4 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITY

4.1 Guidelines for the Determination of Significance

The County County's *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010a) are based on the criteria in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) and were used to analyze potential direct and indirect impacts to biological resources. The following guidelines for the determination of significance come directly from the County's guidelines (County of San Diego 2010a).

Guideline 4.2 The project would have a substantial adverse effect on riparian habitat or another sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS.

A. Project-related grading, clearing, construction, or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in County of San Diego 2010a, Table 5, excluding those without a mitigation ratio) on or off the project site. This Guideline would not apply to small remnant pockets of habitat that have a demonstrated limited biological value. No de minimus standard is specified under which an impact would not be significant; however, minor impacts to native or naturalized habitat that is providing essentially no biological habitat or wildlife value can be evaluated on a case-by-case basis to determine whether the projected impact may be less than significant. For example, an impact to native or naturalized upland habitat under 0.1 acre in an existing urban setting may be considered less than significant (depending on a number of factors). An evaluation of this type should consider factors including, but not limited to, type of habitat, relative presence or potential for sensitive species, relative connectivity with other native habitat, wildlife species and activity in the project vicinity, and current degree of urbanization and edge effects in project vicinity, etc. Just because a particular habitat area is isolated, for example, does not necessarily mean that impacts to the area would not be significant (e.g., vernal pools). An area that is disturbed or partially developed may provide a habitat "island" that would serve as a functional refuge area "stepping stone" or "archipelago" for migratory species.

B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by U.S. Army Corps of Engineers (ACOE),

California Department of Fish and Game (CDFG), 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; any disturbance of the substratum; and/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 groundwater-dependent habitat, typically a drop of 3 feet or more from historically low groundwater levels.

D. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing undeveloped lands or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term. The following issues should be addressed in determining the significance of indirect impacts: increasing human access; increasing predation or competition from domestic animals, pests, or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown by the best available science to adversely affect the functioning of sensitive habitats.

E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands. If the project is subject to the Resource Protection Ordinance (RPO), buffers of a minimum of 50 feet and a maximum of 200 feet to protect wetlands are required based on the best available science available to the County at the time of adoption of the ordinance. The following examples provide guidance on determining appropriate buffer widths:

- A 50-foot wetland buffer would be appropriate for lower quality RPO-wetlands where the wetland has been assessed to have low physical and chemical functions, vegetation is not dominated by hydrophytes, soils are not highly erosive, and slopes do not exceed 25%.
- A wetland buffer of 50 to 100 feet is appropriate for moderate- to high-quality RPO-wetlands that support a predominance of hydrophytic vegetation or wetlands within steep slope areas (greater than 25%) with highly erosive soils. Within the 50- to 100-foot range, wider buffers are appropriate where wetlands connect upstream and downstream, where the wetlands serve as a local wildlife corridor, or where the adjacent land use(s) would result in substantial edge effects that could not be mitigated.

- Wetland buffers of 100 to 200 feet are appropriate for RPO-wetlands within regional wildlife corridors or wetlands that support significant populations of wetland-associated sensitive species, or where stream meander, erosion, or other physical factors indicate a wider buffer is necessary to preserve wildlife habitat.
- Buffering of greater than 200 feet may be necessary when an RPO-wetland is within a regional corridor or supports significant populations of wetland-associated sensitive species and lies adjacent to land use(s) that could result in a high degree of edge effects within the buffer. Although the RPO stipulates a maximum of 200 feet for RPO-wetland buffers, actions may be subject to other laws and regulations (such as the Endangered Species Act) that require greater wetland buffer widths.

4.2 Analysis of Project Effects

The Proposed Project will result in significant impacts and are mitigated under the guidelines presented in Section 4.1 for the following reasons.

4.2.1 Project Effects Relevant to Guideline 4.2.A

Short-term, construction-related, or temporary direct impacts to special-status upland vegetation communities would primarily result from construction activities. Clearing, trampling, or grading of special-status vegetation communities outside designated construction zones could occur in the absence of avoidance and mitigation measures. Potential temporary direct impacts to special-status vegetation communities on site would be significant, absent mitigation (**Impact V-1**). However, these short-term, direct impacts will be mitigated to a level below significance through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including special-status vegetation communities; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which prohibits planting of invasive plants that can compete with native plants for resources and alter habitat; and **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to special-status vegetation communities.

Permanent direct impacts to disturbed land are not considered significant. Permanent direct impacts to 103.2[16] acres of special-status upland vegetation communities would occur as a result of the Proposed Project. Permanent direct impacts to special-status upland vegetation communities would be significant, absent mitigation (**Impact V-2**). This impact will be

[16] Includes fuel modification zone acres.

mitigated through mitigation measure **M-BI-4** (habitat preservation and management), which will conserve approximately 180.4 acres of equivalent function and value.

Table 4 in Section 2.2 summarizes temporary and permanent direct impacts to vegetation communities and land covers found in the Project area. Figure 9 illustrates the distribution of biological resources on site and the locations where proposed impacts would occur. Table 10, Summary of Impacts, Mitigation, and Open Space for Vegetation Communities and Jurisdictional Areas, summarizes the impacts and required mitigation for special-status vegetation communities in the Project area. Mitigation ratios provided in Table 10 conform to County guidelines (County of San Diego 2010b). Open space design and resources are shown in Figure 9.

Semi-desert chaparral, Sonoran mixed woody scrub, and upper Sonoran subshrub scrub have many plant species and other characteristics in common. For example, areas mapped as semi-desert chaparral have species composition similar to Sonoran mixed woody shrub but have a lower percent cover of creosote; areas mapped as upper Sonoran subshrub have open structure and plant species similar to semi-desert chaparral, but lack creosote completely. The 26.3 acres of excess mitigation acreage of semi-desert chaparral would provide functions and values similar to the Sonoran mixed woody scrub (3.2 acres) and upper Sonoran subshrub scrub (3.0 acres) because the species compositions are similar and there is similar soils distribution within the open space areas compared to the Proposed Project impact areas. These characteristics, combined with the overall openness and relatively flat terrain of the site, would allow for these open space areas to provide similar functions and values because they have potential to provide suitable habitat for the same types of plant and wildlife species. Although there would be a deficit of 6.2 acres at the required 1:1 mitigation ratio for Sonoran mixed woody scrub and upper Sonoran subshrub scrub, overall, the Project would have an excess of 42 acres of required mitigation lands (see Table 10). Currently, wildlife species are free to move throughout all of these habitat types and would continue to use the designated semi-desert chaparral and Peninsular juniper woodland and scrub as habitat for breeding, nesting, cover, and foraging.

Table 10 includes the impacts to vegetation communities and non-natural land covers and mitigation acreage (if required). Semi-desert chaparral and Peninsular juniper woodland and scrub have a combined mitigation excess of 38.9 acres, and Sonoran mixed woody scrub and upper Sonoran subshrub scrub have a combined mitigation deficit of 6.2 acres. Wildlife species that are expected to move throughout both impacted and open space habitats include species described in Table 6. These species include Blainville's horned lizard, Belding's orange-throated whiptail, northern red-diamond rattlesnake, northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, and San Diego desert woodrat. Avian species that may forage in these areas include Cooper's hawk, prairie falcon, golden eagle, Bell's sparrow, turkey vulture, and loggerhead shrike. Avian species that may nest in these areas include Bell's sparrow and loggerhead shrike. Modeled habitat, or similar vegetation communities and soils, for special-

status plants occur throughout the open space areas. Because wildlife species are expected to use all of the on-site open space areas, and there is suitable habitat for plants within the open space areas, these lands would have functional equivalence, and no additional mitigation would be necessary. Additionally, the open space areas provide higher-quality habitat compared to the impacted areas, and would result in conserved lands at a mitigation ratio greater than 1:1.

Table 10
Summary of Impacts, Mitigation, and Open Space for
Vegetation Communities and Jurisdictional Areas

Habitat Types/Vegetation Communities	Existing Acreage[1]	Total Impacts (Acres)[2]	Mitigation Ratio	Mitigation Required (Acres)	Open Space (Acres)	Mitigation Excess (Deficit)
Non-Jurisdictional Vegetation Communities						
Upland Scrub and Chaparral						
Semi-desert chaparral[3]	179.5	74.9	1:1	74.9	101.2	26.3
Sonoran mixed woody scrub[3]	3.2	3.2	1:1	3.2	—	(3.2) Mitigated through excess SDC
Upper Sonoran subshrub scrub[3]	3.6	3.0	1:1	3.0	—	(3.0) Mitigated through excess SDC
Subtotal	*186.2*	*81.1*	—	*81.1*	*101.2*	*26.3*
Woodland						
Peninsular juniper woodland and scrub[3]	101.5	22.2	3:1	66.6	79.2	12.6
Subtotal	*101.5*	*22.2*	—	*66.6*	*79.2*	*12.6*
Non-Natural Land Covers						
Disturbed land	13.2	8.3	N/A	—	3.1	3.1
Subtotal	*13.2*	*8.3*	—	—	*3.1*	*3.1*
Jurisdictional Vegetation Communities and Waters						
Non-wetland ephemeral waters[4]	3.3	0.21	1:1	0.21	3.14	N/A
Subtotal	*3.3*	*0.21*	—	*0.21*	*3.14*	*N/A*
Total	**300.9**	**111.5**	**—**	**147.9**	**183.5**	**42.0**

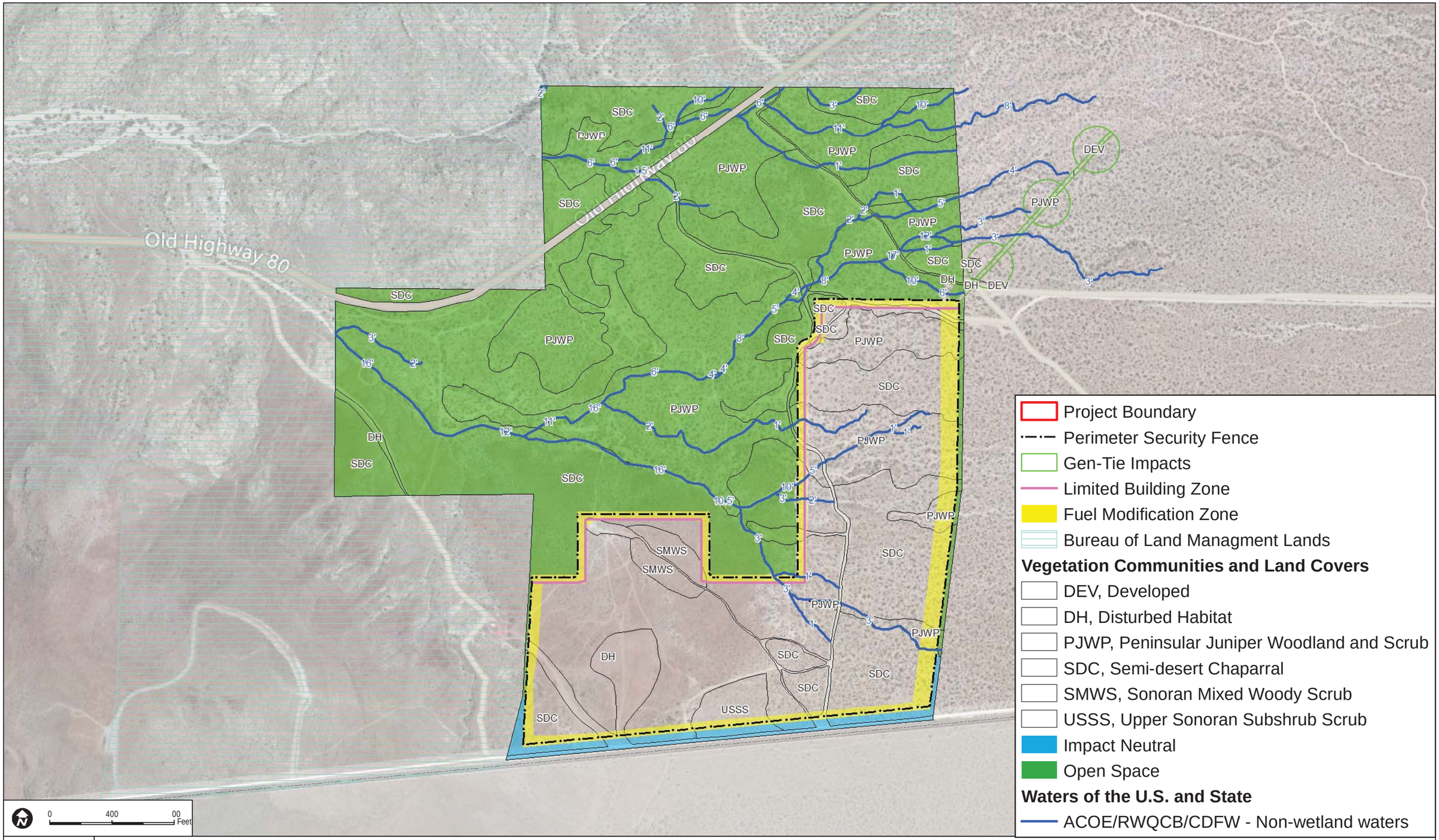
1 Includes acreage from the gen-tie line.
2 Includes acreage from the fuel modification zones and gen-tie line.
3 Considered special status by the County (County of San Diego 2010a).
4 These features are overlays to the vegetation community layer and are not counted toward the total acreage.

4.2.2 Project Effects Relevant to Guideline 4.2.B

No wetlands under the jurisdiction of ACOE, RWQCB, CDFW or County were identified within the solar site or gen-tie site and will not be further addressed.

The Proposed Project was designed to avoid non-wetland waters to the maximum extent practicable. There will be direct impacts to 0.21 acre (4,261 linear feet) of non-wetland ephemeral waters under the jurisdiction of ACOE/RWQCB/CDFW. Impacts to 0.21 acre of non-wetland waters would be significant, absent mitigation (**Impact V-3**), and would be mitigated to a level less than significant through implementation of mitigation measure **M-BI-4** (habitat preservation and management), which conserves 180.4 acres of habitat in open space, including 3.14 acres of non-wetland waters that help maintain the natural flow of water across the landscape and downstream to Carrizo Creek; and **M-BI-15** (require permits from ACOE, RWQCB, and CDFW), which requires the Applicant to obtain permits from ACOE, RWQCB, and CDFW, as required under federal and state law, and to demonstrate avoidance and minimization of impacts to jurisdictional resources to the extent feasible.

Short-term, construction-related, or temporary indirect impacts to jurisdictional non-wetlands waters would primarily result from construction activities. Indirect impacts could include the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Potential temporary indirect impacts to jurisdictional waters on site would be significant, absent mitigation (**Impact V-4**). However, these short-term indirect impacts will be mitigated to a level below significant through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including jurisdictional resources; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which avoids indirect impacts to jurisdictional resources; and **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to jurisdictional resources.



