R·E·C Civil Engineering Environmental Land Surveying
rec-consultants.com

2442 Second Avenue
San Diego, California 92101
Phone: 619.232.9200
Fax: 619.232.9210

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Cheryl Lee
Bay Vista Methodist Heights
140 Escondido Boulevard
Escondido, CA 92025

Subject**:** **Biological Resources Letter Report for the Lisbon Heights Project, Lisbon Street, San Diego, California, APN: 581-050-01 and -06; Prepared for the City of San Diego, Project No. 622368**

Dear Ms. Lee:

REC Consultants, Inc. has prepared this letter report to address potential development-related impacts to biological resources on the Lisbon Heights property.

SUMMARY

The Lisbon Heights project proposes the construction of 24 residences. The only biologically sensitive resource on the property is non-native grassland. Impacts to non-native grassland will require mitigation, which will be achieved through payment into the City's Habitat Acquisition Fund.

INTRODUCTION, PROJECT DESCRIPTION, LOCATION, SETTING

Project Description

The Lisbon Heights Project (Project) proposes to develop 24 residences on two contiguous undeveloped parcels. Access to the Project site (Site) will be from Lisbon Street. Offsite improvements consist of a driveway and sewer/water connection.

Project Location and Setting

The approximately 3.4-acre Site is located on Assessor's Parcel Numbers (APN) 581-050-01 and -06 in the Skyline-Paradise Hills Community Planning Area in the City of San Diego, approximately three miles southeast of the intersection of California State Route 94 (SR-94) and California State Route 125 (SR-125) (**Figure 1**). The Site is an infill property; it is bordered by development on all sides (**Figures 2** and **3**).

The Site is undeveloped but appears to be subject to fuel management activities from the surrounding residences. The Site contains a small south-facing slope along the northern quarter of the Site. Onsite elevation ranges from approximately 315 feet (96 meters) at the southwest corner of the Site to 380 feet (115 meters) above mean sea level (AMSL) in the northeast corner.

According to the U.S. Department of Agriculture (USDA) Web Soil Survey (USDA 2018), one soil type occurs onsite: Las Flores loamy fine sand, 15 to 30 percent slopes, eroded (LeE2). The Las Flores series consists of moderately well drained loamy fine sands that have a sandy clay subsoil. These soils formed in material weathered from siliceous marine sandstone. LeE2 is moderately steep and rill and gully erosion are evident. Runoff is medium to rapid, and the erosion hazard moderate to high.

The Project is located within the City of San Diego (City) and subject to the City Multiple Species Conservation Program (MSCP) Subarea Plan and the Land Development Code Biology Guidelines, which were formulated by the City Development Services Department to help implement the City's Environmentally Sensitive Lands Regulation, and to guide determination of impacts and mitigation under CEQA and the Coastal Act (City of San Diego 2012a). The Biology Guidelines specifically provide protection for sensitive biological resources including narrow endemic species; habitat for rare, endangered or threatened species; vegetation communities in Tiers I, II, IIIA or IIIB; Multi-Habitat Planning Area (MHPA) lands; and those areas outside the MHPA that qualify as wetlands according to the City of San Diego wetland definition. Environmentally Sensitive Lands on a site require that Project development comply with these regulations. The nearest MHPA land is approximately one mile south of the Site in the Paradise Canyon Park, as shown in **Figure 4**. Therefore, the Project is not subject to regulations pertaining to projects within or adjacent to the MHPA. The Site is outside the Coastal Overlay Zone.

METHODOLOGY

Biological resources on the Site were investigated through records review and an onsite survey. Records review consisted of a search of RareFind5 California Natural Diversity Database (CNDDB) documentation of rare and special-status plant and animal species within the Project USGS 7.5-minute quadrangle (National City) and surrounding quadrangles (La Jolla, La Mesa, El Cajon, Point Loma, Jamul Mountains, Imperial Beach, and Otay Mesa), and soil maps and descriptions from the USDA Web Soil Survey. One general biological field survey was conducted, as summarized in Table 1, below.

Table 1. Survey Conducted on the Project Site

Date	Time	Temp (°F)	Sky	Wind (MPH)	Survey Type	Personnel
10/9/2018	0940 to 1015	72	Scattered clouds	0-3	General	L. BenVau

REC Field Biologist Lee BenVau conducted a general biological survey on the Site to document current conditions and biological resources (see **Attachment A** for his resume). Field notes were maintained throughout the survey. All onsite vegetation and land cover types were mapped, and all observed plant and animal species were documented. Wildlife species were identified directly by sight or vocalizations and indirectly by scat, tracks, burrows, nests or other sign. Any observed special-status species were documented, and suitability of habitat for special-status species was evaluated based on factors including soil, topography, elevation, water availability, microhabitats such as boulders, vegetation, proximity to development, size of overall habitat, and presence/absence of suitable prey, as applicable. Habitats and wildlife on surrounding properties were observed from the Site or public roadways. Mapping of existing resources on and around the Site was conducted on an aerial photograph scaled at approximately 1 inch = 50 feet.

Site survey limitations include under-representation of spring-blooming annuals and summer-flowering plants due to low rainfall and time of year, and nocturnal wildlife due to time of day.

Vegetation communities and land cover classification in this report follow Holland (1986) as updated by Oberbauer et al. (2008), as well as City-specific guidelines. Plant taxonomy and nomenclature in this report follow the Jepson eFlora (Jepson 2018) and the Jepson Manual, second edition (Baldwin et al. 2012) for taxonomy and scientific names, and Rebman and Simpson (2014) for common names, with some rare plant common names from the California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2016). Wildlife taxonomy and nomenclature in this report follow *San Diego County Mammal Atlas* (Tremor et al. 2017) for mammals, Avibase (Lepage 2015) for birds, California Herps (Nafis 2015) for reptiles and amphibians, Butterflies of America (Warren et al. 2015) for butterflies, BugGuide (ISUDE 2015) for other insects and arachnids, and the Integrated Taxonomic Information System (ITIS 2015) for other invertebrates, as well as the San Diego Natural History Museum spider, butterfly, bird, reptile, and amphibian checklists for localized subspecies information (SDNHM 2005, 2002, and undated).

SURVEY RESULTS

During REC's Site survey, three vegetation community/land cover categories were observed onsite: developed land, disturbed land, and non-native grassland, as shown in **Figure 5**. These are described below. The Site supports very few species, thus all plant and animal species detected onsite are listed below in the vegetation community/land cover category in which they were observed rather than being listed separately in attachments. Representative photographs are provided in **Appendix B**, and photograph locations are shown in **Figure 6**.

Non-native Grassland (Habitat Code 42200, Tier IIIB) occupies approximately 1.83 acres onsite. This habitat is "A dense to sparse cover of annual grasses with flowering culms 0.2-0.5 (1.0) m high. Often associated with numerous species of showy-flowered, native annual forbs ('wildflowers'), especially in years of favorable rainfall. In San Diego County the presence of *Avena*, *Bromus*, *Erodium*, and *Brassica* are common indicators. In some areas, depending on past disturbance and annual rainfall, annual forbs may be the dominant species; however, it is presumed that grasses will soon dominate. Germination occurs with the onset of the late fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. Remnant native species are variable. This can include grazed and even dry-farmed (i.e. disked) areas where irrigation is not present." (Oberbauer et al. 2008)

To distinguish between non-native grassland and disturbed land, the City (2002) provides this guidance:

> *Typically, [non-native grassland] includes at least 50% cover of the entire herbaceous layer attributable to annual non-native grass species, although other plant species (native or non-native) may be intermixed… Ruderal habitat typically develops on sites with heavily compacted soils following intense levels of disturbance such as grading… Disturbed areas are usually associated with prior development (i.e. previous grading) or agricultural use. These areas can consist of bare ground, or when vegetated, are dominated by at least 50% cover of invasive broad-leaved non-native plant species… To distinguish between [non-*

native grassland] and other disturbed areas, the relative percent cover of the herbaceous species should be used as a diagnostic tool. Within the area in question, the percent cover and relative percent cover of all herbaceous species should be assessed. The cumulative total of each species should be determined and ranked in descending order of abundance… The vegetation community should be determined based upon the total cumulative relative percent cover of non-native grasses (Poaceae family). If native habitats have been ruled out and if the majority (50% or greater) of the observed species are introduced members of the Poaceae family, then the area should be characterized as non-native annual grassland. Otherwise, consideration should be given to identified types of disturbed areas.

Onsite non-native grassland consists of the central area of the Site that currently appears to not be subject to mowing/scraping. Species observed in this area consist of oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), Bermuda grass (*Cynodon dactylon*), prickly lettuce (*Lactuca serriola*), Australian tumbleweed (*Salsola australis*), and smilo grass (*Stipa miliacea*). Oats and ripgut brome together provide approximately 90% absolute cover while Australian tumbleweed and prickly lettuce (*Lactuca serriola*) provide approximately 30% absolute cover, or 75% and 25% relative cover, respectively. This habitat qualifies as non-native grassland based upon the above guidance.

Animal species observed in onsite non-native grassland consist of brown garden snail (*Helix aspersa*) [several], rock dove (*Columba livia*) [4, flyover], northern mockingbird (*Mimus polyglottos*) [pile of feathers], domestic cat (*Felis catus*) [1], and Botta's pocket gopher (*Thomomys bottae*) [mounds].

Disturbed Land (Habitat Code 11300, Tier IV) occupies approximately 1.73 acre onsite. Disturbed land consists of areas "that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association, but continue to retain a soil substrate. Typically vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance, or shows signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal. Examples of disturbed land include areas that have been graded, repeatedly cleared for fuel management purposes and/or experienced repeated use that prevents natural revegetation (i.e., dirt parking lots, trails that have been present for several decades), recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites." (Oberbauer et al. 2008) Disturbed areas are usually associated with prior development (e.g., previous grading) or agricultural use (City of San Diego 2012).

Onsite disturbed land consists of a mowed/scraped fringe of land around most of the perimeter of the Site, seemingly for fuel management purposes. Plant species observed consisted of several non-native species: baby sun rose (*Aptenia cordifolia*), Australian saltbush (*Atriplex semibaccata*), ripgut grass, jade plant (*Crassula ovata*), mission prickly-pear (*Opuntia ficus-indica*), Australian tumbleweed, Peruvian pepper (*Schinus molle*), Brazilian pepper (*Schinus terebinthifolius*); and one native species: lemonadeberry (*Rhus integrifolia*). All of these species were represented by only one or at most a few individuals. Bare ground provides most of the cover in this land cover category.

The only animal species observed in this land cover category onsite was domestic dog (*Canis lupus familiaris*) [1].

Developed Land (Habitat Code 12000) occupies approximately 0.17 acre onsite. This land cover category consists of areas "that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that require irrigation. Areas where no natural lands is evident due to a large amount of debris or other materials being placed upon it may also be considered urban/developed (e.g. car recycling plant, quarry)." Developed land is typically unvegetated, or landscaped with a variety of ornamental (usually non-native) plants. (Oberbauer et al. 2008)

Developed land onsite consists of a fenced rear yard. The fence obstructed the view into the yard, but it appears the yard is used for storage and is unvegetated except for Peruvian pepper.

SPECIAL-STATUS SPECIES

For the purposes of this report, a sensitive or special-status plant or animal is any species, subspecies, or variety that is officially listed by the State of California or the federal government as Endangered, Threatened, or Rare, or a candidate for one of those listings; classified as Fully Protected or Species of Special Concern by the California Department of Fish and Wildlife (CDFW); included in California Rare Plant Ranks (CRPR) 1 through 4; or included in the City of San Diego Narrow Endemics list.

Observed special-status species

No special-status species were observed onsite.

Special-status species with the potential to occur onsite

Lists of special-status plants and animals with the potential to occur on the Site were generated from the CNDDB RareFind5 database. The resulting lists include any special-status species documented within the Site's USGS 7.5-minute quadrangle or surrounding quadrangles. **Attachment C** provides information on these special-status plant species, as well as an evaluation of the potential for each species to occur onsite, based on CNDDB, the CNPS Inventory of Rare and Endangered Plants (online version, 2018), Reiser's *Rare Plants of San Diego County* (2001), SDNHM's Herbarium Collection Map (SDNHM 2012), Jepson eFlora (Jepson Flora Project 2018), professional experience, and field observations. **Attachment D** provides information on these animal species, and an evaluation of the potential for each species to occur onsite, based on species requirements, CNDDB search results, *San Diego County Mammal Atlas* (Tremor et al. 2017), *San Diego County Bird Atlas* (Unitt 2004) and Google Earth Bird Atlas (SDNHM 2018), Amphibian and Reptile Atlas of Peninsular California (SDNHM 2018), and field observations.

No special-status species have high potential to occur onsite.

City of San Diego Narrow Endemic species

Fifteen plant species have been designated by the City as Narrow Endemic species because of their limited distribution within the region, and are considered sensitive biological resources of special importance to the City. Information about whether each species was observed and why it would or would not be expected to occur onsite is provided in Table 2, below.

