Appendix B Biological Resources Report



July 2, 2018

Mr. Dallas Pugh County of San Diego Department of Parks and Recreation San Diego, California 92123

Subject: Biological Resources Letter Report for the Lakeside Equestrian Facility (ICF 00049.17)

Dear Mr. Pugh:

ICF was retained to conduct biological surveys and prepare this letter report for the proposed Lakeside Equestrian Facility (project), located within the approved South County Subarea Plan of the San Diego County's (County's) Multiple Species Conservation Program (MSCP). This report analyzes potential effects on sensitive biological resources associated with construction of the project.

Summary

The proposed project comprises horse arenas, livestock corrals, concessions and storage, a parking lot, and other facilities to be used by the community for a variety of equestrian and livestock-related uses. Construction and maintenance of the project would involve vegetation removal and trimming as well as some minor grading and ground disturbance. The impact footprint for the proposed project is approximately 14 acres, and is located on the corner of Willow Road and Moreno Avenue in the unincorporated community of Lakeside.

The project site encompasses approximately 13.82 acres of agricultural fields and approximately 0.09 acre of developed habitat (road shoulder); because no sensitive vegetation communities occur on the site, no impacts on such communities are anticipated. Additionally, no jurisdictional wetland or waterway resources and no federal wetlands are present onsite, so none would be affected by the project.

A desktop analysis and onsite habitat assessment determined that no sensitive plant species have high potential to occur. ICF biologists did not conduct focused surveys for special-status plant species because the land use and soils do not provide suitable habitat for special-status plant species. Accordingly, the proposed project would not impact the regional long-term survival of special-status plant species.

One special-status wildlife species—turkey vulture (*Cathartes aura*; County Group I)—was observed or detected during the field survey. Other County Group I species, as well as County Group II and state Species of Special Concern were not observed during the field survey. No other sensitive wildlife species were determined to have a high potential to occur.

The proposed project proposes nighttime lighting. Additionally, noise from construction and operation of the project has the potential to result in significant impacts on sensitive species

adjacent to the project area. Although the project includes nighttime lighting during construction and operations, lighting will be designed so that it would not affect sensitive wildlife species in the surrounding area.

The project area provides marginally suitable habitat for ground-nesting birds and raptors, and the proposed project could affect the nesting success of ground-nesting birds if grading, clearing, or other noise-generating activities is conducted during their breeding season (defined as February 1–July 15 for ground-nesting birds and February 1–August 15 for migratory birds). To mitigate the potentially significant impacts on ground-nesting birds, vegetation clearing or grading will be restricted during the breeding season unless preconstruction surveys conducted by a qualified biologist determine that no nesting birds or raptors would be affected by the proposed work. If active nests are identified within the project area or the immediate vicinity, vegetation clearing activities will not be permitted within 300 feet of active bird nests and 800 feet of ground-nesting raptor nests until either the breeding season has ended or the nest is no longer active.

Study Methods

The study area for the proposed project consisted of the project boundary; on the basis of preliminary analysis, a buffer extending from the project boundary was not included in view of the developed setting, the similar land uses bordering the project area, and the low biological value of the surrounding land. Prior to conducting field surveys of the project site, ICF biologists conducted searches of available literature and databases to identify sensitive species previously detected or with potential to occur in the survey area. Biologists queried the California Natural Diversity Database (CNDDB) for the San Vicente Reservoir, Escondido, San Pasqual, Ramona, Poway, El Cajon Mountain, El Cajon, La Mesa, and Alpine quadrangles (CDFW 2017). To characterize the physical characteristics of the site and surrounding areas (e.g., potential stream courses and other topographic features), biologists reviewed the U.S. Department of Agriculture (USDA) soil survey of the area (USDA 1973), the U.S. Geologic Survey (USGS) topographic maps and the National Wetlands Inventory (NWI) (USFWS 2017).

ICF Biologists Keoni Calantas and Meris Guerrero conducted a site visit on Feb 13, 2017 (Table 1). Surveys were conducted to categorize and map plant communities within the survey area, to delineate the extent of jurisdictional features, and to assess the suitability of habitat for specialstatus plant and animal species (Table 1). Biologists walked the survey area in an effort to map vegetation communities and assess areas with the potential to support sensitive species. Vegetation communities were mapped on a 300-foot scale aerial photograph in the field and later digitized into geographic information system (GIS) coverage using ArcGIS software. General habitat mapping and vegetation communities were categorized using required County classifications (Oberbauer 2008). All plant species observed were noted, and plants that could not be verified in the field were identified later using Baldwin et al. (2012). Plants without diagnostic structures present were identified to the generic level. Animal species were detected through direct observation or from calls, tracks, scat, nests, or other sign.

Date	Time	Biologists	Survey Type
2/13/17	0830-1100	Keoni Calantas, Meris Guerrero	General survey, aquatic resources assessment, vegetation mapping

Table 1. Survey Dates and Conditions

During the general wildlife survey, all wildlife species observed or detected during the field survey by sight, vocalizations, burrows, tracks, scat, or other sign were recorded. Binoculars (8 x 42) were used to aid in the identification of observed wildlife. In addition to species actually observed, expected wildlife use of the site was characterized on the basis of known habitat preferences of local species and knowledge of their distribution in the project vicinity. The survey effort did not include focused surveys for special-status wildlife species.

Due to the timing of the surveys, some plants and migrating or summer-breeding birds may not have been detected during the surveys; however, the potential occurrence of special-status species was analyzed on the basis of known ranges and occurrences, and presented in Attachment 5. Similarly, nocturnal wildlife species would not have been readily detected as only daytime surveys were conducted. Complete lists of plant and wildlife species observed within the project area are provided as Attachments 2 and 3, respectively.

The aquatic resources assessment consisted of a survey of the entire project site focusing on identification of aquatic resource physical parameters such as presence of wetlands indicator plant species or hydrophytic vegetation; surface soil conditions; wetland hydrology indicators; and nonwetland hydrology indicators, such as sediment sorting, presence of bed and bank, and destruction of terrestrial vegetation. The primary focus of the assessment was to determine whether the project site supports aquatic resources (e.g., wetlands, steams, riparian habitat) requiring a formal jurisdictional delineation to identify the type, location, and boundaries of aquatic resources subject to U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) jurisdiction. A formal jurisdictional delineation following USACE-approved methodologies was not performed as part of this survey.

Project Description, Location, and Setting

Project Location

The proposed project is located in the unincorporated community of Lakeside, San Diego County, California, on the northeast corner of Willow Road and Moreno Avenue (Figures 1 and 2, Attachment 1). It is located near the western boundary of the Lake Jennings/Wildcat Canyon–El Cajon Mountain Core Resource Area and approximately 0.25 mile north of the San Diego River. The proposed project is located within the Metro-Lakeside-Jamul segment of the approved South County Subarea Plan of the County's MSCP and is therefore subject to the County's Biological Mitigation Ordinance.

Project Description

The County Department of Parks and Recreation proposes to design and construct an Equestrian Facility on an approximately 14-acre parcel at the corner of Willow Road and Moreno Avenue in the unincorporated community of Lakeside. The facility will consist of two arenas (one outside and one

covered), bleachers, a restroom-showers-concession-meeting building, corral, volunteer pad, maintenance-storage building, public staging area with a shade pavilion, picnic tables, hitching posts, temporary irrigation, and drought tolerant landscape. The facility will also include an open decomposed granite parking area capable of accommodating approximately 74 trucks/trailers and approximately 35 single vehicle spaces. There will be a public accessible multi-use trail between the southeast property corner and the northwest property corner. A separate equestrian facility warmup track will run the perimeter of the facility.

The community facility would be used for a variety of equestrian and livestock-related activities such as practices, training, and contests, including shows and events. A typical equestrian event would likely draw between 50 and 125 attendees, with large events attracting as many as 300 attendees (spectators and participants). The large events would only be anticipated to take place a few times each year. The project may also include a small-scale manure composting facility, educational interpretive signage, and stop signs on Willow Road at the intersection of Moreno Avenue.

The construction and maintenance of the proposed facility would involve general maintenance items that would include trash pickup, vegetation removal, minor track and trail grading or restoration, maintaining landscaped areas, buildings, and dry and wet utilities.