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SOURCE: C B 2014; Bing Maps 2014

FIGURE 9

Open Space and Impact Neutral Areas

Jacumba Solar Project

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Potential long-term indirect impacts to jurisdictional non-wetlands waterways would primarily result from impacts related to operation and maintenance activities, including chemical pollutants, altered hydrology, non-native invasive species, increased human activity, and alteration of the natural fire regime. These indirect impacts would be significant, absent mitigation (**Impact V-5**), absent mitigation. Long-term indirect impacts to jurisdictional non-wetlands waterways would be mitigated to a level below significant through implementation of mitigation measure **M-BI-4** (habitat preservation and management), which conserves 180.4 acres, including 3.14 acres of non-wetland waters, in open space, and in addition to the Project design, would reduce potential impacts to hydrology by maintaining the natural flow of water across the landscape and downstream to Carrizo Creek; **M-BI-6** (restrictions on operation and maintenance personnel activity), which prohibits operation and maintenance personnel from traveling outside the Project footprint; **M-BI-9** (implementation of a Fugitive Dust Control Plan), which minimizes traffic speeds and requires the road leading to the facility entrance be paved to reduce dust; **M-BI-11** (implementation of a Fire Protection Plan), which reduces potential loss of suitable habitat from increased fire risk through managed fuel clearing and maintenance; **M-BI-12** (regulated herbicide application), which minimizes potential herbicide effects to plants through compliance with federal, state, and local laws, as well as requires weed control to minimize the spread of non-native species that can compete with natives for resources and alter habitat; and **M-BI-15** (require permits from ACOE, RWQCB, and CDFW), which requires the Applicant to obtain permits from ACOE, RWQCB, and CDFW, as required under federal and state law, and to demonstrate avoidance and minimization of impacts to jurisdictional resources to the extent feasible.

4.2.3 Project Effects Relevant to Guideline 4.2.C

The Proposed Project site does not support areas of potentially groundwater-dependent vegetation. During construction activities, an estimated water demand of 58.1 acre-feet over a period of approximately 5 months is anticipated. Water used for construction activities would be supplied via water trucked in from a local water source. No on-site groundwater will be used for construction and operational needs. Construction water demands would be met by the Jacumba Community Services District (JCSD) and/or the Padre Dam Municipal Water District. Since the operational water demand of the Proposed Project is anticipated to be fairly low (the facility would not be manned), because the cost of developing on-site water resources would be high, and because the yield of on-site wells is uncertain, the Proposed Project is anticipated to import all of its water needs from off-site sources. All operational water needs are anticipated to be met by the JCSD at Wells 4, 6, and 8. Wells 4 and 6 are approximately 500 feet south of riparian or bottomland vegetation communities, and Well 8 is approximately 350 feet south of riparian or bottomland vegetation communities. A groundwater investigation report prepared for the

Proposed Project demonstrated that JCSD Well 6 can provide up to 100,000 gallons per day over 192 days, for a total of 59 acre-feet, without causing significant impacts to groundwater storage, well interference, or groundwater-dependent habitat (Appendices 3.1.4-3 and 3.1.4-4 of the Jacumba Solar Energy Project EIR).

Operational water demands are anticipated to be greatest for PV panel washing and application of a non-toxic soil binder to stabilize site soil. Total operational water demands are estimated at 3.4 acre-feet per year. Panel washing for the Proposed Project would use 2.5 acre-feet per year. Water used for application of soil binder (if required) would be 0.9 acre-feet per year. This information is based on the Project Description for Jacumba Solar Energy Project (Dudek 2014b). Impacts to groundwater-dependent vegetation are anticipated to be less than significant.

4.2.4 Project Effects Relevant to Guideline 4.2.D

Short-term, indirect impacts to special-status upland vegetation communities as a result of the Proposed Project are described in Section 2.2.2.1 and include short-term; construction-related; or temporary, indirect impacts, and include generation of fugitive dust, changes in hydrology resulting from construction, and the introduction of chemical pollutants (including herbicides). Short-term, indirect impacts to special-status upland vegetation communities would be significant, absent mitigation (**Impact V-6**). Short-term, indirect impacts to special-status upland vegetation communities will be mitigated to a level below significance through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading, including special-status species vegetation communities; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which prohibits planting of invasive plants that can compete with native plants for resources; **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to special-status vegetation communities; and **M-BI-9** (implementation of a Fugitive Dust Control Plan), which prevents construction-related impacts to the viability of vegetation communities by requiring soil stabilizers, watering, and other dust-control methods during construction activities.

The Proposed Project would avoid impacts to vegetation communities to the maximum extent practicable as previously described, with conservation of approximately 60% of these habitats within the on-site open space (180.4 acres).

Mitigation for short-term direct impacts to special-status vegetation communities include **M-BI-1** (biological monitoring), **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), **M-BI-3** (preparation of a

biological monitoring report), and **M-BI-9** (implementation of a Fugitive Dust Control Plan), which are described in Section 3.4.

In accordance with the County Guidelines (County of San Diego 2010b), impacts to 103.2 acres of semi-desert chaparral, Sonoran mixed woody scrub, upper Sonoran subshrub scrub, and Peninsular juniper woodland and scrub will require mitigation. No mitigation will be required for direct impacts to developed or disturbed land. Mitigation measure **M-BI-4**, described in Section 3.4, will mitigate for these impacts to this vegetation community through on-site or off-site compensatory mitigation.

Permanent direct impacts to 0.15 acre (3,536 linear feet) of impacts to ephemeral unvegetated stream channel under the jurisdiction of ACOE, RWQCB, and CDFW will be mitigated to a less than significant level through implementation of mitigation measures **M-BI-4** (habitat preservation and management), described in Section 3.4, and **M-BI-15**.

M-BI-15 To comply with the state and federal regulations for impacts to waters of the United States and state, the following agency permits are required, or verification that they are not required shall be obtained.

1. The following permit and agreement shall be obtained, or provide evidence from the respective resource agency satisfactory to the director of Planning and Development Services (PDS) that such an agreement or permit is not required:

    a. A Clean Water Act, Section 401/404 permit issued by the California RWQCB and the ACOE for all Project-related disturbances of waters of the United States and/or associated wetlands.

    b. A Section 1602 Streambed Alteration Agreement issued by the CDFW for all Project-related disturbances of any streambed.

2. **Documentation:** The Applicant shall consult each agency to determine if a permit or agreement is required. Upon completion of the agency review of this Project, the Applicant shall provide a copy of the permit(s)/agreement(s), or evidence from each agency that such an agreement or permit is not required to the PDS for compliance.

3. **Timing:** Prior to approval of any grading and/or improvement plans and issuance of any Grading or Construction Permits.

4. **Monitoring:** The PDS shall review the permits/agreement for compliance with this condition. Copies of these permits should be transmitted to the Department of Public Works (DPW) for implementation on the grading plans.

Mitigation for short-term and long-term indirect impacts to special-status vegetation communities and jurisdictional waters include the implementation of mitigation measures **M-BI-1** through **M-BI-4** and **M-BI-11** through **M-BI-14**, which are described in Section 3.4, and **M-BI-14**.

4.3 Conclusions

Impact BI-V-1 The significant short-term direct impacts to special-status upland vegetation communities and jurisdictional wetlands and waters will be reduced to a level that is less than significant through implementation of mitigation measures **M-BI-1**, **M-BI-2**, and **M-BI-3**, which require biological monitoring, restrictions on plantings, equipment staging and storage, and construction vehicle speed limits, preparation of a biological monitoring report.

Impact BI-V-2 The significant permanent direct impact to 103.2 acres of semi-desert chaparral, Sonoran mixed woody scrub, upper Sonoran subshrub scrub, and Peninsular juniper woodland and scrub will be reduced to a level that is less than significant through implementation of mitigation measure **M-BI-4**, which provides for 180.4 acres of habitat conservation of equivalent function and value.

Impact BI-V-3 The significant permanent direct impact to 0.21 acre of non-wetland waters will be reduced to a level that is less than significant through implementation of mitigation measures **M-BI-4** and **M-BI-14**.

Impact BI-V-4 The significant short-term indirect impact to non-wetland waters will be reduced to a level that is less than significant through implementation of mitigation measures **M-BI-1** through **M-BI-3**.

Impact BI-V-5 The significant long-term indirect impacts to non-wetland waters will be reduced to a level that is less than significant through implementation of mitigation measures **M-BI-4**, **M-BI-6**, **M-BI-9**, **M-BI-11**, **M-BI-12**, and **M-BI-15**.

Impact BI-V-6 The significant short-term indirect impacts to special-status upland vegetation communities and jurisdictional non-wetland waters will be reduced to a level

that is less than significant through implementation of mitigation measures **M-BI-1**, **M-BI-2**, **M-BI-3**, and **M-BI-9,** which require biological monitoring, restrictions on plantings, equipment staging and storage, and construction vehicle speed limits, preparation of a biological monitoring report, and implementation of a Fugitive Dust Control Plan.

Impact BI-V-7 The significant long-term indirect impacts to special-status upland vegetation communities and jurisdictional non-wetland waters will be reduced to a level that is less than significant through implementation of mitigation measures **M-BI-4**, **M-BI-6**, **M-BI-9**, **M-BI-10**, **M-BI-11**, and **M-BI-12,** which provide for 180.4 acres of habitat conservation of equivalent function and value, requires restrictions on operation and maintenance personnel activity, implements a Fugitive Dust Control Plan, requires biological review of landscape plans, implements a Fire Protection Plan, and regulates weed control treatments.

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5 JURISDICTIONAL WETLANDS AND WATERWAYS

5.1 Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources (County of San Diego 2010a) are based on the criteria in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) and were used to analyze potential direct and indirect impacts to biological resources. The following guideline for the determination of significance comes directly from the County's guidelines (County of San Diego 2010a) and refers only to federally protected wetlands.

Guideline 4.3 The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

The significance of impacts shall be determined under Guideline 4.2B, C, and E, if federally protected wetlands will be affected.

5.2 Analysis of Project Effects

Project Effects Relevant to Guideline 4.3

No wetlands under the jurisdiction of ACOE were identified within the solar site or gen-tie site and therefore this Guideline will not be further addressed. See Section 4.2.2.

5.3 Cumulative Impact Analysis

Cumulative impacts are not assessed in this document; they are discussed thoroughly in Section 2.2.4 of the Proposed Project's EIR.

5.4 Mitigation Measures

Since no wetlands under the jurisdiction of ACOE were identified within the solar site or gen-tie site, no mitigation is proposed.

5.5 Conclusions

Since no wetlands under the jurisdiction of ACOE were identified within the Proposed Project site, no impacts would occur.

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6 WILDLIFE MOVEMENT AND NURSERY SITES

6.1 Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources (County of San Diego 2010a) are based on the criteria in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) and were used to analyze potential direct and indirect impacts to biological resources. The following guidelines for the determination of significance come directly from the County's guidelines (County of San Diego 2010a).

Guideline 4.4 The project would interfere substantially with the movement of a 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.

A. The project would impede 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. For example, if the project proposes roads that cross corridors, fencing that channels wildlife to underpasses located away from interchanges will be required to provide connectivity. Wildlife underpasses shall have dimensions (length, width, height) suitable for passage by the affected species based on a site-specific analysis of wildlife movement. Another example is increased traffic on an existing road that would result in significant road-kill or interference with an existing wildlife corridor/linkage.

C. The project would create artificial wildlife corridors that do not follow natural movement patterns; for example, constraining a corridor for mule deer or mountain lion to an area that is not well-vegetated or that runs along the face of a steep slope instead of through the valley or along the ridgeline.

D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels likely to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.

E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/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. The adequacy of the width shall be based on the biological information for the target species, the quality of the habitat within and adjacent to the corridor, topography, and adjacent land uses. Where there is limited topographic relief, the corridor should be well-vegetated and adequately buffered from adjacent development. Corridors for bobcats, deer, and other large animals should reach rim-to-rim along drainages.

F. The project does not maintain adequate visual continuity (i.e., long lines of site) within wildlife corridors or linkage. For example, development (such as homes or structures) sited along the rim of a corridor could present a visual barrier to wildlife movement. For stepping-stone/archipelago corridors, a project does not maintain visual continuity between habitat patches.

6.2 Analysis of Project Effects

When analyzing the importance of this area from a wildlife corridor perspective, Dudek reviewed Las Californias Binational Conservation Initiative (Initiative) (Conservation Biology Institute 2004) and other documents. The goal of the Initiative is to provide for connectivity through the binational area between San Diego (roughly Laguna Mountains), United States, south into Ensenada, northern Baja California (roughly Sierra Juarez), Mexico. The area is already compromised by dense development, human population, and infrastructure, including major highways and the International border fence. Breaks in the International border fence occur both west and east of the Proposed Project (Figure 7).

Wildlife movement was analyzed using the Initiative as a tool. Impacts and contributions were reviewed as they related to the Initiative. The general area was identified as having Category B management objectives (requires land uses and management that maintain habitat integrity and allow natural ecological processes to continue). Further, the general area is identified as a Critical Opportunity Area, supported by abundant federal lands (USFS and BLM lands) on the U.S. side. The Project was designed to be condensed, with as little edge as possible and to nestle against the International border fence. Further, it was designed to provide connective open space adjacent to existing BLM lands. This provides for enhanced connectivity between the gaps in the International border fence and protected or managed lands within the United States. Management and protections within Mexico are not guaranteed.

6.2.1 Project Effects Relevant to Guideline 4.4.A

Short-term, construction-related, or temporary direct impacts to potential foraging and breeding habitat for species that use the Project area (e.g., special-status birds) would primarily result from construction activities. Clearing, trampling, or grading of foraging and breeding habitat outside designated construction zones could occur in the absence of avoidance and mitigation measures. Potential temporary direct impacts to foraging and breeding habitat on site would be significant, absent mitigation (**Impact BI-WM-1**). However, these short-term, direct impacts will be mitigated to a level below significance through implementation of mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which requires a variety of BMPs to protect open space habitat and limits vehicle speeds to reduce potential collisions with wildlife species; and **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to habitat areas.

Permanent direct impacts to approximately 111.5 acres of potential foraging and breeding habitat for species that use the Project area (e.g., special-status birds) would occur as a result of the Proposed Project. Permanent direct impacts to foraging and breeding habitat would be significant, absent mitigation (**Impact BI-WM-2**). This impact will be mitigated through mitigation measure **M-BI-4** (habitat preservation and management), which includes preservation and management of more than a 1:1 mitigation ratio of suitable habitat. Table 10 summarizes the impacts and required mitigation for habitat types in the Project area.

