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August 26, 2014
M&A #08-021-31

Dirk Smith
Public Utilities Department, Wastewater Branch
9192 Topaz Way
San Diego, CA 92123

**Biological Letter Report,
Black Mountain Access Road Repair Project
(May 14, 2014, Revised August 26, 2014)**

Dear Mr. Smith:

Merkel & Associates, Inc. has prepared the following biological letter report for the City of San Diego Biological Support for the Black Mountain Access Road Repair Project, written in accordance with the current City of San Diego Biological Guidelines for Conducting Biological Surveys.

If you have any questions concerning this biological letter report, please do not hesitate to contact me at (858) 560-5465 or abehle@merkelinc.com.

Sincerely,

Adam Behle
Project Manager

INTRODUCTION

PURPOSE OF REPORT

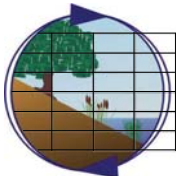
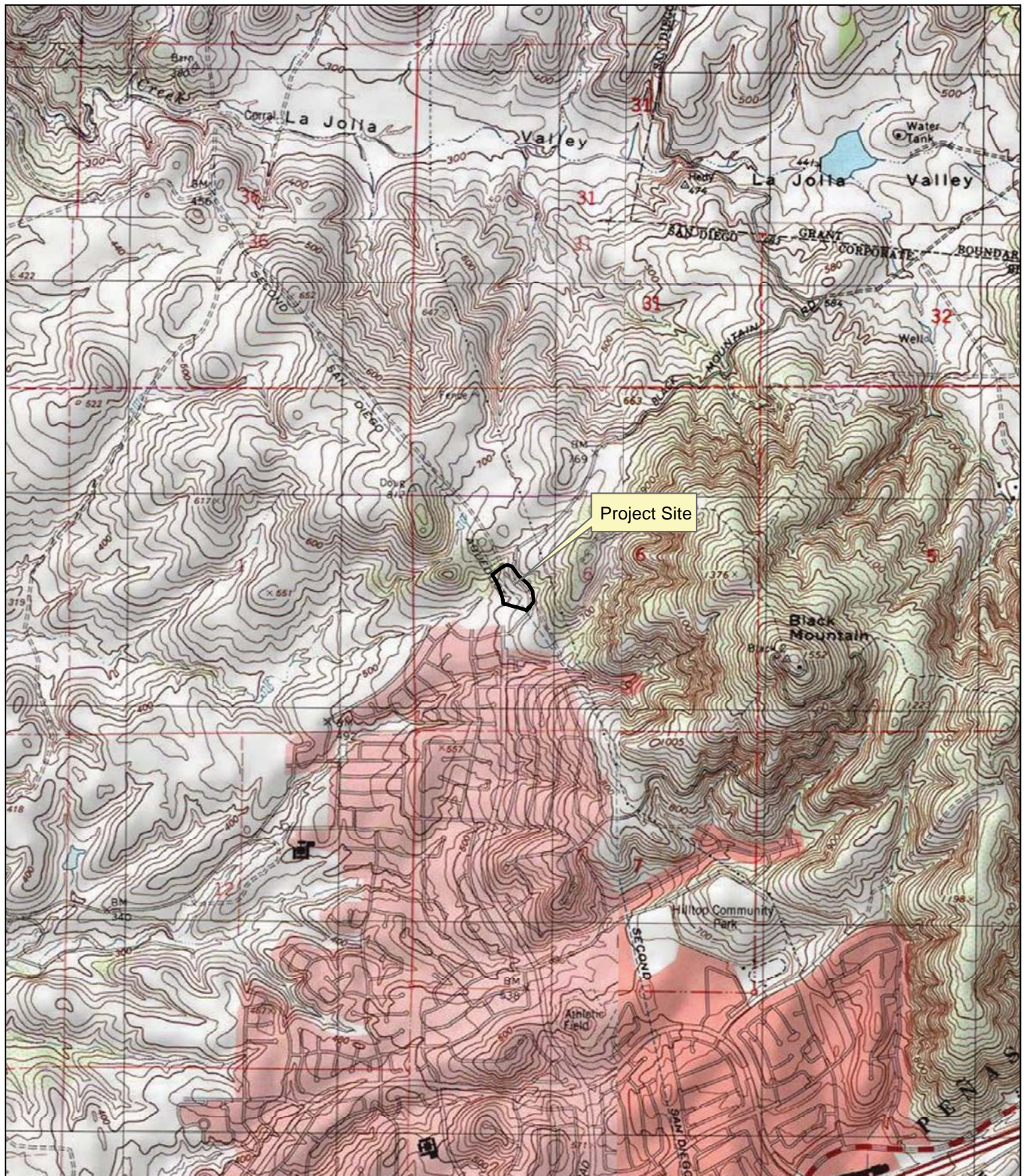
Merkel & Associates, Inc. (M&A) has prepared this biological resource letter report for the proposed Black Mountain Access Road Repair Project. The purpose of this report is to document the existing biological conditions within the study area; identify potential impacts to biological resources that could result from implementation of the proposed project, and recommend measures to avoid, minimize, and/or mitigate significant impacts consistent with the California Environmental Quality Act (CEQA) and applicable federal, state, and local rules and regulations.

PROJECT LOCATION

The study area occupies the approximate center of Assessor's Parcel Number 3122920400, which is owned by the City of San Diego and is located in the Black Mountain Open Space Park on the Black Mountain Access Road. It can be referenced on the U.S. Geological Survey 7.5' Del Mar, California Quadrangle Map in Section 6, Township 14 South, Range 2 West of the San Bernardino Base and Meridian. The approximate latitude and longitude coordinates of the center of the study area are 32.9839 and -117.1304 decimal degrees (NAD83) (Figure 1). The project lies predominantly inside the City's Multi-Habitat Planning Area (MHPA) (Figure 2).

PROJECT DESCRIPTION

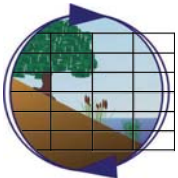
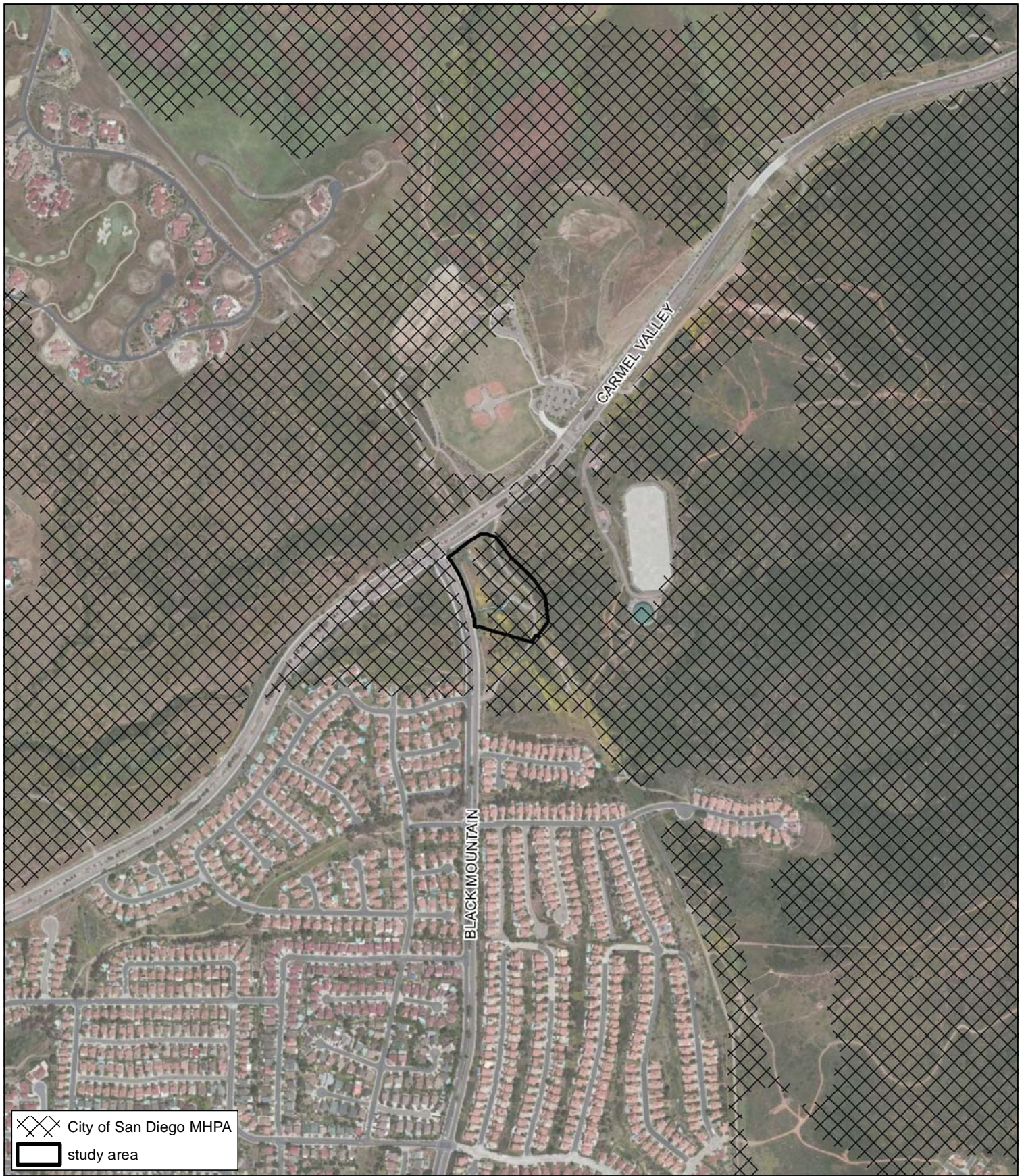
Erosion from overflow of the Black Mountain Reservoirs has created an incised gully along the western branch of the Black Mountain Access Road and threatens to expose three San Diego County Water Authority (CWA) underground 108-inch aqueducts located approximately 15 feet below grade. The final construction plan to address the eroded areas is currently being developed, but will generally consist of the removal of the existing concrete headwalls and detention basins, and installation of a below grade 36" drainage pipe and revegetated downstream energy dissipater. After installation of the pipe is complete, all previously eroded areas would be re-contoured and restored with a native upland restoration plant palette. The surrounding vegetation of the proposed project consists of Diegan coastal sage scrub that supports Coastal California Gnatcatcher, a federally threatened species. Staging and access would remain on urban/developed habitats within the existing access road when practicable; however, unavoidable temporary impacts to disturbed Diegan coastal sage scrub would likely occur during construction in order to safely access all areas within the construction footprint.



Project Vicinity Map

Black Mountain Access Road Repair Project
Source: USGS 7.5' Del Mar, CA Quadrangle

Figure 1



MHPA Map
Black Mountain Access Road Repair Project

Figure 2

METHODS AND SURVEY LIMITATIONS

LITERATURE AND DATA REVIEW

Historical and currently available biological literature and data pertaining to the project area were reviewed prior to initiation of the field investigation. This review included examination of: 1) aerial photography for the project site (Air Photo USA 2010); 2) regional vegetation data for the project vicinity (SanGIS 2007a); 3) geological substrates and soil types mapped on the project site (USGS 2005 and USDA NRCS 2007, respectively); 4) U.S. Fish and Wildlife Service National Wetlands Inventory Wetlands Mapper (USFWS 2011); and 5) California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDDB) and U.S. Fish and Wildlife Service (USFWS) special status species records for the project vicinity (CDFG 2010 and USFWS CFWO 2012, respectively).

SURVEY DATES, TIMES, AND CONDITIONS

M&A biologists, Adam Behle and Joe Thompson, conducted a general biological survey and a jurisdictional wetland delineation of the study area on foot on July 16, 2012. An additional survey was performed by Adam Behle on April 5, 2013 to refine the results of the previous wetland delineation and to identify potential construction access locations. The study area included a buffer of approximately 40 feet beyond the proposed construction footprint.

Table 1. Summary of Survey Dates, Times, Conditions, and Staff

Date	Time	Weather Conditions	Biologist	Survey
July 16, 2012	0900-1130	Weather: 0%cc Wind: 0-2 mph Temp.: 68°F	Adam Behle / Joe Thompson	General Biological Survey, Wetland Delineation
April 5, 2013	1100-1300	Weather: 5%cc Wind: 0-2 mph Temp.: 70°F	Adam Behle	Wetland Delineation

cc = cloud cover

mph = miles per hour

F = Fahrenheit

General Biological Survey

Existing vegetation types were delineated onto a 1" = 100' scale, color aerial photograph (Air Photo USA 2012) with topographical overlay of the project site. The vegetation types were classified according to the Holland (1986) code classification system as modified by Oberbauer (2008) and were mapped in accordance with the City of San Diego's current biological resource mapping requirements (City 2002). A list of detectable flora and fauna species was recorded in a field notebook. Plant identifications were either resolved in the field or later determined through verification of voucher specimens, and wildlife species were determined through direct observation (aided by binoculars), identification of songs, call notes and alarm calls, or by detection of sign (e.g., burrows, tracks, scat, etc.). Wildlife species were determined through direct observation (aided by binoculars), identification of songs, call notes and alarm calls, or by detection of sign (e.g., burrows,

tracks, scat, etc.). In addition, directed searches for the queried list of sensitive species with a potential to occur on-site were conducted within the study area, and any other potential occurrences were assessed in the field based on the existing biological conditions. Photographs of the project study area were taken to record the biological resources present, and data collected from the survey were digitized into current Geographical Information System (GIS) Environmental Systems Research Institute (ESRI) software platforms. Photos of the project site are located in Appendix 1 of this report.

Delineation of Jurisdictional Wetlands and Other Waters

M&A conducted a jurisdictional wetland delineation within the study area. The wetland delineation was conducted using the routine on-site determination methods noted in the U.S. Army Corps of Engineers' (ACOE) *Wetland Delineation Manual* (Environmental Laboratory 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* version 2.0 (USACOE 2008), hereafter referred to as the "Arid West Supplement". The delineation included non-wetland federally regulated waters as well as waters of the state.