Environmental Setting

The project area is an agricultural operations lot, bordered by Willow Road on the south and Moreno Avenue on the west. The existing agricultural land use includes livestock holding and grazing, as well as various equestrian uses for the community. Surrounding land uses include commercial and industrial development to the west, El Capitan Equestrian Center and semi-rural residential development to the south, a mix of agricultural and semi-rural residential development to the north and east, and rural lands and open space beyond the semirural development to the east. All residential development surrounding the project is associated with the community of Lakeside. The project are is relatively flat, with elevations ranging from 403 to 410 feet above mean sea level. The project area is accessed from Moreno Avenue.

The project area is located entirely within disturbed habitat, dominated by young nonnative grasses and herbaceous species (Figure 3).

The project area is underlain by Visalia sandy loam (0 to 2 percent slopes) (Figure 4). The Visalia soil series occupies swale-like and other nearly level positions on low, recent alluvial fans and floodplains. Under natural conditions these soils were imperfectly drained and subject to flooding and a periodic high water table. These soils are used extensively for irrigated row, pasture, vine, and orchard crops.

Regional Context

The proposed project is located with the approved South County Subarea Plan of the County's MSCP, on unincorporated land within the Metro-Lakeside-Jamul Segment of the MSCP (Figure 1).

Habitat and Vegetation Communities

Vegetation communities with the survey area consisted mostly of agriculture, with some developed surfaces (asphalt roads and bare ground road shoulders) along the southern perimeter of the site and surrounding the project (Figure 3, Table 2). The vegetation communities identified during the survey are described below.

Table 2. Vegetation Communities within the Survey Area

Vegetation/Land Cover Type	Habitat Tier	Acreage
Extensive Agriculture – Field/Pasture/Row Crops	IV	13.82
Urban/Developed	N/A	0.09
Total		13.91

Extensive Agriculture—Field/Pasture/Row Crops—18300 (13.82 acres)

Extensive agriculture in the survey area consists of existing dirt roads, two bare ground horse corrals, and tilled land dominated by nonnative herbaceous and grass species such as wall barley (*Hordeum murinum*), Mediterranean schismus (*Schismus barbatus*), compact brome (*Bromus madritensis*), redstem filaree (*Erodium cicutarium*), Russian thistle (*Salsola tragus*), and cheeseweed (*Malva parviflorum*). This land cover type is classified as Tier IV and has limited ecological value due to lack of natural habitat elements. This land cover type is not considered sensitive by any local, state, or federal agencies.

Developed Land—12000 (0.09 acres)

Developed land in the survey area consists of a gravel and bare ground road shoulder along the southern side of the project. This land cover type has a low ecological value due to the lack of natural habitat elements, and is typically vegetated by nonnative species and landscaped vegetation. This land cover type is not considered sensitive by any local, state, or federal agencies.

No sensitive vegetation communities occur within the project area.

Special-Status Species

This section discusses special-status species observed or detected within the survey area, as well as special-status species with potential to occur. A special-status species is one that is listed by federal or state agencies as threatened or endangered; included in the California Rare Plant Ranking (formerly California Native Plant Society [CNPS]) List (i.e., CRPR 1, 2, 3, and 4 Plant Species); or included in the County's Sensitive Plant (List A, B, C, or D Plants) or Animal (Group I and II) list.

Special-Status Plant Species

The CNDDB search, CNPS search, and field surveys identified 91 sensitive plant species that occur or have potential to occur in the project vicinity (Attachment 2). The CNDDB and CNPS searches were conducted for the San Vicente Reservoir, Escondido, San Pasqual, Ramona, Poway, El Cajon Mountain, El Cajon, La Mesa, and Alpine quadrangles (CDFW 2017; CNPS 2017). Special-status plant species identified during the literature search are outlined in Attachment 4, along with their

potential to occur in the study area. Discussion of the plant species incorporates information from Reiser (2001) and Baldwin et al. (2012).

No special-status plant species were detected during the field survey. No sensitive plant species were assessed to have high potential to occur.

Special-Status Wildlife Species

The CNDDB search and field survey identified 53 sensitive wildlife species that occur or have potential to occur in the project vicinity (Attachments 3 and 5). The CNDDB search was conducted for the San Vicente Reservoir, Escondido, San Pasqual, Ramona, Poway, El Cajon Mountain, El Cajon, La Mesa, and Alpine quadrangles (CDFW 2017). Turkey vulture was the only special-status wildlife species detected during the field survey. Sensitive wildlife species identified during the literature search are outlined in Attachment 5, along with their potential to occur within the survey area.

Special-Status Wildlife Species Observed

Turkey vulture is a County Group 1 species known to occur throughout San Diego County. This species was observed overhead during the field survey. Suitable foraging habitat for this species occurs within the survey area.

No other sensitive wildlife species were detected during the field survey.

Jurisdictional Wetlands and Waterways

Wetlands and other waters are considered to be sensitive biological resources and are protected by various federal, state, and local regulations. USACE and RWQCB regulate waters of the United States, including wetlands, under the authority of Sections 404 and 401, respectively, of the federal Clean Water Act (CWA). The term *waters of the United States* encompasses many types of waters, including waters currently or historically used in interstate or foreign commerce; all waters subject to the ebb and flow of tides; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including ephemeral and intermittent streams), mudflats, sandflats, wetlands, sloughs, etc., the use, degradation or destruction of which could affect interstate or foreign commerce; all impoundments of waters otherwise defined as waters of the United States; tributaries of waters of the United States; territorial seas; and wetlands adjacent to waters of the United States (Environmental Laboratory 1987). Under the Porter-Cologne Act, the RWQCB's jurisdiction also includes isolated wetlands and other waters that are not jurisdictional under the CWA. CDFW takes jurisdiction over lakes, rivers, and streams under Section 1600 et seq. of the California Fish and Game Code.

USACE defines wetlands as areas that are dominated by hydrophytic plant species, exhibit wetland hydrology, and have hydric soils. Areas that do not meet these criteria but exhibit a defined channel are considered nonwetland waters of the United States. CDFW jurisdiction extends across the ordinary high water mark (OHWM) of these features and includes areas beneath a riparian canopy, even if the canopy areas are well away from the stream channel (such as in riparian areas). The RWQCB takes jurisdiction of waters of the United States as defined by the USACE as well as other surface waters, which include isolated wetlands (e.g., vernal pools) and stream channels.

Aerial photographs from 1993–2016 depict a drainage-like feature that intermittently appears through the middle of the project site. Topographic maps show no change in topography and there are no USGS National Hydrography Dataset (NHD) blue line streams of surface flows associated with the drainage-like feature. Furthermore, the U.S. Fish and Wildlife Service's (USFWS's) National Wetlands Inventory does not depict any wetland or steam resources within the project site boundary.

The aquatic resources assessment confirmed that the project site is predominantly flat with very little topographic relief. Consequently, physical evidence or indicators of an OHWM—such as an established bed and bank, scour, or deposition; matted down, bent, or absent vegetation; or changes in plant community or terrestrial vegetation—are lacking. Additionally, the project site does not support hydrophytic vegetation and lacks evidence of wetland hydrology and current or recent soil saturation (e.g., surface soil cracks, saturation, drainage patterns, and biotic crust). Although a drainage-like feature intermittently appears in aerial imagery, the site assessment confirmed that soil saturation does not occur repeatedly; moreover, the timing, duration, and frequency of saturation or inundation are not sufficient to produce a characteristic wetlands plant community. Therefore, it appears the project site does not support potential aquatic resources subject to USACE, RWQCB, or CDFW jurisdiction. If the County requires a definitive, official determination from USACE that there are no jurisdictional aquatic resources within the limits of the project site, an approved jurisdictional determination (AJD) should be conducted and a formal jurisdictional delineation report should be submitted to USACE for review and verification.

Wildlife Corridors and Linkages

Wildlife movement corridors are areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features such as canyon drainages, ridgelines, or areas with vegetative cover provide corridors for wildlife movement. Wildlife movement corridors are important because they provide access to mates, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetic traits between populations.

Another important consideration is the setting of a project site with respect to regional connectivity with other undeveloped lands. Large blocks of contiguous habitat are important to support resident populations of plants and wildlife as well as to provide suitable conditions for wildlife movement and dispersal.