Table 2. Narrow Endemics and Potential to Occur on the Project Site

Scientific Name	Common Name	Observed Onsite	Rationale to Expect or Not Expect Onsite
Acanthomintha ilicifolia	San Diego thornmint	No	Not expected; no clay soils onsite.
Agave shawii var. *shawii*	Shaw's agave	No	Not expected; no suitable habitat onsite; would have been detectable and was not observed.
Ambrosia pumila	San Diego ambrosia	No	Not expected; no suitable habitat onsite.
Aphanisma blitoides	Aphanisma	No	Not expected; no suitable habitat onsite.
Astragalus tener var. *titi*	Coastal dune milkvetch	No	Not expected; no suitable habitat onsite.
Baccharis vanessae	Encinitas baccharis	No	Not expected; no suitable habitat onsite; Site outside known geographic range; would have been detectable and was not observed.
Cylindropuntia californica var. *californica*	Snake cholla	No	Not expected; no suitable habitat onsite; would have been detectable and was not observed.
Deinandra conjugens	Otay tarplant	No	Not expected; no suitable soils occur onsite.
Dudleya brevifolia	Short-leaf dudleya	No	Not expected; no suitable habitat or soils onsite; Site outside known geographic range.
Dudleya variegata	Variegated dudleya	No	Not expected; no suitable habitat or soils onsite.
Eryngium aristulatum	San Diego button-celery	No	Not expected; vernal pools or similar do not occur onsite.
Navarretia fossalis	Spreading navarretia	No	Not expected; vernal pools or similar do not occur onsite.
Orcuttia californica	California Orcutt's grass	No	Not expected; vernal pools or similar do not occur onsite.
Pogogyne abramsii	San Diego mesa mint	No	Not expected; vernal pools or similar do not occur onsite.
Pogogyne nudiuscula	Otay mesa mint	No	Not expected; vernal pools or similar do not occur onsite.

Raptors, native birds, and migratory birds

Raptors are protected under California Fish and Game Code Section 3503.5, which specifically covers all birds in the orders Falconiformes or Strigiformes (raptors, including owls). It is unlawful to take, possess or destroy any such raptors or their nests and eggs except as otherwise provided in the Fish and Game Code. No raptors were observed on or over the Site and the Site is unlikely to serve as raptor foraging habitat due to the limited prey species occurring onsite and the small size of the Site.

California Fish and Game Code Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the Fish and Game Code or any regulation made pursuant to the Code, and the federal Migratory Bird Treaty Act (MBTA) prohibits the killing or transport of native migratory birds, or any part, nest, or egg or any such bird unless allowed by another regulation (such as for "game" birds), Therefore, all native, non-game birds on the Site, and the nests and eggs of all native non-game birds, are protected during the nesting season even if these birds are not special-status or otherwise protected.

This Project will comply with the MBTA.

JURISDICTIONAL WETLANDS AND WATERS

Any wetlands or other waters are potentially subject to jurisdiction of California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the State Water Resources Control Board. The City of San Diego also regulates impacts to wetland habitat.

The Site does not contain any jurisdictional wetlands or waters or any features that suggest that they may have been present in the past.

OTHER UNIQUE FEATURES / RESOURCES

The Site occurs on a south-facing slope that becomes steeper on the north quarter of the Site and appears to meet the City's Steep Hillside Guidelines (City of San Diego 2004) criteria for Environmentally Sensitive Lands:

(A) 143.0110 When Environmentally Sensitive Lands Regulations Apply

> *Generally, the steep hillside regulations of the Environmentally Sensitive Lands Regulations are applicable when development is proposed on a site containing any portions with a natural gradient of at least 25 percent (25 feet of vertical distance for every 100 feet of horizontal distance) and a vertical elevation of at least 50 feet. The steep hillside regulations are also applicable if a portion of the site contains a natural gradient of at least 200 percent (200 feet of vertical distance for every 100 feet of horizontal distance) and a vertical elevation of at least 10 feet. See Diagram I-1. The vertical elevation must occur generally in the area with the steep hillsides and may include some pockets of area with less than 25 percent gradient.*

SIGNIFICANCE DETERMINATION THRESHOLDS

The City uses specific guidelines to determine if impacts to biological resources are significant. The following text is cited, verbatim, from the City's Land Development Manual – Biology Guidelines (City of San Diego 2012):

> *The California Environmental Quality Act (CEQA) Guidelines define "significant effect on the environment" as a "substantial or potentially substantial adverse change in the environment". The CEQA Guidelines (Appendix G) further indicate that there may be a significant effect on biological resources if the project will:*
>
> *A. Substantially affect an endangered, rare, or threatened species of animal or plant or the habitat of the species;*
> *B. Interfere substantially with the movement of any resident or migratory fish or wildlife species; or*
> *C. Substantially diminish habitat for fish, wildlife, or plants.*
>
> *Impacts to biological resources are evaluated by City staff through the CEQA review process, the Environmentally Sensitive Lands Regulations and Biology Guidelines, and through the review of the project's consistency with the City's Multiple Species Conservation Program (MSCP) Subarea Plan.*

The City uses the following guidelines to determine potential significance to Biological Resources:

> *Would the proposal result in:*
>
> *1. A substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the MSCP or other local or regional plans, policies or regulations, or by the*

California Department of Fish and Game (CDFG) or U.S. Fish and Wildlife Service (USFWS)?

2. *A substantial adverse impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the Biology Guidelines of the Land Development manual or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS?*
3. *A substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pool, riparian, etc.) through direct removal, filling, hydrological interruption, or other means?*
4. *Interfering substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites?*
5. *A conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, either within the MSCP plan area or in the surrounding region?*
6. *Introducing land use within an area adjacent to the MHPA that would result in adverse edge effects?*
7. *A conflict with any local policies or ordinances protecting biological resources?*
8. *An introduction of invasive species of plants into a natural open space area?"*

In order to determine the significance of Project impacts, its direct, indirect, and cumulative impacts must be evaluated according to following methods:

1. *Direct Impacts*

   The direct, indirect and cumulative impacts of a project must be analyzed for significance. The first step in making the determination is to identify the nature of the impact, and the extent, and degree of direct impacts to biological resources. A direct impact is a physical change in the environment which is caused by and immediately related to the project. An example of a direct physical change in the environment is the removal of vegetation due to brushing, grubbing, grading, trenching, and excavating.

   In order to determine the extent of impacts, the acreage of each habitat type to be lost should be quantified. If an upland, categorize the land into one of the four Tier categories (I -IV), which are listed on Table 3 of the Biology Guidelines. If a natural wetland, categorize as indicated on Tables 2a and/or 2b of the Biology Guidelines. In addition, the boundaries of the MHPA should be determined and any proposed encroachment should be quantified. Where possible, the extent or number of individuals of sensitive, threatened, rare, or endangered species to be taken or harassed should also be quantified. In order to determine the degree of the impact, fragmentation of habitat, loss of foraging area for sensitive species, and other factors should be considered.

   The City's permit to 'take' Covered Species under the MSCP is based on the concept that 90% of lands within the MHPA will be preserved. Any encroachment

into the MHPA (in excess of the allowable encroachment by a project) would be considered significant and require a boundary line adjustment which would include a habitat equivalency assessment to ensure that what will be added to the MHPA is at least equivalent to what would be removed.

In addition, lands containing Tier I, II, IIIa and IIIb [see Table 3 of City's Biology Guidelines] and all wetlands [see Tables 2a and/or 2b of City's Biology Guidelines] are considered sensitive and declining habitats. As such, impacts to these resources may be considered significant. Lands designated as Tier IV are not considered to have significant habitat value and impacts would not be considered significant.

Impacts to individual sensitive species, outside of any impacts to habitat, may also be considered significant based upon the rarity and extent of impacts. Impacts to state or federally listed species and all narrow endemics [see the City's Biology Guidelines] should be considered significant. Certain species covered by the MSCP [see Section I of the Biology Guidelines] and other species not covered by the MSCP, may be considered significant on a case-by-case basis taking into consideration all pertinent information regarding distribution, rarity, and the level of habitat conservation afforded by the MSCP.

Notes:

(a) Total upland impacts (Tiers I-IIIB) less than 0.1 acre are not considered significant and do not require mitigation. See Section 3 (Cumulative Impacts) relative to native grasslands.
(b) Impacts to non-native grasslands totaling less than 1.0 acres which are completely surrounded by existing urban developments are not considered significant and do not require mitigation. Examples may include urban infill lots.
(c) Total wetland impacts less than 0.01 acre are not considered significant and do not require mitigation. THIS DOES NOT APPLY TO VERNAL POOLS or wetlands within the Coastal Zone.
(d) Brush management Zone 2 thinning activities, while having the potential to adversely affect biological resources, are not considered potentially significant inside the MHPA or, to the extent that non-covered species are not impacted, outside the MHPA, because of the implementation of the MSCP. Brush management Zone 2 thinning outside the MHPA which affects non-covered species is potentially significant. Brush management not conducted in accordance with brush management regulations, regardless of where it is located, is also potentially significant.
(d) Mitigation is not required for impacts to non-native grassland habitat when impacted for the purpose of wetland or other native habitat creation.
(e) Habitat mitigation is not required for impacts to manufactured slopes or areas that have been planted with native species for the purpose of erosion control. For example, in order to qualify for this exception, substantiation of previous permits and mitigation must be provided. Noise mitigation, however may be required for significant noise impacts to certain avian species during

their breeding season depending upon the location of the slope (such as adjacent to an MHPA) and what birds may be present in the area such as the California gnatcatcher, least Bell's vireo, southern willow flycatcher, least tern, cactus wren, tricolored blackbird, western snowy plover, or burrowing owl. If these avian species (except for the California gnatcatcher) are present, then mitigation will be required if construction or operational noise levels would exceed 60 db(A), or the existing ambient noise level if already above 60dB(A) during the breeding season. For California gnatcatcher habitat within the MHPA and occupied, construction or operational noise levels exceeding 60 dB(A) (or exceeding the existing ambient noise level if already above 60 dB(A)) during the breeding season is considered significant. There are no restrictions for the gnatcatcher ***outside*** *the MHPA anytime of the year. In addition, inside the MHPA, impact avoidance areas are required for Cooper's hawk, northern harrier, golden eagle, burrowing owl, and southwestern pond turtle. See Biology Guidelines, Section II, A. 2 & 4, and Section 9.12 of the Implementing Agreement.*

(f) Removal/control of non-native plants is not considered to constitute a significant habitat impact for which compensatory habitat acquisition, preservation, or creation for the area impacted is required. Mitigation for indirect impacts such as erosion control or off-site infestation by non-native species may be needed.

2. Indirect Impacts

CEQA Guidelines §15064(d) provides the following guidance regarding identification of direct versus indirect impacts:

In evaluating the significance of the environmental effect of a project, the Lead Agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment which may be caused by the project.

a. An indirect impact is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. If a direct impact in turn causes another physical change in the environment, then the secondary changes is an indirect impact. For example, the dust from heavy equipment that would result from grading for a sewage treatment plant could settle on nearby vegetation and interfere with photosynthetic processes; and the construction equipment noise levels could interrupt reproductive behavior within adjacent sensitive avian breeding habitats during the breeding season.

b. An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project. A change which is speculative or unlikely to occur is not reasonably foreseeable.

Depending on the circumstances, indirect impacts of a project may be as significant as the direct impacts of the project. In general, however, indirect impacts are easier to mitigate than direct ones. Some impacts may be considered indirect impacts in some circumstances and direct impacts under

other circumstances. Indirect impacts include but are not limited to, the following impacts:

i. *The introduction of urban meso-predators into a biological system;*
ii. *The introduction of urban runoff into a biological system;*
iii. *The introduction of invasive exotic plant species into a biological system;*
iv. *Noise and lighting impacts (note: consider both construction/demolition and operational phases of the project);*
v. *Alteration of a dynamic portion of a system, such as stream flow characteristics or fire cycles; and,*
vi. *Loss of a wetland buffer that includes no environmentally sensitive lands.*

3. *Cumulative Impacts*

The MSCP was designed to compensate for the regional loss of biological resources throughout the region. Projects that conform with the MSCP as specified by the Subarea Plan, and implementing ordinances, (i.e. Biology Guidelines and ESL Regulations) are not expected to result in a significant cumulative impact for those biological resources adequately covered by the MSCP. These resources include the vegetation communities identified as Tier I through IV (see City's Biology Guidelines, and the MSCP Covered Species list (see Appendix A of the City of San Diego's MSCP Subarea Plan).

All direct impacts to vernal pools are significant and cumulatively significant. Impacts to vernal pools may be mitigated in accordance with the criteria in the Biology Guidelines.

Direct impacts to perennial native grasslands that are greater than 0.1 acre are significant and cumulatively significant. Direct impacts to this habitat type are mitigated via Tier I per Biology Guidelines. Cumulative impacts may be mitigated only via creation at a 1:1 ratio or greater with the feasibility of creation to be evaluated on a case-by-case basis.

Impacts to species covered by the MSCP (see Appendix A of MSCP Subarea Plan) would not generally be considered cumulatively significant, provided the project is in full compliance with the MSCP and its implementing regulations. Impacts to state- or federally- listed species not covered by the MSCP may be considered cumulatively significant. Each situation will be evaluated on a case-by-case basis.

It is expected that many other sensitive species not analyzed for coverage under the MSCP will be adequately conserved through the MSCP's habitat-based mitigation plan. A rare circumstance may arise, however, where impacts to a particular species may still result in a cumulatively significant impact. The project-level biological survey report would identify those species and describe why a cumulative impact still exists in light of the habitat level of protection provided by the MSCP. Depending on the size of the impact, the salt marsh daisy

*(*Lasthenia glabrata *ssp.* coulteri*) found in salt pannes) and the little mouse tail (*Myosurus minimus*) found in vernal pools would be examples of non-covered species that might be considered rare enough to conclude cumulatively significant impacts.*

SIGNIFICANCE OF PROJECT IMPACTS AND PROPOSED MITIGATION

A direct impact is a physical change in the environment which is caused by and immediately related to the project. An example of a direct physical change in the environment is the removal of vegetation due to brushing, grubbing, grading, trenching, and excavating. **Figure 7** depicts the Project's direct impacts to biological resources that would occur from implementation of the Project.

