Drive into a diversion swale and into the existing outlet. The majority of the work will occur within an existing disturbed area, and may require removal of some native and non-native shrubs and ornamental trees within the study area.

A biological survey of the study area, including the 0.79 acre project impact area and a 100-foot buffer (totaling 2.95 acres), was conducted by Dudek biologist Danielle Mullen on March 8, 2016. The survey included vegetation mapping and a habitat assessment for special-status plant and wildlife species.

2 PROJECT LOCATION

The approximately 2.95-acre project study area is located in the Carmel Valley community of San Diego, California within the City of San Diego's Subarea of the MSCP (Figure 1). The site is located at north of Pearlman Way and west of Carmel Knolls Drive. The approximate centroid of the project is 32°57′14.19″ north latitude, 117°12′20.83″ west longitude on the U.S. Geological Service (USGS) 7.5 minute series topographic Del Mar quadrangle map Section 18, Range 3 West, Township 14 South (Figure 2). The site is almost entirely bounded by existing development.

Topography and Land Uses

Within the study area, the topography slopes steeply to the west. The site ranges in elevation from approximately 175 feet to 230 feet above mean sea level (AMSL). Currently the site is vacant land.

Soils

According to the San Diego County Soil Survey, two soil types, Corralitos loamy sand, 0% to 5% slopes and loamy alluvial land-Huerhuero complex, 9% to 50% slopes, severely eroded, are mapped within the project study area (Bowman 1973).

3 REGULATORY CONTEXT

Multiple Species Conservation Program

The MSCP is a long-term regional conservation plan established to protect special-status species and habitats in San Diego County. The MSCP is divided into subarea plans that are implemented separately from one another. The entire study area is within the City's MSCP Subarea Plan. This subarea encompasses 206,124 acres and is generally characterized by urban land use. The City MHPA consists of a "hard line" preserve developed by the City in cooperation with the wildlife agencies, property owners, developers, and environmental groups. The MHPA identifies biological core resource areas and corridors targeted for conservation, in which only limited development may occur (City of San Diego 1997).

For planning purposes, the City's MSCP Subarea Plan has been divided into five distinct areas: Southern Area; Eastern Area; Urban Areas; Northern Area; and Cornerstone Lands and San Pasqual Valley. The study area is designated within the "Northern Area" of City's MSCP Subarea Plan. The project site is not located within or directly adjacent to any Environmentally Sensitive Lands (ESLs) or lands designated as Multiple Habitat Planning Area (MHPA) by the City's Subarea Plan. The site is also not within the City Coastal Zone Map No. C-908 as shown in Chapter 13, Article 2, Division 4 (San Diego 2008).

Migratory Bird Treaty Act

The MBTA prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursue, hunt, shoot, wound, kill trap, capture, or collect, or any attempt to carry out these activities (16 U.S.C. 703 et seq.). Additionally, Executive Order 13186, "Responsibilities of Federal Agencies to Protect Migratory Birds," requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Currently, birds are considered to be nesting under the MBTA only when there are eggs or chicks which are dependent on the nest.

California Fish and Game Code

According to Sections 3511 and 4700 of the Fish and Game Code, which regulate birds and mammals, respectively, a "fully protected" species may not be taken or possessed without a permit from the Fish and Game Commission, and "incidental takes" of these species are not authorized.

According to Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. Finally, Section 3513 states that is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

For the purposes of these state regulations, CDFW currently defines an active nest as one that is under construction or in use and includes existing nests that are being modified. For example, if a

hawk is adding to or maintaining an existing stick nest in a transmission tower, then it would be considered to be active and covered under these Fish and Game Code Sections.

4 METHODS

Data regarding biological and jurisdictional resources present within the study area were obtained through a review of pertinent literature and field reconnaissance; both are described in detail below.

4.1 Literature Review

The following data sources were reviewed to assist with the biological and jurisdiction efforts:

- Natural Resource Conservation Service (NRCS) Websoil Survey (U.S. Department of Agriculture (USDA 2016b)),
- CDFW California Natural Diversity Database (CNDDB; CDFW 2016a),
- California Native Plant Society Inventory of Rare and Endangered Plants (CNPS 2016),
- MSCP (City of San Diego 1997),
- U.S. Geological Survey (USGS) National Hydrography Dataset (USGS 2016)
- U.S. Fish and Wildlife Service (USFWS) Species Occurrence Data (USFWS 2016), and
- San Diego Geographic Information Source (SanGIS) database (SanGIS 2016).

4.2 Field Reconnaissance

The field survey was performed by Dudek biologist Danielle Mullen on March 8, 2016 (Table 1). The biological surveys were conducted in accordance with the City's Guidelines for Conducting Biological Surveys (Appendix II, City of San Diego 2012) and included the mapping of vegetation communities and land covers present in the study area, an evaluation of jurisdictional wetlands or waters, and an evaluation of the potential for special-status species to occur in the study area. It is important to note that the study area is defined as the impact footprint for the work location plus a 100-foot-wide study corridor surrounding the site. This is intended to better facilitate a review of all potential direct and indirect impacts resulting from the project (i.e., grading, new facilities/structures, staging areas).

Table 1
Survey Conditions

Date	Time	Personnel	Survey Conditions
3/8/16	1020-1457	Danielle Mullen	Clear; 2-3 mph winds; 61-71˚ Fahrenheit

4.3 Resource Mapping

The survey was conducted on foot to visually cover 100% of the study area. A 40-scale (i.e., 40 feet = 1 inch) aerial photograph map with an overlay of the project boundary was utilized to map the vegetation communities and record any special-status biological resources directly in the field. Observable biological resources—including perennial plants and conspicuous wildlife (i.e., birds and some reptiles) commonly accepted as regionally special status by the California Native Plant Society (CNPS), CDFW, and USFWS—were recorded on the field map, where applicable. Additionally, an assessment and determination of potential for locally recognized special-status species (i.e., Narrow Endemic and Covered Species listed in the City's Subarea Plan) to occur on site was conducted. The information recorded onto the field maps (e.g., vegetation communities and plant/animal species locations) was subsequently digitized into a Geographic Information System (GIS) format.

The vegetation community and land cover mapping follows the classifications described by Holland (1986), as adopted in the City Land Development Code, Biology Guidelines (City of San Diego 2012). In some cases, Oberbauer et al. (2008) was also utilized as a reference, especially with regards to land cover types. Areas on site supporting less than 20% native plant species cover were mapped as disturbed land, and areas supporting at least 20% native plant species, but fewer than 50% native cover, were mapped as a disturbed native vegetation community (e.g., disturbed coastal sage scrub). Vegetation community and land cover mapping was conducted within the entire study area.

Following completion of the field work, Dudek GIS Specialist Hannah Panno digitized the vegetation polygons using ArcGIS. Once in ArcGIS, the acreage of each vegetation community and land cover present on site was determined.

4.4 Jurisdictional Delineation

An evaluation of the potential for jurisdictional "Waters of the United States" including wetlands, was conducted. Based on the lack of vegetation communities dominated by hydrophytic vegetation and the lack of stream channels or other evidence of an ordinary high water mark within the impact

area of the project, no formal jurisdictional wetlands delineation data stations were recorded; however, a jurisdictional determination was completed for the study area.

4.5 Plants and Wildlife

The plant species encountered during the field survey were identified and recorded directly into a field notebook. Those species that could not be identified immediately were brought into the laboratory for further investigation. A compiled list of plant species observed in the study area is presented in Appendix A.

Latin and common names for plant species with a California Rare Plant Rank (CRPR) (formerly CNPS List) follow the CNPS Online Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2016). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2014) and common names follow the USDA NRCS Plants Database (USDA 2016a).

Wildlife species detected during the field survey by sight, calls, tracks, scat, or other signs were recorded directly onto a field notebook. Binoculars (8.5x42 magnifications) were used to aid in the identification of wildlife. In addition to species actually detected during the surveys, expected wildlife use of the site was determined by known habitat preferences of local species and knowledge of their relative distributions in the area. A list of wildlife species observed in the Project study area is presented in Appendix B.

Latin and common names of animals follow Crother (2008) for reptiles and amphibians, American Ornithologists' Union (AOU 2016) for birds, Wilson and Reeder (2005) for mammals, and North American Butterfly Association (NABA 2016), and San Diego Natural History Museum (SDNHM 2002) for butterflies.

4.6 Special-Status Species

Special-status biological resources are those defined as follows: (1) species that have been given special recognition by federal, state, or local conservation agencies and organizations due to limited, declining, or threatened population sizes; (2) species and habitat types recognized by local and regional resource agencies as special status; (3) habitat areas or vegetation communities that are unique, are of relatively limited distribution, or are of particular value to wildlife; (4) wildlife corridors and habitat linkages; or (5) biological resources that may or may not be considered special status, but are regulated under local, state, and/or federal laws.

Searches through the CNPS online inventory database (CNPS 2016) and CNDDB online inventory (CDFW 2016a) were conducted to assist in the determination of special-status plant and animal species potentially present on site. Specifically, both a one-quadrangle search and a nine-quadrangle search were conducted. In addition to these state database searches, species covered under the City's Subarea Plan, including Narrow Endemic Species, were evaluated in relation to the project to assist in determining the level of potential to occur in the study area.

5 RESULTS

5.1 Vegetation Communities/Land Cover Types

Four vegetation communities or land cover types were identified within the study area: developed, disturbed land, coastal sage scrub, and disturbed coastal sage scrub. These vegetation communities or land cover types are described in detail below, their acreages are presented in Table 2, and their spatial distributions are presented on the Biological Resources Map (Figure 3). The designation of vegetation community sensitivity, based on rarity and ecological importance as identified by the City's MSCP Subarea Plan tiers (City of San Diego 1997) is also included in Table 2.

Table 2
Vegetation Communities and Land Cover Types in the Study Area

Vegetation Community	Tier	Acres
Non-Native Uplands and Land Covers		
Developed Land	Tier IV	1.32
Disturbed Land	Tier IV	0.58
Native Uplands		
Coastal Sage Scrub	Tier II	0.75
Disturbed Coastal Sage Scrub	Tier II	0.31
	Total*	2.95

* Totals may not sum due to rounding.