Evidence supporting jurisdictional determinations was recorded on field data forms (Appendix 2). Wetland habitats and jurisdictional waterways were recorded using a hand-held GPS unit, post-processed sub-meter accuracy, and plotted onto a 1" = 200' scale, color aerial map (Air Photo USA 2010) (with topographic overlay) of the project site, with waterway widths noted to provide true jurisdictional dimensions. Data collected from the delineation were digitized into current Geographical Information System Environmental Systems Research Institute software platforms. Information on the overall delineation process and regulatory jurisdictions may be found in the Arid West Supplement, as well as federal, state, and local enacting legislation, or through guidance provided by judicial interpretation, solicitors opinions, and regulatory guidance issued to jurisdictional agencies.

Prior to conducting the delineation, the project site was evaluated to identify potential jurisdictional wetlands and/or waterways on the project site, and their connection to off-site hydrological resources. In addition, the overall landforms, slopes, soils, and climatic/hydrological conditions present on the project site were assessed. Data points were then taken in areas that were visually determined to best represent the characteristics of each potential wetland community type and/or jurisdictional resource identified on the project site, as well as in areas where the presence of a wetland and/or jurisdictional resource was uncertain. The ACOE routine on-site determination methods require the presence of three parameters to define an area as a wetland (e.g., hydrophytic vegetation, hydric soils, and wetland hydrology). At each data point location, the area was first assessed to determine if normal environmental conditions were present. Some wetland indicators of one or more of the parameters can be periodically lacking due to normal seasonal or annual variations in environmental conditions (i.e., problem areas) or effects of recent human activities or natural events (i.e., atypical situations). Each data point was then evaluated for indicators of each of the wetland parameters.

Wetland Parameters

Hydrophytic Vegetation

Hydrophytic vegetation is defined as "the community of macrophytes that occurs in areas where inundation and soil saturation is either permanent, or of sufficient frequency and duration to exert a

controlling influence on the plant species present” (USACOE 2008, Section 2). For the purposes of this delineation, five levels of wetland indicator status were used to assess the presence of hydrophytic vegetation, based on the most current *National Lists of Plant Species that Occur in Wetlands* (USFWS 1988): species classified as 1) obligate wetland plants (OBL) [plants that occur almost always (estimated probability >99%) in wetlands under natural conditions, but which may also occur rarely (estimated probability <1%) in non-wetlands]; 2) facultative wetland plants (FACW) [plants that occur usually (estimated probability >67% to 99%) in wetlands, but also occur (estimated probability 1% to 33%) in non-wetlands]; 3) facultative plants (FAC) [plants with a similar likelihood (estimated probability 33% to 67%) of occurring in both wetlands and non-wetlands]; 4) facultative upland plants (FACU) [plants that occur sometimes (estimated probability 1% to <33%) in wetlands, but occur more often (estimated probability >67% to 99%) in non-wetlands]; and 5) obligate upland plants [plants that occur rarely (estimated probability <1%) in wetlands, but occur almost always (estimated probability >99%) in non-wetlands under natural conditions] (Environmental Laboratory 1987, Table 1). Hydrophytic vegetation was determined to be present if any one of the following three indicator tests were satisfied: 1) the Dominance Test (Indicator 1), where “more than 50% of the dominant plant species across all strata were rated OBL, FACW, or FAC”; 2) the Prevalence Test (Indicator 2), where there were indicators of hydric soils and wetland hydrology, and the prevalence index was 3.0 or less, which is a weighted-average wetland indicator status of all plant species by abundance (percent cover); and/or 3) the Plant Morphological Adaptations Test (Indicator 3), where there were indicators of hydric soils and wetland hydrology present, and either the Dominance Test (Indicator 1) or Prevalence Test (Indicator 2) were satisfied after reconsideration of the indicator status of certain plant species that exhibited morphological adaptations for life in wetlands.

Hydric Soils

Hydric soils are defined as “a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part” (USACOE 2008, Section 3). For the purposes of this delineation, the hydric soil indicators described in the Arid West Supplement and *National Technical Committee for Hydric Soils (NTCHS) Field Indicators of Hydric Soils in the United States* (USDA NRCS 2006) were used to assess the presence of hydric soils. Soil test pits were dug to the depth needed to document the soil chroma index using the Munsell® Soil Color Charts (Munsell® Color 2000), as well as additional hydric soil indicators. The soil was determined to be hydric if one or more hydric soil indicators were present.

Wetland Hydrology

Wetland hydrology is indicated by the presence of surficial or sub-surficial hydrologic characteristics long enough during the growing season to show that the presence of water has an overriding influence on the characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively; thus, for an area to be defined as a wetland, periodic inundation or saturation of soils during the growing season must be determined to be present (USACOE 2008, Section 4). For the purposes of this delineation, the wetland hydrology indicators described in the Arid West Supplement were used to assess the presence of wetland hydrology. Wetland hydrology was determined to be present if one or more primary indicators, or two or more secondary indicators, were observed.

Jurisdiction of Wetlands and Waterways

The extent of jurisdictional boundaries was determined according to the ACOE, CDFW, State Water Resource Control Board/Regional Water Quality Control Board (SWRCB/RWQCB), and City of San Diego definitions of wetlands, navigable waters, and non-wetland waters of the U.S./streambed (NWW). The following text describes each agency's jurisdiction.

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers has regulatory authority to issue permits for 1) the discharge of dredged or fill material in "waters of the U.S." under section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344), and 2) work and placement of structures in "navigable waters of the U.S." under sections 9 and 10 of the Rivers and Harbors Act (RHA) (33 U.S.C 401).

The agencies will assert jurisdiction over the following waters:

- Traditional navigable waters;
- Wetlands adjacent to traditional navigable waters;
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and
- Wetlands that directly abut such tributaries.

"Wetlands" are defined in 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Thus, all three parameters (i.e., hydrophytic vegetation, hydric soils, and wetland hydrology) must be present to classify an area as an ACOE jurisdictional wetland under normal circumstances.

California Department of Fish and Wildlife

Under section 1602 of the California Fish and Game Code, the CDFW has regulatory authority over any proposed activity that may substantially modify a river, stream, or lake. The CDFW regulates alterations of lakes or streambeds through the development of a Streambed Alteration Agreement (Agreement) under the Lake and Streambed Alteration Program (LSA). Unlike the ACOE process, the Agreement is not a discretionary permit, but rather an Agreement developed between an applicant and the CDFW. This Agreement may include conditions of mitigation, impact reduction, or avoidance measures. These measures are subject to acceptance by the applicant or may be countered with alternative measures.

State Water Resource Control Board/Regional Water Quality Control Board

For waters of the State that are federally regulated under the CWA, the State Water Resources Control Board (SWRCB) [through its Regional Water Quality Control Boards (RWQCBs)] must provide state water quality certification pursuant to section 401 of the CWA for activities requiring a federal permit or license, which may result in discharge of pollutants into waters of the U.S. Where

no federal jurisdiction exists over waters of the State, the SWRCB (through its RWQCBs) retains regulatory authority to protect water quality through provisions of the Porter-Cologne Act.

Waters of the State include both surface and groundwater, and are not restricted by geographic features. Like other state definitions, the SWRCB defines waters of the state as having any of the features of hydrophytic vegetation, hydric soils, or wetland hydrology. Impacts to waters of the State are regulated through either the CWA section 401 water quality certification process, or through the issuance of waste discharge requirements (WDRs) by either the SWRCB or the appropriate RWQCB.

City of San Diego

The City regulates wetlands, considered sensitive biological resources under the ESL, San Diego Land Development Code, Chapter 14, Division 1, Section 143.0101 et seq., and the Open Space Residential (OR-1-2) Zone, SDLDC, Chapter 13, Division 2, Section 131.0201 et seq. These guidelines are the baseline biological standards for processing Neighborhood Development Permits, Site Development Permits, and Coastal Development Permits issued pursuant to the ESL.

The City defines wetlands in the San Diego Land Development Code, Chapter 11, Article 3, Division 1, Section 113.0103 et seq. (amended April 8, 2008), as areas characterized by any of the following conditions:

1. All areas persistently or periodically containing naturally occurring wetland vegetation communities characteristically dominated by hydrophytic vegetation, including but not limited to salt marsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodlands, riparian scrub, and vernal pools;
2. Areas that have hydric soils or wetland hydrology, and lack naturally occurring wetland vegetation communities because human activities have removed the historic wetland vegetation or catastrophic or recurring natural events, or processes have acted to preclude the establishment of wetland vegetation as in the case of salt pannes and mudflats;
3. Areas lacking wetland vegetation communities, hydric soils, and wetland hydrology due to non-permitted filling of previously existing wetlands; or
4. Areas mapped as wetlands on Map No. C-713 as shown in Chapter 13, Article 2, Division 6 (Sensitive Coastal Overlay Zone).

Wetland Functions and Values

Based on the wetland delineation, wetland functions and values were assessed for any wetlands identified on-site. Wetland functions can be defined as the physical, chemical, and biological characteristics of a wetland. The physical and chemical functions and values of a wetland are determined based on the wetland width, slope, substrate, hydrology characteristics, and habitat type/floral constituents. These functions and values typically include groundwater recharge, floodflow alteration, streambed stabilization, sediment/toxicant retention, nutrient transformation, and production export. The biological functions and values of a wetland typically include wildlife habitat (i.e., breeding, foraging) and cover.

SCIENTIFIC NOMENCLATURE

The scientific and common names utilized for the floral and faunal resources were noted according to the following scientific nomenclature: flora, Rebman and Simpson (2006); butterflies, Klein/San Diego Natural History Museum (2002); amphibians and reptiles, Crother et al. (2001 and 2003); birds, American Ornithologists' Union (1998 and 2010); and mammals, San Diego Natural History Museum (undated), which uses Wilson and Reeder (1993) for species names and Hall (1981) for subspecies.

GENERAL SURVEY LIMITATIONS

Biological inventories are generally subject to various survey limitations. Depending on the season and time of day during which field surveys are conducted, some species may not be detected due to temporal species variability. The biological surveys conducted for this project were performed during daylight hours in spring, thus, some dispersing species or nocturnal species may not have been detected; however, based on the literature review performed, as well as knowledge of species-specific habitat requirements, it is anticipated that any additional species potentially present on the project site can be fairly accurately predicted, and that the surveys conducted were sufficient in obtaining a thorough review of the biological resources present on the project site.

SURVEY RESULTS

LAND USE

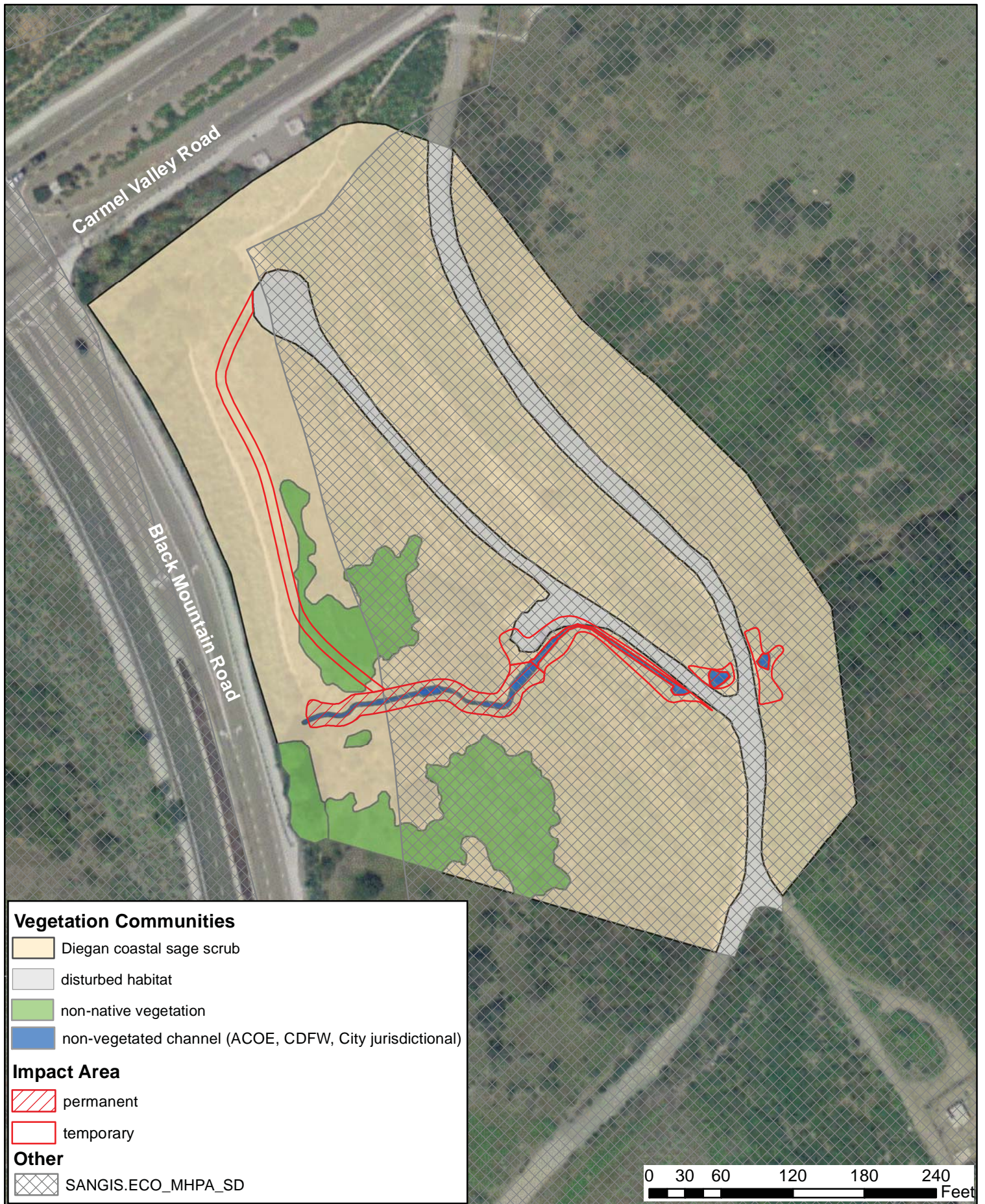
The proposed project location lies within City Park and Recreation Department managed land in the Black Mountain Open Space Park within the MHPA. The majority of the proposed repair work occurs within an existing CWA easement that includes three 108-inch aqueducts located approximately 15 feet below grade. The proposed headwall located on the eastern edge of the project, in addition to the energy dissipater and downstream rock-lined channel located on the west edge of the project, are located outside of the CWA easement. The CWA easement and associated infrastructure is located within and/or surrounded by the greater Black Mountain Open Space Park, which encompasses nearly 2,352 acres of both natural and developed recreational areas. Trails within the park are used primarily for walking, hiking, and cycling. The park is surrounded by the communities of Rancho Peñasquitos to the west and Carmel Mountain to the east.