An indirect impact is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. If a direct impact in turn causes another physical change in the environment, then the secondary change is an indirect impact. Examples include introduction of urban meso-predators into a biological system; introduction of urban runoff into a biological system; introduction of invasive exotic plant species into a biological system; noise and lighting impacts (both construction/demolition and operational phases of the project); alteration of a dynamic portion of a system, such as stream flow characteristics or fire cycles; and loss of a wetland buffer that includes no environmentally sensitive lands.

Direct and indirect Project impacts to habitats and special-status resources are discussed in the following sections.

Direct Impacts

Implementation of the Project would directly impact 3.7 acres of land onsite and 0.02 acres offsite through development of the proposed residences and offsite improvements. Project impacts are shown in **Figure 7**.

Direct impacts and mitigation are summarized in Table 3.

Table 3. Vegetation / Land Cover Acreages and Impacts

Vegetation Community / Land Cover Category	Existing Onsite (Acres)	Project Impact Onsite (Acres)	Project Impact Offsite (Acres)	Mitigation Ratio	Mitigation Required (Acres)
Non-native Grassland (Tier IIIB)	1.8	1.8	-	0.5:1 or 1:1*	0.9 or 1.8
Disturbed Land (Tier IV)	1.7	1.7	-	0:1	-
Developed Land	0.2	0.2	0.0 (0.02)	0:1	-
TOTAL	**3.7**	**3.7**	**0.0 (0.02)**		**0.9** or **1.8**

*0.5:1 if mitigated inside MHPA, 1:1 if mitigated outside MHPA

Direct impacts to developed land and disturbed land are not significant and do not require mitigation. However, direct impacts to 1.8 acres of non-native grassland are considered significant and will require mitigation.

The Project will not result in significant impacts to wildlife corridors, linkages, or wildlife nursery sites.

Indirect Impacts

Surrounding land will not be subject to indirect impacts because of the extent of development in the area.

Indirect impacts to water and air quality would not be significant because the Project will comply with all applicable water and air quality regulations

Proposed Mitigation

The Project will result in significant impacts to 1.8 acres of non-native grassland (Tier IIIB) on an infill parcel. Consistent with the City's Biological Guidelines, impacts to small, isolated sites with lower long-term conservation value may mitigate through a contribution to the City's Habitat Acquisition Fund. Per the Biological Guidelines, impacts to Tier IIIB habitat would require mitigation within the MHPA at a 0.5:1 ratio and outside of the MHPA at a 1:1 ratio. Mitigation for direct impacts would be achieved through payment into the City's Habitat Acquisition Fund. Thus, sensitive upland impacts would be reduced to below a level of significance.

CUMULATIVE IMPACTS

Cumulative impacts occur as a result of ongoing direct and indirect impacts for unrelated projects within a geographic area, and are assessed on a regional basis to determine the overall effect of numerous activities on a special-status resource over a larger area. The MSCP was designed to compensate for the regional loss of biological resources throughout the region. Projects that conform with the MSCP as specified by the Subarea Plan, and implementing ordinances, (i.e. Biology Guidelines and ESL Regulations) are not expected to result in a significant cumulative impact for those biological resources adequately covered by the MSCP. These resources include the vegetation communities identified as Tier I through IV.

The loss of 1.8 acres of non-native grassland on an infill lot within a developed area would not significantly contribute to the cumulative loss of non-native grassland in the region.

CONCLUSION

The Lisbon Heights project will directly impact 1.8 acres of non-native grassland, which will require mitigation. Mitigation for direct project impacts would be achieved through payment into the City's Habitat Acquisition Fund. The implementation of mitigation discussed in this report will reduce potentially significant direct, indirect, and cumulative impacts to biological resources to below a level of significance.

This concludes REC's biological letter report for the Lisbon Heights Project. Please do not hesitate to contact REC with any questions.

Sincerely,

Lee BenVau
Field Biologist

ATTACHMENTS

Figure 1. Regional Location
Figure 2. Vicinity Map
Figure 3. Site Aerial
Figure 4. Nearest MHPA Lands
Figure 5. Biological Resources
Figure 6. Photographic Key
Figure 7. Project Impacts

Attachment A. Biologist Resume
Attachment B. Lisbon Heights Project Site Photographs
Attachment C. Special-Status Plants with Potential to Occur on the Lisbon Heights Project Site
Attachment D. Special-Status Animals with Potential to Occur on the Lisbon Heights Project Site

REFERENCES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. *The Jepson Manual: Vascular Plants of California*, second edition. Berkeley and Los Angeles: University of California Press.

Calflora. 2018. "*Quercus dumosa* Nutt., Coastal sage scrub oak, Nuttall's scrub oak." Accessed online at http://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Quercus+dumosa.

City of San Diego. 2000. Brush Management. Ch. 14: General Regulations, Article 2: General Development Regulations, Division 4: Landscape Regulations, §142.0412. Added December 9, 1997; effective January 1, 2000.

City of San Diego. 2002. Guidelines for Conducting Biology Surveys. October 1998. Revised July 2002.

City of San Diego. 2004. Land Development Code – Steep Hillside Guidelines, as amended August 2004. City of San Diego Development Services Department.

City of San Diego. 2018. Environmentally Sensitive Lands Regulations. San Diego Municipal Code Chapter 14 Article 3 Division 1.

City of San Diego. 2012. Land Development Code – Biology Guidelines, as amended April 23, 2012. City of San Diego Development Services Department.

CNDDB. 2018. California Natural Diversity Data Base RareFind5 searchable database, California Department of Fish

and Wildlife. https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data

CNPS (California Native Plant Society). 2018. Inventory of Rare and Endangered Plants (online edition, v8-02). Sacramento: California Native Plant Society. http://www.rareplants.cnps.org.

Holland, R. F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Non-game Heritage Program, State of California Department of Fish and Game, Sacramento.

ISUDE (Iowa State University Department of Entomology). 2015. BugGuide. http://bugguide.net/

ITIS. 2015. Integrated Taxonomic Information System (ITIS). http://itis.gov

Jepson Flora Project (eds.). 2018. *Jepson eFlora*. http://ucjeps.berkeley.edu/eflora/

Lepage, D. 2015. Avibase, the World Bird Database. http://avibase.bsc-eoc.org/

Nafis, G. 2015. A Guide to the Amphibians and Reptiles of California. http://www.californiaherps.com/

Oberbauer, T., M. Kelly, and J. Buegge. 2008. Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California", Robert F. Holland, Ph.D., October 1986.

Rebman, J. P. and M. G. Simpson. 2014. *Checklist of the Vascular Plants of San Diego County* (5th edition). San Diego, CA: San Diego Natural History Museum.

Reiser, C. H. 2001. *Rare Plants of San Diego County*, 1994 and updated 2001. Imperial Beach, CA: Aquafir Press.

SDNHM (San Diego Natural History Museum). 2018. Amphibian and Reptile Atlas of Peninsular California. http://herpatlas.sdnhm.org/

SDNHM. 2012. Map San Diego Plant Species in the SDNHM Herbarium Collection. http://www.sdplantatlas.org/GMap/GMapSpeciesMap.htm

SDNHM. 2002. Butterflies of San Diego County. http://www.sdnhm.org/archive/research/entomology/sdbutterflies.html.

SDNHM. 2005. Spiders of San Diego County. http://www.sdnhm.org/archive/ research/entomology/sdspider.html.

SDNHM. (Undated) Amphibians of San Diego County. http://www.sdnhm.org/archive/research/ herpetology/sdamphib.html.

SDNHM. (Undated) Reptiles of San Diego County. http://www.sdnhm.org/archive/research/ herpetology/sdreptil.html.

SDNHM. (Undated) Checklist of Birds Recorded in San Diego County, California. http://www.sdnhm.org/archive/research/birds/sdbirds.html.

SDNHM. (Undated) Google Earth Bird Atlas. http://www.sdnhm.org/science/birds-and-mammals/projects/san-diego-county-bird-atlas/bird-atlas-google-earth-presentation/

Tremor, Scott, Drew Stokes, Wayne Spencer, Jay Diffendorfer, Howard Thomas, Susan Chivers, and Phillip Unitt, eds. 2017. *San Diego County Mammal Atlas.* San Diego Natural History Museum: San Diego, CA.

Unitt, P. 2004. *San Diego County Bird Atlas*. San Diego Natural History Museum: San Diego, CA.

USDA (United States Department of Agriculture). 1973. Soil Survey, San Diego Area, California. R. H. Bowman, ed. USDA Soil Conservation Service. 104 pp. + app.

USDA. 2018. Natural Resource Conservation Service Web Soil Survey. http://websoilsurvey.sc.egov.usda.gov/app/Home Page.htm.

USDA, NRCS (Natural Resources Conservation Service). 2018. The PLANTS Database. Accessed online at https://plants.sc.egov.usda.gov/core/profile?symbol=QUDU.

Warren, A.D., K.J. Davis, E.M. Stangeland, J.P. Pelham and N.V. Grishin. 2015. Illustrated Lists of American Butterflies. http://www.butterfliesofamerica.com/

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R·E·C Consultants, Inc.

Regional Location

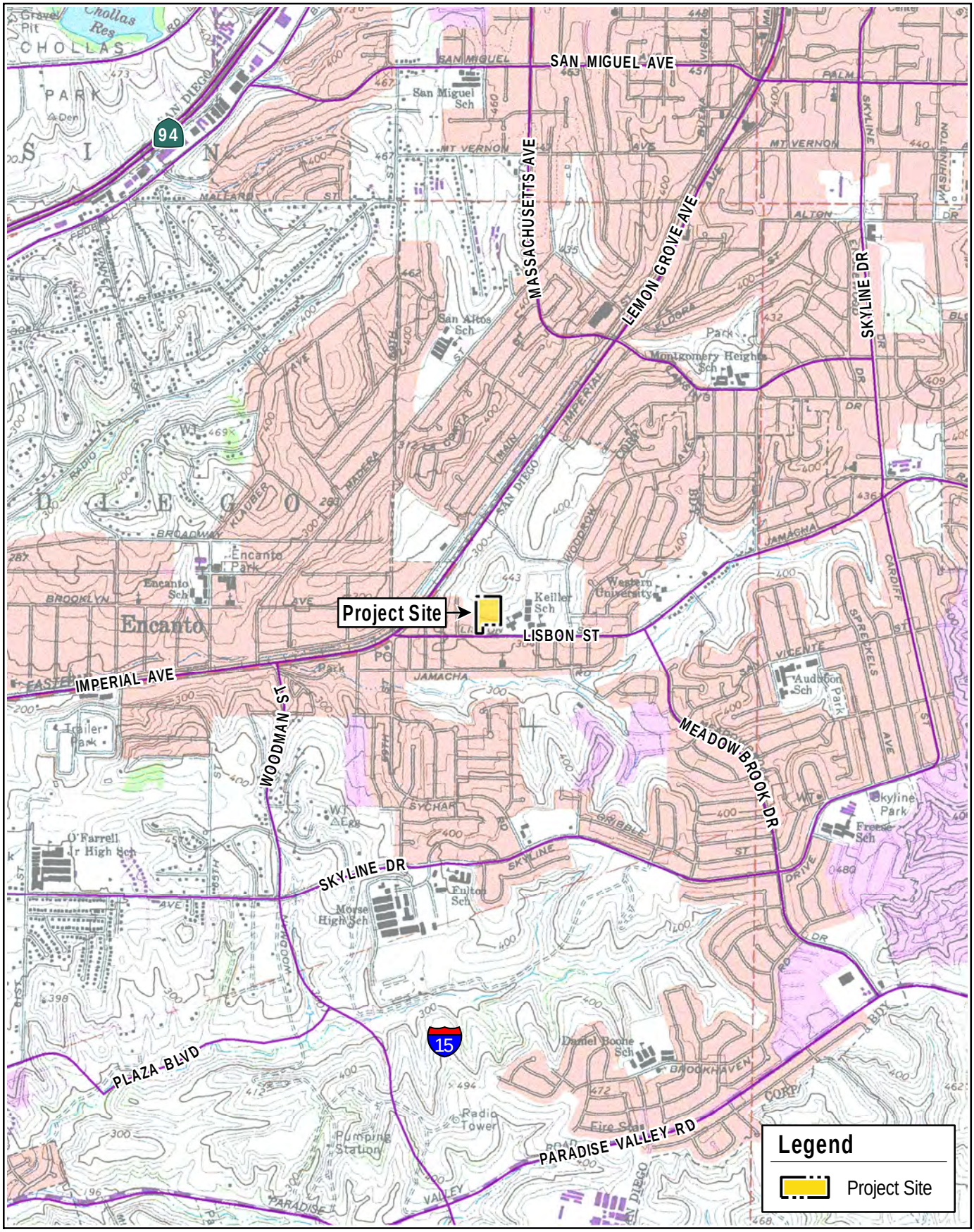
Miles 0 3 6

FIGURE 1

LISBON HEIGHTS

Source: County of San Diego SanGIS Database, 2018.

October 2018



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Vicinity Map

LISBON HEIGHTS

0 1,000 2,000 Feet

Source: Esri USGS Basemap, 2018.

FIGURE 2

October 2018

T:\Project_Data\Lisbon_Heights_1464\Final_Maps\BioReport_Oct2018\LH_Fig-03_AerialMap_100818.mxd

R·E·C Consultants, Inc.