The project area is located in a developed area of San Diego County, and is surrounded by semirural residences and agricultural lands to the south, north, and west; open space farther east is contiguous with El Cajon Mountain. The project area is along the western boundary of the Lake Jennings/Wildcat Canyon–El Cajon Mountain Core Resource Area and is just north of the east-west trending upper San Diego River valley, which provides local movement for a wide range of wildlife species, including mule deer, coyote, bobcat, and mountain lion. Consequently, the project area is north of a core area or regional linkage of importance.

Significance of Project Impacts and Proposed Mitigation

Given the limited extent of the anticipated impacts on sensitive biological resources associated with the proposed project, analysis of such impacts and anticipated mitigation requirements are

combined in this section. Potential impacts on vegetation communities, sensitive plants, and other sensitive resources, such as wetlands and wildlife corridors, are discussed separately to follow the County's significance criteria.

Impact Definitions

Biological resource impacts can be considered direct, indirect, or cumulative, as well as either permanent or temporary. These terms are defined below.

- *Direct impacts* occur when biological resources are altered, disturbed, or destroyed during project implementation. Examples include clearing vegetation, encroaching into wetland buffers, diverting surface water flows, and destruction of individual species or their habitats.
- *Indirect impacts* occur when project-related activities affect biological resources in a manner that is not direct. Examples include elevated noise and dust levels, increased human activity, decreased water quality, and the introduction of invasive wildlife (i.e., domestic cats and dogs) and plants.
- *Cumulative impacts* occur when biological resources are either directly or indirectly affected to a minor extent as a result of a specific project, but the project-related impacts are part of a larger pattern of similar minor impacts. The overall result of these multiple minor impacts from separate projects is considered a cumulative impact on biological resources.
- *Temporary impacts* can be direct or indirect and are considered reversible. Examples include the removal of vegetation from areas that will be revegetated, and elevated noise levels and increased levels of dust associated with project construction that would cease when construction is complete.
- *Permanent impacts* can be direct or indirect and are not considered reversible. Examples include the removal of vegetation from areas that will have permanent structures placed on them or landscaping an area with nonnative plant species.

Potentially significant impacts on each sensitive biological resource are analyzed below. For the purposes of this report, it is assumed that all area within the project boundary (13.91 acres) would be subject to direct impacts as a result of development of this project.

Special-Status Species

Significance Criteria

A project would have a potentially significant effect on biological resources if any of the following would occur.

- The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- Specifically, any of the following conditions would be considered significant.
 - A. The project would impact one or more individuals of a species state- or federally listed as endangered or threatened.

- B. The project would impact the regional long-term survival of a County Group A or B Plant Species, a County Group I Animal Species, or a species listed as a California Species of Special Concern.
- C. The project would impact the regional long-term survival of a County Group C or D Plant Species or a County Group II Animal Species.
- D. The project would impact arroyo toad aestivation or breeding habitat.
- E. The project would impact golden eagle habitat.
- F. The project would result in a loss of functional foraging habitat for raptors.
- G. The project would increase noise or nighttime lighting to a level above that known to adversely affect sensitive species.
- H. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more, not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or an area that supports multiple wildlife species.
- I. The project would increase human access or predation or competition from domestic animals, pests, or exotic species to levels that would adversely affect sensitive species.
- J. The project would impact the nesting success of sensitive animals (as listed in the Guidelines for Determining Significance) through grading, clearing, fire fuel modification, or noise-generating activities such as construction.

Analysis of Project Effects

Each of the significance criteria listed above id discussed below with respect to the proposed project's anticipated effects. Those criteria for which impacts are not anticipated are discussed briefly at the end of the section followed by mitigation measures for potentially significant impacts.

Sensitive Plant Impacts

A, B, C. A desktop analysis and onsite habitat assessment determined that no sensitive plant species have high potential to occur because of the use of the site as active agriculture and the absence of soils that tend to be associated with sensitive species. Accordingly, focused rare plant surveys were not conducted for the proposed project. The project would not have impacts to sensitive plants.

Sensitive Wildlife Impacts

J. The project area provides moderately suitable habitat for ground-nesting birds. Grading, vegetation clearing, or other noise-generating activities undertaken during the avian breeding season, defined as January 15–July 15, could result in removal of active nests or disruption of breeding success through disturbance of breeding behaviors if nesting occurs onsite. Such impacts would be significant.

The proposed project would not result in significant impacts under the following guidelines for the following reasons.

- A. Focused bird surveys were not conducted for the proposed project, but no state- or federally listed species are likely to nest in the study area. Although suitable habitat is not present the study area, species such as coastal California gnatcatcher (*Polioptila californica californica*) and least Bell's vireo (*Vireo bellii pusillus*) are known to occur near the study area. If these species were to occur in the study area, it would most likely be through dispersal rather than breeding or nesting activity. Consequently, impacts would be less than significant.
- B, C. Only one sensitive wildlife species—turkey vulture, a County Group I species—was detected during the field survey. Because of the lack of trees or nesting substrate for this species within the study area, nesting habitat for this species would not be directly impacted. Any impacts on this species would likely be indirect, resulting from construction noise or the direct loss of 13.91 acres of foraging habitat. However, indirect noise impacts and the loss of foraging habitat within the project area would not affect the long-term survival of this species. Such impacts would be less than significant.

No other sensitive wildlife species were observed during the field survey. No special-status wildlife species were determined to have a high potential to occur. Therefore, the project would not have impacts on sensitive wildlife species.

- D. Suitable breeding habitat for arroyo toad was not observed within the survey area.
- E. Golden eagles are known to occur in the project vicinity (e.g., nesting San Vicente Reservoir) and suitable foraging habitat (13.82 acres of open agriculture pasture) is located within the study area. Impacts would not be considered significant as extensive foraging habitat for these species exists outside of the project area and the loss of 13.82 acres would be threaten the long-term success of raptors or golden eagles. Impacts to nest locations known to occur off-site near San Vicente Reservoir are not anticipated; the nearest known golden eagle nest site is greater than 4,000 feet from the project site and large amounts of rural and open space foraging habitat exists between the nesting vicinity and the project site.
- F. While raptors were observed within the survey area and the project contains 13.82 acres of foraging habitat, impacts to this agriculture lot would not contribute to a loss of functional foraging habitat for raptors. The surrounding lands provide ample foraging habitat for raptors in the vicinity of the proposed project.
- G. The proposed project includes use of nighttime lighting. In addition, noise levels associated with proposed project construction and operation are anticipated to result in levels above those that could adversely affect special-status wildlife species. However, the site is entirely surrounded by rural residential and agricultural uses and no sensitive species are expected to occur. Therefore, nighttime lighting and noise levels resulting from the project would have no direct impact on sensitive wildlife species.
- H. While the proposed project area would be considered part of a core wildlife area (Lake Jennings/Wildcat Canyon- El Cajon Mountain Core Resource Area), the proposed project would not affect the viability of the site to function as a core wildlife area--the existing agricultural land use of the site does not contribute substantial value to the core resource area, and already serves as the western boundary of open space to the east. Additionally, its position on the western boundary of the core resource area is highlighted by the development surrounding the western, southern, and northern extents of the project.

I. Construction and use of the proposed Lakeside Equestrian Facility could result in impacts on sensitive species through increased human access and domestic animal activity. However, sensitive species are not expected to occur, and therefore would not be directly impacted by increased human access or domestic pets.

The survey area is heavily disturbed and dominated by nonnative species. Any unintentional introduction of nonnative species as a result of the project would likely not affect the habitat quality of the project area. Therefore, impacts associated with introduced exotic species are not anticipated.