Short-term and long-term indirect impacts to wildlife access to foraging and breeding habitat for small and medium-sized animals would be significant, absent mitigation (**Impact BI-WM-3**), as discussed in detail in Section 2.6. This impact would be mitigated through mitigation measure **M-BI-4** (habitat preservation and management), which would conserve approximately 180.4 acres of equivalent function and value. Additionally, mitigation measure **M-N-1** (see Noise, Section 2.5.5, of the EIR) requires that Proposed Project-generated noise from the PV inverters, HVAC systems, and power inverters associated with the energy storage facilities comply with the County's Noise Ordinance, which would reduce noise impacts so wildlife movement in adjacent areas is not interrupted.

6.2.2 Project Effects Relevant to Guideline 4.4.B

As described in Dudek (see Appendix I), the Open Space Preserve is undeveloped and on-site elevation ranges from approximately 3,010 to 3,160 feet amsl. The site is located 3 miles east of the community of Jacumba Hot Springs, south of Old Highway 80 (the highway traverses

the northern portion of the site), and north of the international border. The site is generally flat except for a low hill near its southwest corner, and several unvegetated channels generally flow to the northwest across the site. The Project will include an interconnection to SDG&E's ECO Substation located approximately ~~1,100~~1,500 feet to the east of the Project site (see Figure 7). Land use on site, and in the surrounding areas, consists of open space in both private and federal lands holdings (Figure 7). BLM lands are adjacent to the Project limits and a 500 kV substation is currently under construction to the east. A portion of study area borders Mexico and is separated by the International border fence. There are breaks in the fence coverage approximately 1,400 feet west of the Project site within BLM lands and approximately 3,000 feet to the east that allow for north–south wildlife movement. The border fence itself is permeable for smaller species, including reptiles, invertebrates, and small mammals such as ground squirrels and rabbits. However, it is unlikely that it provides many opportunities for larger predators like bobcats or coyotes to move through. Additionally, the wide U.S. Customs and Border Protection road adjacent to the fence is heavily maintained and represents a poor habitat quality zone for smaller wildlife, making them susceptible to exposure and predation. The Project site is generally within the Peninsular Range in a transitional area between the coast and the desert. It is in a dry climate with average temperatures near the community of Jacumba ranging from approximately 34°F to 94°F. This community generally receives an average rainfall of less than 15 inches per year (WRCC 2014).

The Project site would be fenced with barbed wire. Fencing would be 9 feet in height consisting of an 8-foot-high chain-link perimeter fence with 1 foot of three strands of barbed wire along the top with a 4-inch maximum clearance from the ground surface. The fence would be constructed with anti-climbing material(s) such as extra small link size for the fence mesh. Fencing would still allow small reptiles, amphibians, and mammals to pass through, but would not provide movement for larger species. Although the fencing would limit the ability of particularly large wildlife to access and traverse the solar site, the adjacent contiguous landscape is proposed as Open Space Preserve. Although wildlife movement would be constrained by the fencing surrounding the Project site, the Project site is fairly uniform in topography and resources. Therefore, the Project site is unlikely to serve as a local or regional wildlife corridor, since, as described in Section 1.4.8, wildlife corridors are defined as areas that connect suitable wildlife habitat in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. For example, natural features, such as canyon drainages, ridgelines, or areas with vegetation cover, provide corridors for wildlife travel. A local example of a corridor would be where the breaks in the border fence occur. Those areas represent a confined area where wildlife are required to travel through if they choose to move north–south across the border area.

The Proposed Project vicinity includes undeveloped landscapes and a fence at the border of Mexico to the south that is generally impermeable to large wildlife, but allows smaller wildlife species to pass through. Aside from the fence at the border, there are few factors that limit the ability of wildlife to access and traverse the site. The existing conditions are that the Project site is not likely to be part of a regional corridor or linkage for large mammals due to the lack of constrained topography surrounding the Project site that would constrain wildlife to traverse through the Project site. In addition, the International border fence bordering the Project site is currently impermeable to larger wildlife, such that movement of larger wildlife between the United States and Mexico only occurs along breaks in the border fence east and west of the Proposed Project area (as described in Section 1.4.8 and shown on Figure 7); smaller wildlife species such as reptiles, invertebrates, birds, and smaller mammals can still travel through the border fence. In addition, the Project is unlikely to serve as a local or regional wildlife corridor, since wildlife is not constrained to travel only through the Project site. Wildlife is able to traverse lands in an east–west manner across the northern portions of the site, using all topography, to gain access between the Jacumba Mountains to the east and the Airport Mesa area to the west. The open space design of the Project complements the adjoining BLM lands and allows for continued and permanent use of those lands for connectivity purposes. Therefore, development of the site and installation of the new 9-foot-tall fencing with barbed wire around the perimeter of the property would not substantially interfere with connectivity between blocks of habitat, or potentially block or substantially interfere with a local or regional wildlife corridor or linkage, and impacts for large mammals would not be significant.

Smaller wildlife species (e.g., lizards and small mammals) will still be able to access the site through openings in the fence; however, vegetation within the solar site would be maintained at a maximum height of 4-inches above ground, thereby removing suitable on-site habitat. Smaller wildlife species would not be able to navigate through the site to access habitat on the far side since the size of the site would be insurmountable for small wildlife. Therefore, impacts to movement of small and mid-sized wildlife would be significant, absent mitigation (**Impact BI-WM-4**). This impact will be mitigated through **M-BI-4** (habitat preservation and management), which will conserve approximately 180.4 acres of equivalent function and value.

Although the Proposed Project will remove habitat suitable for wildlife it is not expected to impact an existing wildlife corridor or linkage (of either regional or local scale) and would not be considered significant.

As described in Section 2.4.2.2, the utility poles associated with the gen-tie alignment would provide perches from which avian species may forage, thereby increasing the potential risk of fatality associated with collisions and electrocutions. Therefore, impacts resulting from collision and electrocution would be significant, absent mitigation (**Impact BI-WM-5**). This impact

would be mitigated through **M-BI-14** (implement recommendations by the Avian Power Line Interaction Committee), which requires all transmission towers and lines to implement measures that protect raptors and other birds from electrocution. As discussed in Section 2.4.2.2, glare and pseudo-lake effect were deemed to be a low risk due to a number of factors, including array design, solar unit design, and site location. In addition, although there have been reported avian fatalities at some of the solar facilities in the desert, it has only been hypothesized that the facilities appear as a water body to migrating birds; there have been no empirical studies conducted on the effects of PV solar installations on birds. Additionally, the Jacumba Solar Energy Project is substantially smaller and is located in a less likely flight path or migratory corridor than the solar projects that are reporting avian fatalities due to its location in the mountains away from the coast or Imperial Valley and not being situated between large water bodies. Nevertheless, mitigation as described under **M-BI-16** (implement a Worker Response Reporting System) would be implemented to mitigate potential collisions and electrocutions. **M-BI-16** will provide a means to collect information on incidental bird or bat species if found within the Project area.

6.2.3 Project Effects Relevant to Guideline 4.4.C

As described above, the Proposed Project is not considered to be a significant local or regional wildlife corridor. In addition, the on-site preservation of the Open Space Preserve would consist of a single large block of habitat and the Proposed Project would not create any artificial wildlife corridors and this impact would be less than significant.

6.2.4 Project Effects Relevant to Guideline 4.4.D

Minimal permanent lighting is associated with the Proposed Project. These areas include security lighting designed to minimize light pollution and preserve dark skies, while enhancing safety, security, and functionality. There would be short-term, construction-related noise as described in Section 2.6.2. Long-term noise associated with routine maintenance would not be expected to impact wildlife movement because these activities will typically occur on an as-needed basis and be within the Project footprint. The potential noise and lighting impacts as a result of the Proposed Project would be less than significant.

6.2.5 Project Effects Relevant to Guideline 4.4.E

The Project does not maintain an adequate width to be considered an existing wildlife corridor or linkage. Approximately 111.5 acres of the total 304 acres of Project area will be impacted by the Proposed Project. Although the Project area is not considered a local or regional wildlife corridor, it is considered a wildlife core area, with wildlife using the area. Small wildlife species

(e.g., lizards and small mammals) will be able to access the Project area through openings in the fence; however, loss of habitat and soil compaction, combined with soil binders, will reduce the abundance of small wildlife using the Project area and the value of habitat on site to wildlife. The site would not provide good habitat for small species, and will likely preclude movement (**Impact BI-WM-4**; see above).

Larger wildlife are similarly expected to use the area frequently. Although the Proposed Project will be fenced (thereby preventing movement of large wildlife through the site), a single contiguous block of habitat will be preserved as Open Space Preserve, thereby facilitating movements of large wildlife through the area. The open space will be connected to adjacent BLM lands, thus adding to landscape-scale functional connectivity across disparate federally managed lands and internationally via direct access to the International border fence openings. The International border fence is permeable to small wildlife and birds, but not to large wildlife. Large wildlife movement across the border is facilitated by openings in the border fence near the Project site (Figure 7). These openings in the fence are located approximately 1,400 feet west of the Project site within BLM lands and approximately 3,000 feet to the east, and allow for north–south wildlife movement. Further, through design of the on-site Open Space Preserve (**M-BI-4**), it occurs in one large block in the north half of the site. This is connected to adjacent BLM lands, thus adding to landscape-scale functional connectivity across disparate federally managed lands, and internationally via direct access to the International border fence openings.

There is a potential for birds to collide with the gen-tie during migration, but that risk was assessed to be low due to the position of the gen-tie. As discussed in Section 2.4.2.2, glare and pseudo-lake effect were deemed to be a low risk due to a number of factors, including array design, solar unit design, and site location. Although the Proposed Project would remove habitat suitable for wildlife it is not expected to impact an existing wildlife corridor or linkage (of either regional or local scale) and would not be considered significant. As described in Section 2.4.2.2, the utility poles associated with the gen-tie alignment would provide perches from which avian species may forage, thereby increasing the potential risk of fatality associated with collisions and electrocutions and resulting in a potentially significant impact (**Impact WM-5**). This impact would be mitigated through **M-BI-14** (implement recommendations by the Avian Power Line Interaction Committee), which requires all transmission towers and lines to implement measures that protect raptors and other birds from electrocution.

6.2.6 Project Effects Relevant to Guideline 4.4.F

The fencing between the border of Mexico and the United States already creates a visual and structural barrier to north and south wildlife movement in the Project area. The Proposed Project would be situated adjacent to the border fencing, and although visual continuity within the

Project area could be exacerbated by the addition of solar panels and fencing, wildlife can likely use a variety of local wildlife corridors outside of the Project area to move east, west, and north of the Project.

While focused wildlife corridor studies have not been completed within the vicinity, based on knowledge of the area, probable key wildlife species, and typical wildlife movement patterns the following discussion applies. Likely species of focus in the Project site vicinity include mule deer, coyote, mountain lion, and bobcat. Avian species use the area during migrations, but those movements typically are oriented in a north–south direction, are broad-fronted, and are not focused on this site. Potential regional wildlife corridors probably connect between the Laguna Mountains to the west and north, and to the east, the Anza-Borrego Desert and the eastern slope of the Peninsular Range. However, connections to the east likely occur north of the site and possibly along I-8, which provides the most direct and obvious potential corridor route between the Proposed Project and habitats east of the Peninsular Range; this is particularly true in the "I-8 Island" area, which is a known lambing area for bighorn sheep, provides undercrossings, and is linked to similar connections within Mexico along Highway 2. Much of this area is large, core blocks of habitat through which wildlife are free to move with minimal constraint. In addition, large areas of undeveloped lands surrounding the Project area provide for local wildlife movement. The site does not exist between lakes/ponds, loafing spots, foraging areas, or nesting sites that might entice local movement of birds or larger wildlife, so it is not considered to be an important local wildlife corridor for avian species; therefore, impacts would be less than significant.

6.3 Cumulative Impact Analysis

Cumulative impacts are not assessed in this document; they are discussed thoroughly in Section 2.2.4 of the Proposed Project's EIR.

6.4 Mitigation Measures

Mitigation for short-term, direct impacts to potential foraging and breeding habitat includes mitigation measures **M-BI-1** (biological monitoring), which prevents inadvertent disturbance to areas outside of the limits of grading; **M-BI-2** (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits), which requires a variety of BMPs to protect open space habitat and limits vehicle speeds to reduce potential collisions with wildlife species; and **M-BI-3** (preparation of a biological monitoring report), which ensures the required biological monitoring has been conducted to prevent inadvertent impacts to habitat areas, which are described in Section 3.4.

Mitigation for long-term direct, short and long-term indirect, impacts to potential foraging and breeding habitat for wildlife species includes mitigation measures **M-BI-4** (habitat preservation and management), which includes preservation and management of more than a 1:1 mitigation ratio of suitable habitat; and **M-BI-14** (implement recommendations by the Avian Power Line Interaction Committee), which requires all transmission towers and lines to implement measures that protect raptors and other birds from electrocution, which are described in Section 3.4.

To address concerns pertaining to avian collisions, **M-BI-16** is provided:

M-BI-16 To address avian concerns pertaining to collisions, the project ~~shall~~ will conduct the following avian monitoring during construction and operations:

1. Implement a Worker Response Reporting System (WRRS). A WRRS will provide a means of recording and collecting information on incidental bird and bat species found dead or injured within the Project area by site personnel. The WRRS will be used by site personnel who discover bird and bat carcasses during construction and routine maintenance activities. Site personnel will be provided a set of standardized instructions to follow in response to wildlife incidents in the Project.
2. In accordance with the WRRS, d~~D~~uring construction, site personnel will notify the Project Biologist to collect the following data on the incidentally detected avian wildlife: species, date, time, location (e.g., nearest Project structure), and how the animal died, if known. Results shall be reported to CDFW and PDS on a quarterly basis unless listed species are involved. During operations, site personnel will collect the same data, take photographs, and notify the Project's environmental manager, who will then notify CDFW and PDS on a quarterly basis unless listed species are involved. In the event of an injury, CDFW will be contacted for instruction on how to handle the situation. Workers will be trained on the WRRS during the Worker Environmental Awareness Program. The WRRS shall be used for the life of the Project. To accommodate these requirements, a Project Biologist shall be on retainer throughout the construction period, and one should be available during the life of the Project to assist in avian ~~identification~~ identifications, data collection, identification of causation of death or injury, and implementing the WRRS~~and injury cases~~.

M-BI-17 Within one year of construction, pre-construction surveys for Quino checkerspot butterfly shall be conducted in accordance with the most up to date protocol. If

Quino checkerspot butterfly are found, the applicant shall consult with the USFWS and CDFW to ensure there is no take of the species. If take could occur, the applicant shall complete Section 7 consultation with the USFWS and obtain an Incidental Take Permit pursuant to Fish and Game Code 2081.