Site Aerial

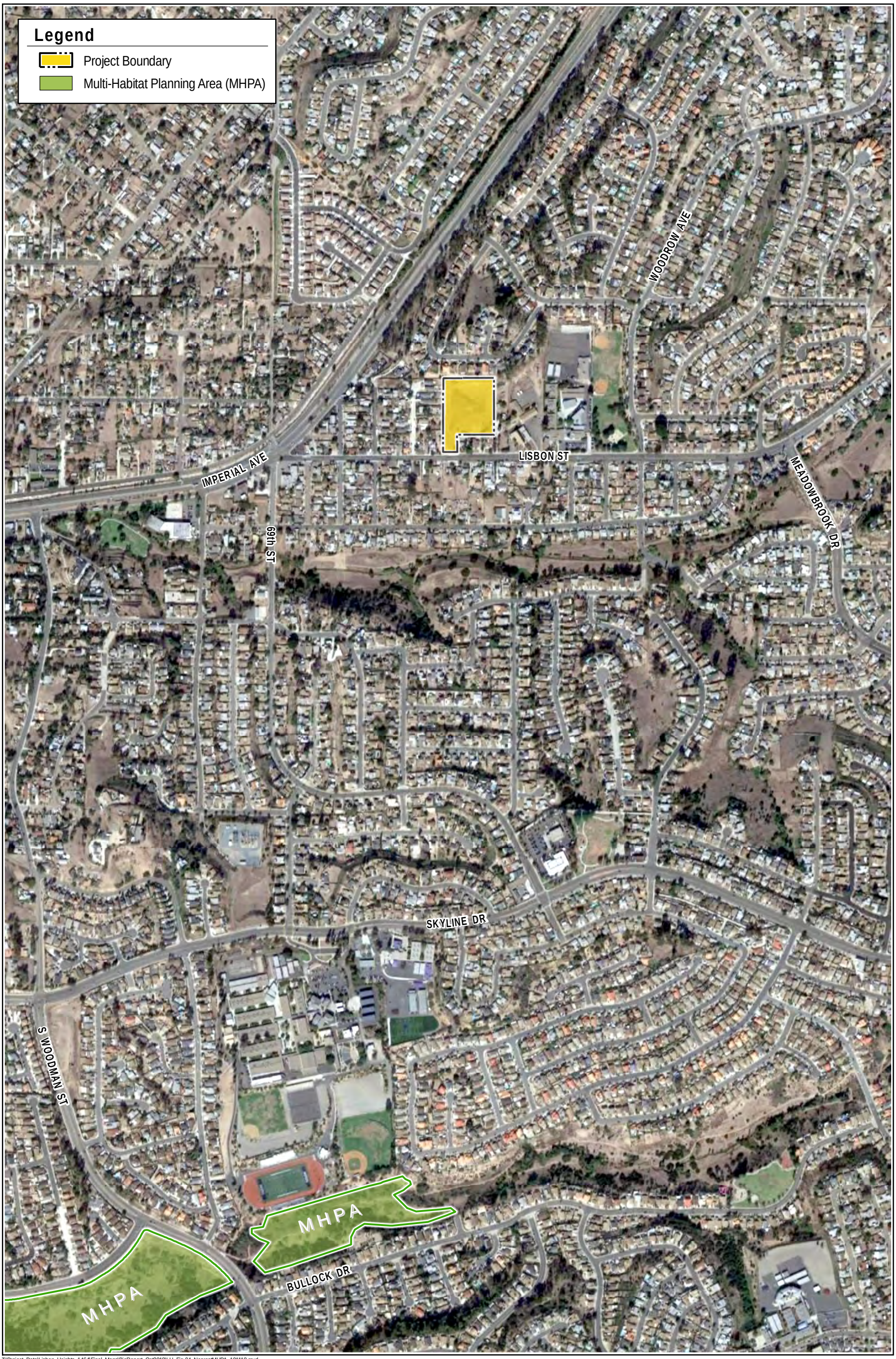
LISBON HEIGHTS

0 50 100 Feet

Source: Google, November 2016.

FIGURE 3

October 2018



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R·E·C Consultants, Inc.

Nearest MHPA Lands

LISBON HEIGHTS

0 330 660 Feet

Source: REC Biological Survey, October 2018.

FIGURE 4

October 2018

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R·E·C Consultants, Inc.

Biological Resources

LISBON HEIGHTS

Feet
0 30 60

Source: REC Biological Survey, October 2018.

FIGURE 5

October 2018

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R·E·C Consultants, Inc.

Photograph Locations

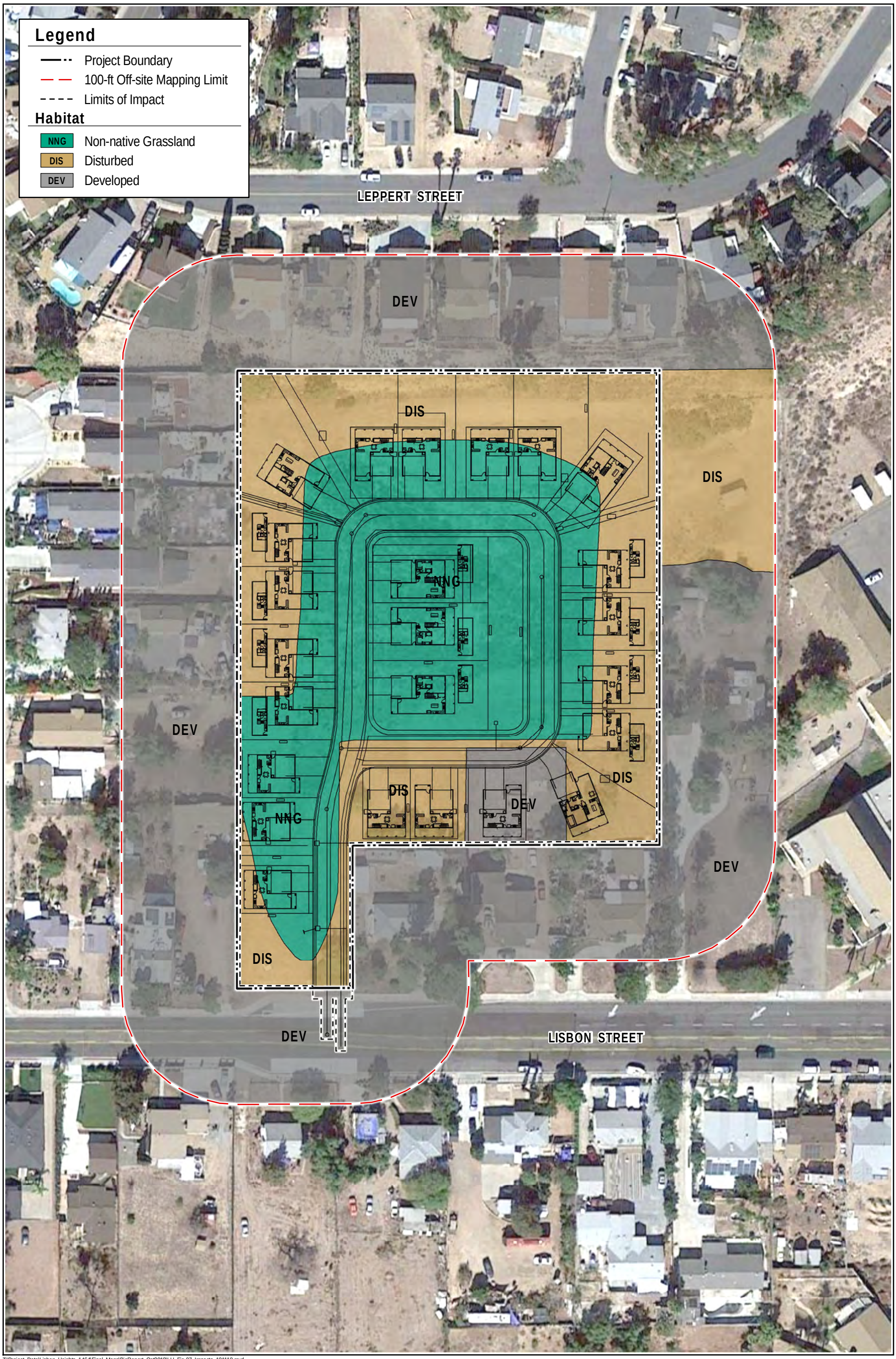
LISBON HEIGHTS

0 50 100 Feet

Source: Google Earth, November 2016.

FIGURE 6

October 2018



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REC Consultants, Inc.

Project Impacts

LISBON HEIGHTS

0 40 80 Feet

Source: REC Biological Survey, October 2018.

FIGURE 7

October 2018

R·E·C CIVIL ENGINEERING ENVIRONMENTAL LAND SURVEYING
Consultants, Inc.

Lee BenVau

FIELD BIOLOGIST

Education: Master of Science Degree in Biology, University of California San Diego, CA, 2014
Bachelor of Science in Ecology, Behavior and Evolution, University of California San Diego, CA, 2012

Professional Background: REC Consultants, Inc. – 2014 to present

Professional Experience:

Mr. BenVau's experience as a field biologist in the San Diego area includes habitat mapping, rare plant and animal surveys, habitat restoration, and biological report preparation. His area of expertise is entomology, and he has also participated in biological field surveys which included the identification of sensitive plants such as thread-leaved brodiaea (*Brodiaea filifolia*), southern tarplant (*Centromadia parryi* subsp. *australis*), and Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*), and sensitive animals such as burrowing owl (*Athene cunicularia*), coastal California gnatcatcher (*Polioptila c. californica*), western spadefoot (*Spea hammondii*), and least Bell's vireo (*Vireo bellii pusillus*). Research for his Master's thesis involved the study of European honey bees (*Apis mellifera*) infected with a microsporidian parasite (*Nosema ceranae*) associated with Colony Collapse Disorder and its interactions with the honey bee regulatory protein vitellogenin.

Specific Work Experience in the City of San Diego

Biological Surveys and Reports

- Canyon Hills Resource Park – General survey and habitat mapping of City-owned property containing coastal sage scrub, natural ephemeral drainages, California adolphia, San Diego desert woodrat, orange-throated whiptail, and California gnatcatcher.
- Genesee Highlands – General survey and habitat mapping of property containing coastal sage scrub, non-native grassland, and southern riparian woodland.
- Hopkins Street – General survey and habitat mapping of property containing coastal scrub, coastal sage scrub, and non-native riparian habitat with San Diego sunflower and coast barrel cactus; letter report.
- Roselle Street – General survey and habitat mapping of property containing coastal sage scrub, non-native grassland, and southern willow scrub with yellow-breasted chat and yellow warbler; letter report.
- Southwest Village Creek – General survey and habitat mapping of property containing coastal sage scrub.

Representative Focused Surveys

- Burrowing owl – Habitat assessments, protocol breeding season surveys, and reports. Continental Commerce Center
- Nesting birds – Northwest Village Creek

Representative Habitat and Sensitive Species Restoration Projects

Habitat restoration projects include qualitative and quantitative monitoring, annual reports, management of maintenance contractors, coordination with clients and permitting agencies, and recommending measures to bring projects to completion. Representative projects include:

- Avenida Magnifica – Coastal sage scrub restoration of City open space unintentionally intruded upon during development of homes.
- Chollas Creek Habitat Enhancement – Riparian habitat enhancement along a tributary to Chollas Creek.
- Northwest Village Creek – Riparian and upland habitat creation and enhancement along Chollas Creek.

Representative Construction Monitoring Experience

- Continental Commerce Center – Monitored work to ensure impacts to burrowing owls were avoided.
- Northwest Village Creek – Monitored vegetation removal and grading for Chollas Creek realignment and revegetation.
- River View Village – Monitored vegetation clearing in coastal sage scrub habitat for residential development.

Other Experience

2017 - Passed the recovery permit practical examination for Quino Checkerspot Butterfly

Publications

BenVau, L. R., & Nieh, J. C. (2017). Larval honey bees infected with *Nosema ceranae* have increased vitellogenin titers as young adults. *Scientific Reports, 7*(1), 14144.

ATTACHMENT B
Lisbon Heights Project Site Photographs, October 2018

1. Overview of site from north end, facing south

2. Overview of site from south end, facing north

ATTACHMENT B
Lisbon Heights Project Site Photographs, October 2018

3. View northeast of non-native grassland

4. View southwest of mowed/scraped disturbed land

ATTACHMENT C

SPECIAL-STATUS ANIMALS WITH THE POTENTIAL TO OCCUR ON THE LISBON HEIGHTS PROJECT SITE (USGS NATIONAL CITY QUAD, 96 - 115 METERS [315 - 380 FT] AMSL)				
Species Name	**Common Name**	**State/Federal Status**	**Habitat**	**Potential to Occur Onsite**
INVERTEBRATES				
Branchinecta sandiegonensis	San Diego fairy shrimp	-/FE	Vernal pools and other unvegetated ephemeral basins in Orange and San Diego Counties and Baja California. Habitat is typically < 30 cm deep and within 64 km of the Pacific Ocean. < 701 m.	Low; vernal pools or similar do not occur onsite.
Callophrys thornei (Mitoura t.)	Thorne's hairstreak	-/-	Otay Mountain; host plant is Hesperocyparis forbesii.	Low; site outside geographic range and host plant does not occur onsite.
Cicindela gabbii	western tidal-flat tiger beetle (Gabb's tidal-flat tiger beetle)	-/-	Dark-colored mud in the lower zone; occasionally found on dry saline flats of estuaries.	Low; suitable coastal habitat does not occur onsite.
Cicindela latesignata latesignata (C. l. obliviosa)	western beach tiger beetle (oblivious tiger beetle)	-/-	Coastal sea beaches, bays, estuaries, salt marshes, and alkali sloughs. Would be expected on salt flats only around estuaries etc., not inland. Possibly only extant in San Diego County.	Low; suitable coastal habitat does not occur onsite.
Danaus plexippus	monarch butterfly	-/-	Land with larval host plant, milkweed (Asclepias spp.), or nectar plants. Overwintering habitats limited to coastal conifer or eucalyptus groves.	Low; host plants, nectar plants, and/or suitable overwintering habitat do not occur onsite.
Euphydryas editha quino	Quino checkerspot butterfly	-/FE	Sunny openings within chaparral and coastal sage shrublands on hills and mesas. Larval host plants are primarily Plantago erecta and P. patagonica, but Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla may also be used.	Low; suitable habitat and host plants do not occur onsite.
Lycaena hermes	Hermes copper butterfly	-/FC	Southern mixed chaparral and coastal sage scrub; limited to western edge of Laguna Mountains. Host plant is Rhamnus crocea.	Low; site outside geographic range, suitable habitat does not occur onsite, and host plant does not occur onsite.