Mitigation Measures and Design Considerations

- B, C, I. Preconstruction training for construction crews will be conducted to address sensitive species that occur or have the potential to occur in the project area.
- G. All permanent exterior lighting and all temporary construction lighting will be installed such that lamps and reflectors are not visible from beyond the project site; lighting does not cause excessive reflected glare; directed lighting does not illuminate the nighttime sky, except for required FAA aircraft safety lighting; illumination of the project facility and its immediate vicinity is minimized; and the lighting plan complies with local policies and ordinances.
- J. Potentially significant impacts on the nesting success of tree- and ground-nesting birds will be mitigated through seasonal restrictions and preconstruction surveys. To mitigate potentially significant impacts on the nesting success of tree- and/or ground-nesting raptors, vegetation clearing or grading will be restricted during the breeding season (January 15–July 15 and February 1–July 15, respectively) unless preconstruction surveys conducted by a qualified biologist determine that no nesting birds or raptors would be affected by the proposed work. If active nests are identified within the project area or immediate vicinity, vegetation-clearing activities will not be permitted within 300 feet of active bird nests, 500 feet of tree-nesting raptor nests, and 800 feet of ground-nesting raptor nests until either the breeding season has ended or the nest is no longer active.

Riparian Habitat or Sensitive Natural Communities

Significance Criteria

A project would have a potentially significant effect on biological resources if any of the following would occur.

- The project would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Specifically, any of the following conditions would be considered significant.
 - A. Project-related construction, grading, clearing, construction, or other activities would temporarily or permanently remove sensitive native or naturalized habitat on or off the project site.

- B. Any of the following would occur adjacent to or within jurisdictional wetlands or riparian habitats as defined by USACE, CDFW, and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; disturbance of the substratum; or any activity that may cause an adverse change in native species composition, diversity, and abundance.
- C. The project would draw down the groundwater table to the detriment of groundwaterdependent habitat—typically a drop of 3 feet or more from historical low groundwater levels.
- D. The project would increase human access or competition from domestic animals, pests, or exotic species to levels proven to adversely affect sensitive habitats.
- E. The project would not include a wetland buffer adequate to protect the functions and values of existing wetlands.

Analysis of Project Effects

Riparian habitat and other sensitive vegetation communities do not occur within the proposed project. Therefore, there are no impacts on riparian habitat and sensitive vegetation communities. The existing land cover types within the study area are shown in Table 2.

Wildlife Corridor and Linkage Impacts

Significance Criteria

A project would have a potentially significant effect on biological resources if any of the following would occur.

- The project would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Specifically, any of the following conditions would be considered significant.
 - A. The project would prevent wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.
 - B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.
 - C. The project would create artificial wildlife corridors that do not follow natural movement patterns.
 - D. The project would increase noise or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.
 - E. The project would not maintain an adequate width for an existing wildlife corridor or linkage, or would further constrain an already narrow corridor through activities such as

(but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.

F. The project would not maintain adequate visual continuity (i.e., long lines of site) within wildlife corridors or linkage.

Analysis of Project Effects

The proposed project would not result in significant impacts under the guidelines listed above because the project area is already located at the western boundary of open space to the east, and it does not provide an existing wildlife corridor or linkage. These limited project impacts would also not prevent or interfere with connectivity to blocks of suitable habitat or to the adjacent lower reaches of the San Diego River corridor. The proposed project would not result in any significant impacts on wildlife corridors or linkages.

Mitigation Measures and Design Considerations

Because the proposed project would not result in significant impacts on wildlife corridors and linkages, no mitigation is proposed.

Cumulative Impacts

A cumulative impact analysis evaluates how the proposed project, whose impacts may not be individually significant, could contribute significantly to the total impacts on sensitive resources occurring in the project vicinity when considered together with other proposed and foreseeable projects. The proposed project is limited to the construction of an equestrian facility, entailing development of approximately 13.91 acres of agricultural pasture that has limited suitability to support sensitive plant and wildlife species. This project conforms to the Biological Mitigation Ordinance, which implements the MSCP. The County's implementation of the MSCP ensures that any specific impacts are not cumulatively significant.

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Dallas Pugh County of San Diego Department of Parks and Recreation Staff

Conclusions

The proposed project would result in significant impacts on sensitive biological resources; however, mitigation measures have been proposed that would reduce these impacts to a less-than-significant level.

If you have any questions regarding the contents of this letter report, please contact Keoni Calantas at 360.471.0123.

Sincerely,

Keoni Calantas Biologist

Attachments:	Attachment 1	Figures 1–4
	Attachment 2	Plant Species Observed
	Attachment 3	Wildlife Species Detected
	Attachment 4	Sensitive Plant Species with Potential to Occur
	Attachment 5	Sensitive Wildlife Species with Potential to Occur

Attachment 1 – Figures





Figure 1 Regional Location Biological Resources Letter Report - Lakeside Equestrian Center





Figure 2 Project Vicinity Biological Resources Letter Report - Lakeside Equestrian Center



Figure 3 Vegetation Communities Biological Resources Letter Report - Lakeside Equestrian Center



Figure 4 Soil Types and Topography Biological Resources Letter Report - Lakeside Equestrian Center

Attachment 2 - Plant Species Detected

Scientific Name	Common Name	Special Status
EUDICOTS		
Asteraceae - Sunflower family		
* Glebionis coronaria	Crown daisy	
* Helminthotheca echioides	Bristly ox-tongue	
Brassicaceae - Mustard family		
Lepidium sp.	Pepper-grass	
* Sisymbrium altissimum	Tumble mustard	
Chenopodiaceae - Goosefoot family		
* Salsola tragus	Prickly russian thistle	
Crassulaceae - Stonecrop family		
Crassula connata	Pygmyweed	
Geraniaceae - Geranium family		
* Erodium cicutarium	Redstem filaree	
Lamiaceae - Mint family		
* Marrubium vulgare	Horehound	
Malvaceae - Mallow family		
* Malva parviflora	Cheeseweed	
Plantaginaceae - Plantain family		
* Plantago lanceolata	English plantain	
Solanaceae - Nightshade family		
* Nicotiana glauca	Tree tobacco	
MONOCOTS		
Poaceae - Grass family		
* Arundo donax	Giant reed	
* Avena fatua	Wild oat	
* Bromus diandrus	Ripgut brome	
* Bromus madritensis	Compact brome	
* Hordeum murinum	Wall barley	
* Schismus barbatus	Mediterranean schismus	

Scientific Name Common Name **Special Status** Legend *= Non-native or invasive species **Special Status:** Federal: FE = Endangered FT = Threatened State: SE = Endangered ST =Threatened CRPR – California Rare Plant Rank 1A. Presumed extinct in California and elsewhere 1B. Rare or Endangered in California and elsewhere 2A. Presumed extinct in California, more common elsewhere 2B. Rare or Endangered in California, more common elsewhere 3. Plants for which we need more information - Review list 4. Plants of limited distribution - Watch list

Threat Ranks

.1 - Seriously endangered in California

.2 – Fairly endangered in California

3 – Not verv endangered in California

Attachment 3 - Wildlife Species Detected

Scientific Name	Common Name	Special Status
VERTEBRATES		
Birds		
Callipepla californica	California Quail	
Cathartes aura	Turkey Vulture	SDC Group I
Buteo jamaicensis	Red-tailed Hawk	
Fulica americana	American Coot	
Zenaida macroura	Mourning Dove	
Calypte anna	Anna's Hummingbird	
Sayornis nigricans	Black Phoebe	
Sayornis phoebe	Eastern Phoebe	
Corvus brachyrhynchos	American Crow	
Corvus corax	Common Raven	
Psaltriparus minimus	Bushtit	
Troglodytes aedon	House Wren	
Thryomanes bewickii	Bewick's Wren	
Chamaea fasciata	Wrentit	
Setophaga coronata	Yellow-rumped Warbler	
Melozone crissalis	California Towhee	
Melospiza melodia	Song Sparrow	
Haemorhous mexicanus	House Finch	
Mammals		
Canis latrans	Coyote	

Legend

*= Non-native or invasive species	
Special Status:	County:
	SDC Group I = includes animal species that have a very high level of
Federal:	sensitivity, either because they are listed as threatened or endangered or
FE = Endangered	because they have very specific natural history requirements that must be
FT = Threatened	met.
	SDC Group II - includes animal species that are becoming less common, but
State:	are not yet so rare that extirpation or extinction is imminent without
SE = Endangered	immediate action. These species tend to be prolific within their suitable
ST =Threatened	habitat types.
CSC = California Species of Special Concern	
CFP = California Fully Protected Species	MSCP = Multiple Species Conservation Program Covered Species