6.5 Conclusions

Impact BI-WM-1 The significant short-term direct impacts to potential foraging and breeding habitat will be reduced to less than significant through implementation of mitigation measures **M-BI-1**, **M-BI-2**, and **M-BI-3**, which require biological monitoring, restrictions on plantings, equipment staging and storage, and construction vehicle speed limits, preparation of a biological monitoring report.

Impact BI-WM-2 The significant permanent, direct impact to the loss of potential foraging and breeding habitat will be reduced to less than significant through implementation of mitigation measure **M-BI-4**, which provides commensurate for on-site habitat and habitat management and conservation that has been demonstrated to contain suitable foraging and breeding habitat for these species. Avoidance of direct impacts on site for the individuals would be done during construction. These impacts have been reduced to less than significant because the on-site or off-site habitat ~~and its management~~ will provide ~~and management~~ equivalent or better function and value for these species and will be managed and monitored in perpetuity.

Impact BI-WM-3 The significant permanent, indirect impact associated with the loss of potential foraging and breeding habitat will be reduced to less than significant through implementation of mitigation measure **M-BI-4**, which provides commensurate for on-site habitat and habitat management and conservation that has been demonstrated to contain suitable foraging and breeding habitat for these species. Additionally, mitigation measure **M-N-1** (see Section 2.5.5 of the EIR) requires that Proposed Project-generated noise from the PV inverters, HVAC systems, and power inverters associated with the energy storage facilities comply with the County's Noise Ordinance. These impacts have been reduced to less than significant because the on-site or off-site habitat and its management will provide and management equivalent or better function and value for these species and

be managed and monitored in perpetuity, and because noise generated by Project equipment would not interfere with movement in adjacent areas.

Impact BI-WM-4 Short-term or long-term impacts to wildlife corridors and habitat linkages for larger wildlife species would be less than significant as a result of the Proposed Project and no mitigation is proposed. The significant impact to movement of small wildlife species from loss of wildlife corridors would be reduced to a level that is less than significant through implementation of mitigation measure **M-BI-4** because this measure requires on-site habitat preservation and management of equivalent or greater function and value.

Impact BI-WM-5 Significant impacts resulting from collision and electrocution would be mitigated to less than significant through implementation of **M-BI-14** (implement recommendations by the Avian Power Line Interaction Committee). This mitigation measure requires the implementation of measures that will protect raptors and other birds from electrocution.

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7 LOCAL POLICIES, ORDINANCES, AND ADOPTED PLANS

7.1 Guidelines for the Determination of Significance

The County's *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010a) are based on the criteria in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) and were used to analyze potential direct and indirect impacts to biological resources. The following guidelines for the determination of significance come directly from the County's guidelines (County of San Diego 2010a).

Guideline 4.5 The project would conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

A. For lands outside of the Multiple Species Conservation Plan (MSCP), the project would impact coastal sage scrub (CSS) vegetation in excess of the County's 5% habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.

B. The project would preclude or prevent the preparation of the subregional Natural Communities Conservation Planning Process (NCCP). For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.

C. The project will impact any amount of wetlands or sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).

D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the Natural Communities Conservation Planning Process (NCCP) Guidelines.

E. The project does not conform to the goals and requirements as outlined in any applicable Habitat Conservation Plan (HCP), Habitat Management Plan (HMP), Special Area Management Plan (SAMP), Watershed Plan, or similar regional planning effort.

F. For lands within the Multiple Species Conservation Program (MSCP), the project would not minimize impacts to Biological Resource Core Areas (BRCAs), as defined in the Biological Mitigation Ordinance (BMO).

G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.

H. The project does not maintain existing movement corridors and/or habitat linkages as defined by the Biological Mitigation Ordinance (BMO).

I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.

J. The project would reduce the likelihood of survival and recovery of listed species in the wild.

K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).

L. The project would result in the take of eagles, eagle eggs, or any part of an eagle (Bald and Golden Eagle Protection Act).

7.2 Analysis of Project Effects

7.2.1 Project Effects Relevant to Guideline 4.5.A

The Project area does not support nor would it impact coastal sage scrub vegetation.

7.2.2 Project Effects Relevant to Guideline 4.5.B

The Jacumba Solar Energy Project would not preclude or prevent the preparation of the subregional NCCP because the Project has been planned in accordance with the planning principles of the MSCP and in consideration of preparation of the ECMSCP Subarea Plan. The Project design has been evaluated according to the Preliminary Conservation Objectives outlined in the Planning Agreement for ECMSCP (County of San Diego 2008). These objectives and Project applicability/compliance are listed in Table 11.

Table 11
ECMSCP Planning Agreement Conservation Objectives

Conservation Objective	Applicability/Compliance
Provide for the protection of species, natural communities, and ecosystems on a landscape level.	Project, with mitigation, will provide for protection and conservation of special-status species and natural communities.
Preserve the diversity of plant and animal communities throughout the Planning Area.	Not applicable

Table 11
ECMSCP Planning Agreement Conservation Objectives

Conservation Objective	Applicability/Compliance
Protect threatened, endangered, or other special status plant and animal species, and minimizes and mitigate the take or loss of proposed Covered Species.	Project, with mitigation, will provide for protection and conservation of special-status species and natural communities.
Identify and designate biologically sensitive habitat areas.	Biological studies have been conducted for the site to determine sensitive habitat areas.
Preserve habitat and contribute to the recovery of Conversed Species.	Project, with mitigation, will provide for protection and conservation of special-status species and natural communities.
Reduce the need to list additional species.	Not applicable
Set forth species-specific goals and objectives.	Not applicable
Set forth specific habitat-based goals and objectives expressed in terms of amount, quality, and connectivity of habitat.	Not applicable

7.2.3 Project Effects Relevant to Guideline 4.5.C

No wetlands or sensitive habitat lands under the jurisdiction of the County, as outlined in the RPO (County of San Diego 2007) were identified within the Proposed Project site. Sensitive habitat lands identified in the RPO include unique vegetation communities, land that supports endangered species, lands essential to a natural ecosystem and wildlife corridors. Therefore, no impacts will occur to RPO wetlands or sensitive habitats as a result of the Proposed Project.

7.2.4 Project Effects Relevant to Guideline 4.5.D

The Jacumba Solar Energy Project does not support nor would it impact coastal sage scrub vegetation; therefore, no impacts would occur.

7.2.5 Project Effects Relevant to Guideline 4.5.E

The Jacumba Solar Energy Project conforms to the goals and requirements as outlined in all applicable regional planning efforts; therefore, no impacts would occur.

7.2.6 Project Effects Relevant to Guideline 4.5.F

The Jacumba Solar Energy Project is located approximately 32 miles east of the approved South County MSCP.

Since there is no approved ECMSCP and no associated BMO, this guideline does not apply to the Jacumba Solar Energy Project and therefore no impacts would occur.

7.2.7 Project Effects Relevant to Guideline 4.5.G

The Jacumba Solar Energy Project is not expected to preclude habitat connectivity as discussed in Section 6.2.2; therefore, no impacts would occur.

7.2.8 Project Effects Relevant to Guideline 4.5.H

Since there is no approved ECMSCP and no associated BMO, this guideline does not apply to the Jacumba Solar Energy Project; therefore, no impacts would occur.

7.2.9 Project Effects Relevant to Guideline 4.5.I

Narrow endemic species are evaluated under the County Guidelines for Determining Significance for Biological Resources. There are none on the Project site; therefore, no impacts would occur.

7.2.10 Project Effects Relevant to Guideline 4.5.J

No federally or state-listed plant or wildlife species have been observed in the Project area; therefore, no impacts would occur.

7.2.11 Project Effects Relevant to Guideline 4.5.K

Short-term, temporary, or construction-related impacts to migratory birds and active migratory bird nests and/or eggs protected under the Migratory Bird Treaty Act (MBTA) would be significant, absent mitigation (**Impact BI-P-1**). This impact will be mitigated through mitigation measure **M-BI-6** (preconstruction surveys for nesting birds and setbacks), which prevents direct loss of active nests and indirect disturbance to active nests.

7.2.12 Project Effects Relevant to Guideline 4.5.L

Impacts to 111.5 acres of suitable foraging habitat for eagles would be significant, absent mitigation (included with raptor foraging impacts, **Impact BI-W-7**). The Project, including the gen-tie site, would not have site-specific impacts on golden eagle nesting. This impact will be mitigated through mitigation measure **M-BI-4** (habitat preservation and management), which conserves 180.4 acres (60%) of suitable raptor foraging habitat through an on-site open space conservation easement. However, no take of eagles would occur from the Proposed Project.

7.3 Cumulative Impact Analysis

Cumulative impacts are not assessed in this document; they are discussed thoroughly in Section 2.2.4 of the Proposed Project's EIR.

7.4 Mitigation Measures

Project construction will be phased, where appropriate, to avoid work during the bird breeding season (i.e., January through August). If construction activity is to commence during the breeding season, a biological survey for nesting bird species must be conducted within the proposed impact area 72 hours prior to construction, as described in mitigation measure **M-BI-7**, which prevents direct loss of active nests and indirect disturbance to active nests. No other mitigation is proposed for impacts to local policies, ordinances, and plans because the Proposed Project remains consistent with all approved planning documents/plans.

7.5 Conclusions

Application of the currently established local policies, ordinances, and plans to the Proposed Project and implementation of appropriate mitigation have not resulted in any conflicts or inconsistencies. Therefore, impacts would be reduced to less than significant.

Impact BI-P-1 The significant short-term direct impacts to active nests or the young protected by the federal MBTA would be reduced to less than significant through implementation of mitigation measure **M-BI-7**, which requires preconstruction surveys for nesting birds and setbacks for avoiding impacts to active nests.

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8 SUMMARY OF PROJECT IMPACTS AND MITIGATION

Habitat Types/Vegetation Communities

Implementation of the proposed development would result in direct impacts to approximately 111.5 acres of vegetation communities and land covers (Table 4). Of these direct impacts, approximately 103.2 acres of vegetation impacts would require mitigation (Table 10) based on the County of San Diego's mitigation requirements (County of San Diego 2010b, Table 5). Required mitigation ratios range from 1:1 to 3:1. Mitigation of approximately 180.4 acres of native vegetation is required, which averages out to an approximately 1.7:1 mitigation ratio.

There would be direct impacts to potential foraging and breeding habitat for wildlife species, discussed in Section 6. No impacts to local policies, ordinances, and adopted plans are anticipated to result from implementation of the Proposed Project. Impacts associated with the MBTA are discussed in both Section 3 and Section 7.

Special-Status Plant Species

The Proposed Project would result in potential short-term and long-term direct impacts to suitable habitat for County List A and B special-status species, including Jacumba milk-vetch (CRPR 1B.2), pygmy lotus (CRPR 1B.3), Mountain Springs bush lupine (CRPR 1B.3), Parry's tetracoccus (CRPR 1B.2), southern jewelflower (CRPR 1B.3), tecate tarplant (CRPR 1B.2), sticky geraea (CRPR 2.3), slender-leaved ipomopsis (CRPR 2.3), desert beauty (CRPR 2.3), pink fairy-duster (CRPR 2.3), Parish's desert-thorn (CRPR 2.3), and Fremont barberry (CRPR 2.3). Additionally, the Proposed Project would result in potential short-term and long-term indirect impacts to suitable habitat for suitable habitat for County List A and B special-status species. A summary of the aforementioned significance criteria, references to their locations within this document, and the significance determination is provided in Table 12.

Special-Status Wildlife Species

There would be potentially significant impacts to special-status species that have been observed or have potential to occur in the Project area (see Table 12). Impacts would occur to suitable habitat and/or individual species, discussed in Chapter 3. Species-based mitigation shall be provided for Group 1 animal species. The mitigation site shall directly benefit the species (presence verified) and provide greater benefit to the species than that impacted. The mitigation shall propose measures above normal habitat mitigation and may propose occupation by an equal or greater number of Group 1 individuals. Adequate mitigation includes preservation and management of the mitigation site, construction limitations during breeding season, and measures to minimize edge effects (including biological monitoring and implementation of the Fire Protection Plan). Species-based

mitigation land may also satisfy the habitat/vegetation community mitigation requirements of the same Project. Therefore, on-site preservation of 180.4 acres of native habitats will provide mitigation for impacts to special-status species equal to the total acreage of impacts on the Project site and greater than the Project impacts to 103.2 acres of special-status upland vegetation communities. A summary of the aforementioned significance criteria, references to their locations within this document, and the significance determination is provided in Table 12.

Wetlands/Jurisdictional Waters

Implementation of the proposed development would result in direct impacts to approximately 0.21 acre (4,261 linear feet) of non-wetland ephemeral waters under the jurisdiction of ACOE/ RWQCB/CDFW. Impacts to 0.21 acre of non-wetland waters would be mitigated to a less than significant level through implementation of mitigation measure **M-BI-4** (habitat preservation and management), which conserves 180.4 acres of habitat in open space, including 94%, or 3.14 acres (20,205 linear feet), of non-wetland waters that help maintain the natural flow of water across the landscape and downstream to Carrizo Creek; and **M-BI-15** (require permits from ACOE, RWQCB, and CDFW), which requires the Applicant to obtain permits from ACOE, RWQCB, and CDFW, as required under federal and state law, and to demonstrate avoidance and minimization of impacts to jurisdictional resources to the extent feasible.

A summary of the aforementioned significance criteria, references to their locations within this document, and the significance determination is provided in Table 12.

Wildlife Movement and Nursery Sites

There would be direct impacts to potential foraging and breeding habitat for wildlife species, discussed in Chapter 6. Impacts associated with the MBTA are discussed in Chapters 3 and 7.

There would be potentially significant impacts to wildlife movement through core habitat, primarily for small and medium sized wildlife. Mitigation shall be provided to directly benefit the affected species (presence verified) and provide greater benefit to the species than that impacted. Adequate mitigation includes preservation and management of the mitigation site and measures to minimize edge effects (including biological monitoring and implementation of the Fire Protection Plan). The wildlife movement and nursery sites mitigation land also satisfy the habitat/vegetation community mitigation requirements of the same Project. Therefore, on-site preservation of 180.4 acres of native habitats will provide compensatory mitigation for impacts to wildlife movement.

A summary of the aforementioned significance criteria, references to their locations within this document, and the significance determination is provided in Table 12. A summary of the mitigation measures and the guideline they relate to is provided in Table 13.