ATTACHMENT C

Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Streptocephalus woottoni	Riverside fairy shrimp	-/FE	Vernal pools in grassland and coastal sage scrub in western Riverside, Orange and San Diego Counties (Ramona area), and coastal SD County. Does not appear until later in the season; may require warmer water or longer inundation times than Branchinecta sandiegonensis.	Low; vernal pools or similar do not occur onsite.
AMPHIBIANS				
Anaxyrus californicus (Bufo microscaphus c.)	arroyo toad	SSC/FE	Washes, arroyos, sandy riverbanks, and riparian areas, especially with willows, cottonwoods and sycamores; needs exposed sandy streamsides with stable terraces for burrowing with scattered vegetation for shelter, and areas of quiet water or pools free of predatory fishes with sandy or gravel bottoms without silt for breeding. 0-900 m	Low; suitable aquatic habitat does not occur onsite.
Spea hammondii	western spadefoot	SSC/-	Grassland, also valley-foothill hardwood woodlands. Vernal pools essential for breeding and egg-laying. Activity limited to wet season, summer storms or during evenings with elevated substrate moisture levels; stays below ground in dry/cold weather. Nocturnal. Extirpated throughout much of lowland southern California.	Low; vernal pools or similar do not occur onsite.
REPTILES				
Acinemys pallida (Emys marmorata, Clemmys m. p.)	western pond turtle	SSC/-	Permanent waters with aquatic vegetation; can occur in urban conditions and brackish water. Nests in sand or grassy open fields up to 0.5 km from water. < 1850 m	Low; suitable aquatic habitat does not occur onsite.
Arizona elegans occidentalis	California glossy snake	SSC/-	Various scrub and grassland habitats, often with loose or sandy soils; Peninsular Ranges.	Low; suitable habitat does not occur onsite.
Aspidoscelis hyperythra (beldingi) (A. hyperythrus b.)	orange-throated whiptail (Belding's)	WL/-	Low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats; prefers sandy areas with perennial plants that support termites.	Low; suitable habitat does not occur onsite.

ATTACHMENT C

Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Aspidoscelis tigris stejnegeri	coastal whiptail	SSC/-	Found in hot, dry open areas with sparse vegetation; also woodland and riparian areas mostly west of the Peninsular Ranges; ground may be firm soil, sandy, or rocky.	Low; suitable habitat does not occur onsite.
Chelonia mydas	green sea turtle	-/FT	Marine. Adults are tropical, juveniles range into temperate waters. May rest on bottom in winter in the northern Gulf of California. Feeds on seagrasses and algae.	Low; suitable aquatic habitat does not occur onsite.
Coluber fuliginosus	Baja California coachwhip	SSC/-	Openings in grassland and coastal sage scrub; southern San Diego County.	Low; suitable habitat does not occur onsite.
Crotalus ruber	red-diamond rattlesnake	SSC/-	Coastal San Diego County to the eastern slopes of Peninsular Ranges in coastal sage scrub, mixed chaparral, open grassy areas and agricultural areas, chamise chaparral, pinon juniper and desert scrub. Most common in the western foothills of the Peninsular Ranges and in dry rocky inland valleys; associated with granite rock outcroppings, especially in winter. 0-1500 m (typically < 1200m)	Low; suitable habitat does not occur onsite.
Diadophis punctatus similis	San Diego ringneck snake	-/-	Moist habitats including wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests, and woodlands, along coast into Peninsular Ranges. Prefer areas with surface litter or herbaceous vegetation. Often found near abandoned buildings and junk piles in wooded areas. Generally hidden during the day. May not be distinct from San Bernardino subspecies (D. p. modestus), which is also special-status.	Low; site lacks sufficient cover and moisture.

ATTACHMENT C

Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Phrynosoma blainvillii (P. coronatum b.)	coast horned lizard	SSC/-	Coastal scrub, chaparral, grassland, cismontane woodland, riparian scrub and woodland; most common in lowlands along sandy washes with scattered low shrubs. Prefers open areas for sunning with loose soil for burial and native harvester ant colonies (few or no Argentine ants).	Low; suitable habitat does not occur onsite.
Plestiodon skiltonianus interparietalis (Eumeces s. i.)	Coronado skink	WL/-	Rocky areas and dry hillsides in coastal sage scrub, grassland, chaparral, pinyon-juniper woodland, open pine or oak woods, near streams; digs burrows in soil.	Low; suitable habitat does not occur onsite.
Salvadora hexalepis virgultea	coast patch-nosed snake	SSC/-	Chaparral, coastal sage scrub, and other brushy vegetation west of desert, near rock outcrops with adjacent seasonal drainages; require small mammal burrows for refuge and overwintering.	Low; suitable habitat does not occur onsite.
Thamnophis hammondii	two-striped gartersnake	SSC/-	In or near permanent fresh water, often along streams with rocky beds bordered by willows and other riparian vegetation, also desert oases and sometimes vernal pools. 0-2100 m.	Low; suitable aquatic habitat does not occur onsite.
BIRDS				
Accipiter cooperii	Cooper's hawk	WL/-	Open riparian cottonwood and sycamore, oak, and eucalyptus woodland and other open forested areas. Nests in second-growth conifer stands, live oaks or deciduous riparian areas. Forages in openings near forested areas. Similar winter habitat, but open woodlands and fields may be used more. 150-915 m	Low; suitable habitat does not occur onsite or nearby.

ATTACHMENT C

Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Agelaius tricolor	tricolored blackbird	SCE, SSC/-	Highly colonial; require open water, protected nesting substrate, and foraging area with insect prey within a few km of colony. Breed and nest in freshwater marshes with emergent vegetation but also in thickets of willow, blackberry, wild rose, tall herbs. In migration and winter inhabit open cultivated lands and pastures as well as marshes. 0-150 m and 300-915 m	Low; suitable habitat does not occur onsite or nearby.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	WL/-	Steep, moderately vegetated slopes of coastal sage scrub dominated by Artemisia californica but also coastal bluff scrub and chaparral. Nest on the ground at the base of rocks, grass tufts, or saplings, or slightly above ground in the branches of shrubs or trees. 0-915 m	Low; suitable habitat does not occur onsite or nearby.
Ammodramus savannarum	grasshopper sparrow	SSC/-	Dense grasslands on rolling hills, lowland plains, in valleys and hillsides on lower mountain slopes. Favors native grasslands with mix of grasses, forbs and scattered shrubs. Difficult to identify except when singing (Mar-Jul).	Low; suitable habitat does not occur onsite or nearby.
Aquila chrysaetos	golden eagle	FP, WL/-	Rolling foothills, mountain areas, sage-juniper flats, desert with sufficient mammalian prey base and near suitable nesting sites. Nest on rock ledges of cliffs but sometimes in large trees (e.g., oak or eucalyptus), on steep hillsides, or on the ground. 0-915 m.	Low; suitable habitat does not occur onsite or nearby.
Artemisiospiza belli belli (Amphispiza b. b.)	Bell's sage sparrow	WL/-	Year-round resident in open chamise chaparral and sage scrub, especially recently burned areas or on gabbro substrate; most common in central southern SD County; very sensitive to habitat fragmentation.	Low; suitable habitat does not occur onsite or nearby.

ATTACHMENT C

Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Athene cunicularia	burrowing owl	SSC/-	Open, dry annual or perennial grasslands, deserts & scrublands with low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, especially California ground squirrel.	Low; marginally suitable habitat occurs onsite but only one occurrence from 1895 is documented near site.
Buteo swainsoni	Swainson's hawk	ST/-	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. Relatively tolerant of human activity. 0-150 m	Low; suitable habitat does not occur onsite or nearby.
Campylorhynchus brunneicapillus sandiegensis	coastal cactus wren	SSC/-	Open coastal sage scrub with thickets of chollas (Cylindropuntia sp.), south- and west-facing slopes below 460 m, usually within 400 m of river valleys, also hillsides in tributary canyons, along washes, and in very open woodland of coast live oak and California sycamore.	Low; suitable habitat does not occur onsite or nearby.
Charadrius nivosus (C. alexandrinus n.)	western snowy plover	SSC/FT	Immediate coast at scattered beach, bay and lagoon locations; nests on beaches, dunes and salt flats.	Low; suitable coastal habitat does not occur onsite.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	SE/FT	Forests, woodland, and scrub. Breeds in deciduous riparian woodland, especially dense stands of cottonwood and willow, sometimes mesquite and tamarisk. Dense riparian understory foliage important for nesting (e.g. blackberry, nettles, wild grape), and cottonwood important for foraging habitat.	Low; suitable riparian habitat does not occur onsite or nearby.
Elanus leucurus (E. caeruleus)	white-tailed kite	FP/-	Widespread over coastal slope, prefers riparian woodlands, oak groves, or sycamore groves adjacent to grassland; feeds almost exclusively on California vole.	Low; suitable habitat does not occur onsite or nearby.

ATTACHMENT C

Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Empidonax traillii extimus	southwestern willow flycatcher	SE/FE	Riparian and wetland thickets of willow or tamarisk, does not need to be extensive. Nests in trees or shrubs with dense vegetation. Forages within and occasionally above dense riparian vegetation. Present in California from late April to September.	Low; suitable riparian habitat does not occur onsite or nearby.
Eremophila alpestris actia	California horned lark	WL/-	Open patches of bare land alternating with low vegetation in grasslands, montane meadows, sagebrush and open coastal plains, fallow grain fields, and alkali flats. Tolerant of disturbance, but sensitive to habitat fragmentation.	Low; marginally suitable habitat occurs onsite but is small and surrounded by development.
Falco mexicanus	prairie falcon	WL/-	Dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forage far afield, even to marshlands and ocean shores. Depend on horned larks and grassland species in general for prey. 0 to over 3000 ft	Low; marginally suitable foraging habitat occurs onsite but site is too small to support raptor foraging.
Icteria virens	yellow-breasted chat	SSC/-	Summer visitor in dense riparian woodland. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground. Most common in coastal lowland, strongly concentrated in NW corner of County; usually return to SD second week in April and start to leave by early August.	Low; suitable riparian habitat does not occur onsite or nearby.
Ixobrychus exilis	least bittern	SSC/-	Nest colonially in dense, tall growths of emergent vegetation (e.g. cattail, sedge, bulrush, or common reed) interspersed with some woody vegetation and open, fresh or brackish water.	Low; suitable aquatic habitat does not occur onsite.
Laterallus jamaicensis coturniculus	California black rail	ST, FP/-	Freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Low; suitable aquatic habitat does not occur onsite.

ATTACHMENT C

Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Passerculus guttatus beldingi (P. sandwichensis b.)	Belding's savannah sparrow	SE/-	Coastal salt marshes. Nests on the ground in natural depression or scrape, primarily in pickleweed (Salicornia virginica) habitat at the higher levels of the marsh, above the reach of the highest spring tides.	Low; suitable coastal habitat does not occur onsite.
Phalacrocorax auritus	double-crested cormorant	WL/-	Lakes, ponds, rivers, lagoons, swamps, coastal bays, marine islands, and seacoasts; usually within sight of land. Colonial nester, nests on the ground or in trees near freshwater or on coastal cliffs with good visibility. 0-150 m	Low; suitable aquatic habitat does not occur onsite.
Polioptila californica californica	coastal California gnatcatcher	SSC/FT	Obligate, permanent resident of coastal sage scrub especially where Artemisia californica dominates; up to 915 m but 90% at 305 m or lower.	Low; suitable habitat does not occur onsite.
Rallus obsoletus levipes (R. longirostris l.)	light-footed Ridgway's rail (light-footed clapper rail)	SE, FP/FE	Year-round resident in coastal salt marsh dominated by cordgrass and pickleweed, and also known at three freshwater sites in SD County.	Low; suitable coastal habitat does not occur onsite.
Setophaga aestiva (Dendroica petechia brewsteri, S. p.)	yellow warbler	SSC/-	Riparian forest/scrub/woodlands in close proximity to water. Nest and forage in willow shrubs and thickets, and in other riparian plants including cottonwoods and sycamores. In migration and winter, often occur in open woodland, agicultural lands, brushy areas, and forest edges.	Low; suitable riparian habitat does not occur onsite or nearby.
Sternula antillarum browni	California least tern	SE, FP/FE	Coastal; nest colonially up to 4 mi inland on bare or sparsely vegetated sand beaches, alkali flats, land fills, paved areas. Usually nest in same area in successive years; tend to return to natal site to nest.	Low; suitable coastal habitat does not occur onsite.