Attachment 4. Sensitive Plant Species—Potential to Occur

Common Name (<i>Scientific Name</i>)	Sensitivity Code, Status	Habitat Requirements	Verified Onsite (Yes/No)	Potential to Occur	Rationale
San Diego thorn-mint (Acanthomintha ilicifolia)	SD County Group List A, CRPR List 1B.1 FT, SE,	Annual herb. Prefers friable or broken clay soils in grassy openings in chaparral and coastal sage scrub, valley and foothill grassland, and vernal pools; 10-960 m (33-3150 ft). Blooming period: April - June	No	Low	Marginally suitable habitat occurs onsite.
California adolphia (<i>Adolphia californica</i>)	SD County Group List B, CRPR List 2B.1	Deciduous shrub. Clay soils in chaparral, coastal scrub, and valley and foothill grassland; 45-740 m (147-2428 ft). Blooming period: December - May	No	Low	Marginally suitable habitat occurs onsite.
Singlewhorl burrobrush (Ambrosia monogyra)	CRPR List 2B.2	Perennial shrub. Sandy soils in chaparral, coastal sage scrub, Sonoran desert scrub, and washes; 10-500 m (328-1640 ft). Blooming period: August - November	No	Low	Marginally suitable habitat occurs onsite.
San Diego ambrosia (<i>Ambrosia pumila</i>)	SD County Group List A, CRPR List 1B.1, FE	Rhizomatous herb. Sandy loam or clay soils in chaparral, coastal sage scrub, valley and foothill grassland, vernal pools; often in disturbed areas or sometimes alkaline areas. Can occur in creek beds, seasonally dry drainages, and floodplains; 20-415 m (66-1362 ft). Blooming period: April - October	No	Low	Marginally suitable disturbed habitat present, this species was not detected during the field survey.
Del Mar manzanita (Arctostaphylos glandulosa ssp. crassifolia)	SD County Group List A, CRPR List 1B.1, FE	Evergreen shrub. Maritime chaparral with sandy soils; 0-365 m (0-1197 ft). Blooming period: December - June	No	Low	Suitable habitat does not occur onsite; this evergreen shrub would have been detected if present.
San Diego sagewort (Artemisia palmeri)	SD County Group List D, CRPR List 4.2	Deciduous shrub. Sandy soils in mesic areas in chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland; 15-915 m (49-3002 ft). Blooming period: February - September	No	Low	Suitable mesic habitat does not occur onsite.

Common Name (<i>Scientific Name</i>)	Sensitivity Code, Status	Habitat Requirements	Verified Onsite (Yes/No)	Potential to Occur	Rationale
Western spleenwort (Asplenium vespertinum)	SD County List D, CRPR List 4.2	Perennial rhizomatous herb. Rocky areas in chaparral, cismontane woodland, and coastal scrub; 180-1000 m (590-3281 ft). Blooming period: February - June	No	Low	This species occurs in known to occur at higher elevations.
Dean's milk-vetch (<i>Astragalus deanei</i>)	SD County Group List A, CRPR List 1B.1	Perennial herb. Open shrubby slopes, coastal sage scrub, chaparral, cismontane woodland, riparian forest, and sandy washes; 75-695 m (246-2279 ft). Blooming period: February - May	No	Low	Suitable habitat does not occur onsite, this species is known to occur in the vicinity.
San Diego milk-vetch (<i>Astragalus oocarpus</i>)	SD County Group List A, CRPR List 1B.2	Perennial herb. Openings in chaparral and cismontane woodland, at the periphery of meadows; 305-1524m (1000-4999 ft). Blooming period: May - August	No	Low	This species is known to occur at higher elevations.
Coulter's saltbush (<i>Atriplex coulteri</i>)	SD County Group List A, CRPR List 1B.2	Perennial herb. Alkaline or clay soils in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland; 3- 460 m (9-1509 ft). Blooming period: March - October	No	Low	Marginally suitable habitat occurs onsite.
South Coast saltscale (<i>Atriplex pacifica</i>)	SD County Group List A, CRPR List 1B.2	Annual herb. Coastal bluff scrub, coastal dunes, coastal scrub, playas; 0-140 m (0- 459 ft). Blooming period: March - October	No	Low	Suitable habitat does not occur onsite.
Parish's brittlescale (<i>Atriplex parishii</i>)	SD County Group List A, CRPR List 1B.1	Annual herb. Alkaline soils in chenopod scrub, playas, and vernal pools; 25-1900 m (82-6232 ft). Blooming period: June - October	No	Low	Suitable habitat present.
Encinitas baccharis (<i>Baccharis vanessae</i>)	SD County Group List A, CRPR List 1B.1, FT, SE	Deciduous shrub. Sandstone in maritime chaparral and cismontane woodland; 60- 720 m (196-2362 ft). Blooming period: August - November	No	Low	The study area is outside of its known range.

Common Name (<i>Scientific</i> <i>Name</i>)	Sensitivity Code, Status	Habitat Requirements	Verified Onsite (Yes/No)	Potential to Occur	Rationale
San Diego goldenstar (<i>Bloomeria clevelandii</i>)	SD County Group List A, CRPR List 1B.1	Perennial bulbiferous herb. Clay soils in chaparral, coastal sage scrub, valley grasslands, particularly near mima mound topography or the vicinity of vernal pools; 50 - 465 m (164-1526 ft). Blooming period : April - May	No	Low	Marginally suitable habitat occurs onsite.
Thread-leaved brodiaea (<i>Brodiaea filifolia</i>)	SD County Group List A, CRPR List 1B.1, FT, SE	Perennial bulbiferous herb. Often found in clay soils in openings in chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools; 25-1120 m (82-3673 ft). Blooming period: March - June	No	Low	Soil onsite is very disturbed and not suitable.
Orcutt's brodiaea (<i>Brodiaea orcuttii</i>)	SD County Group List A, CRPR List 1B.1	Bulbiferous herb. Found on mesic, clay, sometimes serpentinite soils in closed- cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools ; 30-1692 m (98-5550 ft). Blooming period: May - July	No	Low	Soil onsite is very disturbed and not suitable.
Brewer's calandrinia (Calandrinia breweri)	SD County Group List D, CRPR List 4.2	Annual herb. Sandy or loamy soils, disturbed and/or burned sites in chaparral and coastal scrub; 10-1220 m (32-4001 ft). Blooming period: March - June	No	Low	Suitable habitat does not occur onsite.
round-leaved filaree (California macrophylla)	SD County Group List B, CRPR List 1B.2	Annual herb. Clay soils in cismontane woodland and valley and foothill grassland; 15-1200 m (50-3936 ft). Blooming period: March - May	No	Low	Marginally suitable habitat occurs onsite.
Dunn's mariposa lily (<i>Calochortus dunnii</i>)	SD County Group List A CRPR List 1B.2	Perennial bulbiferous herb. Gabbroic or metavolcanic soils, or rocky openings in chaparral or grassland/chaparral ecotone, also in closed-cone coniferous forest; 185- 1830 m (606-6002 ft). Blooming period: February - June	No	Low	This species is known to occur at higher elevations and suitable soil does not occur onsite.