Developed Land

According to Oberbauer et al. 2008, developed lands represent areas that have been constructed upon or otherwise physically altered to an extent that native vegetation communities are not supported. This land cover type generally consists of semi-permanent structures, homes, parking lots, pavement or hardscape, and landscaped areas that require maintenance and irrigation (e.g., ornamental greenbelts). Typically, this land cover type is unvegetated or supports a variety of ornamental plants and landscaping. Developed land is not regulated by the environmental resource agencies and is often considered a disturbed category. This land cover is ranked as Tier IV and is

not considered special status under the City's Subarea Plan. Impacts to developed lands do not require mitigation.

Within the study area, developed lands include existing paved roads, and the surrounding residencies. This Tier IV land cover comprises 1.32 acres and is the majority of the study area.

Disturbed Land

According to Oberbauer et al. 2008, disturbed lands are the areas which have been had physical anthropogenic disturbance and as a result cannot be identified as a native or naturalized vegetation association. However, these areas do have a recognizable soil substrate. The existing vegetation is typically composed of non-native ornamental or exotic species. There can also be impacts from animal uses, grading, or repeated clearing for fuel management on disturbed habitat which leave the land incapable of providing a suitable or sustainable habitat for native species to persist.

This land cover is present within the flat portion of the study area adjacent to the existing storm drain. Vegetation in this area consists of crimson fountaingrass (*Pennisetum setaceum*), peppermint gum (*Eucalytpus nicholii*), and red stemmed filaree (*Erodium cicutarium*). The peppermint gum trees are too sparse on site to be considered a eucalyptus woodland community. This land cover is ranked as Tier IV and is not considered special status under the City's Subarea Plan. Impacts to disturbed lands do not require mitigation.

Coastal Sage Scrub (including Disturbed Coastal Sage Scrub)

Coastal sage scrub is composed of a variety of soft, low shrubs, characteristically dominated by drought-deciduous species such as California sagebrush (*Artemisia californica*), flat-top buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.), California encelia (*Encelia californica*), with scattered evergreen shrubs, including lemonade sumac (*Rhus integrifolia*) and laurel sumac (*Malosma laurina*). The native community typically grows on sites with low moisture availability, steep, xeric slopes, or clay-rich soils that are slow to release stored water (Holland 1986).

Coastal sage scrub was identified along the western undisturbed slope of the study area and is dominated by California sagebrush, black sage (*Salvia mellifera*), and lemonade sumac. Coastal sage scrub is ranked as Tier II habitat per the City's Land Development Manual Biology Guidelines (City of San Diego 2012) and therefore considered special-status.

Disturbed coastal sage scrub is similar in species composition to coastal sage scrub but has higher cover of bare ground or non-native shrubs, forbs and grasses. Disturbed coastal sage scrub

intergrades with annual grassland and disturbed habitat depending on the abundance of annual grasses or non-native forbs. Within the study area disturbed coastal sage scrub includes the slope adjacent to Pearlman Way and the toe of the slope adjacent to Carmel Knolls Drive. These areas have been disturbed but are now revegetated with native species including desertbroom (*Baccharis sarothroides*), California sagebrush, crimson fountaingrass and California sycamore (*Platanus racemosa*). Disturbed coastal sage scrub is ranked as Tier II habitat per the City's Land Development Manual Biology Guidelines (City of San Diego 2012) and therefore considered special-status.

5.2 Jurisdictional Delineation

Evidence of hydrology and hydrophytic vegetation were examined throughout the study area but, because no potential wetland sites or non-wetland waters (e.g., drainages and channels) were identified, no data station pits were dug, and no formal wetland determination data forms were recorded. No jurisdictional wetlands or non-wetland waters of the United States (based on definitions of the City, state, and federal agencies) occur within the project site (i.e., area of proposed storm drain improvements).

5.3 Plants and Wildlife

A total of 29 species of vascular plants, 20 native species and nine non-native species, were recorded during the biological reconnaissance survey (Appendix A). The diversity of native plant species is low due to the extent of existing development and urban setting of the study area. It is important to note that this list is not all-inclusive in that it does not include a comprehensive list of all the ornamental species observed in home and street landscaping.

A total of 15 wildlife species were recorded in the study area during the survey (Appendix B). The wildlife species observed are common, disturbance-adapted species typically found in urban and suburban settings, such as Anna's humming bird (*Calypte anna*), northern mockingbird (*Mimus polyglottos*), American crow (*Corvus brachyrhynchos*). No mammal species were observed within the study area. One reptile species, common side-blotched lizard (*Uta stanburiana),* was observed in the study area. No amphibians were observed during the survey. Two invertebrates were observed, cabbage white (*Pieris rapae*) and Pacific sara orangetip (*Anthocharis sara sara*). There is minimal suitable habitat for small wildlife species (e.g., reptiles, amphibians, and small mammals) within the study area due to the disturbed nature of the site, proximity to residential/urban land cover, and limited connectivity of the surrounding habitat to larger expanses native lands. Overall, the diversity of wildlife species in the study area is low due to the extent of surrounding existing development and the disturbed setting of the study area.

5.4 Special-Status Species

No federally or state-listed species or other special-status species were observed during the survey. Due to the generally disturbed nature of the site and proximity of urban development, the site conditions limit the potential for special-status plants and other special-status animal species to occur on site.

A search of CNPS and CNDDB records was utilized to develop matrices of special-status plant and wildlife species that may have potential to occur on site due to the presence of suitable habitat (taking into consideration vegetation communities, soils, elevation, and geographic range, life form/blooming period, etc.). These two matrices of special-status plant and wildlife species (i.e., federally, state, or locally listed species), their favorable habitat conditions, and their potential to occur on site based on the findings of the field investigations are presented in Appendices C and D, respectively. Species considered special status under the City's Subarea Plan, including species covered under the MSCP, are also included in these appendices.

There is no federally designated critical habitat (USFWS 2016) located within the study area.

Special-Status Plant Species

None of the plant species presented in Appendix C were detected during the field surveys, and given the lack of unique soil types (e.g., clay, alkaline, etc.) and extent of developed/disturbed land covers, special-status plants are not expected to occur in the study area.

Special-Status Wildlife Species

None of the wildlife species presented in Appendix D were detected during the field survey. However, three of the species listed were determined to have a moderate potential to occur on site: orangethroat whiptail (*Aspidoscelis hyperythra*), a state Species of Special Concern; red diamondback rattlesnake (Crotalus ruber), a state Species of Special Concern; San Diego tiger whiptail (*Aspidoscelis tigris stejnegeri*); California gnatcatcher (*Polioptila californica californica*), a federally threatened and a state Species of Special Concern; and western bluebird (*Sialia Mexicana*), a MSCP Covered species. The coastal sage scrub on site is potentially suitable habitat for the orangethroat and San Diego tiger whiptails, red diamondback rattlesnake as well as for nesting and foraging by the California gnatcatcher. The western bluebird has been expanding into coastal San Diego neighborhoods in recent years and may potentially forage or nest in the study area.

Due to the limited amount of suitable habitat, the generally disturbed nature of the study area, and proximity of urban development, the conditions limit the potential for the majority of special-status wildlife species to occur in the study area.

5.5 Wildlife Corridor and Linkage

Although the study area is limited in size and enclosed by existing roadways, it may provide for localized wildlife movement likely associated with the native habitat north, south and east of the study area. However, these open space areas are surrounded by residential development, and are not connected to areas designated as MHPA in the City Subarea Plan. The impact area within the study area has been previously disturbed by grading activities during the construction of the existing residential area and the impact area has been situated to impact the least sensitive portion of the site. Additionally, the site will be revegetated with native species and will result in providing more native habitat for wildlife.

6 IMPACTS ANALYSIS

Direct Impacts include both the permanent loss of on-site habitat and the plant and wildlife species that it contains and the temporary loss of on-site habitat. Direct impacts were quantified by overlaying the proposed project footprint onto the biological resources map. Direct impacts include:

- **Permanent Impact:** grading for the bioretention basin, reinforced concrete storm drain pipes, storm drain inlet openings, improvements to cleanouts, and three outlet headwalls with cobble rock.

While the project does include the establishment of native habitat within the bioretential basin and adjacent slopes which will replace and enhance some of the existing habitat functions of the site, the plantings are not intended to serve as habitat mitigation and therefore the, impacts are considered permanent.

Indirect Impacts refer to off-site and on-site effects that are short-term impacts (i.e., temporary) due to project construction or long-term (i.e., permanent) design of the project and the effects it may have to adjacent resources. For this project, it is assumed that the potential short-term indirect impacts resulting from construction activities may include dust, noise, and general human presence that may temporarily disrupt species and habitat vitality and construction-related soil erosion and runoff. With respect to these latter factors, however, project grading will be subject to the typical restrictions (e.g., best management practices (BMPs)) and requirements that address erosion and

runoff, including the federal CWA, National Pollution Discharge Elimination System (NPDES), and preparation of a Water Pollution Control Plan (WPCP).

Long-term indirect impacts, for this project, would be related to the discharge of the storm drain and potential effects of future maintenance. Since the project involves the construction of a large-scale storm flow storage and multi-pollutant treatment system, it is expected that the project would result in functional improvements of the existing storm drain. The project would introduce surface storm drain runoff into the project study area where currently flows are conveyed within storm drain pipes. This runoff, and associated basin planting and maintenance, has the potential to result in long-term indirect effects. Some of the effects are beneficial, including the establishment of native habitat and water quality improvements. Some effects are potentially adverse, including the potential for invasive species to spread into adjacent habitat areas, noise/dust/debris associated with maintenance of the basin, an attractant for wildlife that could result in adverse urban-wildland interface issues (e.g., roadkill, interactions with pets, ingestion of trash, etc.)

6.1 Direct Impacts

Implementation of the project will result in direct impacts to 0.56 acre of developed and disturbed land, 0.32 of coastal sage scrub (including disturbed) (Table 3, Figure 3).

Table 3
Impacts to Vegetation Communities and Land Covers

Vegetation Community	Subarea Plan Tier*	Acreage
Non-Native Land Covers		
Developed Land	Tier IV	0.07
Disturbed Land	Tier IV	0.49
Native Vegetation Communities		
Coastal Sage Scrub	Tier II	0.08
Disturbed Coastal Sage Scrub	Tier II	0.24
	TOTAL	0.88

* Vegetation Tiers are defined by the City's Biology Guidelines (City of San Diego 2012).