Table 12
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
Guideline 4.1: *The project would have a substantial adverse effect, either directly or through habitat modifications, on a candidate, sensitive, or special status species listed in local or regional plans, policies, or regulations, or by California Department of Fish and Game or U.S. Fish and Wildlife Service.*						
3.2.2.1/3.2.3.1	Impact BI-SP-1	**Special-Status Plants,** County List A and B: Jacumba milk-vetch Pygmy lotus Mountain Springs bush lupine Parry's tetracoccus Southern jewelflower Tecate tarplant Sticky geraea Slender-leaved ipomopsis Desert beauty Pink fairy-duster Parish's desert-thorn List C (CRPR 2.3): Fremont barberry	Short-term direct	M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report)	Less than significant	4.1, B/ 4.1, C
3.2.2.1/3.2.3.1	Impact BI-SP-2	**Special-Status Plants,** County List A and B: Jacumba milk-vetch Pygmy lotus Mountain Springs bush lupine Parry's tetracoccus Southern jewelflower Tecate tarplant Sticky geraea	Long-term direct	M-BI-4 (on-site or off-site habitat preservation and management) M-BI-5 (rare plant surveys and relocation of rare plants to the on-site Open Space Preserve)	Less than significant	4.1, B/ 4.1, C

Table 12
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
		Slender-leaved ipomopsis Desert beauty Pink fairy-duster Parish's desert-thorn List C (CRPR 2.3): Fremont barberry				
3.2.2.2	Impact BI-W-1	**Special-Status Wildlife**, County Group 1	Short-term direct	M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report) M-BI-6 (restrictions on operation and maintenance personnel activity) M-BI-7 (breeding season avoidance) M-BI-8 (cover trenches and holes; monitoring excavated areas and soil piles)	Less than significant	4.1, B
3.2.2.2	Impact BI-W-2	**Special-Status Wildlife,** County Group 1 or CDFW Species of Special Concern Impacts to active nests or young of nesting County Group 1 or CDFW Species of Special Concern	Short-term direct	M-BI-7 (preconstruction surveys for nesting birds and setbacks)	Less than significant	4.1, B

Table 12
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
3.2.2.2	Impact BI-W-3	**Special-Status Wildlife,** County Group 1 or CDFW Species of Special Concern Removal of suitable habitat of County Group 1 wildlife species (see Table 6 for details).	Long-term direct	M-BI-4 (on-site or off-site habitat preservation and management)	Less than significant	4.1, B
3.2.3.2	Impact BI-W-4	**Special-Status Wildlife,** County Group 2 Species (see Section 3.2.3.2 for details)	Short-term direct	M-BI-1 (biological monitoring) M-BI-3 (preparation of a biological monitoring report) M-BI-8 (cover trenches and holes; monitoring excavated areas and soil piles)	Less than significant	4.1, C
3.2.3.2	Impact BI-W-5	**Special-Status Wildlife**, County Group 2 Impacts to active nests or young of nesting County Group 1 or CDFW Species of Special Concern	Short-term direct	M-BI-7 (preconstruction surveys for nesting birds and setbacks)	Less than significant	4.1, C
3.2.6	Impact BI-W-6	**Special-Status Wildlife,** Loss of foraging habitat for raptors	Long-term direct	M-BI-4 (off-site habitat preservation and management)	Less than significant	4.1, F
3.2.7/7.2.12	Impact BI-W-7	**Loss of Core Wildlife Area, Loss of habitat**	Long-term direct	M-BI-4 (off-site habitat preservation and management)	Less than significant	4.1, G/4.5, L9-
3.2.8.1	Impact BI-SP-3	**Special-Status Plants,** County List A and B: Jacumba milk-vetch Pygmy lotus Mountain Springs bush lupine Parry's tetracoccus Southern jewelflower Tecate tarplant	Short-term indirect	M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report) M-BI-9 (implementation of a Fugitive	Less than significant	4.1, H

Table 12
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
		Sticky geraea Slender-leaved ipomopsis Desert beauty Pink fairy-duster Parish's desert-thorn List C (CRPR 2.3): Fremont barberry		Dust Control Plan)		
3.2.8.1	Impact BI-SP-4	**Special-Status Plants**, County List A and B: Jacumba milk-vetch Pygmy lotus Mountain Springs bush lupine Parry's tetracoccus Southern jewelflower Tecate tarplant Sticky geraea Slender-leaved ipomopsis Desert beauty Pink fairy-duster Parish's desert-thorn List C (CRPR 2.3): Fremont barberry	Long-term indirect	M-BI-4 (off-site habitat preservation and management) M-BI-6 (restrictions on operation and maintenance personnel activity) M-BI-7 (implementation of a Fugitive Dust Control Plan) M-BI-10 (biological review of landscape plans) M-BI-11 (implementation of a Fire Protection Plan) M-BI-12 (regulated herbicide application)	Less than significant	4.1, H
3.2.8.2	Impact W-8	**Special-Status Wildlife Detected or Potentially Occurring (Appendix F)**	Short-term indirect	M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment	Less than significant	4.1, H

Table 12
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
				staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report) M-BI-7 (preconstruction surveys for nesting birds and setbacks) M-BI-9 (implementation of a Fugitive Dust Control Plan) M-BI-13 (minimize night lighting)		
3.2.8.2	Impact BI-W-9	**Special-Status Wildlife Detected or Potentially Occurring (Appendix F)**	Long-term indirect	M-BI-4 (off-site habitat preservation and management) M-BI-6 (restrictions on operation and maintenance personnel activity) M-BI-7 (implementation of a Fugitive Dust Control Plan) M-BI-10 (biological review of landscape plans) M-BI-11 (implementation of a Fire Protection Plan) M-BI-14 (implement recommendations by the Avian Power Line Interaction Committee) M-N-1 (compliance with the County's Noise Ordinance)	Less than significant	4.1, H

Table 12
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
Guideline 4.2: *The project would have a substantial adverse effect on riparian habitat or another sensitive natural community identified in local or regional plans, policies, regulations, or by California Department of Fish and Game or U.S. Fish and Wildlife Service.*						
4.2.1	Impact BI-V-1	**Special-Status Upland Vegetation Communities**	Short-term direct	M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report)	Less than significant	4.2, A
4.2.1	Impact BI-V-2	**Special-Status Upland Vegetation Communities**	Long-term direct	M-BI-4 (off-site habitat preservation and management)	Less than significant	4.2, A
4.2.2	Impact BI-V-3	**Jurisdictional Resources**	Long-term direct	M-BI-4 (off-site habitat preservation and management) M-BI-15 (require permits from ACOE, RWQCB, and CDFW)		
4.2.2	Impact BI-V-4	**Jurisdictional Resources**	Short-term indirect	M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report)		
4.2.2	Impact BI-V-5	**Jurisdictional Resources**	Long-term indirect	M-BI-4 (off-site habitat preservation and management) M-BI-6 (restrictions on operation and maintenance personnel activity) M-BI-9 (implementation of a Fugitive		

Table 12
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
				Dust Control Plan) M-BI-11 (implementation of a Fire Protection Plan) M-BI-12 (regulated herbicide application) M-BI-15 (require permits from ACOE, RWQCB, and CDFW)		
4.2.4	Impact BI-V-6	**Special-Status Upland Vegetation Communities**	Short-term indirect	M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report) M-BI-9 (implementation of a Fugitive Dust Control Plan)	Less than significant	4.2, D
4.2.4	Impact BI-V-7	**Special-Status Upland Vegetation Communities**	Long-term indirect	M-BI-4 (off-site habitat preservation and management) M-BI-6 (restrictions on operation and maintenance personnel activity) M-BI-9 (implementation of a Fugitive Dust Control Plan) M-BI-10 (biological review of landscape plans) M-BI-11 (implementation of a Fire Protection Plan) M-BI-12 (regulated herbicide application)	Less than significant	4.2, D

Table 12
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
Guideline 4.3: *The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means.*						
5.2.1	No significant impact	**Jurisdictional Wetlands and Waterways**	No significant impact	None	No Significant Impact	4.3
Guideline 4.4*: The project would interfere substantially with the movement of a 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.*						
6.2.1	Impact BI-WM-1	**Foraging and Breeding Habitat**	Short-term direct	M-BI-1 (biological monitoring) M-BI-2 (SWPPP BMPs, including restrictions on plantings, equipment staging and storage, and construction vehicle speed limits) M-BI-3 (preparation of a biological monitoring report)	Less than significant	4.4, A
6.2.1	Impact BI-WM-2	**Foraging and Breeding Habitat**	Long-term direct	M-BI-4 (off-site habitat preservation and management)	Less than significant	4.4, A
6.2.1	Impact BI-WM-3	**Foraging and Breeding Habitat**	Short-term and long-term indirect	M-BI-4 (off-site habitat preservation and management) M-N-1 (compliance with the County's Noise Ordinance)	Less than significant	4.4, A
6.2.2	Impact BI-WM-4	**Wildlife Movement**, small and mid-sized animals	Long-term direct	M-BI-4 (off-site habitat preservation and management)	Less than significant	4.4, B; 4.4, E
6.2.2	Impact BI-WM-5	**Collision and Electrocution**	Long-term direct	M-BI-14 (implement recommendations by the Avian Power Line Interaction Committee) M-BI-16 (implement at WRRS)	Less than significant	4.4, B; 4.4, E

Table 12
Summary of Significant Impacts

Section of Report Analysis Is Described	Impact Number	Impacted Resource	Impact Type	Proposed Mitigation	Level of Significance After Mitigation	Guideline Number and Letter
Guideline 4.5: *The project would conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state HCP.*						
7.2.11	Impact BI-P-1	**Migratory Bird Treaty Act**	Short-term direct	M-BI-7 (preconstruction surveys for nesting birds and setbacks)	Less than significant	4.5, K

Table 13
Summary of Mitigation Measures

Proposed Mitigation	Level of Significance After Mitigation	Guideline Number(s)
M-BI-1: A Project Biologist shall provide biological monitoring during all grading, clearing, grubbing, trenching, and construction activities.	Less than significant	4.1(B), 4.1(C), 4.1(H), 4.2(A), 4.2(B), 4.2(D), 4.4(A)
M-BI-2: If required, the SWPPP will include BMPs to minimize impacts to special-status species, vegetation communities, and jurisdictional resources.	Less than significant	4.1(B), 4.1(C), 4.1(H), 4.2(A), 4.2(B), 4.2(D), 4.4(A)
M-BI-3: The Project Biologist shall prepare a final biological monitoring report to be submitted to the County Department of Planning and Development Services (PDS).	Less than significant	4.1(B), 4.1(C), 4.1(H), 4.2(A), 4.2(B), 4.2(D), 4.4(A)
M-BI-4: The Proposed Project shall preserve approximately 183.5 acres, including 180.4 acres of native vegetation communities, in an Open Space Preserve area.	Less than significant	4.1(B), 4.1(C), 4.1(F), 4.1(G), 4.1(H), 4.2(A), 4.2(B), 4.2(D), 4.4(A), 4.4(E), 4.4(L)
M-BI-5: Prior to construction, rare plant surveys will be conducted and if found, mitigated through preservation and/or relocation to on-site Open Space.	Less than significant	4.1(B)
M-BI-6: Restrictions for operations and maintenance personnel to avoid and minimize impacts to special-status species, vegetation communities, and jurisdictional resources.	Less than significant	4.1(B), 4.1(H), 4.2(B), 4.2(D)
M-BI-7: Preconstruction nesting bird surveys shall be conducted if construction work must occur during the avian nesting season (February 1 to August 31, and as early as January 1 for some raptors), and appropriate setbacks established until nesting is completed.	Less than significant	4.1(B), 4.1(C), 4.1(H), 4.5(J)
M-BI-8: Excavated areas shall be covered or escape routes provided for wildlife; and soil piles and steep trenches shall be covered at night to prevent wildlife from accessing them.	Less than significant	4.1(B), 4.1(C)
M-BI-9: The Applicant shall develop a Fugitive Dust Control Plan.	Less than significant	4.1(H), 4.2(B), 4.2(D)
M-BI-10: Plant palettes shall be reviewed by the Project Biologist prior to landscape installation to ensure no invasive species are included.	Less than significant	4.1(H), 4.2(D)
M-BI-11: To minimize fire hazards, measures provided in the Jacumba Solar Energy Project Fire Protection Plan shall be implemented.	Less than significant	4.1(H), 4.2(B), 4.2(D)
M-BI-12: Weed control treatments shall be in compliance with local, state and federal laws.	Less than significant	4.1(H), 4.2(B), 4.2(D)
M-BI-13: Construction lighting at night shall be minimized and directed away from adjacent native habitats.	Less than significant	4.1(H)
M-BI-14: All transmission towers and lines shall implement recommendations by APLIC.	Less than significant	4.1(H), 4.4(A), 4.4(E)
M-BI-15: All impacts to jurisdictional resources shall comply with state and federal agencies, including ACOE, CDFW, and RWQCB.	Less than significant	4.2(B)
M-BI-16: A Worker Response Reporting System shall be implemented to address concerns of avian collisions.	Less than significant	4.4(A)

9 REFERENCES

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

16 U.S.C. 1531–1544. Endangered Species Act, as amended.

16 U.S.C. 703–712. Migratory Bird Treaty Act, as amended.

16 U.S.C. 668–668d. Bald and Golden Eagle Protection Act. June 8, 1940, as amended 1959, 1962, 1972, and 1978.

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APPENDIX A

List of Plant Species Observed

APPENDIX A
List of Plant Species Observed

VASCULAR SPECIES

DICOTS

ASTERACEAE—SUNFLOWER FAMILY

Ericameria brachylepis—chaparral goldenbush
Ericameria linearifolia—narrowleaf goldenbush
Lasthenia californica—California goldfields
Ericameria sp.—goldenbush sp.
Gutierrezia sp.—snakeweed sp.
Lasthenia sp.—goldfields

BORAGINACEAE—BORAGE FAMILY

Amsinckia menziesii—Menzies' fiddleneck
Amsinckia sp.—fiddleneck species
Cryptantha sp.—Popcorn flower
Phacelia sp.—phacelia

FABACEAE—LEGUME FAMILY

Acmispon glaber—common deerweed
Senegalia greggii—catclaw acacia

GERANIACEAE—GERANIUM FAMILY

* *Erodium cicutarium*—redstem stork's bill
* *Erodium* sp.—stork's bill

ONAGRACEAE—EVENING PRIMROSE FAMILY

Camissonia sp —evening primrose

OROBANCHACEAE—BROOM-RAPE FAMILY

Castilleja sp.—indian paintbrush

POLEMONIACEAE—PHLOX FAMILY

Leptosiphon lemmonii—Lemmon's linanthus

POLYGONACEAE—BUCKWHEAT FAMILY

Eriogonum fasciculatum var. *polifolium*—Eastern Mojave buckwheat
Eriogonum sp —buckwheat sp.

SIMMONDSIACEAE—JOJOBA FAMILY

Simmondsia chinensis—jojoba

ZYGOPHYLLACEAE—CALTROP FAMILY

Larrea tridentata—creosote bush

GYMNOSPERMS AND GNETOPHYTES

CUPRESSACEAE—CYPRESS FAMILY

Juniperus californica—California juniper

EPHEDRACEAE—EPHEDRA FAMILY

Ephedra sp.—jointfir sp.