Common Name (<i>Scientific Name</i>)	Sensitivity Code, Status	Habitat Requirements	Verified Onsite (Yes/No)	Potential to Occur	Rationale
Lewis' evening-primrose (Camissoniopsis lewisii)	SD County List C, CRPR List 3	Annual herb. Sandy or clay soils in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland; 0-300 m (0-984 ft). Blooming period: March - June	No	Low	Marginally suitable habitat occurs onsite.
San Luis Obispo sedge (<i>Carex obispoensis</i>)	CRPR List 1B.2	Perennial rhizomatous herb. Often found on serpentine or gabbro seeps, or on clay soils in closed-coned coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland; 10-820 m (32-2689 ft). Blooming period: April - June	No	Low	Suitable habitat does not occur onsite.
Mojave paintbrush (<i>Castilleja plagiotoma</i>)	CRPR List 4.3	Hemiparasitic perennial herb. Great basin scrub (alluvial soils), lower montane coniferous forests, Joshua tree, pinyon and juniper woodland; 300-2500 m (984 - 8200 ft.). Blooming period: April - June	No	Low	Marginally suitable habitat occurs onsite.
Payson's jewelflower (<i>Caulanthus simulans</i>)	SD County List D, CRPR List 4.2	Annual herb. Sandy and granitic soils in chaparral and coastal scrub; 90-2200 m (295-7218 ft). Blooming period: February - June	No	Low	Marginally suitable habitat occurs onsite.
Lakeside ceanothus (Ceanothus cyaneus)	SD County List A, CRPR List 1B.2	Evergreen shrub. Closed-cone coniferous forest, dense chaparral; 235-755 m (771- 2543 ft). Blooming period: April - June	No	Low	Suitable habitat does not occur onsite.
Otay Mountain ceanothus (Ceanothus otayensis)	CRPR List 1B.2	Perennial evergreen shrub. Metavolcanic or gabbroic chaparral; 600-1100 m (1968- 3608 ft). Blooming period: January - April	No	Low	Suitable habitat does not occur onsite.
Wart-stemmed ceanothus (Ceanothus verrucosus)	SD County List B, CRPR List 2B.2	Evergreen shrub. Chaparral; 1-380 m (3- 1247 ft). Blooming period: December - May	No	Low	Study area outside known range of species.

Common Name (<i>Scientific</i> <i>Name</i>)	Sensitivity Code, Status	Habitat Requirements	Verified Onsite (Yes/No)	Potential to Occur	Rationale
Southern tarplant (<i>Centromadia parryi</i> ssp. <i>australis</i>)	SD County List A, CRPR List 1B.1	Annual herb. Found within the margin of marshes and swamps, vernally mesic soils in valley and foothill grassland, and vernal pools; 0-480 m (0-1574 ft). Blooming period: May - November	No	Low	Suitable habitat does not occur onsite.
Smooth tarplant (<i>Centromadia pungens</i> ssp. <i>laevis</i>)	SD County List A, CRPR List 1B.1	Annual herb. Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland; 0-640 m (0-2100 ft). Blooming period: April - September	No	Low	Suitable habitat does not occur onsite.
Southern mountain misery (<i>Chamaebatia australis</i>)	SD County List D, CRPR List 4.2	Evergreen shrub. Gabbroic or metavolcanic chaparral; 300-1020 m (984-3345 ft). Blooming period: November - May	No	Low	Suitable habitat does not occur onsite. This species is known to occur at higher elevations.
Peninsular spineflower (Chorizanthe leptotheca)	SD County List D, CRPR List 4.2	Annual herb. Alluvial fans or granitic areas in chaparral, coastal scrub, and lower montane coniferous forest; 300-1900 m (984-6232 ft). Blooming period: May - August	No	Low	Suitable habitat does not occur onsite.
Long-spined spineflower (Chorizanthe polygonoides var. longispina)	SD County List A, CRPR List 1B.2	Annual herb. Clay lenses, largely devoid of shrubs in chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, and vernal pools; 30-1530 m (98-5018 ft). Blooming period: April - July	No	Low	Suitable habitat does not occur onsite.
Delicate clarkia (<i>Clarkia</i> <i>delicata</i>)	SD County List A, CRPR List 1B.2	Annual herb. Oak woodlands and chaparral, often on gabbroic soils; 235- 1000 m (770-3280 ft). Blooming period: April - June	No	Moderate	This species is known to occur in the area, although this species wasn't detected during the field survey.

Common Name (<i>Scientific</i> <i>Name</i>)	Sensitivity Code, Status	Habitat Requirements	Verified Onsite (Yes/No)	Potential to Occur	Rationale
San Miguel savory (Clinopodium chandleri)	SD County List A, CRPR List 1B.2	Perennial shrub. Rocky , gabbroic, or metavolcanic areas in chaparral, cismontane woodland, coastal scrub, riparian scrub, and valley and foothill grassland; 120-1075 (393-3526 ft). Blooming period: March - July	No	Low	Marginally suitable habitat occurs onsite.
Summer holly (Comarostaphylis diversifolia ssp. diversifolia)	SD County List A, CRPR List 1B.2	Evergreen shrub. Chaparral and cismontane woodland; 30-790 m (98- 2591 ft). Blooming period: April - June	No	Low	Suitable habitat does not occur onsite.
Small-flowered morning- glory (Convolvulus simulans)	SD County List D, CRPR List 4.2	Annual herb. Friable clay soils or serpentine seeps in chaparral openings, coastal scrub, and valley and foothill grassland; 30-700 m (98-2297 ft). Blooming period: March - July	No	Low	Suitable habitat does not occur onsite.
Short-bracted bird's-beak (Cordylanthus rigidus ssp. brevibracteatus)	CRPR List 4.3	Annual herb. Occurs in chaparral, lower montane coniferous forest, pinyon and juniper woodland, upper montane conferous forest, in openings, on granitic substrates; 1000-2590 m (3280-8497 ft).	No	Low	Suitable habitat does not occur onsite.
Western dichondra (<i>Dichondra occidentalis</i>)	SD County List D, CRPR List 4.2	Perennial rhizomatous herb. Chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland; 50-500 m (164-1640 ft). Blooming period: January - July	No	Low	Suitable habitat does not occur onsite.
Cleveland's bush monkeyflower (<i>Diplacus</i> clevelandii)	SD County List D, CRPR List 4.2	Perennial rhizomatous herb. On gabbro soils, often in disturbed areas, openings, rocky areas in chaparral, cismontane woodland, and lower montane coniferous forest; 450-2000 m (1462-6560 ft). Blooming Period: April-July	No	Low	Suitable habitat does not occur onsite. This species is known to occur at higher elevations.

Common Name (<i>Scientific</i> Name)	Sensitivity Code, Status	Habitat Requirements	Verified Onsite (Yes/No)	Potential to Occur	Rationale
Variegated dudleya (Dudleya variegata)	SD County List A, CRPR List 1B.2	Perennial herb. Clay soils in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pools; 3-580 m (9-1903 ft). Blooming period: April - June	No	Low	Appropriate rocky outcrops and suitable habitat do not occur onsite.
Palmer's goldenbush (Ericameria palmeri var. palmeri)	SD County List B, CRPR List 1B.1	Evergreen shrub. Coastal drainages, in mesic chaparral sites or mesic coastal sage scrub; below 600 m (1969 ft). Blooming period: August - October (uncommon in July)	No	Low	Suitable habitat does not occur onsite.
Vanishing wild buckwheat (Eriogonum evanidum)	CRPR List 1B.1	Annual herb. Sandy or gravelly soils in chaparral, cismontane woodland, lower montane coniferous forest, and pinyon and juniper woodland; 1100-2225 m (3608-7300 ft). Blooming period: July - October	No	Low	Suitable habitat does not occur onsite.
San Diego button-celery (<i>Eryngium aristulatum</i> var. parishii)	SD County List A, CRPR List 1B.1, FE, SE	Annual/perennial herb. Mesic soils in coastal scrub, valley and foothill grassland, and vernal pools; 20-620 m (65-2034 ft). Blooming period: April - June	No	Low	Suitable vernal pool habitat does not occur onsite.
Palomar monkeyflower (<i>Erythranthe diffusa</i>)	SD County List D, CRPR List4.3	Annual herb. Sandy or gravelly soils in chaparral and lower montane coniferous forest; 1220-1830 (4000-6002 ft). Blooming period: April - June	No	Low	Suitable habitat does not occur onsite.
Abrams' spurge (Euphorbia abramsiana)	CRPR List 2B.2	Annual herb. Sandy soils in Mojavean desert scrub and Sonoran desert scrub; -5 – 915 m (-16 – 3002 ft). Blooming period: August - November	No	Low	Suitable habitat does not occur onsite.
San Diego barrel cactus (Ferocactus viridescens)	SD County List B, CRPR List 2B.1	Stem succulent. Sandy to rocky areas; chaparral, coastal scrub, valley and foothill grassland, vernal pools; 3-450 m (9-1476 ft). Blooming period: May - June	No	Low	Suitable habitat does not occur onsite.