Developed and disturbed lands provide little native habitat value and foraging opportunities for wildlife and are Tier IV vegetation communities as defined by the City's Biology Guidelines (City of San Diego 2012). Therefore, impacts to these land covers would not be considered significant and no mitigation is required (City of San Diego 2012).

Direct impacts to coastal sage scrub (including disturbed), totaling 0.32 acre, are considered significant because the total combined impacts to this Tier II community is greater than the 0.1-acre significance threshold established by the City's Biology Guidelines thus mitigation is required (City of San Diego 2012) (**BIO-1**).

Special-Status Plants

No special-status plants were detected in the study area during the 2016 general biological reconnaissance survey. The majority of impact area is disturbed habitat due to the extent of vegetative disturbance and lack of suitable substrate, special-status plant species are not expected to occur in this area. There are impacts to coastal sage scrub which has potential for special-status plants, however the impacts are very minimal (0.08 acre) and they would be located at the base of the slope adjacent to areas that are classified as disturbed. Impacts are also expected to disturbed coastal sage scrub which contains native plants but unlikely to support special-status plants due to the level of high level of disturbance. Therefore, no significant impacts to special-status plants are anticipated.

Special-Status Wildlife

No special-status wildlife species were detected during the 2016 biological reconnaissance survey. Due to the location of the site within an urban environment with limited opportunities for foraging, nesting, and/or roosting, virtually no special-status wildlife, including raptors, are expected to occur and/or nest within the impact area (Appendix D). The orangethroat and San Diego tiger whiptails, red diamondback rattlesnake, California gnatcatcher and western bluebird are the only special-status wildlife species with moderate potential to occur on site within the coastal sage scrub (including disturbed forms); however there are minimal impacts (0.08 acre) to the coastal sage scrub from the proposed project activities. The small scale of the habitat loss would not appreciably reduce the population of these species in the area. Based on this information, significant direct impacts to special-status wildlife species are not expected to occur.

6.2 Indirect Impacts

Vegetation Communities

Two native vegetation community, coastal sage scrub, and disturbed coastal sage scrub, are located adjacent to the project area and may be subject to indirect impacts.

Short-term indirect impacts related to construction are expected to be minimal based on the fact that these areas are already located in an urbanized setting and subject to typical edge effects

including invasive species and human presence. With implementation of required construction discharge water quality BMPs, other standard construction BMPs (including dust control, use of trash receptacles, etc.) and adherence to the limits of work, short-term indirect impacts are not expected to substantially change the existing vegetation communities in terms of species composition or function. As such, no significant short-term indirect impacts are expected to occur to these communities.

As discussed above, long-term indirect effects of the project are expected to be mostly beneficial due to improvement of an existing storm drain system and establishment of native habitat. Potential adverse impacts of invasive species that may be more likely to occur within the project study area with the storm drainage discharge that is proposed, is not significant, because the project includes native habitat plantings and maintenance by the City that will preclude establishment of invasive species. Absent the implementation of a Revegetation Plan, invasive plant species are likely to establish within temporary disturbance areas resulting in potentially significant adverse impacts to adjacent vegetation communities (**BIO–2**).

Future maintenance may require the removal of native vegetation, including wetland-dependent vegetation. This maintenance activity is not considered a significant adverse impacts, as the project occurs in an upland area that does not historically (pre-project) support wetlands and as such would not be considered City-jurisdictional wetlands under the Land Development Code. Wetlands regulatory agencies may require permits for maintenance; it is recommended that this biological report, the project construction documents, and proposed Operations & Maintenance plan be provided to the resource agencies with request for written concurrence that future regulator permits would not be required on the basis of the lack of jurisdictional resources in the pre-project condition (**BIO-3**).

No significant long-term indirect impacts to vegetation communities would occur.

Special-Status Plants

There are vegetation communities that have the potential to support special-status plant species adjacent to the project site, although no specific species locations have been identified. The potential short- and long-term indirect impacts to vegetation communities discussed above could also affect special-status plants. As stated above, short and long-term indirect impacts are not considered significant due to minimization measures such as standard construction BMPs and project design features.

Special-Status Wildlife

Most of the indirect impacts to vegetation communities previously described can also affect special-status wildlife. Wildlife may also be indirectly affected in the short-term by construction-related noise, which can disrupt normal activities and subject wildlife to higher predation risks. Adverse edge effects can cause degradation of habitat quality through the invasion of pest species. Breeding birds can be significantly affected by short-term construction-related noise, which can result in the disruption of foraging, nesting, and reproductive activities.

The project study area supports suitable vegetation for bird nesting, including trees associated with the street and property landscaping, as well as native habitats, coastal sage scrub and disturbed coastal sage scrub. Work is also expected to occur along Carmel Knolls Drive and while all impacts will occur within the right-of-way, there is native habitat adjacent to the street that could provide nesting habitat. This is nesting habitat for raptors and songbirds protected by the Migratory Bird Treaty Act. Indirect impacts from construction-related noise may occur to breeding wildlife if construction occurs during the breeding season (i.e., February 1 through September 15). Wildlife that would be significantly affected by noise, based on suitable habitat in the project vicinity and in accordance with the City's Land Development Manual Biology Guidelines (June 2012), may occur up to 300 feet from the project work areas. Species whose breeding/nesting may be significantly impacted by noise include all raptor species (regardless of location relative to the MHPA). This impact would be considered a significant impact, absent mitigation **(BIO-4)**.

In terms of potential long-term indirect impacts, the project would alter habitat conditions through the conveyance and retention of surface storm water flows such that the resulting habitat would likely attract wildlife to a greater extent than the current condition. The project study area is owned and managed by City of San Diego Parks and Recreation Department, Open Space Division, although the storm water infrastructure, including the retention basin, will be managed by the Transportation & Storm Water Department, Storm Water Division. This management oversight will ensure that adverse conditions (e.g., trash, invasive species, vector conditions) are minimized to a level less than significant. Attracting wildlife to an area near streets may result in additional roadkill; however, most wildlife that would be affected are common, urban-adapted wildlife species and the potential for substantial effects on special-status wildlife species is considered low. This determination is supported by the fact that the site is not within or adjacent to the MHPA, which are the lands that are required to sustain multiple special-status species populations in the City. As such no significant long-term indirect impacts to special-status wildlife species would occur.

6.3 Consistency with the MSCP

As the project is not located within or adjacent to the MHPA, Sections 1.4.2 and 1.4.3 of the MSCP do not apply. Although there are impacts proposed to 0.32 acre of coastal sage scrub (including disturbed) the majority of impacts will occur to disturbed lands and compensatory habitat mitigation will occur for impacts to coastal sage scrub. Therefore, the project will not impact the goals and objectives of the City's Subarea Plan, and the project is consistent with the guidelines and policies of the MSCP.

Because permanent impacts associated with the Project are to developed and disturbed land cover types, the Project will not negatively impact the goals and objectives of the City's Subarea Plan. Thus, the Project is consistent with the guidelines and policies of the MSCP.

7 MITIGATION AND REGULATORY COMPLIANCE

This section describes the mitigation measures (MMs) and regulatory compliance (RC) required to offset direct and indirect impacts to sensitive vegetation communities and to avoid indirect impacts to breeding birds. These MMs and RC would will reduce identified and potential significant impacts to a level that is less than significant pursuant to CEQA.

BIO-1 Direct impacts to sensitive vegetation communities, including direct, permanent impacts to 0.32 acre of coastal sage scrub will occur with project implementation.

MM-1 Mitigation for direct, permanent impacts to 0.32 acre of coastal sage scrub will occur through the purchase of credits at the Cornerstone Lands Bank or through payment into the City of San Diego's Habitat Acquisition Fund.

BIO-2 Indirect impacts related to the potential for invasive plant species to establish within temporary disturbance areas.

MM-2 If there are temporary disturbance areas within coastal sage scrub associated with construction (i.e., areas not outside the planting areas identified on the construction plans), habitat restoration and erosion control treatments will be installed within these areas, in accordance with the City's Biology Guidelines and Landscape Regulations (City of San Diego 2012). A Revegetation Plan will be prepared by a qualified Biological or Restoration Specialist. Habitat restoration will feature native species that are typical of the area, and erosion control features will include silt fence and straw fiber rolls, where appropriate. The revegetation areas will be

monitored and maintained for 25 months to ensure adequate establishment and sustainability of the plantings/seedings.

BIO-3 Future maintenance may require the removal of native vegetation, including wetland-dependent vegetation. This maintenance activity is not considered a significant adverse impacts, as the project occurs in an upland area that does not historically (pre-project) support wetlands and as such would not be considered City-jurisdictional wetlands under the Land Development Code.

RC-1 Wetlands regulatory agencies may require permits for maintenance; it is recommended that this biological report, the project construction documents, and proposed Operations & Maintenance plan be provided to the resource agencies with request for written concurrence that future regulator permits would not be required on the basis of the lack of jurisdictional resources in the pre-project condition.

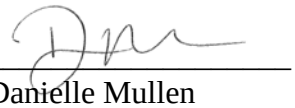
BIO-4 Construction-related direct and indirect impacts may occur to breeding wildlife, if construction occurs during the breeding season (i.e., February 1 through September 15).

RC-2 To avoid any direct impacts to raptors and/or any native/migratory birds or special-status species in the MSCP, CDFW, or USFWS, removal of habitat that supports active nests in the proposed project study area should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, a qualified biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds in the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the preconstruction survey to the City's Development Services Department for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable state and federal law (e.g., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City Development Services Department for review and approval and implemented to the satisfaction of the City. The biologist in concert with the City shall verify and approve that all measures identified in the

report or mitigation plan are in place prior to and/or during construction. If nesting birds are not detected during the pre-construction survey, no further action is required.

If you have any questions or comments regarding this report, please contact me at 760.479.4297 or via email at dmullen@dudek.com.