PHYSICAL CHARACTERISTICS

The study area consists of approximately 6.07 acres and is located on a south-facing slope, west of Black Mountain. Native habitats consist of Diegan coastal sage scrub, with pockets of non-native vegetation and disturbed habitat associated with access roads (Figure 3A).

A single soil mapping unit: San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes occupies the entire study area. This soil mapping unit is not included on the Natural Resource Conservation Service list of hydric soils for the state of California (NRCS 2010).

No USFWS designated critical habitats are associated with the study area.



**Black Mountain Access Road Repair
Biological Resources Map
Figure 3A**

BIOLOGICAL RESOURCES

Botanical Resources - Flora

Three vegetation types were identified within the study area: Diegan coastal sage scrub, non-native vegetation, and urban/developed (Figure 3A). Acreages of these vegetation/habitat types are summarized in Table 2, and each is discussed in more detail following the table. A list of floral species observed or detected within the study area is included as Appendix 3.

Table 2. Summary of Vegetation Communities/Habitat Types within the Study Area

Vegetation Community	Holland/ Oberbauer Code	MSCP Tier Habitat Type	Total Area (acre)
Diegan Coastal Sage Scrub	32500	Tier II	4.93
Non-native vegetation	11000	Tier IV	0.56
Disturbed	11300	Tier IV	0.54
Total			6.03

Diegan Coastal Sage Scrub

Diegan coastal sage scrub is present in open areas west of the Black Mountain Access Road and the eroded channel. Dominant species include California sagebrush (*Artemisia californica*), flat-top buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*), broom baccharis (*Baccharis sarothroides*), coyote brush (*Baccharis pilularis*), black sage (*Salvia mellifera*) and laurel sumac (*Malosma laurina*). Subdominant species include white sage (*Salvia apiana*), peak rush-rose (*Helianthemum scoparium*), and telegraph weed (*Heterotheca grandiflora*). Several non-native species, including tree tobacco (*Nicotiana glauca*), fennel (*Foeniculum vulgare*) and artichoke thistle (*Cynara cardunculus*) are sparsely distributed throughout this habitat.

Non-native Vegetation

Blocks of non-native vegetation that have become established within greater tracts of Diegan coastal sage scrub on site are contiguous enough to be considered a unique habitat. Vegetation in these areas consists mostly of forbs such as tocalote (*Centaurea melitensis*) and mustard (*Hirschfeldia incana*), along with non-native annual grasses such as ripgut grass (*Bromus diandrus*). Other non-native species found in these areas include tree tobacco, fennel, and artichoke thistle.

Disturbed Habitat

Disturbed habitat is mapped for the existing site access roads and trails. High soil compaction and repeated disturbance from regular vehicle, bicycle and pedestrian use prohibits the growth of most vegetation in these habitats.

Zoological Resources -Fauna

Observed faunal/zoological resources and those not observed but that have a potential to occur within the study area are described below. A complete list of the faunal species observed or detected within the study area during the biological surveys has been included with this report in Appendix 4.

Invertebrates

No invertebrate species were observed within the study area during the recent biological survey; however common butterfly species such as cabbage white (*Pieris rapae*), as well as more riparian species such as mourning cloak (*Nymphalis antiopa*) and common buckeye (*Junonia coenia grisea*) have a potential to occur within the study area.

Amphibians and Reptiles

No amphibian or reptile species were observed or detected on-site during the recent surveys; however common western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), southern alligator lizard (*Elgaria multicarinata*), Southern Pacific rattlesnake (*Crotalus viridis*), common kingsnake (*Lampropeltis getula*), and gophersnake (*Pituophis catenifer*) are all common species that could be expected to occur within the study area.

Birds

Common avian species observed and/or detected on-site included western scrub jay, northern mockingbird, and the federally threatened coastal California gnatcatcher.

Mammals

No mammal species were detected in the study area; however, common fossorial species that could be expected to occur on-site include: California ground squirrel (*Spermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii sanctidiegi*), and Valley or Botta's pocket gopher (*Thomomys bottae*). Other common mammal species that have a potential to occur on-site include: coyote (*Canis latrans clepticus*), mule deer (*Odocoileus hemionus fuliginatac*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis holzneri*), black rat (*Rattus rattus*), and northern raccoon (*Procyon lotor*).

JURISDICTIONAL WETLANDS AND NON-WETLAND RESOURCES

A. JURISDICTIONAL WETLANDS AND NON-WETLAND WATERS

ACOE, RWQCB, and CDFW jurisdictional waterways delineated for the proposed Black Mountain Access Road Repair Project are shown in Figure 3A. No features meeting the ACOE definition for wetlands are present within the study area; however, non-wetland waters of the U.S./Streambed are present. The following text discusses these features with regard to vegetation, soils, and hydrology. Table 3 summarizes the acreage of each wetland community within the study area.

Table 3. Summary of Jurisdictional Resources within the Study Area

Jurisdictional Wetlands and Non-Wetland Resources	ACOE, RWQCB, and CDFW Jurisdiction (acre)
Non-wetland Waters of the U.S./Streambed	0.038
Total:	0.038

Non-wetland Waters of the U.S./Streambed

The Non-wetland Waters of the U.S./Streambed on site consist of an eroded and deeply incised ephemeral drainage. This drainage is devoid of hydrophytic vegetation and is therefore jurisdictional only under the ACOE as Non-Wetland Waters of the U.S., and the CDFW as a streambed. The drainage has not supported hydrophytic vegetation previously, and hydrophytic vegetation has not been precluded from becoming established due to past human activities; therefore, it does not meet the City's definition of a wetland. Wetland data point 1A was used to document conditions with respect to dominant vegetation, soils, and hydrology. Wetland data point 1B was used to document the upland conditions above the OHWM. The ephemeral drainage enters the study area east of the Black Mountain Access road and passes southwest under a headwall into a shallow detention basin. From the detention basin the drainage passes under the access road via another 24-inch culvert and enters a soft-bottom channel that turns northwest at a hard right angle and parallels the access road for approximately 100 feet prior to turning southwest for approximately 50 feet before flowing into a broad swale that collects runoff from the Black Mountain Open Space Park. These flows are conveyed by culverts under Black Mountain Road and pass through the urban habitats of Rancho Peñasquitos, eventually merging with the San Dieguito River, which discharges into the Pacific Ocean, approximately 8.85 stream miles west of the study area.

WETLAND FUNCTIONS AND VALUES

The ephemeral drainage is in poor functioning condition, due primarily to a 2010 release of a large volume of water from the upstream Black Mountain Reservoir. Two severe head-cuts were noted and the depth of the incised channel ranges from two feet near the Black Mountain Access Road to eight feet or more where it discharges further west. Unless remedial action is taken, the ephemeral drainage will eventually increase in width and compromise the Black Mountain Access Road. Additionally, continued erosion will cause further siltation of downstream habitats including those associated with the San Dieguito River. Presently, beneficial hydrologic, biogeochemical, and plant functions and values are almost nonexistent.

Although the drainage may provide a small amount of cover for foraging wildlife, the potential to further erode other upland habitats and absence of vegetation indicates that it possesses at best, low wildlife functions.

NATIONAL WETLANDS INVENTORY

The National Wetlands Inventory (NWI) identifies a Palustrine Emergent Seasonally Flooded (PEMA) wetland approximately 85 feet west (downstream) from the study area in a broad drainage swale. This feature was not investigated due to difficult to access; however, it appeared to receive waters exiting the study area and was dominated by upland shrubs associated with coastal sage scrub and chaparral habitats. The NWI data also indicate a second PEMA wetland approximately 110 feet southwest of the study area, lying in the same drainage swale. This feature is upstream from the point where the waters of the study area enter the drainage swale and therefore, waters exiting the study area do not appear enter this NWI wetland.

CITY OF SAN DIEGO ENVIRONMENTALLY SENSITIVE LANDS

Sensitive biological resources are uniquely defined by local jurisdictions. Since the lands of the study area lie within the jurisdiction of the City of San Diego, this report relies upon the City of San

Diego's definition of "sensitive biological resources", as documented in the San Diego Municipal Code, Land Development Procedures (Chapter 11, Article 3, and Division 1). Based on this definition, sensitive biological resources means upland and/or wetland areas that meet any one of the following criteria:

- (a) lands that have been included in the City of San Diego MSCP Preserve;
- (b) wetlands;
- (c) lands outside the Multiple Habitat Planning Area (MHPA) that contain Tier I habitats, Tier II habitats, Tier IIIA habitats, or Tier IIIB habitats;
- (d) lands supporting species or subspecies listed as rare, endangered, or threatened under Section 670.2 or 670.5, Title 14, California Code of Regulations, or the Federal Endangered Species Act, Title 50, Code of Federal Regulations, Section 17.11 or 17.12, or candidate species under the California Code of Regulations;
- (e) lands containing habitats with narrow endemic species as listed in the Biology Guidelines in the Land Development manual; or
- (f) lands containing habitats of covered species as listed in the Biology Guidelines in the Land Development Manual.

The study area lies predominantly within the City's Multi-Habitat Planning Area (MHPA). In addition, the study area supports jurisdictional non-wetland waters of the U.S (Figure 2). Based on the recent project biological surveys, known occurrence records (i.e., CDFW, USFWS), and suitable habitat, the study area contains habitat that supports or may potentially support sensitive species including City MSCP covered species. No City narrow endemic species were identified on-site during the biological surveys and none are expected to occur due to the lack of potentially suitable habitat or soils and/or since the project site may be outside of known range/distribution.

WILDLIFE CORRIDORS

Wildlife corridors are important in preserving species diversity. In the absence of corridors, habitats become isolated islands surrounded by development. Fragmented habitats support lower numbers of species and increase the likelihood of extinction for species restricted to small areas. Connections between areas of open space are integral to maintaining biological diversity and population viability. For the purposes of this report, we have defined wildlife corridor as follows: a linear landscape feature utilized by resident or transient wildlife for movement between two blocks of habitat.

Based on the topography, habitat connectivity and cover, identified and/or potential species within the study area, and land uses, the study area appears to possess low to moderate value as a wildlife corridor. Although high quality coastal sage scrub and chaparral lands are adjacent to the west side of the study area, lands further west (approximately 530 feet from the study area) are primarily urban consisting of Black Mountain Road and dense residential development; therefore, use by terrestrial animals for east-west home-range movements would be unlikely. Dense cover exists in the swale immediately west of the study area and natural lands exist north and south of the study area; therefore, some north-south home range movements may be possible for terrestrial meso-predators such as coyote and bobcat (*Felis rufus*) as well as raccoon, striped skunk, and opossum. These species may be able to access natural lands to the west after passing through culverts under Carmel Valley and Black Mountain Roads. Attempts by wildlife to cross these roads may be a significant cause of local wildlife mortality.

RARE, THREATENED, ENDEMIC, AND/OR SENSITIVE SPECIES OR MSCP COVERED SPECIES

Sensitive species are those considered sensitive by the City or any state or federal agency. For the purposes of this report, species listed as endangered or threatened under the federal Endangered Species Act (ESA) and California Endangered Species Act (CESA); species designated as California Special Concern species or Fully Protected species by the CDFW; and species listed as MSCP narrow endemics by the City (1997) are considered “sensitive”. Species considered rare by the California Native Plant Society (CNPS) (2010) or as Special Plants or Animals in the CNDDB (2011), may be considered “sensitive” if they meet the CEQA Guidelines §15380 (Title 14, Chapter 3, Article 20) definition for “endangered, rare or threatened species”.

Sensitive Flora

No sensitive floral species were detected on-site, due primarily to a lack of suitable habitat for such species.

An evaluation of the potential for sensitive flora species to occur within the study area was conducted, based on suitable habitat, and/or site conditions. Appendix 6 includes a complete listing of the sensitive flora species detected or evaluated for the potential to occur on site, with their respective status, suitable habitat, and an assessment of their potential for occurrence.

Sensitive Fauna

A single sensitive bird species: coastal California gnatcatcher was detected in the coastal sage scrub habitats of the study area. No other sensitive wildlife species are expected to occur on the site except as transients or migrants. No protocol or focused faunal surveys were conducted on-site for the project.

An evaluation of the potential for sensitive fauna species to occur within the study area was conducted, based on suitable habitat, and/or site conditions. Appendix 6 includes a complete listing of the sensitive wildlife species detected or evaluated for the potential to occur on site, with their respective status, suitable habitat, and an assessment of their potential for occurrence.

Critical Habitat

No part of the study area is designated as critical habitat or as proposed critical habitat for listed species.

PROJECT IMPACT ANALYSIS

CEQA THRESHOLDS OF SIGNIFICANCE

State CEQA Guidelines §15065 (a) (Title 14, Chapter 3, Article 5) states, “A project may have a significant effect on the environment” if:

- “The project has the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community;

substantially reduce the number or restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory.”

- “The project has possible environmental effects which are individually limited but cumulatively considerable.”

In addition, the City has developed Significance Determination Thresholds and Biology Guidelines under CEQA; therefore, mitigation measures for significant project impacts are recommended in accordance with these City guidelines. Anticipated impacts are identified in the following Figure 3A.