Common Name (<i>Scientific</i> <i>Name</i>)	Sensitivity Code, Status	Habitat Requirements	Verified Onsite (Yes/No)	Potential to Occur	Rationale
Campbell's liverwort (Geothallus tuberosus)	CRPR List 1B.1	Bryophyte. Mesic soils within coastal scrub, vernal pool habitat. 10-600 m (32 - 1969 ft)	No	Low	Suitable habitat does not occur onsite.
Mission Canyon bluecup (<i>Githopsis diffusa</i> ssp. <i>filicaulis</i>)	SD County List C, CRPR List 3.1	Annual herb. Mesic soils and disturbed areas within chaparral; 450-700 m (1476- 2296 ft). Blooming period: April - June	No	Low	Primarily a montane species.
San Diego gumplant (<i>Grindelia hallii</i>)	SD County List A, CRPR List 1B.2	Perennial herb. Meadows, chaparral, lower montane coniferous forest, and valley and foothill grassland; 185-1745 m (606-5723 ft). Blooming period: May - October	No	Low	Marginally suitable habitat present.
Palmer's grapplinghook (Harpagonella palmeri)	SD County List D, CRPR List4.2	Annual herb. Clay soils in chaparral, grasslands, coastal sage scrub; 20-955 m (65 to 3132 ft). Blooming period: March - May	No	Low	Marginally suitable habitat occurs onsite.
Tecate cypress (Hesperocyparis forbesii)	SD County List A, CRPR List 1B.1	Perennial evergreen tree. Clay, gabbroic, or metavolcanic soils within closed-cone coniferous forest and chaparral; 80-1500 m (262-4921 ft).	No	Low	Marginally suitable habitat occurs onsite.
Graceful tarplant (Holocarpha virgata ssp. elongata)	SD County List D, CRPR List 4.2	Annual herb. Chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland; 60-1100 m (196-3600 ft). Blooming period: May - November	No	Low	Marginally suitable habitat for this species present.
Vernal barley (Hordeum intercedens)	SD County List C, CRPR List 3.2	Annual herb. Coastal dunes, coastal scrub, saline flats and depressions in valley and foothill grassland, and vernal pools; 5- 1000 m (16-3280 ft). Blooming period: March - June	No	Low	Suitable habitat does not occur onsite.
Ramona horkelia (<i>Horkelia</i> <i>truncata</i>)	SD County List A, CRPR List 1B.3	Perennial herb. Clay and gabbroic soils in chaparral and cismontane woodland; 400- 1300 m (1312-4265 ft). Blooming period: May - June	No	Low	Suitable habitat does not occur onsite.

Common Name (<i>Scientific</i> Name)	Sensitivity Code, Status	Habitat Requirements	Verified Onsite (Yes/No)	Potential to Occur	Rationale
Decumbent goldenbush (Isocoma menziesii var. decumbens)	SD County List A, CRPR List 1B.2	Perennial shrub. Chaparral and in sandy coastal scrub, often in sandy disturbed areas; 10-135 m (33-443 ft). Blooming period: April - November	No	Moderate	Marginally suitable habitat for this species present but this species is known to occur in the area
San Diego marsh-elder (<i>Iva</i> <i>hayesiana</i>)	SD County List B, CRPR List 2B.2	Perennial herb. Marshes and swamps, wetland areas, and playas; 10-500 m (32- 1640 ft). Blooming period: April - October	No	Low	Suitable wetland habitat does not occur onsite.
Southwestern spiny rush (Juncus acutus ssp. leopoldii)	SD County List D, CRPR List 4.2	Perennial rhizomatous herb. Mesic soils in coastal dunes, alkaline seeps in meadows and seeps, and coastal salt marshes and swamps; 3-900 m (9-2953 ft). Blooming period: May - June	No	Low	Suitable mesic habitat does not occur onsite.
Pride-of-California (Lathyrus splendens)	SD County List D, CRPR List 4.3	Perennial herb. Chaparral; 200-1525 m (656-5002 ft). Blooming period: March - June	No	Low	This species is known to occur at higher elevations.
Heart-leaved pitcher sage (<i>Lepechinia cardiophylla</i>)	SD County List A, CRPR List 1B.2	Perennial shrub. Closed-cone coniferous forest, chaparral, cismontane woodland; 520-1370 m (1705-4493 ft). Blooming period: April - July	No	Low	Suitable habitat for this species does not occur onsite.
Gander's pitcher sage (<i>Lepechinia ganderi</i>)	SD County List A, CRPR List 1B.3	Perennial shrub. Gabbroic or metavolcanic soils in closed-cone coniferous forest, chaparral, coastal scrub, and valley and foothill grassland; 305-1005 m (1000- 3296 ft). Blooming period: June - July	No	Low	Suitable habitat does not occur onsite.
Robinson's pepper-grass (Lepidium virginicum var. robinsonii)	SD County List A, CRPR List 4.3	Annual herb. Openings in chaparral and sage scrub; below 885 m (2900 ft). Blooming Period: January - July	No	Low	Marginally suitable habitat present.
Large-flowered leptosiphon (<i>Leptosiphon grandiflorus</i>)	CRPR List 4.2	Annual herb. Usually in sandy substrate within coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal dunes, and foothill grassland. 5- 1,220 m (1 - 4,003 ft).	No	Low	Suitable habitat does not occur onsite.

Common Name (<i>Scientific</i> <i>Name</i>)	Sensitivity Code, Status	Habitat Requirements	Verified Onsite (Yes/No)	Potential to Occur	Rationale
Felt-leaved monardella (Monardella hypoleuca ssp. lanata)	SD County List A, CRPR List 1B.2	Rhizomatous herb. Chaparral and cismontane woodland; 300-1575 m (984- 5040 ft). Blooming Period: June - August	No	Low	Suitable habitat for does not occur.
Willowy monardella (Monardella viminea)	SD County List A, CRPR List 1B.1, FE, SE	Perennial herb. Alluvial ephemeral washes in chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland; 50- 225 m (164-738 ft). Blooming period: June - August	No	Low	Suitable alluvial habitat does not occur onsite.
Little mousetail (<i>Myosurus</i> <i>minimus</i> ssp. apus)	SD County List C, CRPR List 3.1	Annual herb. Valley and foothill grassland, and alkaline vernal pools; 20-640 m (65- 2100 ft). Blooming period: March - June	No	Not expected to occur	Vernal pool species.
Spreading navarretia (<i>Navarretia fossalis</i>)	SD County List A, CRPR List 1B.1, FT	Annual herb. Chenopod scrub, assorted freshwater marshes and swamps, playas, and vernal pools; 30-655 m (98-2149 ft). Blooming period: April - June	No	Not expected to occur	Vernal pool species.
Prostrate vernal pool navarretia (<i>Navarretia</i> prostrata)	SD County List A, CRPR List 1B.1	Annual herb. Mesic coastal scrub, meadows and seeps, alkaline valley and foothill grassland, and vernal pools; 15- 1210 m (49-3968 ft). Blooming period: April - July	No	Not expected to occur	Vernal pool species.
Dehesa nolina (<i>Nolina</i> interrata)	CRPR List 1B.1, SE	Perennial herb. Gabbroic, metavolcanic, or serpentinite soils in open southern mixed chaparral and chamise chaparral; 185-855 m (606-2804 ft). Blooming period: June - July	No	Low	Suitable habitat does not occur onsite.
California adder's-tongue (<i>Ophioglossum</i> californicum)	SD County List D, CRPR List 4.2	Perennial rhizomatous herb. Mesic areas in chaparral, valley and foothill grasslands, and the margins of vernal pools; 60-525. Blooming period: December - June	No	Low	Suitable habitat does not occur onsite.
Gander's ragwort (<i>Packera</i> ganderi)	SD County List A, CRPR List 1B.2, SR	Perennial herb. Chaparral often in burned areas and gabbroic outcrops; 400-1200 m (1312-3937 ft). Blooming period April - June	No	Low	Suitable habitat does not occur