Sincerely,



Danielle Mullen
Biologist

Att.: Figures 1–3
Appendix A, List of Vascular Plant Species Observed within the Project Study Area
Appendix B, List of Wildlife Species Observed within the Project Study Area
Appendix C, Special-Status Plant Species Potentially Occurring within the Project Study Area
Appendix D, Special-Status Wildlife Species Potentially Occurring within the Project Study Area

cc: Vipul Joshi, Dudek
Tamara Miller, City of San Diego Public Works Department
Roman Anissi, City of San Diego Public Works Department

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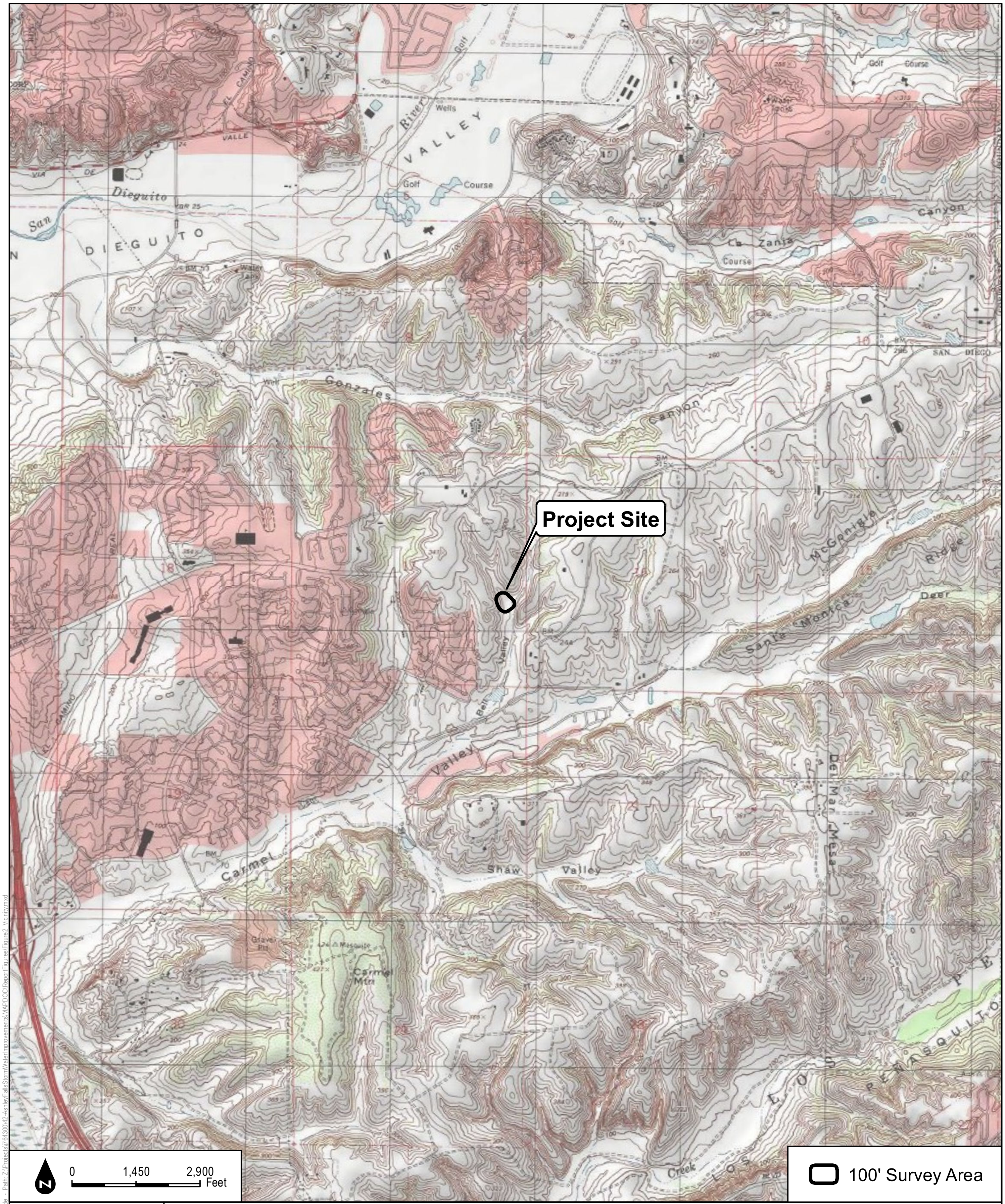
DUDEK

FIGURE 1

Regional Map

Ashley Falls Storm Water Improvements



SOURCE: USGS 7.5-Minute Series - Del Mar Quadrangle.

FIGURE 2

Vicinity Map

Ashley Falls Storm Water Improvements

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SOURCE: SANDAG Imagery, 2014; County of San Diego, 2017.

DUDEK

FIGURE 3

Biological Resources and Impacts

Ashley Falls Storm Water Improvements

APPENDIX A

List of Vascular Plant Species Observed within the Project Study Area

APPENDIX A
List of Vascular Plant Species Observed within the Project Study Area

VASCULAR SPECIES

GYMNOSPERMS AND GNETOPHYTES

PINACEAE—PINE FAMILY

* *Pinus* sp.—pine

EUDICOTS

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Malosma laurina—laurel sumac
Rhus integrifolia—lemonade sumac

ASTERACEAE—SUNFLOWER FAMILY

Artemisia californica—coastal sagebrush
Baccharis sarothroides—desertbroom
Encelia californica—California brittlebush
Baccharis salicifolia—mulefat

BRASSICACEAE—MUSTARD FAMILY

* *Brassica nigra*—black mustard

CACTACEAE—CACTUS FAMILY

Opuntia littoralis—coastal pricklypear

CAPRIFOLIACEAE—HONEYSUCKLE FAMILY

Lonicera subspicata—southern honeysuckle

CHENOPODIACEAE—GOOSEFOOT FAMILY

* *Salsola tragus*—prickly Russian thistle

CUCURBITACEAE—GOURD FAMILY

Marah macrocarpa—Cucamonga manroot

ERICACEAE—HEATH FAMILY

Xylococcus bicolor—mission manzanita

FABACEAE—LEGUME FAMILY

Acmispon glaber—common deerweed

GERANIACEAE—GERANIUM FAMILY

* *Erodium cicutarium*—redstem stork's bill

LAMIACEAE—MINT FAMILY

Salvia mellifera—black sage

MYRTACEAE—MYRTLE FAMILY

* *Eucalyptus nicholii*—peppermint gum

NYCTAGINACEAE—FOUR O'CLOCK FAMILY

Mirabilis laevis—desert wishbone-bush

OXALIDACEAE—OXALIS FAMILY

* *Oxalis pes-caprae*—Bermuda buttercup

PHRYMACEAE—LOPSEED FAMILY

Mimulus aurantiacus—orange bush monkeyflower

PLATANACEAE—PLANE TREE, SYCAMORE FAMILY

Platanus racemosa—California sycamore

ROSACEAE—ROSE FAMILY

Adenostoma fasciculatum—chamise

Heteromeles arbutifolia—toyon

SALICACEAE—WILLOW FAMILY

Salix lasiolepis—arroyo willow

TAMARICACEAE—TAMARISK FAMILY

* *Tamarix chinensis*—five-stamen tamarisk

URTICACEAE—NETTLE FAMILY

Urtica dioica—stinging nettle

MONOCOTS

POACEAE—GRASS FAMILY

* *Bromus madritensis*—compact brome

* *Pennisetum setaceum*—crimson fountaingrass

THEMIDACEAE—BRODIAEA FAMILY

Dichelostemma capitatum—bluedicks

* signifies introduced (non-native) species

APPENDIX B

List of Wildlife Species Observed within the Project Study Area

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List of Wildlife Species Observed within the Project Study Area

BIRD

BUSHTITS

AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS

Psaltriparus minimus—bushtit

EMBERIZINES

EMBERIZIDAE—EMBERIZIDS

Pipilo maculatus—spotted towhee

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Spinus psaltria—lesser goldfinch

Haemorhous mexicanus—house finch

HUMMINGBIRDS

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna's hummingbird

JAYS, MAGPIES AND CROWS

CORVIDAE—CROWS AND JAYS

Aphelocoma californica—western scrub-jay

Corvus brachyrhynchos—American crow

MOCKINGBIRDS AND THRASHERS

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Mimus polyglottos—northern mockingbird

OLD WORLD WARBLERS AND GNATCATCHERS

SYLVIIDAE—SYLVIID WARBLERS

Polioptila caerulea—blue-gray gnatcatcher

WOOD WARBLERS AND ALLIES

PARULIDAE—WOOD-WARBLERS

Setophaga coronata—yellow-rumped warbler

WOODPECKERS

PICIDAE—WOODPECKERS AND ALLIES

Picoides nuttallii—Nuttall's woodpecker

INVERTEBRATE

BUTTERFLIES

PIERIDAE—WHITES AND SULFURS

Anthocharis sara sara—Pacific sara orangetip

REPTILE

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

Uta stanburiana—common side-blotched lizard

APPENDIX C

Special-Status Plant Species Potentially Occurring within the Project Study Area

APPENDIX C
Special-Status Plant Species Potentially Occurring within the Project Study Area