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Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Vireo bellii pusillus	least Bell's vireo	SE/FE	Summer resident in riparian vegetation along rivers and larger creeks, also dry river bottoms, with both riparian canopy and a somewhat dense or shrubby understory for nesting. 0-610 m	Low; suitable riparian habitat does not occur onsite or nearby.
MAMMALS				
Antrozous pallidus	pallid bat	SSC/-	Coastal sage scrub, mixed chaparral, oak woodlands, chamise chaparral, desert wash and desert scrub; often near rocky outcrops and water. May forage over agricultural lands, but is largely absent from urban and suburban areas.	Low; suitable habitat does not occur onsite.
Chaetodipus californicus femoralis	Dulzura pocket mouse	SSC/-	Gravelly substrates in or near chaparral, to a lesser extent in coastal sage scrub, oak woodland, and edge of grassland. More abundant on steeper slopes and increasing cover of scrub oak and Ceanothus.	Low; suitable habitat does not occur onsite.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	SSC/-	Loose sandy soil to gravel to mixed rock on moderate to steep slopes with open shrubland, also grassland (negligible in chaparral and woodland). On coast and urban canyons, also up to at least 1000 m on shrubby slopes. Extirpated from urbanized habitat and most small fragments of natural habitat.	Low; suitable habitat does not occur onsite.
Choeronycteris mexicana	Mexican long-tongued bat	SSC/-	Arid habitats throughout range, urban and suburban areas in SD County. Roost in relatively well-lit caves but also crevices and man-made structures . Feed on pollen and nectar, especially of agaves and columnar cacti, and will visit hummingbird feeders. Seen in fall and winter, presumed to not breed in CA, San Diego on periphery of range. 0-500 m.	Low; suitable habitat does not occur onsite.

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Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Corynorhinus townsendii	Townsend's big-eared bat	SSC/-	Obligate cave-roosting species, no preference for particular vegetation community. Also use mines, buildings, and bridges that offer cave-like situations. Forage in mosaic of forested and edge habitats, including riparian; avoid open areas. Sensitive to human disturbance, presumed absent from coastal locations.	Low; suitable habitat does not occur onsite.
Eumops perotis californicus	western mastiff bat	SSC/-	Strongly associated with roosting habitat: steep rocky cliffs, rock quarries, large granitic boulders and occasionally large buildings. Flies long distances and can be found foraging in coastal and desert scrub, riparian, oak woodlands, open grasslands, openings in montane pine forests, and over open water.	Low; suitable habitat does not occur onsite.
Lasiurus blossevillii	western red bat	SSC/-	Low-elevation wooded habitats. Associated with riparian trees but also eucalyptus and tamarisk as well as orchards. Forage along rivers and streams but also forested meadow edges and sometimes parks in urban or suburban areas.	Low; suitable habitat does not occur onsite.
Lasiurus xanthinus	western yellow bat	SSC/-	Roost in "skirts" of dead palm fronds, strongly associated with groves of California fan palm, particularly with open surface water. Has expanded range to use non-native palms in coastal suburban areas with artificial water sources.	Low; suitable habitat does not occur onsite.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	SSC/-	Prefers grasslands or open areas with patches of scrub of varying densities, generally absent in chaparral with closed canopy.	Low; suitable habitat does not occur onsite.

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Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Myotis ciliolabrum	western small-footed myotis	-/-	Desert, badland, semiarid and mesic habitats, open stands in forests and woodlands. Requires drinking water. In summer, roost in rock crevices, caves, tunnels, under boulders, beneath loose bark, or in buildings. Hibernate in caves or mines. Maternity colonies often are in abandoned houses, barns, or similar structures.	Low; suitable habitat does not occur onsite.
Myotis evotis	long-eared myotis	-/-	Brush, woodland and forest habitats; prefers coniferous woodlands and forests. Roost in buildings, hollow trees, mines, caves and fissures. Feeds on insects over open water. 0-2750 m	Low; suitable habitat does not occur onsite.
Myotis yumanensis	Yuma myotis	-/-	Diverse vegetation and habitat types but most closely associated with rivers, creeks, ponds, and reservoirs. Roost in crevices, cavities, and buildings-especially those associated with water such as bridges and dams. Will also roost in live trees in suburban landscapes. Forages over open water, rivers and streams, as well as oak woodlands and native scrublands. Most common bat in SD County. < 1650 m.	Moderate; marginally suitable habitat occurs onsite and nearby and would not have been detectable during survey.
Neotoma bryanti intermedia (N. lepida i.)	San Diego desert woodrat	SSC/-	Coastal sage scrub and chamise chaparral to pinyon-juniper woodland (but not coniferous forest). Associated with large exposures of boulder outcrops. Houses most commonly constructed under ledges, in crevices, or within rock piles, but also at base of juniper, ceanothus, creosote bush, yucca, and clumps of prickly-pear or cholla. Nocturnal. 180-1500 m.	Low; suitable habitat does not occur onsite.
Nyctinomops femorosaccus	pocketed free-tailed bat	SSC/-	Closely associated with roosting habitat: vertical cliffs, quarries, rocky outcrops. Does not favor any particular vegetation community for foraging.	Low; suitable habitat does not occur onsite.

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Species Name	Common Name	State/Federal Status	Habitat	Potential to Occur Onsite
Nyctinomops macrotis	big free-tailed bat	SSC/-	Closely associated with roosting habitat: vertical cliffs, quarries, rocky outcrops, and occasionally tall buildings. Associated with coastal and desert scrub, evergreen forests, riparian, and montane woodlands. Forages over diverse habitats long distances from roosts.	Low; suitable habitat does not occur onsite.
Taxidea taxus	American badger	SSC/-	Persists mainly in large blocks of undeveloped land, avoids urbanization. Prefers grasslands, alluvial fans, meadows, desert, and other open areas. Requires friable soils, primarily consumes rodents. < 3600 m.	Low; suitable habitat does not occur onsite.

Listing Designations

Federal Listing (USFWS 2015, CDFW 2015)
FE - Federal-listed Endangered
FT - Federal-listed Threatened
FC - Federal candidate for listing

State Listing (CDFW 2015, 2015)
SE - State-listed Endangered
ST - State-listed Threatened
STC - State Threatened Candidate
SEC - State Endangered Candidate
FP - CA Dept. of Fish and Wildlife Fully Protected
SSC - State Species of Special Concern

Cnty NE - an X in this column indicates the species is considered a Narrow Endemic by the County of San Diego (MSCP County of San Diego Subarea Plan 1997)

Cnty Group - County of San Diego Sensitive Animal Group (County of San Diego 2010)
1 - County of SD Sensitive Animal List Group 1
2 - County of SD Sensitive Animal List Group 2

MSCP - an X in this column indicates the species is included in the Multiple Species Conservation Program (MSCP Plan 1998)
ECPC - an X in this column indicates the species is proposed covered under in-process East County Multiple Species Conservation Program
NCPC - an X in this column indicates the species is proposed covered under in-process North County Multiple Species Conservation Program

MHCP NE - an X in this column indicates the species is considered a Narrow Endemic by the Multiple Habitat Conservation Plan for the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista (Final MHCP Vol. II 2003)

MSHCP - an X in this column indicates the species is included in the Multiple Species Habitat Conservation Program for Western Riverside County (Final MSHCP 2003)