MONOCOTS

AGAVACEAE—AGAVE FAMILY

Hesperoyucca whipplei—chaparral yucca

Yucca schidigera—Mojave yucca

Agave sp —agave species

POACEAE—GRASS FAMILY

* *Schismus barbatus*—common Mediterranean grass

Hilaria rigida—big galleta

Bromus sp.—brome

* signifies introduced (non-native) species

APPENDIX B

List of Wildlife Species Observed

APPENDIX B
List of Wildlife Species Observed

BIRD

BLACKBIRDS, ORIOLES AND ALLIES

ICTERIDAE—BLACKBIRDS

Icterus parisorum—Scott's oriole
Quiscalus mexicanus—Great-tailed grackle
* *Molothrus ater*—Brown-headed cowbird
Icterus cucullatus—Hooded oriole

BUSHTITS

AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS

Psaltriparus minimus—Bushtit

EMBERIZINES

***EMBERIZIDAE*—EMBERIZIDS**

Amphispiza bilineata—Black-throated sparrow
Chondestes grammacus—Lark sparrow
Melozone crissalis—California towhee
Pipilo maculatus—Spotted towhee
Spizella breweri—Brewer's sparrow
Zonotrichia leucophrys—White-crowned sparrow
Junco hyemalis—Dark-eyed junco
Spizella passerina—Chipping sparrow
Artemisiospiza belli belli—Bell's sage sparrow
Artemisiospiza nevadensis—Sagebrush sparrow

FALCONS

FALCONIDAE—CARACARAS AND FALCONS

Falco sparverius—American kestrel

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Carpodacus mexicanus—House finch

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

Myiarchus cinerascens—Ash-throated flycatcher
Tyrannus vociferans—Cassin's kingbird

GOATSUCKERS

CAPRIMULGIDAE—GOATSUCKERS

Chordeiles acutipennis—Lesser nighthawk

HAWKS

ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES

Accipiter striatus—Sharp-shinned hawk
Buteo jamaicensis—Red-tailed hawk

HUMMINGBIRDS

***TROCHILIDAE*—HUMMINGBIRDS**

Calypte anna—Anna's hummingbird
Calypte costae—Costa's hummingbird

JAYS, MAGPIES AND CROWS

***CORVIDAE*—CROWS AND JAYS**

Aphelocoma californica—Western scrub-jay
Corvus corax—Common raven

LARKS

***ALAUDIDAE*—LARKS**

Eremophila alpestris actia—California horned lark

MOCKINGBIRDS AND THRASHERS

***MIMIDAE*—MOCKINGBIRDS AND THRASHERS**

Mimus polyglottos—Northern mockingbird
Toxostoma redivivum—California thrasher

NEW WORLD QUAIL

***ODONTOPHORIDAE*—NEW WORLD QUAIL**

Callipepla californica—California quail

NEW WORLD VULTURES

CATHARTIDAE—CARDINALS AND ALLIES

Cathartes aura—Turkey vulture

OLD WORLD WARBLERS AND GNATCATCHERS

SYLVIIDAE—SYLVIID WARBLERS

Polioptila caerulea—Blue-gray gnatcatcher

Polioptila melanura—Black-tailed gnatcatcher

OWLS

TYTONIDAE—BARN OWLS

Tyto alba—Barn owl

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Patagioenas fasciata—Band-tailed pigeon

Zenaida macroura—Mourning dove

ROADRUNNERS AND CUCKOOS

CUCULIDAE—CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus—Greater roadrunner

SHOREBIRDS

CHARADRIIDAE—LAPWINGS AND PLOVERS

Charadrius vociferus—Killdeer

SHRIKES

LANIIDAE—SHRIKES

Lanius ludovicianus—Loggerhead shrike

SILKY FLYCATCHERS

***PTILOGONATIDAE—SILKY*-FLYCATCHERS**

Phainopepla nitens—Phainopepla

SWALLOWS

HIRUNDINIDAE—SWALLOWS

Petrochelidon pyrrhonota—Cliff swallow

SWIFTS

APODIDAE—SWIFTS

Aeronautes saxatalis—White-throated swift

THRUSHES

TURDIDAE—THRUSHES

Sialia mexicana—Western bluebird

Turdus migratorius—American robin

VERDIN

REMIZIDAE—PENDULINE TITS AND VERDINS

Auriparus flaviceps—Verdin

WOOD WARBLERS AND ALLIES

PARULIDAE—WOOD-WARBLERS

Setophaga nigrescens—Black-throated gray warbler

WOODPECKERS

PICIDAE—WOODPECKERS AND ALLIES

Picoides nuttallii—Nuttall's woodpecker

WRENS

TROGLODYTIDAE—WRENS

Salpinctes obsoletus—Rock wren

Thryomanes bewickii—Bewick's wren

Campylorhynchus brunneicapillus—Cactus wren

WRENTITS

TIMALIIDAE—BABBLERS

Chamaea fasciata—Wrentit

INVERTEBRATE

BUTTERFLIES

LYCAENIDAE—BLUES, HAIRSTREAKS, AND COPPERS

Callophrys dumetorum—Bramble hairstreak
Callophrys gryneus loki—Loki juniper hairstreak
~~*Callophrys gryneus thornei*—Thorne's juniper hairstreak~~
~~*Callophrys gryneus*—Juniper hairstreak~~
Glaucopsyche lygdamus australis—Southern blue
Plebejus acmon—Acmon blue
Brephidium exile—Western pygmy-blue
Callophrys dumetorum perplexa —Perplexing (green) hairstreak
Glaucopsyche lygdamus—Southern blue

NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES

Danaus plexippus—Monarch
Junonia coenia—Common buckeye
Vanessa annabella—West coast lady
Vanessa cardui—Painted lady
Euphydryas chalcedona—Chalcedon checkerspot

RIODINIDAE—METALMARKS

Apodemia mormo virgulti—Behr's metalmark

HESPERIIDAE—SKIPPERS

Erynnis funeralis—Funereal duskywing

PAPILIONIDAE—SWALLOWTAILS

Papilio polyxenes coloro—Desert black swallowtail
Papilio rutulus—Western tiger swallowtail
Papilio zelicaon—Anise swallowtail

PIERIDAE—WHITES AND SULFURS

Anthocharis cethura—Desert orangetip
Colias eurydice—California dogface

Colias eurytheme—Orange sulphur
Colias harfordii—Harford's sulphur
Euchloe hyantis lotta—Desert pearly marble
Pontia protodice—Checkered white
Anthocharis sp.—orangetip sp.
Euchloe hyantis—Perly marble
Anthocharis sara —Sara orangetip

EREBIDAE—MOTHS AND ALLIES

Notarctia proxima—Mexican tiger moth

ANTS, BEES, WASPS, AND HORNETS

FORMICIDAE—ANTS

Pogonomyrmex sp.—harvester ant

MAMMAL

CANIDS

CANIDAE—WOLVES AND FOXES

Canis latrans—Coyote

CATS

FELIDAE—CATS

Lynx rufus—Bobcat

DOMESTIC

EQUIDAE—HORSES AND BURROS

* *Equus caballus*—Domestic horse

HARES AND RABBITS

LEPORIDAE—HARES AND RABBITS

Sylvilagus audubonii—Desert cottontail
Sylvilagus bachmani—Brush rabbit
Lepus californicus—Black-tailed jackrabbit

KANGAROO RATS

HETEROMYIDAE—POCKET MICE AND KANGAROO RATS

Dipodomys sp.—kangaroo rat

MUSTELIDS

MUSTELIDAE—WEASELS, SKUNKS, AND OTTERS

Mustela frenata—Long-tailed weasel

POCKET GOPHERS

GEOMYIDAE—POCKET GOPHERS

Thomomys bottae—Botta's pocket gopher

RATS AND MICE

MURIDAE—RATS AND MICE

Neotoma sp.—woodrat (midden)

SQUIRRELS

SCIURIDAE—SQUIRRELS

Ammospermophilus leucurus—White-tailed antelope squirrel

Spermophilus(Otospermophilus) beecheyi—California ground squirrel

Tamias sp.—chipmunk

REPTILE

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

Callisaurus draconoides—Zebra-tailed lizard

Petosaurus mearnsi—Banded rock lizard

Sceloporus occidentalis—Western fence lizard

Sceloporus orcutti—Granite spiny lizard

Uta stansburiana—Common side-blotched lizard

TEIIDAE—WHIPTAIL LIZARDS

Aspidoscelis tigris—Tiger whiptail

SNAKES

VIPERIDAE—VIPERS

Crotalus oreganus helleri —Southern pacific diamondback

* signifies introduced (non-native) species

APPENDIX C

Special-Status Plant Species Detected or Potentially Occurring on the Project Site

APPENDIX C
Special-Status Plant Species Detected or Potentially Occurring in Project Area

Scientific Name/ Common Name	Sensitivity Code and Status (Federal/State/CRPR/ County/ECMSCP)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)	Verified on Site (direct/indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Acmispon haydonii pygmy lotus	None/ None/ 1B.3 /List A /MSCP	Pinyon and juniper woodland, Sonoran desert scrub/rocky/ perennial herb/ Jan-Jun/ 1706-3937	No	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicinity[2]. The closest occurrences are approximately 1.5 miles east and north of the project site (CDFW 2014a; Jepson eFlora 2014; SDNHM 2012a). Therefore, there is a moderate potential for this species to occur on site.
Astragalus douglasii var. *perstrictus* Jacumba milk-vetch	None/ None/ 1B.2 /List A /MSCP	Chaparral, Cismontane woodland, Pinyon and juniper woodland, Riparian scrub, Valley and foothill grassland/rocky/ perennial herb/ Apr-Jun/ 2953-4495	No	High potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. One CNDDB occurrence overlaps with the northwest corner of project site and additional occurrences occur within the vicinity[2]. Species also observed during surveys for ECO Substation project site (CPUC and BLM 2011). Therefore, there is a high potential for this species to occur on site.
Berberis fremontii Fremont barberry	None/ None/ 2.3 /List C /MSCP	Chaparral, Joshua tree "woodland", Pinyon and juniper woodland/rocky/ perennial evergreen shrub/ Apr-Jun/ 2756-6070	No	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicinity[2]. The closest occurrences are approximately 1.8 and 3.0 miles west of the project site (CDFW 2014a). Therefore, there is a moderate potential for this species to occur on site.
Caulanthus simulans Payson's jewel-flower	None/ None/ 4.2 /List D /MSCP	Chaparral, Coastal scrub/sandy, granitic/ annual herb/ (Feb),Mar-May(Jun),/ 295-7218	No	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species known to occur within the vicinity[2]. Several occurrences are located approximately 6 miles (and greater) west of the project site (CDFW 2014a, Jepson eFlora 2014). Therefore, there is a moderate potential for this species to occur on site.
Deinandra floribunda Tecate tarplant	None/ None/ 1B.2 /List A /MSCP	Chaparral, Coastal scrub/ annual herb/ Aug-Oct/ 230-4003	No	High potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicinity[2].

Scientific Name/ Common Name	Sensitivity Code and Status (Federal/State/CRPR/ County/ECMSCP)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)	Verified on Site (direct/indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
					The closest occurrence is approximately 1.8 miles west of project site (CDFW 2014a). In addition, this species is known to occur within drainages and there are numerous drainages present on site, therefore, there is a high potential for this species to occur on site.
Delphinium parishii ssp. *subglobosum* Colorado Desert larkspur	None/ None/ 4.3 /List D	Chaparral, Cismontane woodland, Pinyon and juniper woodland, Sonoran desert scrub/ perennial herb/ Mar-Jun/ 1969-5906	No	Moderate potential to occur	The project site is located within the species' known elevation range and suitable vegetation is present. Species observed during surveys for ECO Substation project (CPUC and BLM 2011) and several potential occurrences in the vicinity[2] with the nearest occurrence approximately 0.4 miles north and northwest of the project site (Jepson eFlora 2014).
Geraea viscida sticky geraea	None/ None/ 2.3 /List B /MSCP	Chaparral(often in disturbed areas)/ perennial herb/ May-Jun/ 1476-5577	No	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species has many occurrences within the vicinity[2], nearest occurrences approximately 1.3 miles north and 2 miles east of the project (CDFW 2014a). In addition, this species was observed during surveys for ECO Substation (CPUC and BLM 2011). Therefore, there is a moderate potential for this species to occur on site.
Harpagonella palmeri Palmer's grapplinghook	None/ None/ 4.2 /List D /MSCP	Chaparral, Coastal scrub, Valley and foothill grassland/clay/ annual herb/ Mar-May/ 66-3133	No	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicinity[2] of the project site (Jepson eFlora 2014; SDNHM 2014a) and was observed at ECO Substation project site (RBC 2009a). Therefore, there is a moderate potential for this species to occur on site.
Ipomopsis tenuifolia slender-leaved ipomopsis	None/ None/ 2.3 /List B	Chaparral, Pinyon and juniper woodland, Sonoran desert scrub/gravelly or rocky/ perennial herb/ Mar-May/ 328-3937	No	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species has many known occurrences within the vicinity[2]. There are approximately 32 occurrences within 5 miles of the project site. The closest occurrences occur approximately 0.3 miles northwest and southeast of the project site (CDFW 2014a). In

Scientific Name/ Common Name	Sensitivity Code and Status (Federal/State/CRPR/ County/ECMSCP)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)	Verified on Site (direct/indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
					addition, this species was also observed during surveys for ECO Substation (CPUC and BLM 2011). Therefore, there is a high potential for this species to occur on site.
Lathyrus splendens pride-of-California	None/ None/ 4.3 /List D /MSCP	Chaparral/ perennial herb/ Mar-Jun/ 656-5003	No	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur in the vicinity[2]. In addition, this species was observed during surveys for ECO Substation (CPUC and BLM 2011). Therefore, there is a moderate potential for this species to occur on site.
Linanthus bellus desert beauty	None/ None/ 2.3 /List B /MSCP	Chaparral(sandy)/ annual herb/ Apr-May/ 3281-4593	No	High potential to occur.	The project site is located slightly below the species' known elevation range; however, there is suitable vegetation and soils present. One known occurrence overlaps with project site; however, exact location of occurrence unknown (CDFW 2014a). In addition, this species was also observed during surveys for ECO Substation (CPUC and BLM 2011). Several additional occurrences in the vicinity[2]. Therefore, there is a high potential for this species to occur.
Lupinus excubitus var. *medius* Mountain Springs bush lupine	None/ None/ 1B.3 /List A /MSCP	Pinyon and juniper woodland, Sonoran desert scrub/ perennial shrub/ Mar-May/ 1394-4495	No	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. One known occurrence is directly outside the northwest corner of project boundary (CDFW 2014a). Approximately 20 additional occurrences within 5 miles of project site (CDFW 2014a) and additional occurrences are known to occur within the vicinity[2]. Therefore, there is a moderate potential for this species to occur.
Mimulus aurantiacus var. *aridus* low bush monkeyflower	None/ None/ 4.3 /List D	Chaparral(rocky), Sonoran desert scrub/ perennial evergreen shrub/ Apr-Jul/ 2461-3937	No	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and rocky soils are present. Species was observed during surveys for ECO Substation project (CPUC and BLM 2011) and many occurrences are known to occur within the vicinity[2] (Jepson eFlora 2014). Therefore, there is a moderate potential for this species to occur on site.