Scientific Name	Common Name	Status (Federal/State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Abronia maritima	red sand-verbena	None/None/4.2/None	Coastal dunes/perennial herb/Feb–Nov/0–328	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Acanthomintha ilicifolia	San Diego thorn-mint	FT/CE/1B.1/Narrow Endemic	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay, openings/annual herb/Apr–June/33–3150	Low potential to occur. No clay soils present. This species is found within the vicinity.
Acmispon prostratus	Nuttall's acmispon	None/None/1B.1/Covered	Coastal dunes, coastal scrub (sandy)/annual herb/Mar–June (July)/0–33	Not expected to occur. The site is outside of the species' known elevation range. This species is found within the vicinity.
Adolphia californica	California adolphia	None/None/2B.1/None	Chaparral, coastal scrub, valley and foothill grassland; clay/perennial deciduous shrub/Dec–May/148–2428	Not expected to occur. No clay soils present. This perennial shrub species would have been observed if present. This species is found within the vicinity.
Agave shawii var. *shawii*	Shaw's agave	None/None/2B.1/Narrow Endemic	Coastal bluff scrub, coastal scrub/perennial leaf succulent/Sep–May/33–394	Not expected to occur. This perennial succulent species would have been observed if present. This species is found within the vicinity.
Ambrosia monogyra	singlewhorl burrobrush	None/None/2B.2/None	Chaparral, Sonoran desert scrub; sandy/perennial shrub/Aug–Nov/33–1640	Not expected to occur. No suitable vegetation present.
Ambrosia pumila	San Diego ambrosia	FE/None/1B.1/Narrow Endemic	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; sandy loam or clay, often in disturbed areas, sometimes alkaline/perennial rhizomatous herb/Apr–Oct/66–1362	Not expected to occur. This perennial species would have been observed if present. This species is found within the vicinity.
Aphanisma blitoides	aphanisma	None/None/1B.2/Narrow Endemic	Coastal bluff scrub, coastal dunes, coastal scrub; sandy or gravelly/annual herb/Mar–June/3–1001	Low potential to occur. Limited suitable habitat present and site is disturbed. This species is found within the vicinity.
Arctostaphylos glandulosa ssp. *crassifolia*	Del Mar manzanita	FE/None/1B.1/Covered	Chaparral (maritime, sandy)/perennial evergreen shrub/Dec–June/0–1198	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Artemisia palmeri	San Diego sagewort	None/None/4.2/None	Chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland; sandy, mesic/perennial deciduous shrub/(Feb) May–Sep/49–3002	Not expected to occur. This perennial shrub species would have been observed if present. This species is found within the vicinity.
Asplenium vespertinum	western spleenwort	None/None/4.2/None	Chaparral, cismontane woodland, coastal scrub; rocky/perennial rhizomatous herb/Feb–June/591–3281	Not expected to occur. The site is outside of the species' known elevation range.
Astragalus tener var. *titi*	coastal dunes milk-vetch	FE/CE/1B.1/Narrow Endemic	Coastal bluff scrub (sandy), coastal dunes, coastal prairie (mesic); often vernally mesic areas/annual herb/Mar–May/3–164	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Atriplex coulteri	Coulter's saltbush	None/None/1B.2/None	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay/perennial herb/Mar–Oct/10–1509	Not expected to occur. This perennial species would have been observed if present.
Atriplex pacifica	South Coast saltscale	None/None/1B.2/None	Coastal bluff scrub, coastal dunes, coastal scrub, playas/annual herb/Mar–Oct/0–459	Low potential to occur. Limited suitable habitat present and site is disturbed. This species is found within the vicinity.
Atriplex parishii	Parish's brittlescale	None/None/1B.1/None	Chenopod scrub, playas, vernal pools; alkaline/annual herb/June–Oct/82–6234	Not expected to occur. No suitable vegetation present.
Baccharis vanessae	Encinitas baccharis	FT/CE/1B.1/Covered	Chaparral (maritime), cismontane woodland; sandstone/perennial deciduous shrub/Aug–Nov/197–2362	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Bergerocactus emoryi	golden-spined cereus	None/None/2B.2/None	Closed-cone coniferous forest, chaparral, coastal scrub; sandy/perennial stem succulent/May–June/10–1296	Not expected to occur. This perennial species would have been observed if present.This species is found within the vicinity.
Bloomeria clevelandii	San Diego goldenstar	None/None/1B.1/Covered	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay/perennial bulbiferous herb/Apr–May/164–1526	Not expected to occur. No clay soils or vernal pools present. This species is found within the vicinity.
Brodiaea filifolia	thread-leaved brodiaea	FT/CE/1B.1/Covered	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools; often clay/perennial bulbiferous herb/Mar–June/82–3675	Low potential to occur. No clay soils or vernal pools present.
Brodiaea orcuttii	Orcutt's brodiaea	None/None/1B.1/Covered	Closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools; mesic, clay, sometimes serpentinite/perennial bulbiferous herb/May–July/98–5551	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Calandrinia breweri	Brewer's calandrinia	None/None/4.2/None	Chaparral, coastal scrub; sandy or loamy, disturbed sites and burns/annual herb/Mar–June/33–4003	Low potential to occur. Limited suitable habitat present and site is disturbed, however species would have been observed during survey if present. This species is found within the vicinity.
Calochortus dunnii	Dunn's mariposa lily	None/CR/1B.2/Covered	Closed-cone coniferous forest, chaparral, valley and foothill grassland; gabbroic or metavolcanic, rocky/perennial bulbiferous herb/(Feb) Apr–June/607–6004	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Camissoniopsis lewisii	Lewis' evening-primrose	None/None/3/None	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland; sandy or clay/annual herb/Mar–May (June)/0–984	Low potential to occur. Limited suitable habitat present and site is disturbed. Species would have been observed during survey if present.This species is found within the vicinity.

Scientific Name	Common Name	Status (Federal/State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Ceanothus cyaneus	Lakeside ceanothus	None/None/1B.2/Covered	Closed-cone coniferous forest, chaparral/perennial evergreen shrub/Apr–June/771–2477	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. This species is found within the vicinity.
Ceanothus otayensis	Otay Mountain ceanothus	None/None/1B.2/None	Chaparral (metavolcanic or gabbroic)/perennial evergreen shrub/Jan–Apr/1969–3609	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Ceanothus verrucosus	wart-stemmed ceanothus	None/None/2B.2/Covered	Chaparral/perennial evergreen shrub/Dec–May/3–1247	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Centromadia parryi ssp. *australis*	southern tarplant	None/None/1B.1/None	Marshes and swamps (margins), valley and foothill grassland (vernally mesic), vernal pools/annual herb/May–Nov/0–1575	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Centromadia pungens ssp. *laevis*	smooth tarplant	None/None/1B.1/None	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline/annual herb/Apr–Sep/0–2100	Not expected to occur. No suitable vegetation present.
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	None/None/1B.1/None	Coastal bluff scrub (sandy), coastal dunes/annual herb/Jan–Aug/0–328	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Chamaebatia australis	southern mountain misery	None/None/4.2/None	Chaparral (gabbroic or metavolcanic)/perennial evergreen shrub/Nov–May/984–3346	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/CE/1B.2/Covered	Coastal dunes, marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May–Oct/0–98	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. This species is found within the vicinity.
Chorizanthe orcuttiana	Orcutt's spineflower	FE/CE/1B.1/None	Closed-cone coniferous forest, chaparral (maritime), coastal scrub; sandy openings/annual herb/Mar–May/10–410	Low potential to occur. Limited suitable habitat present and site is disturbed. Species would have been observed during survey if present. This species is found within the vicinity.
Chorizanthe polygonoides var. *longispina*	long-spined spineflower	None/None/1B.2/None	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools; often clay/annual herb/Apr–July/98–5020	Low potential to occur. No clay oils or vernal pools present. This species is found within the vicinity.
Cistanthe maritima	seaside cistanthe	None/None/4.2/None	Coastal bluff scrub, coastal scrub, valley and foothill grassland; sandy/annual herb/(Feb) Mar–June (Aug)/16–984	Low potential to occur. Limited suitable habitat present and site is disturbed. Species would have been observed during survey if present. This species is found within the vicinity.
Clarkia delicata	delicate clarkia	None/None/1B.2/None	Chaparral, cismontane woodland; often gabbroic/annual herb/Apr–June/771–3281	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	None/None/1B.2/None	Chaparral, cismontane woodland/perennial evergreen shrub/Apr–June/98–2592	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Convolvulus simulans	small-flowered morning-glory	None/None/4.2/None	Chaparral (openings), coastal scrub, valley and foothill grassland; clay, serpentinite seeps/annual herb/Mar–July/98–2297	Low potential to occur. No clay soils or serpentinite seeps present. This species is found within the vicinity.
Corethrogyne filaginifolia var. *incana*	San Diego sand aster	None/None/1B.1/None	Coastal bluff scrub, chaparral, coastal scrub/perennial herb/June–Sep/10–377	Not expected to occur. This perennial herb species would have been observed if present. This species is found within the vicinity.
Corethrogyne filaginifolia var. *linifolia*	Del Mar Mesa sand aster	None/None/1B.1/Covered	Coastal bluff scrub, chaparral (maritime, openings), coastal scrub; sandy/perennial herb/May–Sep/49–492	Not expected to occur. This perennial herb species would have been observed if present. This species is found within the vicinity.
Cryptantha wigginsii	Wiggins' cryptantha	None/None/1B.2/None	Coastal scrub; often clay/annual herb/Feb–June/66–902	Low potential to occur. No clay soils present.
Cylindropuntia californica var. *californica*	snake cholla	None/None/1B.1/Narrow Endemic	Chaparral, coastal scrub/perennial stem succulent/Apr–May/98–492	Not expected to occur. This perennial succulent species would have been observed if present. This species is found within the vicinity.
Dichondra occidentalis	western dichondra	None/None/4.2/None	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/perennial rhizomatous herb/(Jan) Mar–July/164–1640	Not expected to occur. This perennial herb species would have been observed if present. This species is found within the vicinity.
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	None/None/1B.1/None	Coastal bluff scrub, chaparral, coastal scrub, valley and foothill grassland; rocky, often clay or serpentinite/perennial herb/Apr–June/16–1476	Not expected to occur. No clay soils or serpentinite seeps present. This perennial species would have been observed if present.
Dudleya brevifolia	short-leaved dudleya	None/CE/1B.1/Narrow Endemic	Chaparral (maritime, openings), coastal scrub; Torrey sandstone/perennial herb/Apr–May/98–820	Not expected to occur. This perennial species would have been observed if present. This species is found within the vicinity.
Dudleya variegata	variegated dudleya	None/None/1B.2/Narrow Endemic	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools; clay/perennial herb/Apr–June/10–1903	Not expected to occur. No clay soils or vernal pools present. This perennial herb species would have been observed if present. This species is found within the vicinity.
Dudleya viscida	sticky dudleya	None/None/1B.2/Covered	Coastal bluff scrub, chaparral, cismontane woodland, coastal scrub; rocky/perennial herb/May–June/33–1804	Not expected to occur. This perennial herb species would have been observed if present.
Ericameria palmeri var. *palmeri*	Palmer's goldenbush	None/None/1B.1/Covered	Chaparral, coastal scrub; mesic/perennial evergreen shrub/(July) Sep–Nov/98–1969	Not expected to occur. This perennial shrub species would have been observed if present. This species is found within the vicinity.