The following analysis identifies potential impacts to biological resources that could result from implementation of the proposed project. This report was prepared to satisfy the regulations of several different agencies that recognize both temporary and permanent impact classification (i.e. ACOE, CDFW, & RWQCB), in addition to the City that generally recognizes only permanent impacts; therefore, both classifications of impacts are discussed and quantified in the following section. All impacts, temporary and permanent, will be mitigated for off-site, and on-site restoration of all impacted habitats will occur in accordance to a 25-month on-site habitat revegetation and erosion control plan.

ANTICIPATED PROJECT CEQA IMPACTS AND SIGNIFICANCE

Direct Impacts

The construction required to install a stormwater drainage pipe in Diegan coastal sage scrub habitats and the subsequent fill of the existing ephemeral drainage and would result in permanent and temporary impacts to non-wetland waters of the U.S. and Diegan coastal sage scrub habitats.

Jurisdictional Wetlands and Waterways Direct Impacts

The filling of existing upstream detention basins and headwalls, and the subsequent replacement with below-grade drainage pipe would cause unavoidable direct and significant impacts to jurisdictional non-wetland waters of the U.S./Streambed. Jurisdictional areas located downstream of the proposed energy dissipater would be permanently impacted during the installation of natural rock that is required to stabilize the current highly erosive drainage. The restoration and stabilization of this downstream section of the drainage would re-establish the habitat functions of the impacted drainage, and would be further enhanced by the addition of riparian plantings installed within and around the restored flowline. A 25-month on-site habitat revegetation and erosion control plan would be implemented immediately following construction of the repair project. Additionally, off-site mitigation in the form of wetland creation would be required within the Peñasquitos watershed to mitigate for temporary and permanent impacts to jurisdictional resources. The anticipated wetland creation at a 1:1 ratio would occur within Public Utilities’ Rose Canyon Mitigation Project (see Appendix 5). Implementation of Mitigation Measures 1, 2, 3, and 6 would ensure that impacts remain at a level below significant to ensure conformance with CEQA, the City MSCP Subarea Plan, and City Biology Guidelines. Table 4 provides anticipated project impacts to jurisdictional wetland resources.

Table 4. Summary of Project Impacts to Jurisdictional Wetland Resources

Jurisdictional Wetland Resource	Temporary Jurisdictional Impact Acreage	Permanent Jurisdictional Impact Acreage
Non-wetland Waters of the U.S.	0.014	0.024

Upland Habitat Direct Impacts

Temporary and permanent direct impacts of 0.19 acre (8,059 ft²) of disturbed Diegan coastal sage scrub (Tier 2) may result from implementation of the Black Mountain Access Road Repair Project. These impacts are above the 0.10 acre threshold of significance that is stated in The City of San Diego's Significance Determination Guidelines under the California Environmental Quality Act and which do not require mitigation. Implementation of Mitigation Measures would reduce this impact to a level less than significant by requiring that all work be conducted outside of the California gnatcatcher breeding season to avoid impacts to potential nesting habitat, in addition to on-site restoration of all impacted habitats and assignment of off-site compensatory mitigation.

In addition to the on-site restoration of all impacts according to the 25-month on-site habitat revegetation and erosion control plan, off-site mitigation would occur as Public Utilities chooses to mitigate off-site as a matter of policy. Off-site mitigation in the form of upland restoration would be required to mitigate for impacts to disturbed Diegan coastal sage scrub. The anticipated upland restoration at a 1:1 ratio would occur within Public Utilities' Canyon View Mitigation Project located within Peñasquitos Canyon (see Appendix 5). Table 5 provides anticipated project impacts to upland vegetation communities. Please note that the Public Utilities Department typically mitigates for impacts off-site whether the impacts are classified as temporary or permanent as a matter of policy. In many cases off-site mitigation is necessary in case future utility work has to be conducted in areas already impacted.

Table 5. Summary of Project Impacts to Upland Vegetation Communities

Vegetation Community	Temporary Impact Acreage	Permanent Impact Acreage	Total Impact Acreage
Disturbed Diegan Coastal Sage Scrub (Tier 2)	0.12	0.07	0.19
Non-native Vegetation (Tier IV)	0.02	---	0.02
Disturbed Land (Tier IV)	0.01	---	0.01
Total:	0.15	0.07	0.22

While a project schedule has not been confirmed, implementation of the project is not expected to exceed 9 weeks in order to occur mostly between the end of bird nesting season (September 15) and the beginning of the rainy season (approximately November 1). If construction is performed during this time, potential impacts due to precipitation, stormwater, and erosion are not expected to occur due to the decreased annual hydrological flow that is typically present during this time of year. Implementation of Mitigation Measures 2 and 7 recommends that the construction duration be within

this time period to prevent impacts resulting from stormflow and erosion, in addition to the avoidance of the avian breeding season.

Wildlife Corridor Direct Impacts

Use of the site as a wildlife corridor may be temporarily impacted during the construction period within the drainage bottom and along the adjacent streambanks where the project construction activities are proposed. The placement of the proposed rock within the drainage would not obstruct or substantially constrict movement along the drainage during or after construction; however, temporary impacts to wildlife movement within any existing wildlife corridor may include elevated noise levels and/or fugitive dust during construction activities.

The potential temporary interference with the movement of wildlife species is considered a significant impact and would require mitigation to reduce the impact to below a level of significance. Implementation of Mitigation Measures 2, 4, 5, and 6 will reduce this impact to a level less than significant.

Special Status Species Direct Impacts

One sensitive bird species, coastal California gnatcatcher, occurs in the Diegan sage scrub habitat located within the project study area and vicinity. Potential direct impacts to an active nest of this species during the breeding season would be considered significant. In addition, elevated noise levels within occupied coastal California gnatcatcher habitat during the breeding season would be significant. Project Mitigation Measures 2, 3, 5, 7, and 8 would reduce these biological significant impacts to a level below significance and ensure conformance with CEQA, the City MSCP Subarea Plan, and City Biology Guidelines.

The southern mule deer may utilize the riparian corridor for wildlife movement including areas in proximity to the proposed work area. It is anticipated that this species may be temporarily impacted by human presence, elevated noise, and fugitive dust within a wildlife corridor during the construction activities. Project Mitigation Measures 2, 4, 5, and 6 would reduce this biological significant impact to a level below significance and ensure conformance with CEQA, the City MSCP Subarea Plan, and City Biology Guidelines.

Although western mastiff bat and Yuma myotis may forage within the project area, they are not expected to roost on-site including the proposed work area and therefore, no significant impacts to these species are anticipated. The orange-throated whiptail may occur in the patches of Diegan coastal sage scrub habitat and the unvegetated drainage located within the proposed work area; however, the proposed linear impacts resulting from the project would not substantially reduce the habitat, number, and/or restrict the range of these species to a level affecting the stability of the populations in the region. Therefore, no impacts to this species are anticipated as a result of the proposed project. Project Mitigation Measures 2, 4, 5, and 6 would reduce this biological significant impact to a level below significance and ensure conformance with CEQA, the City MSCP Subarea Plan, and City Biology Guidelines.

Indirect Impacts

CEQA guidelines §15358 define an “indirect impact or secondary effect” as “effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably

foreseeable” that can produce a temporary or permanent biologically significant, “physical change” in the environment.

Potential significant indirect impacts resulting from the project may include increased noise, dust, interruption of wildlife movement, and possible sedimentation into downstream wetland environments. Project Mitigation Measures 2-6 would reduce this biological significant impact to a level below significance and ensure conformance with CEQA, the City MSCP Subarea Plan, and City Biology Guidelines.

MSCP Consistency

The proposed project is located mostly within the MHPA. As specified in the MSCP Subarea Plan, existing utility lines, including maintenance access paths and drainage improvements in the case of the proposed project, are considered a compatible use within the MHPA. The City requires that utilities within the Preserve comply with the Subarea Plan MHPA Design Guidelines for Road and Utilities (City of San Diego 1997). The proposed use of natively sourced rock (Santiago Peak Volcanics) to line the downstream non-vegetated channel would preserve the wetland functions and values of the existing drainage, while further decreasing the flow velocity and the subsequent erosion that has occurred previously in this portion of the MHPA. An alternative design that piped flows below-grade to Black Mountain Road was analyzed but abandoned, due to the total loss of existing wetland functions and values that would occur. Therefore, the currently proposed project is consistent with the City MSCP Subarea Plan, including the Design Guidelines. Furthermore, implementation of the project mitigation measures below would ensure consistency with the City’s MSCP Subarea Plan.

MSCP/MHPA Land Use Directives

The project is predominantly located within the MHPA and would comply with the MSCP/MHPA land use directives. As it is currently designed, the project would not result in the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade lands within the MHPA. The temporary duration of the project is not expected to include the installation of artificial lighting, create noise within avian nesting season, permanently impede wildlife movement, or introduce invasive species during project construction. Implementation of the MSCP general management directives would ensure MSCP consistency and the long-term viability of wildlife and sensitive habitats under the proposed project.

Cumulative Impacts

CEQA guidelines §15355 define cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts”. The MSCP was designed to compensate for the loss of biological resources throughout the program’s region; therefore, projects that conform to the MSCP would not result in a cumulatively considerable impact for those biological resources adequately covered by the program. The aforementioned direct and indirect impacts resulting from the proposed project would therefore not be cumulatively considerable if the project mitigation measures are implemented to ensure conformance to the MSCP Subarea Plan and Biology Guidelines.

PROJECT IMPACTS UNDER THE MIGRATORY BIRD TREATY ACT (MBTA)/CDFG CODE

Under the MBTA, it is unlawful, except as permitted by the USFWS, to “take, possess, transport, sell, purchase, barter, import, or export all species of birds protected by the MBTA, as well as their feathers, parts, nests, or eggs. Take means to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect (50 CFR 10.12).” It is important to note that “take” as defined under the federal MBTA is not synonymous with “take” as defined under the federal ESA. The MBTA definition of “take” lacks a “harm and harassment” clause comparable to “take” under the ESA, thus, the MBTA authority does not extend to activities beyond the nests, eggs, feathers, or specific bird parts (i.e., activities or habitat modification in the vicinity of nesting birds that do not result in “take” as defined under the MBTA are not prohibited).

Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit the “take, possession, or destruction of bird nests or eggs.” Section 3503 states: “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 3513 states: “It 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 Migratory Bird Treaty Act.”

The project site has the potential to be utilized by regionally common migratory birds and raptors that are not designated as special status species under CEQA, but are protected under the federal Migratory Bird Treaty Act (MBTA) and CDFG Code Sections 3503 and 3513. Although no active avian nests were observed during our recent biological survey, avian species could potentially nest in the on-site habitats and the proposed project could result in impacts (tree trimming activities only) to active bird and/or raptor nests under the federal MBTA and/or CDFG Code Sections 3503 and 3513. Project Mitigation Measures 2, 3, 5, and 8 would reduce this biological significant impact to a level below significance and ensure conformance with CEQA, the City MSCP Subarea Plan, and City Biology Guidelines

PERMITTING REQUIREMENTS

This biological resource report will be used in support of efforts to obtain necessary permits required to conduct work for the Black Mountain Access Road Repair Project. It is anticipated that the installation of additional rock, fill, and stormwater dissipater within the existing jurisdictional drainage would require a Clean Water Act Section 404 permit from ACOE, Clean Water Act Section 401 Water Quality Certification from RWQCB, and a 1602 Streambed Alteration Agreement from CDFW.

MITIGATION AND MONITORING REQUIREMENTS

According to the City of San Diego’s Significance Determination Guidelines under the California Environmental Quality Act, the direct, impacts that may occur to 0.19-acre of disturbed Diegan coastal sage scrub habitat are significant and would require mitigation because they are over 0.10-acre in size. No mitigation is required for Tier IV habitats (non-native vegetation, disturbed land). Mitigation for all sensitive upland impacts would occur in the form of upland restoration at a 1:1 ratio within Public Utilities’ Canyon View Mitigation Project located within Peñasquitos Canyon (see Appendix 5).

Impacts to 0.03-acre of non-wetland waters of the U.S./Streambed resulting from the fill and removal of existing headwalls and detention basins that would be replaced with below-grade drainage piping would require 0.03-acre of mitigation. Off-site mitigation in the form of wetland creation would occur within the Peñasquitos watershed to mitigate for temporary and permanent impacts to jurisdictional resources. The anticipated wetland creation at a 1:1 ratio would occur within Public Utilities' Rose Canyon Mitigation Project (see Appendix 5).

REVEGETATION MEASURES

Mitigation for the project is completely satisfied off site, as described above. Habitat revegetation will be implemented post construction for erosion control and to provide habitat functions and values equivalent to what existed prior to temporary impacts. Erosion control devices such as straw wattles and hydroseed will be installed following construction. Native seed and container plants appropriate for the location and habitat will be installed to restore native habitats to previous functions.

A Conceptual Revegetation Plan has been provided with this report (Figure 4). A Final Revegetation Plan will be established in conjunction with the post-impact report, and will include a site-specific native seed mix and container plants appropriate for the surrounding habitat (including the species listed in the Conceptual Plan). Distribution of plants will be natural and incorporate clumping tendencies of natural vegetation communities. The Final Revegetation Plan will also outline maintenance and monitoring requirements and success standards:

- Within 25 months, native plant coverage shall be equal to the native species present in the adjacent area, or 30%, whichever is greater. Restored areas shall be evaluated visually by a qualified biologist.
- Within 25 months, perennial weeds will be present in the impact area at less than 1%, and annual weeds will be present in the impact area at less than 10%.

Maintenance of the revegetation areas will include contingency measures (e.g. additional planting to meet coverage criteria) and will ensure the establishment of native plants, and maintain the sites in a weed and trash-free condition.