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Streptanthus campestris southern jewel-flower	None/ None/ 1B.3 /List A	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland/rocky/ perennial herb/ (Apr),May-Jul/ 2953-7546	No	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicinity[2] with the nearest occurrence occurring approximately 2 miles northeast and 4.8 miles northwest of the project site (CDFW 2014a). Additional occurrences approximately 2 miles east of the site (Jepson eFlora 2014). Therefore, there is a moderate potential for this species to occur on site.
Tetracoccus dioicus Parry's tetracoccus	None/ None/ 1B.2 /List A	Chaparral, Coastal scrub/ perennial deciduous shrub/ Apr-May/ 541-3281	No	Moderate potential to occur.	Suitable vegetation is present; the project site is located within the species' known elevation range and the nearest known occurrence is approximately 2.5 miles west of the project site (CDFW 2014a). Therefore, there is a moderate potential for this species to occur on site.

[1] **Status:**

CE: Candidate for federally listed as endangered.
FT: Federally listed as threatened.
SE: State-listed as endangered.
SR: State-listed as rare.
MSCP: Draft Covered Species under the ECMSCP

CRPR: California Rare Plant Rank
1A (formerly List 1A): Plants Presumed Extinct in California
1B (formerly List 1B): Plants Rare, Threatened, or Endangered in California and Elsewhere
2 (formerly List 2): Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3 (formerly List 3): Plants About Which We Need More Information—A Review List
4 (formerly List 4): Plants of Limited Distribution—A Watch List
0.1: Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
0.2: Fairly threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)
0.3: Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

[2] "Vicinity" is based on a search of the CNDDB and CNPS databases for the Jacumba quad and the six surrounding quads (Carrizo Mtn, Sweeney Pass, Sombrero Peak, In-ko-pah Gorge, Live Oak Springs, and Tierra del Sol) conducted in July 2014. Also includes a search of species detected within 5 miles from the project site (Jepson eflora 2014) and species within the U28, U29, T28, and T29 grids (SDNHM 2014a) conducted in July 201

APPENDIX D

Special-Status Plant Species Not Expected to Occur or Rarely Occurring in the Project Area

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Special-Status Plant Species Not Expected to Occur or Rarely Occur in the Project Area

Scientific Name Common Name	Sensitivity Code and Status (Federal/State/ CRPR/County/E CMSCP)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)	Verified on Project Site (direct/indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Abronia maritima red sand-verbena	None/ None/ 4.2 /List D	Coastal dunes/ perennial herb/ Feb-Nov/ 0-328	No	Not expected to occur.	No suitable vegetation is present and the site is located outside of the species' known elevation range. Species is not known to occur within the vicinity[2].
Abronia villosa var. *aurita* chaparral sand-verbena	None/ None/ 1B.1 /List A	Chaparral, Coastal scrub, Desert dunes/sandy/ annual herb/ Jan-Sep/ 246-5249	No	Low potential to occur	Although suitable vegetation (semi-desert chaparral) and soils are present and the site is located within the species' known elevation range, species is not known to occur within the vicinity[2].
Acanthomintha ilicifolia San Diego thorn-mint	FT/ SE/ 1B.1 /List A /MSCP	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/clay, openings/ annual herb/ Apr-Jun/ 33-3150	No	Not expected to occur.	Although soils are present and the project site is located within the species' known elevation range, the species is not known to occur within the vicinity[2] and the site lacks suitable vernal pools. This species is known to occur in coastal San Diego County and south to San Telmo in northern Baja California (73 FR 50454–50496). The nearest known occurrence is approximately 35 miles northwest of the project site (CDFW 2014a).
Acmispon prostratus Nuttall's acmispon	None/ None/ 1B.1 /List A	Coastal dunes, Coastal scrub(sandy)/ annual herb/ Mar-Jun(Jul),/ 0-33	No	Not expected to occur.	Species not known to occur in the vicinity[2]. Additionally, the project site is located outside of the species' known elevation range and there is no suitable vegetation present.
Adolphia californica California adolphia	None/ None/ 2.3 /List B	Chaparral, Coastal scrub, Valley and foothill grassland/clay/ perennial deciduous shrub/ Dec-May/ 148-2428	No	Not expected to occur.	Although suitable vegetation (chaparral) and soils are present, species not known to occur in the vicinity[2]. Additionally, the site is outside of the species' known elevation range.

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Agave shawii var. *shawii* Shaw's agave	None/ None/ 2.3 /List B	Coastal bluff scrub, Coastal scrub/ perennial leaf succulent/ Sep-May/ 33-394	No	Not expected to occur.	Species not known to occur in the vicinity[2] of the project. Additionally, the site is outside of the species' known elevation range and there is no suitable vegetation present.
Ambrosia chenopodiifolia San Diego bur-sage	None/ None/ 2.3 /List B	Coastal scrub/ perennial shrub/ Apr-Jun/ 180-509	No	Not expected to occur.	Species not known to occur in the vicinity[2] of the project. Additionally, the site is outside of the species' known elevation range and there is no suitable vegetation present.
Ambrosia pumila San Diego ambrosia	FE/ None/ 1B.1 /List A	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/sandy loam or clay, often in disturbed areas, sometimes alkaline/ perennial rhizomatous herb/ Apr-Oct/ 66-1362	No	Not expected to occur.	Although suitable habitat and soils are present, the site is located outside of the species' known elevation range. Species is not known to occur within the vicinity[2]. Nearest known occurrence is approximately 50 miles west of the project site (CDFW 2014a).
Androsace elongata ssp. *acuta* California androsace	None/ None/ 4.2 /List D	Chaparral, Cismontane woodland, Coastal scrub, Meadows and seeps, Pinyon and juniper woodland, Valley and foothill grassland/ annual herb/ Mar-Jun/ 492-3937	No	Low potential to occur.	Although suitable vegetation (semi-desert chaparral, pinyon and juniper woodland) are present and site is within species' known elevation range, species not known to occur in the vicinity[2].
Aphanisma blitoides aphanisma	None/ None/ 1B.2 /List A	Coastal bluff scrub, Coastal dunes, Coastal scrub/sandy/ annual herb/ Mar-Jun/ 3-1001	No	Not expected to occur.	Species not known to occur in the vicinity[2]. Additionally, the project site is located outside of the species' known elevation range and there is no suitable vegetation present.
Arctostaphylos glandulosa ssp. *crassifolia* Del Mar manzanita	FE/ None/ 1B.1 /List A	Chaparral(maritime, sandy)/ perennial evergreen shrub/ Dec-Jun/ 0-1198	No	Not expected to occur.	Although suitable vegetation is present, species not known to occur in the vicinity[2]. Additionally, the site is outside of the species' known elevation range.

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Arctostaphylos otayensis Otay manzanita	None/ None/ 1B.2 /List A /MSCP	Chaparral, Cismontane woodland/metavolcanic/ perennial evergreen shrub/ Jan-Apr/ 902-5577	No	Low potential to occur.	Although the project site is located within the species' known elevation range and there is suitable vegetation (semi-desert chaparral), and soils present, species not known to occur in the vicinity[2].
Arctostaphylos rainbowensis Rainbow manzanita	None/ None/ 1B.1 /List A	Chaparral/ perennial evergreen shrub/ Dec-Mar/ 673-2198	No	Not expected to occur.	Although suitable vegetation is present, species not known to occur in the vicinity[2]. Additionally, the site is outside of the species' known elevation range.
Artemisia palmeri San Diego sagewort	None/ None/ 4.2 /List D	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland/sandy, mesic/ perennial deciduous shrub/ (Feb),May-Sep/ 49-3002	No	Not expected to occur. The site is	Although suitable vegetation is present, species not known to occur in the vicinity[2] of the project. Additionally, the site is outside of the species' known elevation range.
Asplenium vespertinum western spleenwort	None/ None/ 4.2 /List D	Chaparral, Cismontane woodland, Coastal scrub/rocky/ perennial rhizomatous herb/ Feb-Jun/ 591-3281	No	Low potential to occur.	Although the project site is located within the species' known elevation range and there is suitable vegetation (semi-desert chaparral= and soils present, species not known to occur in the vicinity.
Astragalus crotalariae Salton milk-vetch	None/ None/ 4.3 /List D /MSCP	Sonoran desert scrub(sandy or gravelly)/ perennial herb/ Jan-Apr/ -197-820	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range.
Astragalus deanei Dean's milk-vetch	None/ None/ 1B.1 /List A /MSCP	Chaparral, Cismontane woodland, Coastal scrub, Riparian forest/ perennial herb/ Feb-May/ 246-2280	No	Not expected to occur.	Although suitable vegetation is present, species not known to occur in the vicinity[2]. Additionally, the project site is located outside of the species' known elevation range.
Astragalus insularis var. harwoodii Harwood's milk-vetch	None/ None/ 2.3 /List B /MSCP	Desert dunes, Mojavean desert scrub/sandy or gravelly/ annual herb/ Jan-May/ 0-2329	No	Not expected to occur.	Species is known to occur within the vicniity[2] and suitable desert scrub and soils are present; however, the project site is located outside of the species' known elevation range.

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Astragalus lentiginosus var. borreganus Borrego milk-vetch	None/ None/ 4.3 /List D /MSCP	Mojavean desert scrub, Sonoran desert scrub/sandy/ annual herb/ Feb-May/ 98-1050	No	Not expected to occur.	Although suitable vegetation is present, species not known to occur in the vicinity[2]. Additionally, the project site is located outside of the species' known elevation range.
Astragalus magdalenae var. *peirsonii* Peirson's milk-vetch	FT/ SE/ 1B.2 /List A	Desert dunes/ perennial herb/ Dec-Apr/ 197-738	No	Not expected to occur.	Species not known to occur in the vicinity[2]. Additionally, the project site is located outside of the species' known elevation range and there is no suitable vegetation present.
Astragalus oocarpus San Diego milk-vetch	None/ None/ 1B.2 /List A /MSCP	Chaparral(openings), Cismontane woodland/ perennial herb/ May-Aug/ 1001-5000	No	Low potential to occur.	Suitable vegetation is present and the project site is located within the species' known elevation range; however, the species is not known to occur within the vicinity[2].
Astragalus pachypus var. *jaegeri* Jaeger's bush milk-vetch	None/ None/ 1B.1 /List A	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/sandy or rocky/ perennial shrub/ Dec-Jun/ 1198-3002	No	Not expected to occur.	Although suitable vegetation is present, species not known to occur in the vicinity[2]. Additionally, the site is outside of the species' known elevation range and.
Astragalus tener var. *titi* coastal dunes milk-vetch	FE/ SE/ 1B.1 /List A	Coastal bluff scrub(sandy), Coastal dunes, Coastal prairie(mesic)/often vernally mesic areas/ annual herb/ Mar-May/ 3-164	No	Not expected to occur.	Although suitable vegetation and soils are present, the site is outside of the species' known elevation range. Additionally, no known occurrences in the vicinity[2].
Atriplex coulteri Coulter's saltbush	None/ None/ 1B.2 /List A	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland/alkaline or clay/ perennial herb/ Mar-Oct/ 10-1509	No	Not expected to occur.	Species not known to occur in the vicinity[2]. Additionally, the site is outside of the species' known elevation range and there is no suitable vegetation present.

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Atriplex pacifica South Coast saltscale	None/ None/ 1B.2 /List A	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas/ annual herb/ Mar-Oct/ 0-459	No	Not expected to occur.	Species not known to occur in the vicinity[2]. Additionally, the project site is outside of the species' known elevation range and there is no suitable vegetation present.
Atriplex parishii Parish's brittlescale	None/ None/ 1B.1 /List A	Chenopod scrub, Playas, Vernal pools/alkaline/ annual herb/ Jun-Oct/ 82-6234	No	Not expected to occur.	The project site is located within the species' known elevation range; however, there is no suitable vegetation or vernal pools present and the species is not known to occur within the vicinity[2].
Atriplex serenana var. *davidsonii* Davidson's saltscale	None/ None/ 1B.2 /List A	Coastal bluff scrub, Coastal scrub/alkaline/ annual herb/ Apr-Oct/ 33-656	No	Not expected to occur.	Species not known to occur in the vicinity[2] of the project. Additionally, the site is outside of the species' known elevation range and there is no suitable vegetation present.
Ayenia compacta California ayenia	None/ None/ 2.3 /List B	Mojavean desert scrub, Sonoran desert scrub/rocky/ perennial herb/ Mar-Apr/ 492-3593	No	Low potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicinity[2]. The nearest known occurrence is approximately 11 miles north of the project and due to the limited amount of suitable desert scrub, this species has a low potential to occur on site.
Azolla microphylla Mexican mosquito fern	None/ None/ 4.2 /List D	Marshes and swamps(ponds, slow water)/ annual/perennial herb/ Aug/ 98-328	No	Not expected to occur.	Species not known to occur in the vicinity[2] of the project. Additionally, the site is outside of the species' known elevation range and there is no suitable vegetation present.
Baccharis vanessae Encinitas baccharis	FT/ SE/ 1B.1 /List A	Chaparral(maritime), Cismontane woodland/sandstone/ perennial deciduous shrub/ Aug-Nov/ 197-2362	No	Not expected to occur.	Although suitable vegetation is present, the site is outside of the species' known elevation range. Additionally, no known occurrences in the vicinity[2] of the project site.