Scientific Name	Common Name	Status (Federal/State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/CE/1B.1/Covered	Coastal scrub, valley and foothill grassland, vernal pools; mesic/annual / perennial herb/Apr–June/66–2034	Not expected to occur. No vernal pools present. This perennial herb species would have been observed if present. This species is found within the vicinity.
Euphorbia misera	cliff spurge	None/None/2B.2/None	Coastal bluff scrub, coastal scrub, Mojavean desert scrub; rocky/perennial shrub/Dec–Aug (Oct)/33–1640	Not expected to occur. This perennial shrub species would have been observed if present. This species is found within the vicinity.
Ferocactus viridescens	San Diego barrel cactus	None/None/2B.1/Covered	Chaparral, coastal scrub, valley and foothill grassland, vernal pools/perennial stem succulent/May–June/10–1476	Not expected to occur. This perennial succulent species would have been observed if present. This species is found within the vicinity.
Frankenia palmeri	Palmer's frankenia	None/None/2B.1/None	Coastal dunes, marshes and swamps (coastal salt), playas/perennial herb/May–July/0–33	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. This species is found within the vicinity.
Geothallus tuberosus	Campbell's liverwort	None/None/1B.1/None	Coastal scrub (mesic), vernal pools; soil/ephemeral liverwort/N.A./33–1969	Low potential to occur. No vernal pools present. This species is found within the vicinity.
Githopsis diffusa ssp. *filicaulis*	Mission Canyon bluecup	None/None/3.1/None	Chaparral (mesic, disturbed areas)/annual herb/Apr–June/1476–2297	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Grindelia hallii	San Diego gumplant	None/None/1B.2/None	Chaparral, lower montane coniferous forest, meadows and seeps, valley and foothill grassland/perennial herb/May–Oct/607–5725	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. This species is found within the vicinity.
Harpagonella palmeri	Palmer's grapplinghook	None/None/4.2/None	Chaparral, coastal scrub, valley and foothill grassland; clay/annual herb/Mar–May/66–3133	Low potential to occur. Limited suitable habitat present and site is disturbed. Species would have been observed during survey if present. This species is found within the vicinity.
Hazardia orcuttii	Orcutt's hazardia	FC/CT/1B.1/None	Chaparral (maritime), coastal scrub; often clay/perennial evergreen shrub/Aug–Oct/262–279	Not expected to occur. This perennial shrub species would have been observed if present.
Heterotheca sessiliflora ssp. *sessiliflora*	beach goldenaster	None/None/1B.1/None	Chaparral (coastal), coastal dunes, coastal scrub/perennial herb/Mar–Dec/0–4019	Not expected to occur. This perennial herb species would have been observed if present. This species is found within the vicinity.
Holocarpha virgata ssp. *elongata*	graceful tarplant	None/None/4.2/None	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/annual herb/May–Nov/197–3609	Low potential to occur. Limited suitable habitat present and site is disturbed. This species is found within the vicinity.
Hordeum intercedens	vernal barley	None/None/3.2/None	Coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), vernal pools/annual herb/Mar–June/16–3281	Low potential to occur. No saline flats or vernal pools present. This species is found within the vicinity.
Horkelia truncata	Ramona horkelia	None/None/1B.3/None	Chaparral, cismontane woodland; clay, gabbroic/perennial herb/May–June/1312–4265	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Isocoma menziesii var. *decumbens*	decumbent goldenbush	None/None/1B.2/None	Chaparral, coastal scrub (sandy, often in disturbed areas)/perennial shrub/Apr–Nov/33–443	Not expected to occur. This perennial shrub species would have been observed if present. This species is found within the vicinity.
Iva hayesiana	San Diego marsh-elder	None/None/2B.2/None	Marshes and swamps, playas/perennial herb/Apr–Oct/33–1640	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Juncus acutus ssp. *leopoldii*	southwestern spiny rush	None/None/4.2/None	Coastal dunes (mesic), meadows and seeps (alkaline seeps), marshes and swamps (coastal salt)/perennial rhizomatous herb/(Mar) May–June/10–2953	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None/1B.1/None	Marshes and swamps (coastal salt), playas, vernal pools/annual herb/Feb–June/3–4003	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None/None/4.3/None	Chaparral, coastal scrub/annual herb/Jan–July/3–2904	Low potential to occur. Limited suitable habitat present and site is disturbed. Species would have been observed during survey if present. This species is found within the vicinity.
Leptosyne maritima	sea dahlia	None/None/2B.2/None	Coastal bluff scrub, coastal scrub/perennial herb/Mar–May/16–492	Not expected to occur. This perennial herb species would have been observed if present. This species is found within the vicinity.
Lycium californicum	California box-thorn	None/None/4.2/None	Coastal bluff scrub, coastal scrub/perennial shrub/(Dec) Mar–Aug/16–492	Not expected to occur. This perennial shrub species would have been observed if present. This species is found within the vicinity.
Microseris douglasii ssp. *platycarpha*	small-flowered microseris	None/None/4.2/None	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools; clay/annual herb/Mar–May/49–3510	Low potential to occur. No clay soils or vernal pools present. This species is found within the vicinity.
Mimulus aurantiacus var. *aridus*	low bush monkeyflower	None/None/4.3/None	Chaparral (rocky), Sonoran desert scrub/perennial evergreen shrub/Apr–July/2461–3937	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Mimulus diffusus	Palomar monkeyflower	None/None/4.3/None	Chaparral, lower montane coniferous forest; sandy or gravelly/annual herb/Apr–June/4003–6004	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Mobergia calculiformis	light gray lichen	None/None/3/None	Coastal scrub (?); on rocks/crustose lichen (saxicolous)/N.A./33–33	Not expected to occur. The site is outside of the species' known elevation range.
Monardella hypoleuca ssp. *lanata*	felt-leaved monardella	None/None/1B.2/Covered	Chaparral, cismontane woodland/perennial rhizomatous herb/June–Aug/984–5167	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Monardella viminea	willowy monardella	FE/CE/1B.1/Covered	Chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland; alluvial ephemeral washes/perennial herb/June–Aug/164–738	Not expected to occur. This perennial herb species would have been observed if present. This species is found within the vicinity.
Myosurus minimus ssp. *apus*	little mousetail	None/None/3.1/None	Valley and foothill grassland, vernal pools (alkaline)/annual herb/Mar–June/66–2100	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Navarretia fossalis	spreading navarretia	FT/None/1B.1/Narrow Endemic	Chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, vernal pools/annual herb/Apr–June/98–2149	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Navarretia prostrata	prostrate vernal pool navarretia	None/None/1B.1/None	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools; mesic/annual herb/Apr–July/10–3970	Low potential to occur. No clay soils or vernal pools present.
Nemacaulis denudata var. *denudata*	coast woolly-heads	None/None/1B.2/None	Coastal dunes/annual herb/Apr–Sep/0–328	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Ophioglossum californicum	California adder's-tongue	None/None/4.2/None	Chaparral, valley and foothill grassland, vernal pools (margins); mesic/perennial rhizomatous herb/(Dec) Jan–June/197–1722	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Orcuttia californica	California Orcutt grass	FE/CE/1B.1/Narrow Endemic	Vernal pools/annual herb/Apr–Aug/49–2165	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Orobanche parishii ssp. *brachyloba*	short-lobed broomrape	None/None/4.2/None	Coastal bluff scrub, coastal dunes, coastal scrub; sandy/perennial herb (parasitic)/Apr–Oct/10–1001	Not expected to occur. This perennial herb species would have been observed if present. This species is found within the vicinity.
Pentachaeta aurea ssp. *aurea*	golden-rayed pentachaeta	None/None/4.2/None	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, valley and foothill grassland/annual herb/Mar–July/262–6070	Low potential to occur. Limited suitable habitat present and site is disturbed. Species would have been observed during survey if present. This species is found within the vicinity.
Phacelia ramosissima var. *austrolitoralis*	south coast branching phacelia	None/None/3.2/None	Chaparral, coastal dunes, coastal scrub, marshes and swamps (coastal salt); sandy, sometimes rocky/perennial herb/Mar–Aug/16–984	Not expected to occur. This perennial herb species would have been observed if present. This species is found within the vicinity.
Phacelia stellaris	Brand's star phacelia	FC/None/1B.1/None	Coastal dunes, coastal scrub/annual herb/Mar–June/3–1312	Low potential to occur. Limited suitable habitat present and site is disturbed. Species would have been observed during survey if present. This species is found within the vicinity.
Pinus torreyana ssp. *torreyana*	Torrey pine	None/None/1B.2/Covered	Closed-cone coniferous forest, chaparral; sandstone/perennial evergreen tree/N.A./246–525	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Piperia cooperi	chaparral rein orchid	None/None/4.2/None	Chaparral, cismontane woodland, valley and foothill grassland/perennial herb/Mar–June/49–5200	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Pogogyne abramsii	San Diego mesa mint	FE/CE/1B.1/Narrow Endemic	Vernal pools/annual herb/Mar–July/295–656	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. This species is found within the vicinity.
Pogogyne nudiuscula	Otay Mesa mint	FE/CE/1B.1/Narrow Endemic	Vernal pools/annual herb/May–July/295–820	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. This species is found within the vicinity.
Quercus dumosa	Nuttall's scrub oak	None/None/1B.1/None	Closed-cone coniferous forest, chaparral, coastal scrub; sandy, clay loam/perennial evergreen shrub/Feb–Apr (Aug)/49–1312	Not expected to occur. This perennial shrub species would have been observed if present. This species is found within the vicinity.
Quercus engelmannii	Engelmann oak	None/None/4.2/None	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland/perennial deciduous tree/Mar–June/164–4265	Not expected to occur. No suitable vegetation present.
Salvia munzii	Munz's sage	None/None/2B.2/None	Chaparral, coastal scrub/perennial evergreen shrub/Feb–Apr/377–3494	Not expected to occur. The site is outside of the species' known elevation range.
Selaginella cinerascens	ashy spike-moss	None/None/4.1/None	Chaparral, coastal scrub/perennial rhizomatous herb/N.A./66–2100	Not expected to occur. This perennial herb species would have been observed if present. This species is found within the vicinity.
Senecio aphanactis	chaparral ragwort	None/None/2B.2/None	Chaparral, cismontane woodland, coastal scrub; sometimes alkaline/annual herb/Jan–Apr/49–2625	Low potential to occur. Limited suitable habitat present and site is disturbed. Species would have been observed during survey if present. This species is found within the vicinity.
Sphaerocarpos drewei	bottle liverwort	None/None/1B.1/None	Chaparral, coastal scrub; openings, soil/ephemeral liverwort/N.A./295–1969	Not expected to occur. The site is outside of the species' known elevation range. This species is found within the vicinity.
Stemodia durantifolia	purple stemodia	None/None/2B.1/None	Sonoran desert scrub (often mesic, sandy)/perennial herb/Jan–Dec/591–984	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Stipa diegoensis	San Diego County needle grass	None/None/4.2/None	Chaparral, coastal scrub; rocky, often mesic/perennial herb/Feb–June/33–2625	Not expected to occur. This perennial herb species would have been observed if present. This species is found within the vicinity.
Stylocline citroleum	oil neststraw	None/None/1B.1/None	Chenopod scrub, coastal scrub, valley and foothill grassland; clay/annual herb/Mar–Apr/164–1312	Low potential to occur. No clay soils present. This species is found within the vicinity.