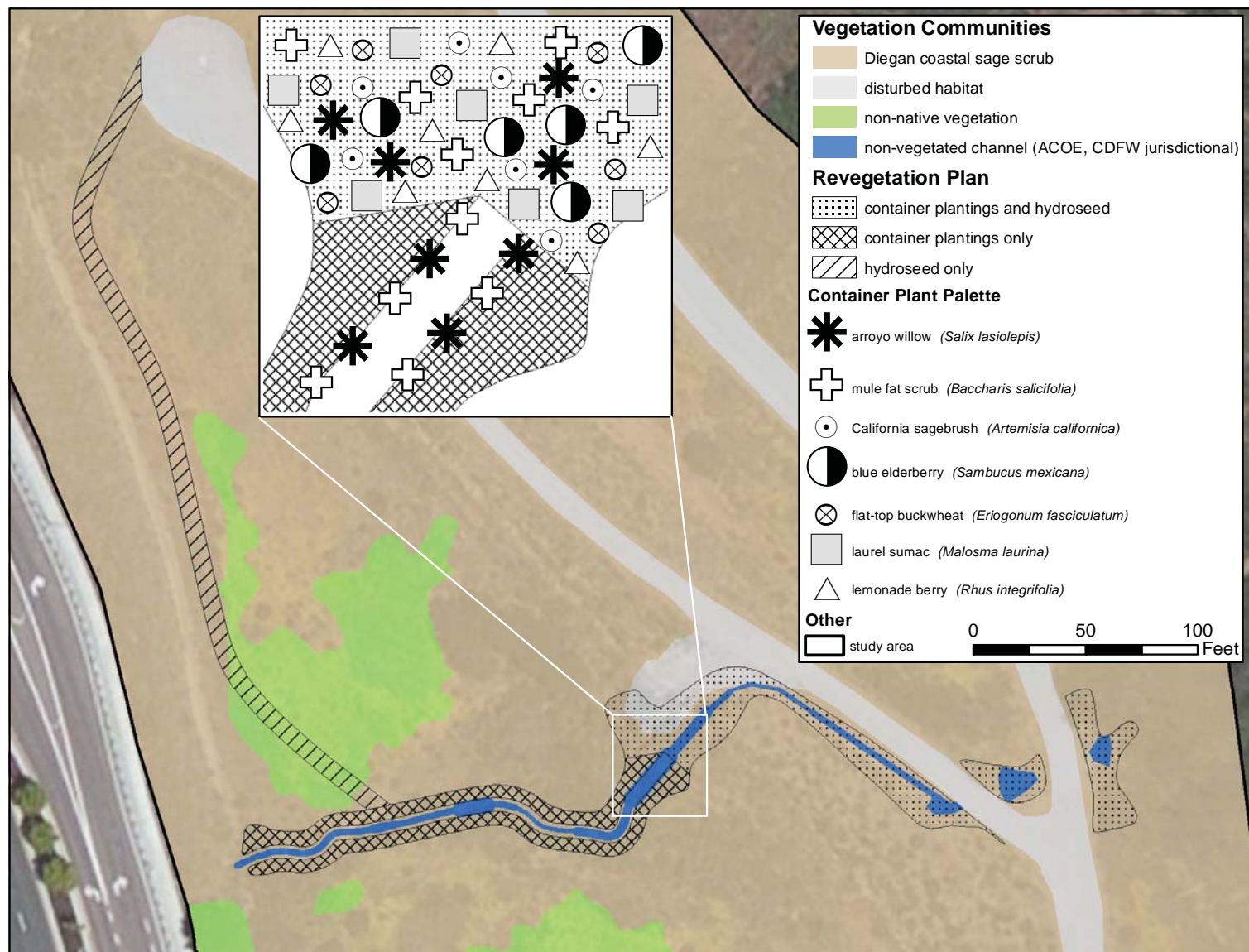
MITIGATION MEASURES

Implementation of the following project mitigation measures would reduce biological impacts to a level below significance under CEQA, ensure conformance to the City MSCP Subarea Plan and City of San Diego Biology Guidelines, as well as compliance with the federal MBTA and CDFG Code Sections 3503 and 3513.

1. Qualitative post-construction biological monitoring should be performed by a qualified biologist to monitor the recovery of vegetation that was temporarily impacted during the repair effort. A post-construction restoration plan must be implemented immediately following construction to restore all impacted wetland and upland vegetation communities to better than previous conditions. Upland areas would be restored via the installation of a non-irrigated hydroseed mix. The downstream rock-lined drainage would be planted with cuttings of mule fat (*Baccharis salicifolia*) and willow species (*Salix* spp.) in areas that are conducive for the species' growth. Additionally, these and other suitable native species

would be planted along the periphery of the dissipater to provide enhanced habitat diversity and erosion control for the completed project. Details and specifications of the restoration plan would be included as part of the final construction documents for the project and/or a post-impact report. Remedial restoration and maintenance recommendations should be submitted to Public Utilities if natural recovery of native vegetation fails to occur.

2. The construction duration for the project should not exceed 9 weeks to limit work from occurring between the avian breeding season and potential rainy season (Sept. 15-Nov. 1).
3. A biological monitor should be on-site during the work to ensure avoidance and/or minimization of impacts to sensitive habitat, drainages, and/or other sensitive resources that occur in the vicinity of the work area.
4. Project construction activities should be restricted to daylight hours.
5. Impacts from elevated noise levels to sensitive biological resources including wildlife corridors, listed species occupied habitat, and/or MHPA lands will be avoided and/or minimized through appropriate measures including but not limited to the avoidance of breeding seasons or implementing noise attenuation measures.
6. Impacts from fugitive dust will be avoided and minimized through watering and other appropriate measures, as applicable.
7. To avoid potential significant impacts to coastal California gnatcatcher located within the MHPA, no brushing, clearing, and/or grading shall occur during the breeding season for gnatcatcher, March 1 to August 15 (as provided in the MSCP and Biology Guidelines). If construction activities that do not include removal of habitat are conducted during the breeding season, then appropriate avoidance measures shall be implemented such as the prevention of noise levels from exceeding an hourly average of 60 dBA at the edge of suitable/occupied habitat on-site.
8. To avoid potential significant impacts to an active nest of a migratory bird, no brushing, clearing, and/or grading would be allowed within potential nesting habitat proposed to be impacted during the migratory bird breeding season (generally between February 1 and September 15) to ensure compliance with the MBTA. If avoidance of the migratory bird breeding season is not feasible, then it is recommended that a pre-construction nesting bird survey be conducted to determine if nesting migratory birds are present and what additional avoidance measures would apply depending on the bird species potentially affected.



- Following construction, final impact areas will be measured using a hand-held GPS device with sub-meter accuracy, and a final revegetation plan will be included with the post-impact report.
- Container plant list and seed mixes will be finalized in the final Revegetation Plan. Any proposed substituted species would be at the discretion of the project biologist or City representative.
- Revegetation will occur in Diegan Coastal Sage Scrub and non-native vegetation that was temporarily impacted as a result of the project.
- No container plants or seed mix will be installed within the flowline of the rock-lined drainage.
- Existing permanent access paths located in disturbed areas will not be planted in order to continue to function for recreational and maintenance uses.
- All seed and container stock shall originate from within a 25 mile radius of the coast & project site, or as determined by the project biologist.
- Weeding and/or herbicide application shall be done regularly by the maintenance contractor. Weeding shall be performed at a minimum biweekly until the end of the 120-day P.E.P.
- Maintenance contractor shall control weeds as identified by the project biologist such that no weed cover exceeds 5% of the project site, before they exceed 12" in height, and before they set seed.
- Revegetation area will be maintained for 25 months after the successful completion of a 120-day plant establishment period.
- All species specified are drought tolerant and do not require regular watering; however, supplemental watering by hand or truck may be needed for initial establishment.

CONTAINER PLANT MATERIALS

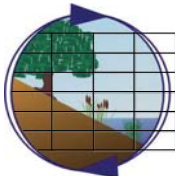
Species	Common Name	Unit Size	Density (foot centers)
<i>Artemisia californica</i>	California sagebrush	1-gallon	3
<i>Baccharis salicifolia</i>	mule fat	1-gallon/cutting	6
<i>Eriogonum fasciculatum</i>	flat-top buckwheat	1-gallon	3
<i>Malosma laurina</i>	laurel sumac	1-gallon	12
<i>Rhus integrifolia</i>	lemonadeberry	1-gallon	9
<i>Salix lasiolepis</i>	arroyo willow	1-gallon/cutting	6
<i>Sambucus mexicana</i>	blue elderberry	1-gallon	12

HYDROSEED SEED PALETTE

Species	Common Name	Density (lbs./acre)	Purity /Germination
<i>Acmispon glaber</i> var. <i>glaber</i>	coastal deerweed	4	90/60
<i>Artemisia californica</i>	California sagebrush	2	15/50
<i>Baccharis sarothroides</i>	broom baccharis	2	2/40
<i>Deinandra fasciculata</i>	tarweed	2	10/25
<i>Encelia californica</i>	California encelia	2	40/60
<i>Eriogonum fasciculatum</i>	flat-top buckwheat	6	10/65
<i>Salvia apiana</i>	white sage	2	70/50
<i>Salvia mellifera</i>	black sage	2	70/50
Total:		22 Lbs./Acre	

HYDROSEED SLURRY COMPONENTS

Product	Lbs./Acre
Hydropost Compost	2,000
Humate Tri-C Organic Soil Conditioner	500
SoilBuster Pelletized Calcium Sulfate Gypsum Alternative	1,200
Cellulose Fiber Mulch	2,000
Super Tack	150



Conceptual Revegetation Plan

Black Mountain Access Road Repair Project

Figure 4

REFERENCES

- Air Photo USA (aka Digital Globe). 2010. Aerial Imagery [Internet]. Available from: <http://www.digitalglobe.com/>.
- American Ornithologists' Union, et al. 1998. Check-list of North American Birds, 7th ed. American Ornithologists' Union, Washington D.C.
- American Ornithologists' Union, et al. 2010. Fifty-first Supplement to the American Ornithologists' Union *Check-list of North American Birds* [Internet]. Auk 127(3):726-744. Available from: <http://www.aou.org/>.
- Bowman, R. H., R. E. Bishop, R. W. Griffin, and M. L. Jones. 1973. Soil survey, San Diego area, California. U.S. Department of Agriculture.
- Calflora. 2011. Information on Wild California Plants for Conservation, Education, and Appreciation. Available at: <http://www.calflora.org/>.
- California Department of Fish and Game, Natural Diversity Database. 2011. RareFind Version 3.0.3. 2010 data.
- California Native Plant Society (CNPS). 2011. Inventory of Rare and Endangered Plants (online edition, v6-05d). California Native Plant Society. Accessed online: <http://www.cnps.org/inventory>.
- City of San Diego. 2011. El Capitan Reservoir. Available at: <http://www.sandiego.gov/water/recreation/elcap.shtml>.
- City of San Diego. 2002. The City of San Diego Managers Report; Report No. 02-180. Available online: <http://docs.sandiego.gov/reportstocouncil/2002/02-180.pdf>.
- City of San Diego. 1997. City of San Diego Multiple Species Conservation Program; City of San Diego MSCP Subarea Plan. City of San Diego Community and Economic Development Department. San Diego, California.
- City of San Diego. Adopted 1999, Amended 2000, 2001, 2012. San Diego Municipal Code: Land Development Code, Biology Guidelines. San Diego, California. 40 pp.
- County of San Diego. 1997. South County MSCP Subarea Plan. 4 Sections + appendices. Prepared in conjunction with the U.S. Fish and Wildlife Service and California Department of Fish and Game. Available from: http://dplu-mscp.sdcounty.ca.gov//4_sub_ar_pl/4_sbarpl.html.
- Crother BI (ed.). 2000 (2001). Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding. SSAR Herpetological Circular 29.iii +82 pp.
- Crother BI, Boundy J, Campbell JA, De Quieroz K, Frost D, Green DM, Highton R, Iverson JB, McDiarmid RW, Meylan PA, Reeder TW, Seidel ME, Sites JW Jr., Tilley SG, Wake DB.

2003. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico: Update. *Herpetological Review* 2003, 34(3), 196-203.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station. Vicksburg, Mississippi. 117 pp.
- Hall ER. 1981. The mammals of North America. 2nd Edition. John Wiley & Sons. New York, New York. Two volumes. 1,181 pp.
- Holland, R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, The Resources Agency, Department of Fish and Game. Sacramento, California. 156 pp.
- Klein MW, San Diego Natural History Museum. 2002. Butterflies of San Diego County [Internet]. Available from: <http://www.sdnhm.org/research/entomology/sdbutterflies.html>.
- Munsell® Color. 2000. Munsell® Soil Color Charts. Revised Edition. Munsell® Color, gretagmacbeth. New Windsor, New York.
- Oberbauer, T. 1996. Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions. San Diego Association of Governments. San Diego, California. 7 pp.
- Oberbauer T, Kelly M, Buegge J. 2008, Revised 1996 and 2006. Draft Vegetation Communities of San Diego County [Internet]. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California", Holland RF, PhD., 1986. Available from: http://www.sdcountry.ca.gov/dplu/docs/Veg_Comm_SDCountry_2008.pdf.
- Rebman JP, Simpson MG. 2006. Checklist of the Vascular Plants of San Diego County, 4th Edition [Internet]. ISBN 0-918969-05-0. Available from: <http://www.sdnhm.org/research/botany/sdplants/index.html>.
- Reiser, C.H. 1994. Rare Plants of San Diego County. Available at: <http://sandiego.sierraclub.org/rareplants/171.html>.
- San Diego Geographic Information Source (SanGIS). 2007. Ecology, Vegetation Download (zip) updated 4/9/2007 [Internet]. Available from: <http://www.sangis.org/>.
- Strand, R. G. 1962. Geologic map of California, San Diego-El Centro Sheet (fourth printing 1993). State of California, The Resources Agency, Department of Conservation, Division of Mines and Geology, Sacramento, California.
- U.S. Army Corps of Engineers (USACOE). 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, ed. JS Wakeley, RW Lichvar, and CV Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

- _____. 2013. Arid West 2013 Regional Wetland Plant List. (Lichvar, R.W. 2013. The National Wetland Plant List: 2013 wetland ratings. Phytoneuron 2013-49: 1-241). Available from: http://rsgisias.crrel.usace.army.mil/nwpl_static/data/docs/lists_2013/Regions/pdf/reg_AW_2013v1.pdf
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2006. Field Indicators of Hydric Soils in the United States, Version 6.0 [Internet]. GW Hurt and LM Vasilas (eds.). Fort Worth, Texas. USDA, NRCS in cooperation with the National Technical Committee for Hydric Soils. Available from: <http://soils.usda.gov/use/hydric/>.
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2007. Soil Survey Geographic (SSURGO) database for San Diego County, California [Internet]. Natural Resources Conservation Service (NRCS). Available from: <http://SoilDataMart.nrcs.usda.gov/>.
- U.S. Fish and Wildlife Service. (USFWS). 2010. Carlsbad Fish and Wildlife Office, GIS Division Species Occurrence Data Download (zip) 6/30/2005 updated 9/2010 [Internet]. Available from: <http://www.fws.gov/carlsbad/giswebpage/giswebpage>.
- U.S. Fish and Wildlife Service. (USFWS). 2011. National Wetlands Inventory Wetlands Mapper. Available at: <http://www.fws.gov/wetlands/Data/Mapper.html>.
- U.S. Geological Survey (USGS). 2005. Preliminary Integrated Geological Map Databases for the United States; Western States: California, Nevada, Arizona, Washington, Oregon, Idaho, and Utah. Version 1.2. GIS Data Download California (zip) [Internet]. Available from: <http://pubs.usgs.gov/of/2005/1305/#CA>.
- Wilson DE, Reeder DM (eds). 2005. Mammal Species of the World. Johns Hopkins University Press. 2,142 pp. Available from Johns Hopkins University Press at: 1-800-537-5487 or (410) 516-6900, or <http://www.press.jhu.edu/> or <http://nrmnhgoph.si.edu/msw/>.