ATTACHMENT D

SPECIAL-STATUS PLANTS WITH THE POTENTIAL TO OCCUR ON THE LISBON HEIGHTS PROJECT SITE (USGS NATIONAL CITY QUAD, 96 - 115 METERS [315 - 380 FT] AMSL)								
Species Name	**Common Name**	**Family**	**CRPR**	**State/ Federal**	**City NE**	**Growth form, bloom time**	**Habitat**	**Potential to Occur Onsite**
Acanthomintha ilicifolia	San Diego thorn-mint	Lamiaceae	1B.1	SE/FT	X	Annual herb, Apr-Jun	Chaparral, coastal scrub, valley and foothill grassland, vernal pools. Endemic to active vertisol clay soils of mesas & valleys. Usually on clay lenses within grassland or chaparral communities. 10-960 m.	Low; suitable habitat and soils do not occur onsite.
Acmispon prostratus (Lotus nuttallianus)	Nuttall's acmispon (Nuttall's lotus)	Fabaceae	1B.1	-/-	-	Annual herb, Mar-Jun (Jul)	Coastal dunes, sandy coastal scrub. 0-18 m.	Low; suitable habitat does not occur onsite.
Adolphia californica	California adolphia	Rhamnaceae	2B.1	-/-	-	Shrub (deciduous), Dec-May	From sandy/gravelly to clay soils within grassland, coastal sage scrub, or chaparral; various exposures. 45-740 m.	Low; suitable habitat and soils do not occur onsite; would have been detectable and was not observed.
Agave shawii var. shawii	Shaw's agave	Agavaceae	2B.1	-/-	X	Perennial (leaf succulent), Sep-May	Coastal bluffs and slopes within coastal sage scrub. 10-120 m.	Low; suitable habitat and soils do not occur onsite; would have been detectable and was not observed.
Ambrosia chenopodiifolia	San Diego bur-sage	Asteraceae	2B.1	-/-	-	Shrub, Apr-Jun	Slopes of canyons in open succulent scrub, especially maritime suculent scrub, usually with little herbaceous cover. 55-155 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Ambrosia monogyra (Hymenoclea m.)	singlewhorl burrobrush	Asteraceae	2B.2	-/-	-	Shrub, Aug-Nov	Sandy or rocky soils in sage scrub, chaparral and Sonoran desert scrub. 10-500 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Ambrosia pumila	San Diego ambrosia	Asteraceae	1B.1	-/FE	X	Perennial herb (rhizomatous), Apr-Oct	Sandy loam or clay soil, sometimes alkaline, in chaparral, coastal scrub, valley and foothill grassland. Sometimes on margins or near vernal pools. 3-580 m.	Low; suitable habitat does not occur onsite.
Aphanisma blitoides	aphanisma	Chenopodiaceae	1B.2	-/-	X	Annual herb, Feb-Jun	Sandy or clay soils in coastal bluff scrub, coastal dunes, coastal scrub. 3-305 m.	Low; suitable habitat does not occur onsite.
Aphyllon parishii subsp. brachylobum (Orobanche p. subsp. brachyloba)	short-lobe orobanche	Orobanchaceae	4.2	-/-	-	Perennial herb (parasitic), Apr-Oct	Sandy coastal bluff scrub, coastal dunes, coastal scrub; parasitic on shrubs, generally Isocoma menziesii. 3-305 m.	Low; suitable habitat does not occur onsite.
Arctostaphylos glandulosa subsp. crassifolia	Del Mar manzanita	Ericaceae	1B.1	-/FE	-	Shrub (evergreen), Dec-Jun	Chaparral on sandy coastal mesas and ocean bluffs. 30-365 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Arctostaphylos otayensis	Otay manzanita	Ericaceae	1B.2	-/-	-	Shrub (evergreen), Jan-Apr	Metavolcanic soils in chaparral, cismontane woodland. 75-1040 m.	Low; suitable habitat and soils do not occur onsite.
Artemisia palmeri	San Diego sagewort	Asteraceae	4.2	-/-	-	Biennial to perennial herb to subshrub, (Feb) May-Sep	Drainages and riparian areas in sandy soil within chaparral, coastal scrub, riparian forest, riparian woodland and riparian scrub. 15-915 m.	Low; suitable habitat does not occur onsite.
Asplenium vespertinum	western spleenwort	Aspleniaceae	4.2	-/-	-	Perennial herb (rhizomatous), Feb-Jun	Under overhanging rocks in rocky chaparral, cismontane woodland, coastal scrub. 180-1000 m.	Low; suitable habitat does not occur onsite.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Astragalus deanei	Deane's milk-vetch	Fabaceae	1B.1	-/-	-	Perennial herb, Feb-May	Chaparral, cismontane woodland, coastal scrub, riparian forest. Open, brushy south-facing slopes in Diegan coastal sage scrub, sometimes on recently burned-over hillsides. 75-695 m	Low; suitable habitat does not occur onsite.
Astragalus tener var. titi	coastal dune milkvetch	Fabaceae	1B.1	SE/FE	X	Annual herb, Mar-May	Moist, sandy depressions of bluffs or dunes in coastal bluff scrub, coastal dunes, coastal prairie. 1-45 m.	Low; suitable habitat does not occur onsite.
Atriplex coulteri	Coulter's saltbush	Chenopodiaceae	1B.2	-/-	-	Perennial herb, Mar-Oct	Alkaline or clay soils in coastal bluff scrub, coastal dunes, coastal scrub, valley & foothill grassland, also ridgetops and alkaline low places. 2-460 m.	Low; suitable habitat and soils do not occur onsite.
Atriplex pacifica	south coast saltscale	Chenopodiaceae	1B.2	-/-	-	Annual herb, Mar-Oct	Alkali soils in coastal bluff scrub, coastal dunes, coastal scrub, playas. 1-400 m.	Low; suitable habitat does not occur onsite.
Baccharis vanessae	Encinitas baccharis	Asteraceae	1B.1	SE/FT	X	Shrub (deciduous), Aug-Nov	Steep, open, rocky areas with sandstone soils in maritime chaparral, cismontane woodland. 40-855 m.	Low; suitable habitat does not occur onsite; site outside known geographic range; would have been detectable and was not observed.
Bahiopsis laciniata (Viguiera l.)	San Diego sunflower (San Diego County viguiera)	Asteraceae	4.3	-/-	-	Shrub, Feb-Jun (Aug)	Slopes and ridges in chaparral and coastal scrub. 60-750 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Bergerocactus emoryi	golden-spined cereus	Cactaceae	2B.2	-/-	-	Perennial (stem succulent), May-Jun	Sandy soils in chaparral, closed-cone coniferous forest, coastal scrub; coastal only. 3-395 m.	Low; suitable habitat does not occur onsite.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Bloomeria clevelandii (Muilla c.)	San Diego goldenstar	Themidaceae	1B.1	-/-	-	Perennial herb (bulbiferous), Apr-May	Clay soil in chaparral, coastal scrub, valley & foothill grassland. Often on mounds between vernal pools in fine, sandy loam. 50-465 m.	Low; suitable habitat and soils do not occur onsite.
Brodiaea orcuttii	Orcutt's brodiaea	Themidaceae	1B.1	-/-	-	Perennial herb (deciduous, bulbiferous), May-Jul	Mesic, clay, sometimes serpentine soils in closed-cone coniferous forest, chaparral, cismontane woodland, meadows & seeps, valley & foothill grassland. Usually in vernal pools and small drainages. 30-1695 m.	Low; suitable habitat and soils do not occur onsite.
Calochortus dunnii	Dunn's mariposa lily	Liliaceae	1B.2	SR/-	-	Perennial herb (bulbiferous), (Feb)Apr-Jun	Gabbroic or metavolcanic soil, sometimes sandstone, in closed-cone coniferous forest, chaparral, valley & foothill grassland. 255-1655 m.	Low; suitable habitat and soils do not occur onsite.
Camissoniopsis lewisii (Camissonia l.)	Lewis's evening-primrose	Onagraceae	3	-/-	-	Annual herb, Mar-May (Jun)	Sandy or clay soil in cismontane woodland, coastal bluff scrub, coastal dunes, coastal scrub, valley & foothill grassland. 0-300 m.	Low; suitable habitat does not occur onsite.
Ceanothus cyaneus	Lakeside ceanothus	Rhamnaceae	1B.2	-/-	-	Shrub (evergreen), Apr-Jun	Closed-cone coniferous forest, chaparral. 200-1040 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Ceanothus otayensis	Otay Mountain ceanothus	Rhamnaceae	1B.2	-/-	-	Shrub (evergreen), Jan-Apr	Metavolcanic or gabbroic soils in chaparral. 75-1160 m.	Low; suitable habitat and soils do not occur onsite; would have been detectable and was not observed.
Ceanothus verrucosus	wart-stemmed ceanothus	Rhamnaceae	2B.2	-/-	-	Shrub (evergreen), Dec-May	Southern maritime chaparral and nearby chaparral, rocky slopes. 1-380 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Centromadia pungens subsp. laevis	smooth tarplant	Asteraceae	1B.1	-/-	-	Annual herb, Apr-Sep	Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, valley & foothill grassland, disturbed areas. 5-1170 m.	Low; suitable habitat and soils do not occur onsite; outside known geographic range.
Chaenactis glabriuscula var. orcuttiana	Orcutt's pincushion	Asteraceae	1B.1	-/-	-	Annual herb, Jan-Aug	Sandy coastal bluff scrub, coastal dunes. 0-100 m.	Low; suitable habitat does not occur onsite.
Chamaebatia australis	southern mountain misery	Rosaceae	4.2	-/-	-	Shrub (evergreen), Nov-May	Gabbroic or metavolcanic chaparral. 300-1020 m.	Low; suitable habitat and soils do not occur onsite; would have been detectable and was not observed.
Chloropyron maritimum subsp. maritimum (Cordylanthus maritimus subsp. m.)	salt marsh bird's beak	Orobanchaceae	1B.2	SE/FE	-	Annual herb (hemiparasitic), May-Oct (Nov)	Limited to the higher zones of salt marsh habitat. 0-10 m.	Low; suitable habitat does not occur onsite.
Chorizanthe orcuttiana	Orcutt's spineflower	Polygonaceae	1B.1	SE/FE	-	Annual herb, Mar-May	Sandy openings in maritime chaparral, closed-cone coniferous forest, and coastal scrub. 3-125 m.	Low; suitable habitat does not occur onsite.
Chorizanthe polygonoides var. longispina	long-spined spineflower	Polygonaceae	1B.2	-/-	-	Annual herb, Apr-Jul	Gabbroic clay soils in chaparral, coastal scrub, meadows & seeps, valley & foothill grassland, near vernal pools. 30-1530 m.	Low; suitable habitat and soils do not occur onsite.
Clarkia delicata	delicate clarkia, Campo clarkia	Onagraceae	1B.2	-/-	-	Annual herb, Apr-Jun	Often gabbroic soil in chaparral, cismontane woodland. 95-1800 m.	Low; suitable habitat and soils do not occur onsite.
Clinopodium chandleri (Satureja c.)	San Miguel savory	Lamiaceae	1B.2	-/-	-	Shrub, Mar-Jul	Rocky, gabbroic or metavolcanic soils in chaparral, cismontane woodland, coastal scrub, riparian woodland, valley & foothill grassland. 120-1075 m.	Low; suitable habitat and soils do not occur onsite; would have been detectable and was not observed.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Comarostaphylis diversifolia subsp. diversifolia	summer-holly	Ericaceae	1B.2	-/-	-	Shrub (evergreen), Apr-Jun	Chaparral (often mixed, sometimes post-burn), cismontane woodland. 30-945 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	4.2	-/-	-	Annual herb, Mar-Jul	Wet clay and serpentine ridges in chaparral openings, coastal scrub, valley & foothill grassland. 30-700 m.	Low; suitable habitat and soils do not occur onsite.
Corethrogyne filaginifolia var. incana (no varieties recognized in TJM2)	San Diego sand aster	Asteraceae	1B.1	-/-	-	Perennial herb, Jun-Sep	Sandstone or sandy soils in chaparral, coastal bluff scrub, coastal scrub, possibly disturbed sites and ecotones. 35-275 m.	Low; suitable habitat does not occur onsite.
Cylindropuntia californica var. californica (Opuntia parryi var. serpentina)	snake cholla	Cactaceae	1B.1	-/-	X	Shrub (stem succulent), Apr-May	Coastal chaparral, coastal sage scrub. 30-150 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Deinandra conjugens (Hemizonia c.)	Otay tarplant	Asteraceae	1B.1	SE/FT	X	Annual herb, (Apr)May-Jun	Clay soils in coastal plains, coastal scrub, mesas, river bottoms, valley & foothill grassland; often in open disturbed areas. 60-275 m.	Low; suitable soils do not occur onsite.
Deinandra floribunda (Hemizonia f.)	Tecate tarplant	Asteraceae	1B.2	-/-	-	Annual herb, Aug-Oct	Chaparral, coastal scrub, often in small drainages or disturbed areas. 150-1325 m.	Low; marginally suitable habitat occurs onsite but site is outside known geographic range.
Deinandra paniculata (Hemizonia p.)	San Diego tarplant, paniculate tarplant	Asteraceae	4.2	-/-	-	Annual herb, (Mar)Apr-Nov	Usually vernally mesic sites in coastal scrub and valley and foothill grassland; sometimes vernal pools or nearby mima mounds. 25-940 m.	Low; marginally suitable habitat occurs onsite but only two nearby records are from 1917 and 1936 (Jepson eFlora).

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Dichondra occidentalis	western dichondra, western ponyfoot	Convolvulaceae	4.2	-/-	-	Perennial herb (rhizomatous), (Jan)Mar-Jul	Sandy loam, clay and rocky soils in chaparral, cismontane woodland, coastal scrub, valley & foothill grassland. 50-500 m.	Low; suitable habitat and soils do not occur onsite.
Dicranostegia orcuttiana (Cordylanthus orcuttianus)	Orcutt's bird's beak	Orobanchaceae	2B.1	-/-	-	Annual herb (hemiparasitic), (Mar)Apr-Jul(Sep)	Coastal scrub associations on slopes; also reported from intermittently moist swales, and in washes. 0-200 m	Low; suitable habitat does not occur onsite.
Dudleya attenuata subsp. attenuata (D. a. subsp. orcuttii)	Orcutt's dudleya	Crassulaceae	2B.1	-/-	-	Perennial herb, May-Jul	Rocky mesas, canyons and ridges in coastal scrub, coastal bluff scrub, chaparral. Only known from Border Field State Park and Lichty Mesa, near US-Mexico border. 3-50 m.	Low; suitable habitat does not occur onsite and site is outside known geographic range.
Dudleya blochmaniae subsp. blochmaniae	Blochman's dudleya	Crassulaceae	1B.1	-/-	-	Perennial herb, Apr-Jun	Coastal bluff scrub, chaparral, coastal scrub, valley & foothill grassland. Open, rocky slopes; often in shallow clays over serpentine or in rocky areas with little soil. 5-450 m.	Low; suitable habitat and soils do not occur onsite.
Dudleya brevifolia (D. blochmaniae subsp. brevifolia)	short-leaf dudleya	Crassulaceae	1B.1	SE/-	X	Perennial herb, Apr-May	On Torrey sandstone in pebbly openings in maritime chaparral & coastal scrub. 30-125 m.	Low; suitable habitat and soils do not occur onsite; site outside known geographic range.

Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Dudleya variegata	variegated dudleya	Crassulaceae	1B.2	-/-	X	Perennial herb, Apr-Jun	Often rocky/gravelly or clay soils or on rock outcrops in grassland, openings in chaparral, cismontane woodland, coastal scrub, also near vernal pools or on mima mounds. 3-550 m.	Low; suitable habitat and soils do not occur onsite.
Dudleya viscida	sticky dudleya	Crassulaceae	1B.2	-/-	-	Perennial herb, May-Jun	North and south-facing cliffs and banks in coastal bluff scrub, chaparral, cismontane woodland, coastal scrub. 10-550 m.	Low; suitable habitat does not occur onsite.
Ericameria palmeri var. palmeri	Palmer's goldenbush	Asteraceae	1B.1	-/-	-	Shrub (evergreen), (Jul)Sep-Nov	Steep hillsides, granitic soils in mesic chaparral, coastal scrub. 5-625 m.	Low; suitable habitat and soils do not occur onsite; would have been detectable and was not observed.
Eryngium aristulatum var. parishii	San Diego button-celery	Apiaceae	1B.1	SE/FE	X	Biennial to perennial herb, Apr-Jun	San Diego mesa hardpan & claypan vernal pools & southern interior basalt flow vernal pools in coastal scrub or valley and foothill grassland. 15-880 m.	Low; suitable habitat does not occur onsite.
Erysimum ammophilum	coast wallflower, sand-loving wallflower	Brassicaceae	1B.2	-/-	-	Perennial herb, Feb-Jun	Openings in sandy maritime chaparral, coastal dunes, and coastal scrub. 3-320 m.	Low; suitable habitat does not occur onsite.
Euphorbia misera	cliff spurge	Euphorbiaceae	2B.2	-/-	-	Shrub, Dec-Aug(Oct)	Rocky coastal bluff scrub, coastal scrub, Mojavean desert scrub. 3-430 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Ferocactus viridescens	coast barrel cactus, San Diego barrel cactus	Cactaceae	2B.1	-/-	-	Perennial (stem succulent), May-Jun	Chaparral, coastal scrub, valley & foothill grassland, near vernal pools; often exposed, level or south-sloping areas, near crest of slopes. 3-490 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Frankenia palmeri	Palmer's frankenia	Frankeniaceae	2B.1	-/-	-	Perennial herb, May-Jul	Coastal dunes, coastal salt marshes, playas. 3-10 m.	Low; suitable habitat does not occur onsite.
Fremontodendron mexicanum	southern fremontia, Mexican flannelbush	Malvaceae	1B.1	SR/FE	-	Shrub (evergreen), Mar-Jun	Along borders of creeks or in dry canyons with gabbroic, metavolcanic, or serpentinite soils in closed-cone coniferous forest, chaparral, cismontane woodland. 300-490 m.	Low; suitable habitat and soils do not occur onsite; would have been detectable and was not observed.
Geothallus tuberosus	Campbell's liverwort	Sphaerocarpaceae	1B.1	-/-	-	Ephemeral liverwort	Vernal pools and mesic coastal scrub. 10-600 m.	Non-vascular plants were not evaluated for potential to occur but suitable habitat does not occur onsite.
Grindelia hallii (G. hirsutula var. hallii)	San Diego gumplant	Asteraceae	1B.2	-/-	-	Perennial herb, May-Oct	Moist areas in chaparral, lower montane coniferous forest, meadows & seeps, valley & foothill grassland. 180-1810 m.	Low; suitable habitat does not occur onsite.
Harpagonella palmeri	Palmer's grappling-hook	Boraginaceae	4.2	-/-	-	Annual herb, Mar-May	Clay soils in chaparral, coastal scrub, valley & foothill grassland. 20-955 m.	Low; suitable habitat and soils do not occur onsite.
Hesperevax caulescens	hogwallow starfish	Asteraceae	4.2	-/-	-	Annual herb, Mar-Jun	Mesic valley and foothill grassland with clay soil, vernal pools. 0-505 m.	Low; suitable habitat and soils do not occur onsite.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Hesperocyparis forbesii (Cupressus f.)	Tecate cypress	Cupressaceae	1B.1	-/-	-	Tree (evergreen)	Clay, gabbroic, or metavolcanic soils in closed-cone coniferous forest, chaparral. 60-1650 m.	Low; suitable habitat and soils do not occur onsite; would have been detectable and was not observed.
Heterotheca sessiliflora subsp. sessiliflora	false goldenaster, beach goldenaster	Asteraceae	1B.1	-/-	-	Perennial herb, Mar-Dec	Sandy soils in coastal chaparral, coastal dunes, coastal scrub. 0-5 m.	Low; suitable habitat does not occur onsite.
Holocarpha virgata subsp. elongata	graceful tarplant	Asteraceae	4.2	-/-	-	Annual herb, May-Nov	Chaparral, cismontane woodland, coastal scrub, valley & foothill grassland. 60-1100 m.	Low; suitable habitat does not occur onsite.
Hordeum intercedens	little barley, vernal barley	Poaceae	3.2	-/-	-	Annual herb, Mar-Jun	Dry, saline streambeds and alkaline flats in coastal dunes, coastal scrub, valley and foothill grassland; vernal pools. 5-1000 m.	Low; suitable habitat does not occur onsite.
Isocoma menziesii var. decumbens	decumbent goldenbush	Asteraceae	1B.2	-/-	-	Shrub, Apr-Nov	Sandy, often disturbed areas in chaparral, coastal scrub. 1-915 m.	Low; suitable habitat does not occur onsite.
Iva hayesiana	San Diego marsh-elder	Asteraceae	2B.2	-/-	-	Perennial herb to subshrub, Apr-Oct	Marshes & swamps, playas, riverwashes. 1-430 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Juncus acutus subsp. leopoldii	southwestern spiny rush	Juncaceae	4.2	-/-	-	Perennial herb, (Mar) May-Jun	Moist saline places such as mesic coastal dunes, alkaline seeps, salt marshes. 3-900 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Lasthenia glabrata subsp. coulteri	Coulter's salt-marsh daisy, Coulter's goldfields	Asteraceae	1B.1	-/-	-	Annual herb, Feb-Jun	Alkaline soils in coastal salt marshes & swamps, playas, vernal pools. 1-1375 m.	Low; suitable habitat and soils do not occur onsite.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Lepechinia cardiophylla	heart-leaf pitcher sage	Lamiaceae	1B.2	-/-	-	Shrub, Apr-Jul	Closed-cone coniferous forest, chaparral, cismontane woodland. 520-1370 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Lepechinia ganderi	Gander's pitcher sage	Lamiaceae	1B.3	-/-	-	Shrub, Jun-Jul	Gabbroic or metavolcanic soils in closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland; 305-1005 m	Low; suitable habitat and soils do not occur onsite; would have been detectable and was not observed.
Lepidium virginicum var. robinsonii (not recognized in TJM2)	Robinson's peppergrass	Brassicaceae	4.3	-/-	-	Annual herb, Jan-Jul	Dry chaparral, coastal scrub. 4-1435 m.	Low; suitable habitat does not occur onsite.
Leptosyne maritima (Coreopsis m.)	San Diego sea-dahlia	Asteraceae	2B.2	-/-	-	Perennial herb, Mar-May	Coastal bluff scrub, coastal scrub. 5-185 m.	Low; suitable habitat does not occur onsite.
Lycium californicum	California desert thorn	Solanaceae	4.2	-/-	-	Shrub, (Dec) Mar-Aug	Coastal bluff scrub, coastal scrub. 5-150 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Microseris douglasii subsp. platycarpha	small-flower microseris	Asteraceae	4.2	-/-	-	Annual herb, Mar-May	Alkaline clay soils in cismontane woodland, coastal scrub, valley & foothill grassland, vernal pools. 15-1070 m.	Low; suitable habitat and soils do not occur onsite.
Mobergia calculiformis	light gray lichen	Physciaceae	3	-/-	-	Lichen	Coastal scrub; abundant on cobbles in right habitat; only known from one site in Baja and one in San Diego. 10 m.	Non-vascular plants were not evaluated for potential to occur but suitable habitat does not occur onsite.
Monardella hypoleuca subsp. lanata	felt-leaf monardella	Lamiaceae	1B.2	-/-	-	Perennial herb to subshrub (rhizomatous), Jun-Aug	Sandy soil in understory of mixed chaparral, chamise chaparral, southern oak woodland. 300-1575 m.	Low; suitable habitat does not occur onsite.

Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Monardella stoneana	Jennifer's monardella	Lamiaceae	1B.2	-/-	-	Perennial herb to subshrub, Jun-Sep	Usually in rocky intermittent streambeds, closed-cone coniferous forest, chaparral, coastal scrub, riparian scrub; 10-790 m	Low; suitable habitat does not occur onsite.
Monardella viminea (M. linoides subsp. v.)	willowy monardella	Lamiaceae	1B.1	SE/FE	-	Perennial herb to subshrub, Jun-Aug	Canyons, rocky and sandy places, and alluvial, ephemeral washes or floodplains in chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland. 45-230 m.	Low; suitable habitat does not occur onsite.
Myosurus minimus (includes M. m. subsp. apus)	little mousetail	Ranunculaceae	3.1	-/-	-	Annual herb, Mar-Jun	Valley & foothill grassland, vernal pools (alkaline). 20-640 m.	Low; suitable habitat does not occur onsite.
Nama stenocarpa	mud nama	Boraginaceae	2B.2	-/-	-	Annual to perennial herb, Jan-Jul	Marshes & swamps (lake margins, riverbanks). 5-500 m.	Low; suitable habitat does not occur onsite.
Navarretia fossalis	spreading navarretia, Moran's navarretia	Polemoniaceae	1B.1	-/FT	X	Annual herb, Apr-Jun	Vernal pools, swales, and depressions surrounded by chaparral, grassland, or scrub. 15-850 m.	Low; suitable habitat does not occur onsite.
Navarretia prostrata	flat navarretia	Polemoniaceae	1B.1	-/-	-	Annual herb, Apr-Jul	Mesic, alkaline areas in coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps. 3-1235 m.	Low; suitable habitat does not occur onsite.
Nemacaulis denudata var. denudata	coast woolly-heads	Polygonaceae	1B.2	-/-	-	Annual herb, Apr-Sep	Coastal dunes. 0-5 m.	Low; suitable habitat does not occur onsite.
Nemacaulis denudata var. gracilis	slender woolly-heads, slender cottonheads	Polygonaceae	2B.2	-/-	-	Annual herb, Mar-May	Coastal dunes, desert dunes, Sonoran desert scrub; -50-400 m	Low; suitable habitat does not occur onsite.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Orcuttia californica	California Orcutt's grass	Poaceae	1B.1	SE/FE	X	Annual herb, Apr-Aug	Vernal pools. 10-660 m.	Low; suitable habitat does not occur onsite.
Ornithostaphylos oppositifolia	Baja California birdbush	Ericaceae	2B.1	SE/-	-	Shrub (evergreen), Jan-Apr	Chaparral; 55-800 m	Low; suitable habitat does not occur onsite.
Phacelia stellaris	Brand's phacelia	Boraginaceae	1B.1	-/-	-	Annual herb, Mar-Jun	Coastal dunes, openings in coastal scrub. 3-370 m.	Low; suitable habitat does not occur onsite.
Pogogyne abramsii	San Diego mesa mint	Lamiaceae	1B.1	SE/FE	X	Annual herb, Mar-Jul	Vernal pools within grasslands, chamise chaparral, or coastal sage scrub. 70-195 m.	Low; suitable habitat does not occur onsite.
Pogogyne nudiuscula	Otay mesa mint	Lamiaceae	1B.1	SE/FE	X	Annual herb, May-Jul	Dry beds of vernal pools and moist swales. 135-165 m.	Low; suitable habitat does not occur onsite.
Pseudognaphalium leucocephalum	white rabbit-tobacco	Asteraceae	2B.2	-/-	-	Perennial herb, Jul-Dec	Sandy, gravelly sites in riparian woodland, cismontane woodland, coastal scrub, chaparral. 35-515 m.	Low; suitable habitat does not occur onsite.
Quercus dumosa	Nuttall's scrub oak	Fagaceae	1B.1	-/-	-	Shrub (evergreen), Feb-Aug	Sandy soil near coast, clay loam soils in closed-cone coniferous forest, chaparral, coastal scrub. 15-400 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Ribes viburnifolium	Santa Catalina Island currant, evergreen currant	Grossulariaceae	1B.2	-/-	-	Shrub (evergreen), Feb-Apr	Chaparral, cismontane woodland; 30-305 m	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Rosa minutifolia	small-leaf rose, desert rose	Rosaceae	2B.1	SE/-	-	Shrub (deciduous), Jan-Jun	Chaparral, coastal scrub; 150-160 m	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.
Salvia munzii	Munz's sage	Lamiaceae	2B.2	-/-	-	Shrub (evergreen), Feb-Apr	Rocky hills and slopes in chaparral, coastal scrub. 35-575 m.	Low; suitable habitat does not occur onsite; would have been detectable and was not observed.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Selaginella cinerascens	mesa spike-moss, ashy spike-moss	Selaginellaceae	4.1	-/-	-	Perennial herb (rhizomatous)	Chaparral and coastal scrub on undisturbed soil. 20-640 m.	Low; suitable habitat does not occur onsite.
Senecio aphanactis	California groundsel, chaparral ragwort	Asteraceae	2B.2	-/-	-	Annual herb, Jan-Apr	Chaparral, cismontane woodland, coastal scrub, sometimes alkaline flats. 20-855 m.	Low; suitable habitat does not occur onsite.
Sidalcea neomexicana	salt spring checker-bloom	Malvaceae	2B.2	-/-	-	Perennial herb, Mar-Jun	Alkali springs and marshes in chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas. 3-2380 m.	Low; suitable habitat does not occur onsite.
Sphaerocarpus drewei	bottle liverwort	Sphaerocarpaceae	1B.1	-/-	-	Liverwort (ephemeral)	On soil in openings of chaparral, coastal scrub. 90-600 m.	Non-vascular plants were not evaluated for potential to occur but suitable habitat does not occur onsite.
Stemodia durantifolia	blue streamwort, purple stemodia	Plantaginaceae	2B.1	-/-	-	Perennial herb, Jan-Dec	Sandy soil in riparian habitats, on wet sand or rocks, drying streambeds, mesic Sonoran desert scrub. 35-795 m.	Low; suitable habitat does not occur onsite.
Stipa diegoensis (Achnatherum diegoense)	San Diego needlegrass, San Diego County needle grass	Poaceae	4.2	-/-	-	Perennial herb, Feb-Jun	Rocky slopes, sea cliffs and stream banks, often mesic areas in chaparral, coastal scrub. 10-800 m.	Low; suitable habitat does not occur onsite.
Streptanthus bernardinus	Laguna Mountain jewelflower	Brassicaceae	4.3	-/-	-	Perennial herb, May-Aug	Chaparral, lower montane coniferous forest; 670-2500 m	Low; suitable habitat does not occur onsite.

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite
Stylocline citroleum	oil neststraw	Asteraceae	1B.1	-/-	-	Annual herb, Mar-Apr	Flats, clay soils in oil-producing areas in chenopod scrub, coastal scrub, valley & foothill grassland. No modern occurrences outside of Bakersfield, CA. 50-400 m.	Low; suitable habitat and soils do not occur onsite; outside known modern geographic range.
Suaeda esteroa	estuary sea-blite	Chenopodiaceae	1B.2	-/-	-	Perennial herb, (May) Jul-Oct (Jan)	Clay, silt, and sand soils in coastal salt marshes and swamps. 0-80 m.	Low; suitable habitat and soils do not occu onsite.
Tetracoccus dioicus	Parry's tetracoccus	Picrodendraceae	1B.2	-/-	-	Shrub, Apr-May	Rocky, decomposed gabbro soil in chaparral, coastal scrub. 135-705 m.	Low; suitable habitat and soils do not occur onsite; would have been detectable and was not observed.
Texosporium sancti-jacobi	woven-spored lichen	Caliciaceae	3	-/-	-	Lichen	On small mammal pellets, bits of decaying organic matter, or soil in open sites with Adenostoma fasciculatum, Eriogonum, Selaginella. 290-660 m.	Non-vascular plants were not evaluated for potential to occur but suitable habitat does not occur onsite.
Tortula californica	California screw moss	Pottiaceae	1B.2	-/-	-	Moss	Sandy soils in chenopod scrub, valley and foothill grassland. 10-1460 m.	Non-vascular plants were not evaluated for potential to occur but suitable habitat does not occur onsite.

Listing Designations

CRPR - California Rare Plant Rank (from Rare Plant Status Review Group, jointly managed by California Department of Fish and Wildlife [CDFW] and California Native Plant Society [CNPS])

1A - Plants presumed extirpated in California and either rare or extinct elsewhere
1B - Plants rare, threatened or endangered in California AND elsewhere
2A - Presumed extirpated or extinct in California, but more common elsewhere
2B - Plants rare, threatened or endangered in California, but more common elsewhere
3 - Plants about which more information is needed - a review list
4 - Plants of limited distribution - a watch list

.1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 - Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3 - Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)
CBR - Considered But Rejected

State of California species designations (CDFW April 2016)

SE - State-listed Endangered

Federal species designations (CDFW April 2016, USFWS 2016)

FE - Federally-listed Endangered

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Species Name	Common Name	Family	CRPR	State/ Federal	City NE	Growth form, bloom time	Habitat	Potential to Occur Onsite

ST - State-listed Threatened
SR - State-listed Rare
FT - Federally-listed Threatened
FC - Federal candidate for listing

City NE - an X in this column indicates the species is considered a Narrow Endemic by the City of San Diego (Land Development Manual - Biology Guidelines 2009)

Other abbreviations:

TJM2 - The Jepson Manual, 2nd edition (2012) (taxonomic authority for this report except where it conflicts with special-status plant recognition)

(Common names are primarily from the *Checklist of Vascular Plants of San Diego County 5th Edition* [Rebman and Simpson 2014], and secondarily from CNPS's Inventory of Rare and Endangered Plants [CNPS 2018])