Scientific Name	Common Name	Status (Federal/State/CRPR/MSCP)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Suaeda esteroa	estuary seablite	None/None/1B.2/None	Marshes and swamps (coastal salt)/perennial herb/May–Oct (Jan)/0–16	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. This species is found within the vicinity.
Suaeda taxifolia	woolly seablite	None/None/4.2/None	Coastal bluff scrub, coastal dunes, marshes and swamps (margins of coastal salt)/perennial evergreen shrub/Jan–Dec/0–164	Not expected to occur. No suitable vegetation present. This species is found within the vicinity.
Texosporium sancti-jacobi	woven-spored lichen	None/None/3/None	Chaparral (openings); on soil, small mammal pellets, dead twigs, and on Selaginella spp./crustose lichen (terricolous)/N.A./951–2165	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present. This species is found within the vicinity.
Viguiera laciniata	San Diego County viguiera	None/None/4.2/None	Chaparral, coastal scrub/perennial shrub/Feb–June (Aug)/197–2461	Not expected to occur. This perennial shrub species would have been observed if present. This species is found within the vicinity.
Xanthisma junceum	rush-like bristleweed	None/None/4.3/None	Chaparral, coastal scrub/perennial herb/June–Jan/787–3281	Not expected to occur. The site is outside of the species' known elevation range.

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APPENDIX D

Special-Status Wildlife Species Potentially Occurring within the Project Study Area

APPENDIX D
Special-Status Wildlife Species Potentially Occurring within the Project Study Area

Common Names	Scientific Name	Status (Federal/State/MSCP/Other)	Habitat	Potential to Occur
Amphibians				
California red-legged frog	*Rana draytonii*	FT/SSC/Covered/None	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable vegetation present.
western spadefoot	*Spea hammondii*	None/SSC/None/None	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrrub, valley–foothill woodlands, pastures, and other agriculture	Not expected to occur. Limited sutiable habitat and the site or the surrounding vicinity does not contain suitable ephemeral wetlands. This species occurs within the vicinity.
arroyo toad	*Anaxyrus californicus*	FE/SSC/Covered/None	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Not expected to occur. No suitable vegetation present.
Reptiles				
western pond turtle	*Actinemys marmorata*	None/SSC/Covered/None	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable vegetation present.
coast patch-nosed snake	*Salvadora hexalepis virgultea*	None/SSC/None/None	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Low potential to occur. Site does not contain small mammal burrows.
orangethroat whiptail	*Aspidoscelis hyperythra*	None/SSC/Covered/None	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	Moderate potential to occur. Limited coastal sage scrub and site has previously been disturbed. This species occurs within the vicinity.

Common Names	Scientific Name	Status (Federal/State/MSCP/Other)	Habitat	Potential to Occur
Coronado Island skink	*Plestiodon skiltonianus interparietalis*	None/SSC/None/None	Woodlands, grasslands, pine forests, and chaparral; rocky areas near water	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
rosy boa	*Lichanura trivirgata*	None/None/None/None	Desert and chaparral habitats with rocky soils in coastal canyons and hillsides, desert canyons, washes, and mountains	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable vegetation present.
San Diego ringneck snake	*Diadophis punctatus similis*	None/None/None/None	Moist habitats including wet meadows, rocky hillsides, gardens, farmland grassland, chaparral, mixed-conifer forest, and woodland habitats	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
Blainville's horned lizard	*Phrynosoma blainvillii*	None/SSC/Covered/None	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Low potential to occur. Limited suitable habitat and site is within a highly urbanized environment. This species occurs within the vicinity.
red diamondback rattlesnake	*Crotalus ruber*	None/SSC/None/None	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	Moderate potential to occur. Limited coastal sage scrub and site has previously been disturbed.
San Diegan tiger whiptail	*Aspidoscelis tigris stejnegeri*	None/None/None/None	Open areas in semiarid grasslands, scrublands, and woodlands	Moderate potential to occur. Limited coastal sage scrub and site has previously been disturbed. This species occurs within the vicinity.
two-striped gartersnake	*Thamnophis hammondii*	None/SSC/None/None	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not expected to occur. No suitable vegetation present.
Birds				
burrowing owl	*Athene cunicularia (burrow sites and some wintering sites)*	BCC/SSC/Covered/None	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Low potential to occur. Site does not contain small mammal burrows. This species occurs within the vicinity.

Common Names	Scientific Name	Status (Federal/State/MSCP/Other)	Habitat	Potential to Occur
California black rail	*Laterallus jamaicensis coturniculus*	BCC/ST, FP/None/None	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
ferruginous hawk	*Buteo regalis (wintering)*	BCC/WL/Covered/None	Winters and forages in open, dry country, grasslands, open fields, agriculture	Not expected to occur. No suitable vegetation present.
northern harrier	*Circus cyaneus (nesting)*	None/SSC/Covered/None	Nests in open wetlands including marshy meadows, wet lightly-grazed pastures, old fields, freshwater and brackish marshes, but also in drier habitats such as grassland and grain fields; forages in variety of habitats, including grassland, scrubs, rangelands, emergent wetlands, and other open habitats	Not expected to occur. There are no open wetlands suitable for nesting or foraging on site.
Swainson's hawk	*Buteo swainsoni (nesting)*	BCC/ST/Covered/None	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agriculturals areas such as wheat and alfalfa fields and pasture	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable vegetation present.
tricolored blackbird	*Agelaius tricolor (nesting colony)*	BCC/SSC/Covered/None	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberrry; forages in grasslands, woodland, and agriculture	Not expected to occur. No suitable vegetation present.
yellow warbler	*Setophaga petechia (nesting)*	BCC/SSC/None/None	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Not expected to occur. No suitable vegetation present.

Common Names	Scientific Name	Status (Federal/State/MSCP/Other)	Habitat	Potential to Occur
American peregrine falcon	*Falco peregrinus anatum (nesting)*	FDL/SDL, FP/Covered/None	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	Not expected to nest onsite. No suitable foraging habitat and no cliffs for nesting.
bald eagle	*Haliaeetus leucocephalus (nesting and wintering)*	FDL, BCC/SE, FP/Covered/None	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	Not expected to occur. No suitable vegetation present.
Cooper's hawk	*Accipiter cooperii (nesting)*	None/WL/Covered/None	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Not expected to occur. No suitable vegetation present.
coastal cactus wren	*Campylorhynchus brunneicapillus sandiegensis (San Diego and Orange Counties only)*	BCC/SSC/Covered/None	Southern cactus scrub patches	Not expected to occur. No suitable cactus or succulent scrub habitat.
coastal California gnatcatcher	*Polioptila californica californica*	FT/SSC/Covered/None	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Moderate potential to occur. Coastal sage scrub within the study area is isolated, limited in size, disturbed, and is bound by dense urbanization. This species was recorded within the vicinity.
least Bell's vireo	*Vireo bellii pusillus (nesting)*	FE/SE/Covered/None	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
southwestern willow flycatcher	*Empidonax traillii extimus (nesting)*	FE/SE/Covered/None	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. No suitable vegetation present.

Common Names	Scientific Name	Status (Federal/State/MSCP/Other)	Habitat	Potential to Occur
white-tailed kite	*Elanus leucurus (nesting)*	None/FP/None/None	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
yellow-breasted chat	*Icteria virens (nesting)*	None/SSC/None/None	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Not expected to occur. No suitable vegetation present.
golden eagle	*Aquila chrysaetos (nesting and wintering)*	BCC/FP, WL/Covered/None	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Not expected to occur. No suitable vegetation present.
prairie falcon	*Falco mexicanus (nesting)*	BCC/WL/None/None	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Not expected to occur. No suitable vegetation present.
southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	None/WL/Covered/None	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Low potential to occur. There is limited coastal sage scrub habitat and the project is in a highly urbanized environment. This species occurs within the vicinity.
Belding's savannah sparrow	*Passerculus sandwichensis beldingi*	None/SE/Covered/None	Nests and forages in coastal saltmarsh dominated by pickleweed (Salicornia spp.)	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
Bell's sage sparrow	*Artemisiospiza belli belli*	BCC/WL/None/None	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	Low potential to occur. There is limited coastal sage scrub habitat and the project is in a highly urbanized environment. This species occurs within the vicinity.