APPENDIX 1: STUDY AREA PHOTOS



Photo Point 1. Upstream headwall and 24" pipe culvert, east side of Black Mountain access road.



Photo Point 2. Detention basin on west side of Black Mountain access road.



Photo Point 3. Avulsion in channel adjacent to west side of Black Mountain access road.



Photo Point 4. Headcut in channel adjacent to west side of Black Mountain access road.



Photo Point 5. Wetland delineation data point 1A in deeply incised and eroded channel. Channel was determined to be a non-wetland water of the U.S.



Photo Point 6. Wetland delineation data point 1B in coastal sage scrub upland habitat adjacent to eroded channel.



Photo Point 7. Extensive erosion at mouth of channel.



Photo Point 8. Wetland delineation data point 2 at previously proposed discharge area for new pipe. No wetlands or other waters were found in this area. Habitat is coastal sage scrub.

APPENDIX 2: WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Black Mountain City/County: San Diego / San Diego Sampling Date: 7/16/12
 Applicant/Owner: City of San Diego State: CA Sampling Point: 1A
 Investigator(s): Thompson, Behle Section, Township, Range: S6, T14S, R2W
 Landform (hillslope, terrace, etc.) Ditch Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR): LRR-C Lat: 32.98427 Long: -117.13015 Datum: WGS84
 Soil Map Unit Name: San Miguel Exchequer rocky silt loams, 9-70% slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Eroded channel. Width 3 feet. Non-wetland water of the U.S.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. -				
2.				
3.				
4.				
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')				
1. -				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = <u>N/A</u>
2.				
3.				
4.				
5.				
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 3')				
1. -				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Test is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2.				
3.				
4.				
5.				
6.				
7.				
8.				
	<u>0</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30')				
1. -				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2.				
		= Total Cover		
% Bare Ground in Herb Stratum <u>100</u> % Cover of Biotic Crust <u>0</u>				
Remarks: No vegetation in eroded channel.				

SOIL

Sampling Point: 1A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/4	100	None				Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 1 cm Muck (A9) (LRR C)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 2 cm Muck (A10) (LRR B)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Stratified Layers (A5) (LRR C)			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
Restrictive Layer (if present):								
Type: _____								
Depth (inches): <u> 4 </u>						Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Channel contains soils recently eroded from adjacent uplands.								

HYDROLOGY

Wetland Hydrology Indicators:			Primary Indicators (minimum of one required: check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Water-Stained Leaves (B9)				
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)			Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
Remarks:						
Sediment from recent erosion.						

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Black Mountain City/County: San Diego / San Diego Sampling Date: 7/16/12
 Applicant/Owner: City of San Diego State: CA Sampling Point: 1B
 Investigator(s): Thompson, Behle Section, Township, Range: S6, T14S, R2W
 Landform (hillslope, terrace, etc.) Terrace Local relief (concave, convex, none): None Slope (%): 0
 Subregion (LRR): LRR-C Lat: 32.98426 Long: -117.13015 Datum: WGS84
 Soil Map Unit Name: San Miguel Exchequer rocky silt loams, 9-70% slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Upland data point for eroded channel.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. <u>-</u>				
2. <u></u>				
3. <u></u>				
4. <u></u>				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 30')				
1. <u>Baccharis sarothroides</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>50</u> x 4 = <u>200</u> UPL species <u>125</u> x 5 = <u>625</u> Column Totals: <u>175</u> (A) <u>825</u> (B) Prevalence Index = B/A = <u>4.7</u>
2. <u>Eriogonum fasciculatum</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>	
3. <u>Salvia apiana</u>	<u>5</u>	<u>No</u>	<u>UPL</u>	
4. <u>Salvia mellifera</u>	<u>5</u>	<u>No</u>	<u>UPL</u>	
5. <u>Helianthemum scoparium</u>	<u>T</u>	<u>No</u>	<u>UPL</u>	
<u>90</u> = Total Cover				
Herb Stratum (Plot size: 5')				
1. <u>Brachypodium distachyon</u>	<u>70</u>	<u>Yes</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Test is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Cynara cardunculus</u>	<u>8</u>	<u>No</u>	<u>UPL</u>	
3. <u>Bromus diandrus</u>	<u>5</u>	<u>No</u>	<u>UPL</u>	
4. <u>Heterotheca grandiflora</u>	<u>2</u>	<u>No</u>	<u>UPL</u>	
5. <u></u>				
6. <u></u>				
7. <u></u>				
8. <u></u>				
<u>85</u> = Total Cover				
Woody Vine Stratum (Plot size: 30')				
1. <u>-</u>				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. <u></u>				
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>15</u>		% Cover of Biotic Crust <u>0</u>		
Remarks:				

SOIL

Sampling Point: 1B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/4	100					Sandy loam	Contains many 3-5 inch rocks.

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:
Rocky, dry, hard to dig.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required: check all that apply)			Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)			

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Black Mountain City/County: San Diego / San Diego Sampling Date: 7/16/12
 Applicant/Owner: City of San Diego State: CA Sampling Point: 2
 Investigator(s): Thompson, Behle Section, Township, Range: S^, T14S, R2W
 Landform (hillslope, terrace, etc.) Hillslope Local relief (concave, convex, none): None Slope (%): 4
 Subregion (LRR): LRR-C Lat: 32.98426 Long: -117.13015 Datum: WGS84
 Soil Map Unit Name: San Miguel Exchequer rocky silt loams, 9-70% slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Proposed point of discharge for water pipe.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25</u> (A/B)
1. <u>Nicotiana glauca</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	<u>20</u>	<u>= Total Cover</u>		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>30</u> x 4 = <u>120</u> UPL species <u>60</u> x 5 = <u>300</u> Column Totals: <u>110</u> (A) <u>480</u> (B) Prevalence Index = B/A = <u>4.4</u>
Sapling/Shrub Stratum (Plot size: 30')				
1. <u>Baccharis sarothroides</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Salvia mellifera</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>	
3. <u>Artemisia californica</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>	
4. <u>Encelia californica</u>	<u>10</u>	<u>No</u>	<u>UPL</u>	
5. _____	<u>90</u>	<u>= Total Cover</u>		
Herb Stratum (Plot size: 5')				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Test is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>-</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	<u>0</u>	<u>= Total Cover</u>		
Woody Vine Stratum (Plot size: 30')				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. <u>-</u>	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>100</u>		% Cover of Biotic Crust <u>0</u>		
Remarks:				

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 4/4	100					Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problematic.
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Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required: check all that apply)			Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)			Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

APPENDIX 3. FLORA SPECIES OBSERVED ON-SITE

Habitat Types:

S	=	Diegan Coastal Sage Scrub
N	=	Non-native Vegetation
U	=	Urban/Developed

* = Denotes non-native flora species.

Scientific Name	Common Name	Habitat
DICOTYLEDONS		
Anacardiaceae - Sumac Family		
<i>Malosma laurina</i> (Nutt.) Abrams	laurel sumac	S
<i>Toxicodendron diversilobum</i> (Torrey & A. Gray) E. Greene	western poison oak	S
	X	
Apiaceae - Carrot Family		
* <i>Foeniculum vulgare</i> Miller	fennel	N, U
Asteraceae - Sunflower Family		
<i>Artemisia californica</i> Less.	California sagebrush	S
<i>Baccharis pilularis</i> DC.	coyote brush, chaparral broom	S
<i>Baccharis salicifolia</i> (Ruíz Lopez & Pavón) Pers.	mule fat, seep-willow	S
<i>Baccharis sarothroides</i> A. Gray	broom baccharis	S
* <i>Centaurea melitensis</i> L.	tocalote	N, U
* <i>Chrysanthemum coronarium</i> L.	garland, crown daisy	N, U
Brassicaceae - Mustard Family		
* <i>Hirschfeldia incana</i> (L.)Lagr.-Fossat	short-pod mustard	N, U
Polygonaceae - Buckwheat Family		
<i>Eriogonum fasciculatum</i> Benth. var. <i>fasciculatum</i>	coast California buckwheat	S,
MONOCOTYLEDONS		
Poaceae - Grass Family		
* <i>Bromus diandrus</i> Roth	ripgut grass	N, U
* <i>Bromus madritensis</i> L. ssp. <i>rubens</i> (L.) Husnot	red brome, foxtail chess	N, U

APPENDIX 4. FAUNA SPECIES OBSERVED OR DETECTED ON-SITE***Habitat Types:***

S	=	Diegan Coastal Sage Scrub
G	=	Non-native Grassland
U	=	Urban/Developed
FO	=	fly over

* = denotes introduced species

Abundance Codes (birds only):

- A = Abundant: Almost always encountered in moderate to large numbers in suitable habitat and the indicated season.
- C = Common: Usually encountered in proper habitat at the given season.
- U = Uncommon: Infrequently detected in suitable habitat. May occur in small numbers or only locally in the given season.
- R = Rare: Applies to species that are found in very low numbers.

“Numbers” indicate the number of individuals observed during the field survey work.

Status Codes (birds only):

- M = Migrant: Uses the site for brief periods of time, primarily during the spring and fall months.
- R = Year-round resident: Probable breeder on-site or in the vicinity.
- S = Spring/summer resident: Probable breeder on-site or in the vicinity unless combined with transient status.
- T = Transient: Uses site irregularly in summer but unlikely to breed. Not a true migrant and actual status often poorly known.
- W = Winter visitor: Does not breed locally.
- V = Casual vagrant: Not expected; out of normal geographic or seasonal range and by definition rare

Common Name	Scientific Name	Habitat	Abundance	Status
BIRDS				
Corvidae (Jays, Magpies, and Crows)				
western scrub jay	<i>Aphelocoma californica</i>	S	A	R
Mimidae (Thrashers, Mockingbirds, Tremblers, and New World Catbirds)				
Northern mockingbird	<i>Mimus polyglottos</i>	FO	A	R
Fringilidae (Finches)				
house finch	<i>Carpodacus mexicanus</i>	S	A	R
Poliophtilidae (Gnatcatchers)				
coastal California gnatcatcher	<i>Poliophtila californica</i>	S	R	R

APPENDIX 5: BLACK MOUNTAIN ACCESS ROAD REPAIR PROJECT
MITIGATION ASSIGNMENT



City of San Diego Public Utilities Department Impact Project Mitigation Report

Black Mtn Access Rd Repair

Canyon View (Penasquitos Upland)

Mitigation Location	Mitigation Type	Mitigation Habitat Type	Acres	Description
In-canyon	Upland Restoratio	DCSS	0.19	
Total Mitigation within this mitigation project				0.19 acres

Rose Canyon Mitigation Project

Mitigation Location	Mitigation Type	Mitigation Habitat Type	Acres	Description
Off-site in watershed	Wetland Creation	Streambed	0.038	
Total Mitigation within this mitigation project				0.038 acres

Total Mitigation Acres for Project:

0.228 acres

APPENDIX 6. OCCURRENCE OR POTENTIAL OF SPECIAL STATUS SPECIES ON THE PROJECT SITE

Key to abbreviations:

Federal Endangered Species Act (ESA)

FE = Federally-listed as Endangered

FT = Federally-listed as Threatened

FPE = Federally proposed for listing as Endangered

FPT = Federally proposed for listing as Threatened

FPD = Federally proposed for delisting

FC = Federal candidate species

SC = Species of concern

Delisted species are monitored for 5 years

California Endangered Species Act (CESA)

SE = State-listed as Endangered

ST = State-listed as Threatened

SCE = State candidate for listing as Endangered

SCT = State candidate for listing as Threatened

SCD = State candidate for de-listing

SR = California Rare Species

California Natural Diversity Database (CNDDB)

SP = Special Plant

SA = Special Animal

California Department of Fish and Game (DFG)

SSC = Species of Special Concern

FP = California fully protected species

WL = Watch List

U.S. Forest Service (USFS)

S = Sensitive

California Rare Plant Rank (CRPR)

List 1A = Plants presumed extinct in California

List 1B = Plants rare, threatened, or endangered in California and elsewhere

List 2 = Plants rare, threatened, or endangered in California, but more common elsewhere

List 3 = Plants about which more information is needed (a review list)

List 4 = Plants of limited distribution (a watch list)

Threat level

0.1-Seriously threatened in California (high degree/immediacy of threat)

0.2-Fairly threatened in California (moderate degree/immediacy of threat)

0.3-Not very threatened in California (low degree/immediacy of threats/ no current threats known)

Multiple Species/Habitat Conservation Program (MSCP)/(MHCP)

NE = Narrow Endemic

CS = Covered Species

CP = Critical Population

County of San Diego

Plant List A = Plants rare, threatened or endangered in California and elsewhere

Plant List B = Plants rare, threatened or endangered in California but more common elsewhere

Plant List C = Plants which may be quite rare, but need more information to determine their true rarity status