Common Name (<i>Scientific</i> <i>Name</i>)	Sensitivity Code, Status	Habitat Requirements	Verified Onsite (Yes/No)	Potential to Occur	Rationale
Golden-rayed pentachaeta (<i>Pentachaeta aurea</i> ssp. <i>aurea</i>)	SD County List D, CRPR List 4.2	Annual herb. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, and valley and foothill grassland; 80-1850 m (262-6068 ft). Blooming period: March - July.	No	Low	Marginally suitable habitat occurs onsite.
Woolly chaparral-pea (Pickeringia montana var. tomentosa)	CRPR List 4.3	Evergreen shrub. Gabbroic, granitic, or clay soils in chaparral; 0-1700 m (0-5577 ft). Blooming period: May - August	No	Low	Suitable habitat does not occur onsite.
Chaparral rein orchid (<i>Piperia cooperi</i>)	SD County List D, CRPR List4.2	Perennial herb. Chaparral, cismontane woodland, and valley and foothill grassland; 15-1585 m (49-5200 ft). Blooming period: March - June	No	Low	Marginally suitable habitat occurs onsite.
San Diego mesa mint (<i>Pogogyne abramsii</i>)	SD County List A, CRPR List 1B.1, FE, SE	Annual herb. Vernal pools; 90-200 m (295-656 ft). Blooming period: March - July	No	Low	Suitable habitat does not occur onsite.
Otay Mesa mint (<i>Pogogyne</i> nudiuscula)	SD County List A, CRPR List 1B.1, FE, SE	Annual herb. Vernal pools; 90-250 (295- 820 ft). Blooming period: May - July	No	Not expected to occur	Suitable habitat does not occur.
Fish's milkwort (<i>Polygala</i> <i>cornuta</i> var. <i>fishiae</i>)	SD County List D, CRPR List 4.3	Perennial deciduous shrub. Chaparral, cismontane woodland, and riparian woodland; 100-1000 m (328-3280 ft). Blooming period: May - August	No	Low	Suitable habitat does not occur.
White rabbit-tobacco (Pseudognaphalium leucocephalum)	CRPR List 2B.2	Perennial herb. Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland; 0-2100 m (0-6888 ft). Blooming period: July - December	No	Moderate	Marginally suitable habitat occurs onsite, but this species is known to occur in the area
Cedros Island oak (Quercus cedrosensis)	SD County List B, CRPR List 2B.2	Evergreen tree. Closed-cone coniferous forest, chaparral, coastal scrub; 255-960 m (836-3148). Blooming period: April - May	No	Low	Suitable habitat does not occur.

Common Name (<i>Scientific</i> <i>Name</i>)	Sensitivity Code, Status	Habitat Requirements	Verified Onsite (Yes/No)	Potential to Occur	Rationale
Nuttall's scrub oak (<i>Quercus dumosa</i>)	SD County List A, CRPR List 1B.1	Perennial evergreen shrub. Sandy or clay loam in closed-cone coniferous forest, chaparral, and coastal scrub; 15-400 m (49-1312 ft.). Blooming period: February - August	No	Low	Species primarily found in coastal plain.
Engelmann oak (<i>Quercus</i> engelmannii)	SD County List D, CRPR List 4.2	Deciduous tree. Cismontane woodland, chaparral, riparian woodland, and valley and foothill grassland; 50-1300 m (164- 4265 ft). Blooming period: March - June	No	Low	No oak woodland present onsite, this species would have been observed if present.
Moreno currant (<i>Ribes</i> canthariforme)	SD County List A, CRPR List1B.3	Deciduous shrub. Chaparral and riparian scrub; 340-1200 m (1115-3937 ft). Blooming period: February - April	No	Low	Suitable habitat does not occur onsite.
Munz's sage (Salvia munzii)	SD County List B, CRPR List 2B.2	Evergreen shrub. Chaparral and coastal sage scrub; 120-1065 m (393-3493 ft). Blooming period: February - April	No	Low	Marginally suitable habitat present.
Ashy spike-moss (Selaginella cinerascens)	SD County List D, CRPR List 4.1	Perennial rhizomatous herb. Chaparral and coastal sage scrub; 20-640 m (65- 2099 ft).	No	Low	Suitable rocky soils do not occur onsite.
Chaparral ragwort (Senecio aphanactis)	SD County List B, CRPR List 2B.2	Annual herb. Chaparral, cismontane woodland, coastal scrub, and alkaline flats; 15-800 m (49-2624 ft.). Blooming period: January - April	No	Low	Marginally suitable habitat present.
Purple stemodia (<i>Stemodia</i> durantifolia)	SD County List B, CRPR List 2B.1	Perennial herb. Along minor creeks and seasonal drainages, often in mesic, sandy soils in Sonoran desert scrub; 180-300 m (590-984 ft). Blooming period: January - December	No	Low	Suitable habitat does not occur onsite.
San Diego County needle grass (<i>Stipa diegoensis</i>)	CRPR List 4.2	Perennial herb. Rocky, often mesic soils within chaparral and coastal scrub; 10- 800 m (32-2624 ft). Blooming period: February - June	No	Low	Suitable habitat does not occur onsite.

Common Name (<i>Scientific</i> Name)	Sensitivity Code, Status	Habitat Requirements	Verified Onsite (Yes/No)	Potential to Occur	Rationale
Oil neststraw (<i>Stylocline</i> <i>citroleum</i>)	SD County List A, CRPR List 1B.1	Annual herb. Clay soils in chenopod scrub, coastal scrub, and valley and foothill grassland, associated with oilfields; 50- 400 m (164-1312 ft). Blooming period: March - April	No	Low	Marginally suitable habitat occurs onsite.
Parry's tetracoccus (<i>Tetracoccus dioicus</i>)	SD County List A, CRPR List 1B.2	Deciduous shrub. Chaparral and coastal sage scrub; 165-1000 m (541-3280 ft). Blooming period: April - May	No	Low	Suitable habitat does not occur onsite.
Woven-spored lichen (<i>Texosporium sancti-jacobi</i>)	CRPR List 3	Lichen. Found in open spots in chaparral with <i>Adenostoma fasciculatum</i> , Eriogonum, Selanginella. At pinnacles, on small mammal pellets. 290-660m (951- 2,165 ft).	No	Low	Suitable habitat does not occur onsite.
Coastal triquetrella (<i>Triquetrella californica</i>)	CRPR List1B.2	Moss. Found within coastal bluff scrub of coastal scrub, grows within 30m from the coast in coastal scrub, grasslands, and in open gravels on roadsides, hillsides, rocky slopes, and fields. On gravel or thin soil over outcrops. 10-100m (32-328 ft)	No	Low	Suitable habitat does not occur onsite.
San Diego County viguiera (<i>Viguiera laciniata</i>)	SD County List D, CRPR List 4.3	Perennial shrub. Chaparral and coastal scrub; 10-750 m (33-2461 ft). Blooming period: February - August	No	Moderate	Although suitable habitat does not occur onsite, this species is known to occur in the area.
Rush-like bristleweed (Xanthisma junceum)	CRPR List 4.3	Perennial herb. Chaparral and coastal scrub; 240-1000 m (787-3280 ft.). Blooming period: June - January	No	Low	Suitable habitat does not occur onsite.

Common Name (Scientific			Verified Onsite Potential				
Name)	Sensitivity Code, Status	Habitat Requirements	(Yes/No) to Occur Rationale				
Status:							
Federal			CA Rare Plant Rank (CRPR) – Formerly known as CRPR List				
FE - Listed as endangered under the	federal Endangered Species Act.		1A. Presumed extirpated in California, and either rare or extinct elsewhere				
FT - Listed as threatened under the	federal Endangered Species Act.		1B. Rare, threatened, or endangered in California and elsewhere				
FC – Candidate for listing under the federal Endangered Species Act.			2A. Presumed extirpated in California, more common elsewhere2B. Rare ,threatened, or				
State			endangered in California, more common elsewhere				
SE - Listed as endangered under the California Endangered Species Act.			3. Plants for which we need more information - Review list				
ST – Listed as threatened under California Endangered Species Act			4. Plants of limited distribution - Watch list				
SR – Listed as rare under California	Endangered Species Act.		Threat Ranks				
			.1 - Seriously threatened in California				
			.2 – Fairly threatened in California				
			.3 – Not very threatened in California				
			San Diego County Group				
			A – Rare, threatened or endangered in California and elsewhere				
			B – Rare, threatened or endangered in California but more common elsewhere				
			C – Maybe quite rare, but more information is needed to determine their status				
			D – Limited distribution and are uncommon but not presently rare or endangered				