Common Names	Scientific Name	Status (Federal/State/MSCP/Other)	Habitat	Potential to Occur
California brown pelican	*Pelecanus occidentalis californicus (nesting colonies and communal roosts)*	FDL/SDL, FP/Covered/None	Forages in warm coastal marine and estuarine environments; in California, nests on dry, rocky offshore islands	Not expected to occur. No suitable vegetation present.
California horned lark	*Eremophila alpestris actia*	None/WL/None/None	Nests and forages in grasslands, disturbed lands, agriculture, and beaches; nests in alpine fell fields of the Sierra Nevada	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
California least tern	*Sternula antillarum browni (nesting colony)*	FE/SE, FP/Covered/None	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
elegant tern	*Thalasseus elegans (nesting colony)*	None/WL/Covered/None	Inshore coastal waters, bays, estuaries, and harbors; forages over open water	Not expected to occur. No suitable vegetation present.
large-billed savannah sparrow	*Passerculus sandwichensis rostratus (wintering)*	None/SSC/Covered/None	Nests and forages in open, low saltmarsh vegetation, including low halophytic scrub	Not expected to occur. No suitable vegetation present.
least bittern	*Ixobrychus exilis (nesting)*	BCC/SSC/None/None	Nests in freshwater and brackish marshes with dense, tall growth of aquatic and semi-aquatic vegetation	Not expected to occur. No suitable vegetation present.
long-billed curlew	*Numenius americanus (nesting)*	BCC/WL/Covered/None	Nests in grazed, mixed grass, and short-grass prairies; localized nesting along the California coast; winters and forages in coastal estuaries, mudflats, open grassland, and cropland	Not expected to occur. No suitable vegetation present.
mountain plover	*Charadrius montanus (wintering)*	BCC/SSC/Covered/None	Winters in shortgrass prairies, plowed fields, open sagebrush, and sandy deserts	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable vegetation present.
western snowy plover	*Charadrius alexandrinus nivosus (nesting)*	FT, BCC/SSC/Covered/None	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.

Common Names	Scientific Name	Status (Federal/State/MSCP/Other)	Habitat	Potential to Occur
western yellow-billed cuckoo	*Coccyzus americanus occidentalis (nesting)*	FT, BCC/SE/None/None	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable vegetation present.
white-faced ibis	*Plegadis chihi (nesting colony)*	None/WL/Covered/None	Nests in shallow marshes with areas of emergent vegetation; winter foraging in shallow lacustrine waters, flooded agricultural fields, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields, and estuaries	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable vegetation present.
Canada goose	*Branta canadensis*	None/None/Covered/None	Lakes, rivers, ponds, and other bodies of water; yards, park lawns, and agricultural fields	Not expected to occur. There are no lakes, ponds or other large bodies of water and the project is in a highly urbanized environment.
reddish egret	*Egretta rufescens*	None/None/Covered/None	Freshwater marsh with emergent vegetation; in the Central Valley primarily nests and forages in rice fields and other flooded agricultral fields with weeds and other residual aquatic vegetation	Not expected to occur. No suitable vegetation present.
western bluebird	*Sialia mexicana*	None/None/Covered/None	Nests in old-growth red fir, mixed-conifer, and lodegpole pine habitats near wet meadows used for foraging	Moderate potential to occur. This species has been expanding into San Diego neighborhoods in recent years and may potentially forage or nest onsite.
Ridgway's rail	*Rallus obsoletus levipes*	FE/SE, FP/Covered/None	Coastal wetlands, brackish areas, coastal saline emergent wetlands	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
Mammals				
Pacific pocket mouse	*Perognathus longimembris pacificus*	FE/SSC/None/None	Fine-grained sandy substrates in open coastal strand, coastal dunes, and river alluvium	Not expected to occur based on lack of suitable upland habitat and highly disturbed sandy soils. Study area is not located along immediate coast. This species occurs within the vicinity.

Common Names	Scientific Name	Status (Federal/State/MSCP/Other)	Habitat	Potential to Occur
San Diego desert woodrat	*Neotoma lepida intermedia*	None/SSC/None/None	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Not expected to occur. No suitable habitats with dense undergrowth present. Would have detected middens if present. This species occurs within the vicinity.
big free-tailed bat	*Nyctinomops macrotis*	None/SSC/None/WBWG_MH	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
pallid bat	*Antrozous pallidus*	None/SSC/None/WBWG_H	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Low potential to forage. No suitable rocky outcrops, cliffs, and crevices for roosting.
Yuma myotis	*Myotis yumanensis*	None/None/None/WBWG_LM	Riparian, arid scrublands and deserts, and forests associated with water (streams, rivers, tinajas); roosts in bridges, buildings, cliff crevices, caves, mines, and trees	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
American badger	*Taxidea taxus*	None/SSC/Covered/None	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. There is very limited suitable habitat for this species in the study area.
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	None/SSC/None/None	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	Low potential to occur. Limited coastal sage scrub habitat and there is no suitable chaparral onsite.
hoary bat	*Lasiurus cinereus*	None/None/None/WBWG_M	Forest, woodland riparian, and wetland habitats; also juniper scrub, riparian forest, and desert scrub in arid areas; roosts in tree foliage and sometimes cavities, such as woodpecker holes	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.

Common Names	Scientific Name	Status (Federal/State/MSCP/Other)	Habitat	Potential to Occur
Mexican long-tongued bat	*Choeronycteris mexicana*	None/SSC/None/WBWG_H	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon–juniper woodland; roosts in caves, mines, and buildings	Not expected to occur. No suitable vegetation present.
northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	None/SSC/None/None	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland	Not expected to occur due to limited coastal sage scrub or rocky substrates onsite. This species occurs within the vicinity.
pocketed free-tailed bat	*Nyctinomops femorosaccus*	None/SSC/None/WBWG_M	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with dropoffs, caverns, and buildings	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	None/SSC/None/None	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	Low potential to occur. Limited suitable open habitats onsite and the study area is bounded by residential homes, schools, and SR-56 This species occurs within the vicinity.
silver-haired bat	*Lasionycteris noctivagans*	None/None/None/WBWG_M	Old-growth forest, maternity roosts in trees (primarily woodpecker hollows), large-diameter snags 50 feet aboveground; hibernates in hollow trees, under sloughing bark, in rock crevices, and occasionally in buildings, mines, and caves; forages in or near coniferous or mixed deciduous forest, often following stream or river drainages	Not expected to occur. No suitable vegetation present.
spotted bat	*Euderma maculatum*	None/SSC/None/WBWG_H	Foothills, mountains, desert regions of southern California, including arid deserts, grasslands, and mixed-conifer forests; roosts in rock crevices and cliffs; feeds over water and along washes	Low potential to forage in the study area. This species is typically found in arid environments. This species occurs within the vicinity.

Common Names	Scientific Name	Status (Federal/State/MSCP/Other)	Habitat	Potential to Occur
Townsend's big-eared bat	*Corynorhinus townsendii*	None/SC, SSC/None/WBWG_H	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	Not expected to occur. No suitable vegetation present.
western mastiff bat	*Eumops perotis californicus*	None/SSC/None/WBWG_H	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Low potential to forage in the study area. The study area is highly urbanized but could find suitable roosting structures/microhabitat. This species occurs within the vicinity.
western red bat	*Lasiurus blossevillii*	None/SSC/None/WBWG_H	Forest, woodland, riparian, mesquite bosque, and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
western yellow bat	*Lasiurus xanthinus*	None/SSC/None/WBWG_H	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	Not expected to occur. No suitable vegetation present.
cougar	*Puma concolor*	None/None/Covered/None	Scrubs, chaparral, riparian, woodland, and forest; rests in rocky areas and on cliffs and ledges that provide cover; most abundant in riparian areas and brushy stages of most habitats throughout California, except deserts	Not expected to occur. Limited suitable vegetation present and site is highly urbanized.
mule deer	*Odocoileus hemionus*	None/None/Covered/None	Coastal sage scrub, chaparral, riparian, woodlands, and forest; often browses in open area adjacent to cover throughout California, except deserts and intensely farmed areas	Not expected to occur. Limited suitable vegetation present and site is highly urbanized.

Common Names	Scientific Name	Status (Federal/State/MSCP/Other)	Habitat	Potential to Occur
Invertebrates				
Riverside fairy shrimp	*Streptocephalus woottoni*	FE/None/Covered/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. No vernal pools or necessary clay soil substrate within the study area.
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE/None/Covered/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. No vernal pools or necessary clay soil substrate within the study area. This species was recorded within the vicinity.
globose dune beetle	*Coelus globosus*	None/None/None/None	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
mesa shoulderband	*Helminthoglypta coelata*	None/None/None/None	Known only from a few locations in coastal San Diego County	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable vegetation present.
mimic tryonia (=California brackishwater snail)	*Tryonia imitator*	None/None/None/None	Inhabits coastal lagoons, estuaries, and saltmarshes, from Sonoma County south to San Diego County	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
sandy beach tiger beetle	*Cicindela hirticollis gravida*	None/None/None/None	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
senile tiger beetle	*Cicindela senilis frosti*	None/None/None/None	Inhabits marine shoreline, from Central California coast south to saltmarshes of San Diego; also found at Lake Elsinore	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
western beach tiger beetle	*Cicindela latesignata latesignata*	None/None/None/None	Mudflats and beaches in coastal Southern California	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable vegetation present.
obscure bumble bee	*Bombus caliginosus*	None/None/None/None	Coastal areas from Santa Barabara county to north to Washington state. Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia and Phacelia.	Low potential to occur. Study area is highly disturbed and urbanized. Limited food plants available.

Common Names	Scientific Name	Status (Federal/State/MSCP/Other)	Habitat	Potential to Occur
Crotch bumble bee	*Bombus crotchii*	None/None/None/None	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Low potential to occur. Study area is highly disturbed and urbanized. Limited food plants available.
California mellitid bee	*Melitta californica*	None/None/None/None	Desert regions of southwestern Arizona, southeastern California, and Baja California, Mexico; also collected from Torrey Pines, San Diego County	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
Thorne's hairstreak	*Callophrys thornei*	None/None/Covered/None	Interior cypress woodland dominated by host plant Hesperocyparis forbesii (Tecate cypress)	Not expected to occur. No suitable vegetation present.
Hermes copper	*Lycaena hermes*	FC/None/None/None	Mixed woodlands, chaparral, and coastal scrub	Not expected to occur. Requisite host plants not present. There is limited coastal sage scrub vegetation present and the study area lacks chaparral.
monarch	*Danaus plexippus*	None/None/None/None	Wind-protected tree groves with nectar sources and nearby water sources	Not expected to occur. No suitable vegetation present. This species occurs within the vicinity.
quino checkerspot	*Euphydryas editha quino*	FE/None/None/None	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include Plantago erecta (dwarf plantain), Antirrhinum coulterianum (white snapdragon), and Plantago patagonica (woolly	Not expected to occur. No plantago was observed and the site is surrounded by urban development.
wandering skipper	*Panoquina errans*	None/None/Covered/None	Saltmarsh	Not expected to occur. No suitable vegetation present.