Plant List D = Plants of limited distribution and are uncommon, but not presently rare or endangered

Animal Group 1 = Animals rare, threatened or endangered in California and elsewhere

Animal Group 2 = Animals rare, threatened or endangered in California but more common elsewhere

<i>Scientific Name</i> Common Name	Sensitivity Codes and Status ^{1, 2}	Habitat Preferences/Requirements ³	Verified On-Site	Potential To Occur On-Site	Factual Basis For Determination of Occurrence Potential
PLANTS					
<i>Acanthomintha ilicifolia</i> San Diego thornmint	ESA: FT CESA: SE CNDDDB: SP CRPR 1B.1 MSCP: NE, CS Cnty of SD List: A MHCP: NE, CS	Native, annual herb that has a distinctive microhabitat, preferring grassy openings in chaparral or sage scrub on gabbroic substrate with friable or broken clay soils, including vernal pools; ranges in elevation from 10-960 meters (33-3,150 ft); blooming period April-June.	No	Not Expected	Friable clay soils associated with this species were not found on-site.
<i>Adolphia californica</i> California adolphia	CRPR 2.1 CNDDDB: SP Cnty of SD List: B	Native, short and spiny, deciduous shrub that is often intermixed with sage scrub, but occasionally occurs in peripheral chaparral habitats, particularly hillsides near creeks; usually associated with xeric locales where shrub canopy reaches 4-5' in height, often with San Miguel and Friant soils; blooming period December-May.	No	Not Expected	1991 CNDDDB occurrence located approximately 1 mile north of project study area, and 2001 occurrence located approximately 1 mile west of project study area. Species sought but not found.
<i>Ambrosia pumila</i> San Diego ambrosia	ESA: FE CNDDDB: SP CRPR 1B.1 MSCP: NE, CS Cnty of SD List: A MHCP: NE, CS	Native, perennial, rhizomatous herb that prefers creeks beds, seasonally dry drainages, and floodplains; usually a protective tree canopy is absent and it grows on the periphery of willow woodland; ranges in elevation from 20-450 m (66-1,476 ft.); blooming period April-October.	No	Not Expected	Population known from Penasquitos Creek, just east of Black Mountain Road. Species sought but not found.

<i>Artemisia palmeri</i> Palmer's sagewort	CRPR 4.2 CNDDDB: SP Cnty of SD List: D	Native, deciduous, shrub most often found along perennial creeks and drainages near the coast; grows within a shaded understory beneath riparian woodland; inland it may occur in mesic chaparral conditions; blooming period May-September.	No	Not Expected	Shrub species that was sought in suitable habitat but was not found.
<i>Asplenium vespertinum</i> western spleenwort	CNDDDB: SP CRPR 4.2 Cnty of SD List: D	Perennial herb that grows from rhizomes; prefers a rocky substrate in chaparral, cismontane woodland, and coastal scrub; elevation 180-1,000 meters (590-3,280 ft.); blooming period February-June.	No	Not Expected	Fern species that was sought in suitable habitat but was not found.
<i>Atriplex coulteri</i> Coulter's sagebrush	CNDDDB: SP CRPR 1B.2 Cnty of SD List: A	Perennial herb found in alkaline or clay soils on coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; elevation 3-460 meters (10-1,500 ft.); blooming period March-October.	No	Not Expected	Population known from near Community Road and State Route 56. Soils associated with this species were not found on-site.
<i>Atriplex pacifica</i> south coast saltscale	CNDDDB: SP CRPR 1B.2 Cnty of SD List: A	Annual herb usually found in Diegan sage scrub dominated by <i>Artemisia californica</i> but also in coastal bluff scrub and playas; elevation 0-140 meters (0-460 ft.); blooming period March-October.	No	Not Expected	Population known from Fairbanks Ranch. The survey was conducted during this species blooming period, however no plants were found.
<i>Atriplex serenana</i> var. <i>davidsonii</i> Davidson's saltscale	CNDDDB: SP CRPR 1B.2 Cnty of SD List: A	Annual herb found in alkaline soils of coastal bluff scrub and coastal scrub; elevation 10-200 meters (33-656 ft.); blooming period April-October.	No	Not Expected	Alkaline soils typical of this species were not observed on-site.

<i>Baccharis vanessae</i> Encinitas baccharis	ESA: FT CESA: SE CNDDDB: SP CRPR 1B.1 MSCP: NE, CS MHCP: NE, CS Cnty of SD List: A	Native, deciduous shrub that prefers mature but relatively low-growing chaparral; at inland locales may be associated with large granitic boulders; blooming period August-November.	No	Not Expected	Population known from Carmel Mountain near Interstate 5. Shrub species that would have been observed if present on-site.
<i>Bloomeria (=Muilla) clevelandii</i> San Diego goldenstar	CRPR 1B.1 CNDDDB: SP MSCP: CS MHCP: NE Cnty of SD List: A	Native, perennial, corm/bulbiferous herb that prefers valley grasslands, particularly near mima mound topography or in the vicinity of vernal pools, in clay soils with good shrink/swell potential; does not typically grow in the shade of woody perennials, but rather in somewhat open locales; blooming period April-May.	No	Not Expected	Clay soils associated with this species do not occur on-site.
<i>Calandrinia breweri</i> Brewer's calandrinia	CNDDDB: SP CRPR 4.2 Cnty of SD List: D	Native, annual herb typically reported from burns in chaparral and coastal sage scrub; blooming period March-June.	No	Low Potential	Population known from near Sorrento Valley Boulevard and Camino Santa Fe, just south of Penasquitos Canyon. May occur on-site but requires fire for germination.
<i>Brodiaea orcuttii</i> Orcutt's brodiaea	CNDDDB: SP CRPR 1B.1 MSCP: CS Cnty of SD List: A USFS List: Sensitive	Native, perennial, bulbiferous/corm sprouting herb that prefers vernal moist grasslands, mima mound topography, and the periphery of vernal pools, but will occasionally grow on streamside embankments, and has also been found in mesic grasslands and openings within chaparral, at elevations ranging from 30-1,692 meters (98-5,551 ft.); blooming period May-July.	No	Not Expected	The site lacks suitable habitat and/or vernal moist conditions to occur on-site.

<i>Convolvulus simulans</i> small-flowered bindweed/ small-flowered morning glory	CNDDDB: SP CRPR 4.2 Cnty of SD List: D	Native, small annual grows on friable clay soils which are typically devoid of shrubs, in openings in chaparral, sage scrub, and grasslands; blooming period March-July.	No	Not Expected	Clay soils associated with this species were not found on-site.
<i>Corethrogyne filaginifolia</i> var. <i>filaginifolia</i> (=var. <i>incana</i> ; var. <i>linifolia</i>) California sand aster	CNDDDB: SP MSCP: CS MHCP: NE, CS Cnty of SD List: A	Perennial herb found in chaparral, coastal bluff scrub, coastal mixed chaparral and coastal scrub habitat; elevation 3-115 meters 10-344 ft.); blooming period May-September.	No	Not Expected	The site is east and north of this species known range.
<i>Dichondra occidentalis</i> western dichondra	CNDDDB: SP CRPR 4.2 CNDDDB: SP Cnty of SD List: D	Native, small, cryptic perennial, rhizomatous herb that occurs in southern mixed chaparral, chamise chaparral, sage scrub, rocky outcrops in grasslands, and especially in recently exposed areas of post-burn habitat; often grows almost completely hidden at the base of leafy shrubs; ranges in elevation from 50-500 meters (164-1,641 ft); blooming period (January) March-July.	No	Low Potential	Cryptic perennial herb that was sought but not found on-site. May occur in low numbers beneath shrubs out side proposed impact area.
<i>Dudleya variegata</i> variegated dudleya	CNDDDB: SP CRPR 1B.2 MSCP: NE, CS MHCP: NE Cnty of SD List: A	Native, small, corm-like sprouting, succulent, perennial herb that occurs in openings in sage scrub and chaparral, isolated rocky substrates in open grasslands, as well as in vernal pools and mima mound topography; usually grows in small areas devoid of shrub cover, even though chamise, scrub oak, or sage scrub elements may occur nearby; blooming period May-June.	No	Low Potential	Two 1991 CNDDDB occurrences located approximately: 3,200 feet northwest and 1 mile west of project study area. Rocky soils indicative of this plants habitat were not found on-site. Project areas where potential impacts may occur have been previously disturbed during installation of the CWA aqueduct and development of Black Mountain Road, therefore the species is not expected to occur on-site.

<i>Ferocactus viridescens</i> coast barrel cactus	CNDDDB: SP CRPR 2.1 MSCP: CS MHCP: CS Cnty of SD List: B	Native succulent; optimal habitat for this cactus appears to be sage scrub hillsides; often at the crest of slopes and growing among cobbles; occasionally is found on the periphery of vernal pools and mima mound topography; blooming period May-June.	No	Not Expected	Perennial succulent species that was sought but not found on-site.
<i>Harpagonella palmeri</i> Palmer's grappling hook	CNDDDB: SP CRPR 4.2 Cnty of SD List: D	Native, inconspicuous annual, herb that typically occurs on clay vertisols with open grassy slopes in open sage scrub or chaparral, at elevations ranging from 20-955 meters (65-3,133 ft.); blooming period March-May.	No	Not Expected	Clay soils associated with this species were not found on-site.
<i>Hazardia orcuttii</i> Orcutt's hazardia	ESA: FC CESA: ST CNDDDB: SP CRPR 1B.1 MHCP: NE, CS Cnty of SD List: A	Perennial evergreen shrub often found in clay soils of maritime chaparral and coastal sage scrub habitat; elevation 85-85 meters (262-280 ft.); blooming period August-October.	No	Not Expected	The site is east of this species known range.
<i>Isocoma menziesii</i> var. <i>decumbens</i> clay-field goldenbush/ decumbent goldenbush	CNDDDB: SP CRPR 1B.2 Cnty of SD List: A	Perennial shrub found in sandy, often disturbed areas of chaparral and coastal sage scrub; elevation 10-135 meters (33-443 ft.); blooming period April-November.	No	Not Expected	Perennial shrub that was sought but not found on-site.
<i>Iva hayesiana</i> San Diego marsh elder	CNDDDB: SP CRPR 2.2 MHCP: CS Cnty of SD List: B	Perennial shrub that prefers creeks or intermittent streambeds, marshes, swamps, and playas; elevation 10-500 meters (33-1,640 ft.); blooming period April-October.	No	Not Expected	1997 CNDDDB occurrence located approximately 1 mile north of project study area.; Perennial shrub that was sought but not found on-site.

<i>Juncus acutus</i> ssp. <i>leopoldii</i> spiny rush/ southwestern spiny rush	CNDDDB: SP CRPR 4.2 Cnty of SD List: D	Perennial rhizomatous shrub found in coastal salt marsh at brackish locales, alkaline meadows and seeps, and riparian marshes; elevation 3-900 meters (10-2,950 ft.); blooming period May-June.	No	Not Expected	Perennial shrub that was sought but not found on-site.
<i>Lepidium virginicum</i> var. <i>menziesii</i> (=var. <i>robinsonii</i>) Robinson's peppergrass	CNDDDB: SP CRPR 1B.2 Cnty of SD List: A	Native, annual herb that grows in openings in chaparral and sage scrub at the foothill elevations, generally well away from the southern California coast; typically, sites are relatively dry, exposed locales, rather than beneath a shrub canopy or along a creek; blooming period January-July.	No	Low Potential	2001 CNDDDB occurrence located approximately 3,200 feet northwest of project study area. This species was sought during its blooming period but was not found on-site. May occur in low numbers outside the proposed impact area.
<i>Lycium californicum</i> California desert-thorn/ California box thorn	CNDDDB: SP CRPR 4.2 Cnty of SD List: D	Perennial shrub found in coastal bluff scrub and coastal sage scrub; elevation 5-150 meters (16-492 ft.); blooming period December-August.	No	Not Expected	Perennial shrub that was sought but not found on-site
<i>Microseris douglasii</i> ssp. <i>platycarpha</i> small-flower microseris	CNDDDB: SP CRPR 4.2 Cnty of SD List: D	Native, non-descript, annual herb that is typically found on clay lenses in perennial grasslands, on the periphery of vernal pools, or in broad openings in sage scrub; blooming period March-May.	No	Not Expected	Clay soils associated with this species do not occur on-site.
<i>Monardella viminea</i> willow monardella	ESA: FE CESA: SE CNDDDB: SP CRPR 1B.1 MSCP: CS Cnty of SD List: A	Perennial herb found in alluvial ephemeral washes of closed-cone coniferous forest, chaparral, coastal sage scrub, riparian scrub, riparian woodland; elevation 50-225 meters (164-738 ft.); blooming period June-August.	No	Not Expected	Population known from Lopez Canyon south and west of the site. The site occurs north of this species known range.

<i>Stipa</i> (= <i>Achnatherum</i>) <i>diegoense</i> San Diego County needlegrass	CRPR 4.2 Cnty of SD List: D	Perennial herb, monocot, that is found in rocky substates of chaparral and coastal sage scrub habitat; elevation 10-700 meters (33-2,300 ft.); blooming period May-June.	No	Not Expected	Perennial grass that was sought but not found on-site.
<i>Bahiopsis</i> (= <i>Viguiera</i>) <i>laciniata</i> San Diego County viguiera	CNDDDB: SP CRPR 4.2 Cnty of SD List: D	Perennial shrub that typically prefers arid sage scrub; generally the shrub cover is more open than at mesic, coastal locales supporting sage scrub; blooming period February-June.	No	Not Expected	Perennial shrub that was sought but not found on-site.
INVERTEBRATES					
<i>Euphydryas editha quino</i> quino checkerspot butterfly	ESA: FE CNDDDB: SA Cnty of SD Group: 1 MSCP: NE (Cnty of SD only)	Coastal habitats of sage scrub and chaparral; more inland, can be found in open meadows adjacent to sage scrub, chaparral and oak woodland, as well as juniper woodland and semi-desert scrub; habitats must have open areas with low growing and sparse vegetation; other suitable habitat conditions include dirt trails/roads, especially along hilltops, and clay soils and cryptogammic crusts, which favor host plant growth; primary caterpillar host plants include <i>Plantago erecta</i> at lower elevations and <i>P. patagonica</i> and <i>Antirrhinum coulterianum</i> at higher elevations; additional host plants may include <i>Cordylanthus rigidus</i> and <i>Castilleja exserta</i> ; adults nectar on low growing annuals; adult flight period typically Mar-Apr, depending on winter rainfall and temperatures.	No	Not Expected	No potential quino host plant was observed or identified onsite. Project site is located outside of USFWS recommended Quino survey area.

<i>Lycaena hermes</i> Hermes copper butterfly	CNDDDB: SA Cnty of SD Group: 1	Southern mixed chaparral, and coastal sage scrub often on canyon bottoms and northern exposed hillsides. Caterpillar host plant is <i>Rhamnus crocea</i> ; adults nectar on flowers of <i>Eriogonum</i> ; restricted range from San Diego County to Baja California; adult flight period mid-May to early Jul.	No	Not Expected	Although the project site supports coastal sage scrub, no potential host plants (<i>Rhamnus crocea</i>) were located on-site. California buckwheat (<i>Eriogonum fasciculatum</i>) plants are located on-site, but no occurrences have been recorded in the area for the species.
REPTILES					
<i>Aspidoscelis hyperythra</i> orange-throated whiptail	CNDDDB: SA DFG: SSC Cnty of SD Group: 2 MSCP: CS MHCP: CS	This species is a diurnal reptile from early spring to late summer that prefers washes and other sandy areas with patches of brush and rocks in coastal scrub and chaparral.	No	Moderate	Single recorded occurrence approximately 1.5 miles west of study area in 1991. Not observed on-site but may occur in low numbers.
<i>Aspidoscelis tigris stejnegeri</i> coastal western whiptail	CNDDDB: SA Cnty of SD Group: 2	Primarily diurnal reptile that is most common in and around dense vegetation in a variety of habitats including chaparral, desert scrub, desert wash, alkali scrub, and grasslands.	No	Moderate	No known records of this species in project vicinity. Not observed on-site but may occur in low numbers.
<i>Charina</i> (=Lichanura) <i>trivirgata roseofusca</i> coastal rosy boa	CNDDDB: SA Cnty of SD Group: 2 USFS: S	This species ranges from the foothills of the San Gabriel and San Bernardino Mountains south through San Diego County into Sierra San Pedro Martir, Baja California, at elevations ranging from sea level to 2,070 meters (6,790 feet) (USFS 2006b). This primarily nocturnal snake occurs in coastal sage scrub and chaparral-dominated communities that contain large rocks and boulders for cover and refuge, often near permanent or intermittent streams.	No	Low	No known records of this species in project vicinity. Typical suitable habitat, including large rocks and boulders that the species is generally associated with is not located on-site.

<i>Diadophis punctatus similis</i> San Diego ringneck snake	CNDDDB: SA Cnty of SD Group: 2 USFS: S	Often encountered during the day under boards and flat rocks in open, moist, relatively rocky areas within chaparral and grassland habitats.	No	Low	Single occurrence located approximately 0.25 mile north of study area in 2005. The project site is comprised of coastal sage scrub vegetation, not typical of this species which prefers cooler moist areas dominated by chaparral vegetation.
<i>Plestiodon (=Eumeces) skiltonianus interparietalis</i> Coronado Island skink	CNDDDB: SA DFG: SSC Cnty of SD Group: 2	Diurnal species that actively forages through leaf litter and dense vegetation in a variety of habitats including grasslands, sage scrub, and various woodlands including oak, pine, juniper, and riparian.	No	Low	The site is mostly comprised of open coastal sage scrub vegetation, not typical of this species.
<i>Phrynosoma coronatum (blainvillii)</i> coast (San Diego) horned lizard	CNDDDB: SA USFS: S DFG: SSC Cnty of SD Group: 2	This species is endemic to southern California and northern Baja California, Mexico (USFS 2006b). This diurnal lizard occurs in a variety of habitats, including coastal sage scrub, chaparral, grassland, coniferous forest, oak woodland, riparian, and the margins of higher elevation desert, with an abundance of open areas for basking and obtaining prey (i.e., native ants and insects), and loose, fine soils that provide camouflage and allow burrowing for protection from predators.	No	Low	No known records of this species occur in the vicinity of the site. Native harvester ants that are typical of this lizard's diet were not observed on-site.

<i>Salvadora hexalepis virgultea</i> coast patch-nosed snake	CNDDDB: SA DFG: SSC Cnty of SD Group: 2	This species ranges from Creston in San Luis Obispo County southward, primarily on the coastal side of the mountains, into Baja California, at elevations ranging from sea level to 2,130 meters (7,000 feet), but is typically found below 1,524 meters (5,000 feet) (USFS 2006b). This diurnal snake prefers coastal sage and chaparral habitats with low shrub structure of medium density. Habitat selection is closely related to the presence of the species' primary prey, whiptail lizards (<i>Cnemidophorus</i> spp.), and the presence of refuge and burrow sites for overwintering, which generally occurs between Oct to Mar.	No	Low	No known records of this species occur in the vicinity of the site. This species' primary prey, whiptail lizards, was not observed on-site.
BIRDS					
<i>Aimophila ruficeps canescens</i> southern California rufous-crowned sparrow	CNDDDB: SA DFG: WL Cnty of SD Group: 1 MSCP: CS MHCP: CS	Sedentary year-round resident that occurs in sparse, mixed chaparral and sage scrub habitats, often on rolling, herbage-covered hillsides with scattered shrubs and rocky outcrops; breeds from Mar-Jun, with nests built on the ground concealed at the base of grass or a shrub.	No	Moderate	Occurrence approximately 1.5 miles southwest of site in 2000 in native grassland/sparse CSS. This species was sought during the biological surveys of the site but was not detected.

<i>Amphispiza belli belli</i> Bell's sage sparrow	CNDDDB: SA DFG: WL Cnty of SD Group: 1 North Cnty MSCP: CS MHCP: CS	Sedentary year-round resident in chaparral and sage scrub that is not too dense and has open ground, not encumbered by leaf litter. Prefers gabbro soils and south facing slopes. Nests are cups of dry twigs and herb stems located on the ground beneath a shrub between March 25 and mid-July.	No	Moderate	One of the larger known populations of this species is found east of the site on Black Mountain where a total of 18 (many paired) have been reported (Unit 2004). This species was sought during the biological survey of the site but was not detected.
<i>Poliophtila californica californica</i> coastal California gnatcatcher	ESA: FT DFG: SSC CNDDDB: SA MSCP: NE (Cnty of SD only); CS MHCP: CS Cnty of SD Group: 1	Year-round resident in coastal areas below 500 m (1,500 ft); prefers coastal sage scrub habitat that is dominated by <i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i> and <i>Artemisia californica</i> as well as open chaparral.	Yes	Present	
MAMMALS					
<i>Chaetodipus californicus femoralis</i> Dulzura (California) pocket mouse	CNDDDB: SA DFG: SSC Cnty of SD Group: 2	Nocturnal species that occurs in a variety of habitats, including coastal scrub, chaparral and grasslands, typically in brushy areas along grass-chaparral edge.	No	Low	No known records of this species occur in the vicinity of the site. This species' preferred chaparral habitat is not found on-site.
<i>Chaetodipus fallax fallax</i> northwestern San Diego pocket mouse	CNDDDB: SA DFG: SSC Cnty of SD Group: 2 MHCP: CS	Nocturnal species that occurs in a variety of habitats, including coastal scrub, chaparral and grasslands, typically in brushy areas along grass-chaparral edge.	No	Moderate	No known records of this species occur in the vicinity of the site. It's preferred habitat (disturbed coastal sage scrub) occurs on-site, however a focused trapping effort would be required to determine this species presence/absence.
<i>Dipodomys stephensi</i> Stephens' kangaroo rat	ESA: FE CESA: ST CNDDDB: SA North Cnty MSCP: NE, CS Cnty of SD Group: 1 MHCP: CS	Areas of sparse vegetation primarily grasslands, but may occur in sage scrub or disturbed areas.	No	Not Expected	No known records of this species occur in the vicinity of the site. In San Diego, this well documented species occurs at Camp Pendleton, Fallbrook Naval Weapons Annex, Lake Henshaw, Santa Maria Valley (Ramona), east of Mission San Luis Rey (historically), and Guejito Ranch.

<i>Eumops perotis californicus</i> western mastiff bat	CNDDDB: SA DFG: SSC Cnty of SD Group: 2	Nocturnal bat species that occurs in many open, semi-arid to arid habitats, including woodlands, coastal scrub, grasslands, chaparral, desert scrub, and urban areas; roosts in crevices in vertical cliff faces, high buildings, trees, and tunnels.	No	Low	This species may forage over the site at night but no roosting habitat was detected.
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	CNDDDB: SA DFG: SSC Cnty of SD Group: 2	Mainly nocturnal, but also crepuscular and occasionally diurnal small mammal that is active year-long and prefers coastal scrub or juniper/sagebrush habitat, with moderate to dense canopies, particularly in areas of rock outcrops and rocky cliffs and slopes; nests are constructed of twigs, sticks, cactus parts, and rocks, dependent on the availability of surrounding building materials, and are usually built against a rock crevice or in the lower branches of trees; prefers to eat the buds, fruits, seeds, bark, leaves, and young shoots of live oak, chamise, and buckwheat, and is dependent on prickly pear for water balance in desert habitats.	No	Low	Rocky outcrops often associated with this species' habitat were not found on-site.
<i>Odocoileus hemionus fuliginata</i> southern mule deer	MSCP: CS Cnty of SD Group: 2 MHCP: CS	Typically crepuscular species, but may be active during the day or night, that occurs in early to intermediate successional stages of most forest, woodland, and brush habitats, but prefers a mosaic of various-aged vegetation that provides woody cover, meadow and shrubby openings, and free water.	No	Low	Species known to occur within the adjacent Black Mountain Open Space Park in areas away from urban development.

<i>Onychomys torridus ramona</i> southern grasshopper mouse	CNDDDB: SA DFG: SSC Cnty of SD Group: 2	Variety of habitats, including grasslands, sage scrub and chaparral, where friable soils occur.	No	Moderate	No known records of this species occur in the vicinity of the site. It's preferred habitat (coastal sage scrub) occurs on-site, however a focused trapping effort would be required to determine its presence.
<i>Taxidea taxus</i> American badger	CNDDDB: SA DFG: SSC MSCP: CS Cnty of SD Group: 2	Nocturnal and diurnal carnivore that is most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils for digging burrows for cover.	No	Low	No known records of this species occur in the vicinity of the site. This species' distinctive burrow opening was not observed on-site.

¹References for Sensitivity Codes and Status: County 1997, Ogden et al. 1998, AMEC 2003a, County 2009b and d, CDFG 2011b-d

²California Natural Diversity Database Special Plants/Animals = A general term that refers to all taxa inventoried by the CDFG CNDDDB, regardless of their legal or protection status; these taxa include species, subspecies, or varieties that fall into one of the above categories and/or one or more of the following categories: 1) Taxa officially listed or proposed for listing under the federal and/or state ESA; 2) Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the CEQA Guidelines, which may include California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) Lists 1 and 2, and some List 3 plants; 3) Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), or U.S. Forest Service (USFS) Sensitive (S) Species; 4) Taxa considered SSC by the CDFG; 5) Taxa listed by the CNPS; 6) Taxa that are biologically rare, very restricted in distribution, declining throughout their range but are not currently threatened with extirpation, or have a critical, vulnerable stage in their life cycle that warrants monitoring; 7) Populations in California that may be peripheral to the major portion of a taxon's range, but are threatened with extirpation in California; 8) Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, valley shrubland habitats, vernal pools, etc.); and 8) In addition to the above taxa, those taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or non-governmental organization (NGO) [e.g., The World Conservation Union (IUCN) Conservation Dependent (CD), Critically Endangered (CR), Data Deficient (DD), Endangered (EN), Least Concern (LC), Near Threatened (NT), Vulnerable (V) species; California Department of Forestry and Fire Protection (CDF) Sensitive (S) species; National Marine Fisheries Service (NMFS) Species of Concern (SC); American Fisheries Society (AFS) Endangered (EN), Threatened (TH), Vulnerable (VU) species; Xerces Society (XERCES) Critically Imperiled (CI), Data Deficient (DD), Imperiled (IM), Vulnerable (VU) invertebrate species; USFWS Birds of Conservation Concern (BCC); American Bird Conservancy (ABC) U.S. Watch List of Birds of Conservation Concern (WLBCC); Marine Mammal Commission (MMC) Marine Mammal Species of Special Concern (SSC); and The Western Bat Working Group (WBWG) High (H), Low-Medium (LP), Medium (M), Medium-High (MH) Priority species].

³References for Habitat Preferences/Requirements: (plants) Reiser 2001, County 2009d, CNPS 2010; (butterflies) Faulkner and Klein 2004, Opler 2006; (amphibians and reptiles) Stebbins 2003, CDFG 2010a; (birds) AOU Birds of North America On-line 2010 and CDFG 2010a; (mammals) CDFG 2010a.

⁴CNDDDB only tracks the nesting locations of these bird species; the location of the nest or any indication of breeding (i.e., territorial males, adults carrying nest material, adults carrying food, the presence of newly fledged young, etc.) is acceptable evidence of nesting. County of San Diego listing is for breeding populations only.

⁵CNDDDB only tracks the wintering range of these bird species. County of San Diego listing is for wintering populations only

REFERENCES

U.S. Fish and Wildlife Service. 1998. Pacific Pocket Mouse (*Perognathus longimembris pac~ficus*) Recovery Plan. Portland, OR. 112pp.

U.S. Fish and Wildlife Service. 2000. Recovery plan for bighorn sheep in the Peninsular Ranges, California. U.S. Fish and Wildlife Service, Portland, OR. xv+251 pp.

California Native Plant Society (CNPS). 2012. Inventory of Rare and Endangered Plants (online edition, v8-01a). California Native Plant Society. Sacramento, CA. Accessed on Thursday, November 01, 2012.