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Berberis nevinii Nevin's barberry	FE/ SE/ 1B.1 /List A	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub/sandy or gravelly/ perennial evergreen shrub/ Mar-Jun/ 899-2707	No	Not expected to occur.	Although suitable vegetation and soils are present, the site is outside of the species' known elevation range. Additionally, there are no known occurrences in the vicinity[2] of the project site.
Bergerocactus emoryi golden-spined cereus	None/ None/ 2.3 /List B	Closed-cone coniferous forest, Chaparral, Coastal scrub/sandy/ perennial stem succulent/ May-Jun/ 10-1296	No	Not expected to occur.	Although suitable vegetation and soils are present, the site is outside of the species' known elevation range. Additionally, there are no known occurrences in the vicinity[2].
Bloomeria clevelandii San Diego goldenstar	None/ None/ 1B.1 /List A	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/clay/ perennial bulbiferous herb/ Apr-May/ 164-1526	No	Not expected to occur.	Although suitable vegetation and soils are present, the site is outside of the species' known elevation range. Additionally, there are no known occurrences in the vicinity[2].
Boechera hirshbergiae Hirshberg's rockcress	None/ None/ 1B.2 /List A /MSCP	Pebble plain/ perennial herb/ Mar-May/ 4593-4642	No	Not expected to occur.	Species not known to occur in the vicinity[2]of the project. Additionally, the site is outside of the species' known elevation range and there is no suitable vegetation present.
Brodiaea filifolia thread-leaved brodiaea	FT/ SE/ 1B.1 /List A	Chaparral(openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools/often clay/ perennial bulbiferous herb/ Mar-Jun/ 82-3675	No	Not expected to occur.	Although the project site is located within the species' known elevation range and there are clay soils present, the species is not known to occur within the vicinity[2] and the site lacks mesic conditions and suitable vernal pools. This species commonly occurs within mesic grassland and alkali grassland communities with clay or alkaline soils ranging in elevation from 100 to 2,500 feet, depending on soil series (FR 64930-64982). The nearest occurrence is located approximately 57 miles northeast of the project (CDFW 2014a).

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Brodiaea orcuttii Orcutt's brodiaea	None/ None/ 1B.1 /List A /MSCP	Closed-cone coniferous forest, Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland, Vernal pools/mesic, clay, sometimes serpentinite/ perennial bulbiferous herb/ May-Jul/ 98-5551	No	Not expected to occur.	Although the project site is located within the species' known elevation range and there is suitable vegetation and soils present, the species is not known to occur within the vicinity[2] and the site lacks suitable vernal pools and mesic conditions.
Bursera microphylla little-leaf elephant tree	None/ None/ 2.3 /List B /MSCP	Sonoran desert scrub(rocky)/ perennial deciduous tree/ Jun-Jul/ 656-2297	No	Not expected to occur.	Suitable vegetation and soils are present; however, the project site is located outside of the species' known elevation range.
Calandrinia breweri Brewer's calandrinia	None/ None/ 4.2 /List D	Chaparral, Coastal scrub/sandy or loamy, disturbed sites and burns/ annual herb/ Mar-Jun/ 33-4003	No	Low potential to occur.	Although the project site is located within the species' known elevation range and there is suitable vegetation (semi-desert chaparral, disturbed and soils present, the species is not known to occur within the vicinity[2].
California macrophylla round-leaved filaree	None/ None/ 1B.1 /List B	Cismontane woodland, Valley and foothill grassland/clay/ annual herb/ Mar-May/ 49-3937	No	Not expected to occur	Although the project site is located within the species' known elevation range, this species is not known to occur within the vicinity[2] and no suitable vegetation is present.
Calliandra eriophylla pink fairy-duster	None/ None/ 2.3 /List B /MSCP	Sonoran desert scrub(sandy or rocky)/ perennial deciduous shrub/ Jan-Mar/ 394-4921	No	Low potential to occur.	The project site is located within the species' known elevation range, suitable vegetation and soils are present and the species is known to occur within the vicintiy[2] with two occurrences approximately 6.5 miles east of the project site (CDFW 2014a, Jepson eFlora 2014). However, there is a limited amount of suitable habitat present (3.23 acres); therefore, there is a low potential for this species to occur on site.

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Calochortus catalinae Catalina mariposa lily	None/ None/ 4.2 /List D	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/ perennial bulbiferous herb/ (Feb),Mar-Jun/ 49-2297	No	Not expected to occur.	Although suitable vegetation is present, no known occurrences in the vicinity[2]. Additionally, the site is outside of the species' known elevation range.
Calochortus dunnii Dunn's mariposa lily	None/ SR/ 1B.2 /List A /MSCP	Closed-cone coniferous forest, Chaparral, Valley and foothill grassland/gabbroic or metavolcanic, rocky/ perennial bulbiferous herb/ (Feb),Apr-Jun/ 607-6004	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation (semi-desert chaparral) and soils are present, species is not known to occur within the vicinity[2].
Camissoniopsis lewisii Lewis' evening-primrose	None/ None/ 3 /List C	Coastal bluff scrub, Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland/sandy or clay/ annual herb/ Mar-May(Jun),/ 0-984	No	Not expected to occur.	Although suitable sandy soils are present, the species is not known to occur within the vicinity[2]. The project site is outside of the species' known elevation range and there is no suitable vegetation present.
Carex obispoensis San Luis Obispo sedge	None/ None/ 1B.2 /None /MSCP	Closed-cone coniferous forest, Chaparral, Coastal prairie, Coastal scrub, Valley and foothill grassland/often serpentinite seeps, sometimes gabbro; often on clay soils/ perennial rhizomatous herb/ Apr-Jun/ 33-2690	No	Not expected to occur.	Although suitable vegetation and soils are present, the site is outside of the species' known elevation range. Additionally, there are no known occurrences within the vicinity[2].
Carlowrightia arizonica Arizona carlowrightia	None/ None/ 2.3 /List B /MSCP	Sonoran desert scrub(sandy, granitic alluvium)/ perennial deciduous shrub/ Mar-May/ 935-1411	No	Not expected to occur.	Species is known to occur within the vicniity[2] and suitable vegetation and soils are present; however, the site is located outside of the species' known elevation range.
Ceanothus cyaneus Lakeside ceanothus	None/ None/ 1B.2 /List A /MSCP	Closed-cone coniferous forest, Chaparral/ perennial evergreen shrub/ Apr-Jun/ 771-2477	No	Not expected to occur.	Although suitable vegetation is present, the site is outside of the species' known elevation range. Additionally, the species is not known to occur within the vicnity[2].

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Ceanothus verrucosus wart-stemmed ceanothus	None/ None/ 2.3 /List B	Chaparral/ perennial evergreen shrub/ Dec-May/ 3-1247	No	Not expected to occur.	Although suitable vegetation is present, the site is outside of the species' known elevation range. Additionally, the species is not known to occur within the vicinity[2].
Centromadia parryi ssp. *australis* southern tarplant	None/ None/ 1B.1 /List A	Marshes and swamps(margins), Valley and foothill grassland(vernally mesic), Vernal pools/ annual herb/ May-Nov/ 0-1575	No	Not expected to occur.	No suitable vegetation is present and the project site is located outside of the species' known elevation range. Species is not known to occur within the vicinity[2].
Centromadia pungens ssp. l*aevis* smooth tarplant	None/ None/ 1B.1 /List A	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland/alkaline/ annual herb/ Apr-Sep/ 0-2100	No	Not expected to occur.	No suitable vegetation is present and the project site is located outside of the species' known elevation range. Species is not known to occur within the vicnity[2].
Chaenactis carphoclinia var. *peirsonii* Peirson's pincushion	None/ None/ 1B.3 /List A	Sonoran desert scrub(sandy)/ annual herb/ Mar-Apr/ 10-1640	No	Not expected to occur.	Suitable vegetation and soils are present; however, the site is located outside of the species' known elevation range. Species is not known to occur within the vicnity[2].
Chaenactis glabriuscula var. *orcuttiana* Orcutt's pincushion	None/ None/ 1B.1 /List A	Coastal bluff scrub(sandy), Coastal dunes/ annual herb/ Jan-Aug/ 0-328	No	Not expected to occur.	No suitable vegetation is present and the project site is located outside of the species' known elevation range. Species is not known to occur within the vicnity[2].
Chaenactis parishii Parish's chaenactis	None/ None/ 1B.3 /List A /MSCP	Chaparral(rocky)/ perennial herb/ May-Jul/ 4265-8202	No	Not expected to occur.	Suitable vegetation and soils are present; however, the site is located outside of the species' known elevation range. Species is not known to occur within the vicnity[2].
Chamaebatia australis southern mountain misery	None/ None/ 4.2 /List D /MSCP	Chaparral(gabbroic or metavolcanic)/ perennial evergreen shrub/ Nov-May/ 984-3346	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation (semi-desert chaparral) and soils are present, species is not known to occur within the vicinity[2].

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Chamaesyce abramsiana Abrams' spurge	None/ None/ 2.3 /None	Mojavean desert scrub, Sonoran desert scrub/sandy/ annual herb/ (Aug),Sep-Nov/ 16-3002	No	Not expected to occur.	Suitable vegetation is present and the species is known to occur within the vicinity[2]; however, the project site is located outside of the species' known elevation range.
Chamaesyce arizonica (Euphorbia arizonica) Arizona spurge	None/ None/ 2.3 /List B	Sonoran desert scrub(sandy)/ perennial herb/ Mar-Apr/ 164-984	No	Not expected to occur.	Suitable habitat and soils exist and the species is known to occur within the vicnity[2]; however, the project site is located outside of the species' known elevation range. Nearest known occurrence approximately 0.7 miles northeast of the project site (CDFW 2014a).
Chamaesyce platysperma flat-seeded spurge	None/ None/ 1B.2 /List A	Desert dunes, Sonoran desert scrub(sandy)/ annual herb/ Feb-Sep/ 213-328	No	Not expected to occur.	Suitable habitat and soils are present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Chamaesyce revoluta revolute spurge	None/ None/ 4.3 /List D	Mojavean desert scrub(rocky)/ annual herb/ Aug-Sep/ 3593-10171	No	Not expected to occur.	The project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Chloropyron maritimum ssp. *maritimum* salt marsh bird's-beak	FE/ SE/ 1B.2 /List A	Coastal dunes, Marshes and swamps(coastal salt)/ annual herb hemiparasitic/ May-Oct/ 0-98	No	Not expected to occur.	The project site is located outside of the species' known elevation range, there is no suitable vegetation present and the species is not known to occur within the vicinity[2].
Chorizanthe leptotheca Peninsular spineflower	None/ None/ 4.2 /List D	Chaparral, Coastal scrub, Lower montane coniferous forest/alluvial fan, granitic/ annual herb/ May-Aug/ 984-6234	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation (semi-desert chaparral) and soils are present, species is not known to occur within the vicinity[2].

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Chorizanthe orcuttiana Orcutt's spineflower	FE/ SE/ 1B.1 /List A	Closed-cone coniferous forest, Chaparral(maritime), Coastal scrub/sandy openings/ annual herb/ Mar-May/ 10-410	No	Not expected to occur.	Suitable soils are present; however, the project site is located outside of the species' known elevation range and the site lacks maritime chaparral. Additionally, the species is not known to occur within the vicinity[2].
Chorizanthe parryi var. *fernandina* San Fernando Valley spineflower	FC/ SE/ 1B.1 /List A	Coastal scrub(sandy), Valley and foothill grassland/ annual herb/ Apr-Jul/ 492-4003	No	Not expected to occur	Although the project is located within the species' known elevation range, there is no suitable vegetation present and the species not known to occur within the vicinity[2]. This species is known from two localities; southeastern Ventura County and within southwestern Los Angeles County (77 FR 70103-70162).
Chorizanthe polygonoides var. *longispina* long-spined spineflower	None/ None/ 1B.2 /List A /MSCP	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools/often clay/ annual herb/ Apr-Jul/ 98-5020	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation and soils are present, species is not known to occur within the vicinity[2] and site lacks suitable vernal pools.
Cistanthe maritima seaside cistanthe	None/ None/ 4.2 /List D	Coastal bluff scrub, Coastal scrub, Valley and foothill grassland/sandy/ annual herb/ (Feb),Mar-Jun(Aug),/ 16-984	No	Not expected to occur.	No suitable vegetation is present and the project site is located outside of the species' known elevation range. Species is not known to occur within the vicinity[2].
Clarkia delicata delicate clarkia	None/ None/ 1B.2 /List A /MSCP	Chaparral, Cismontane woodland/often gabbroic/ annual herb/ Apr-Jun/ 771-3281	No	Low potential to occur.	Suitable vegetation is present, the project site is located within the species' known elevation range and the species is known to occur within the vicinity[2]; however, the nearest known occurrence is approximately 15 miles northwest of the project (CDFW 2014a).

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Clinopodium chandleri San Miguel savory	None/ None/ 1B.2 /List A	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland, Valley and foothill grassland/Rocky, gabbroic or metavolcanic/ perennial shrub/ Mar-Jul/ 394-3527	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation (semi-desert chaparral) and soils are present, species is not known to occur within the vicinity[2].
Colubrina californica Las Animas colubrina	None/ None/ 2.3 /List B	Mojavean desert scrub, Sonoran desert scrub/ perennial deciduous shrub/ Apr-Jun/ 33-3281	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation (semi-desert chaparral) is present, species is not known to occur within the vicinity[2].
Comarostaphylis diversifolia ssp. *diversifolia* summer holly	None/ None/ 1B.2 /List A	Chaparral, Cismontane woodland/ perennial evergreen shrub/ Apr-Jun/ 98-2592	No	Not expected to occur.	Although suitable vegetation is present, the project site is located outside of the species' known elevation range. Additionally, species is not known to occur within the vicinity[2].
Convolvulus simulans small-flowered morning-glory	None/ None/ 4.2 /List D	Chaparral(openings), Coastal scrub, Valley and foothill grassland/clay, serpentinite seeps/ annual herb/ Mar-Jul/ 98-2297	No	Not expected to occur.	Although suitable vegetation and soils are present, the project site is located outside of the species' known elevation range. . Additionally, species is not known to occur within the vicinity[2].
Corethrogyne filaginifolia var. *incana* San Diego sand aster	None/None/1B.1 /List A	Coastal bluff scrub, chaparral, coastal scrub/perennial herb/Jun-Sept/ 10-377	No	Not expected to occur.	Although suitable vegetation is present, the project site is located outside of the species' known elevation range. Additionally, species is not known to occur within the vicinity[2].
Corethrogyne filaginifolia var. *linifolia* Del Mar Mesa sand aster	None/ None/ 1B.1 /List A	Coastal bluff scrub, Chaparral(maritime, openings), Coastal scrub/sandy/ perennial herb/ May-Sep/ 49-492	No	Not expected to occur.	No suitable vegetation is present and the project site is located outside of the species' known elevation range. Additionally, species is not known to occur within the vicinity[2].
Cryptantha costata ribbed cryptantha	None/ None/ 4.3 /List D /MSCP	Desert dunes, Mojavean desert scrub, Sonoran desert scrub/sandy/ annual herb/	No	Not expected to occur.	Although suitable vegetation is present, the project site is located outside of the species'

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		Feb-May/ 197-1640			known elevation range. Additionally, species is not known to occur within the vicinity[2].
Cryptantha ganderi Gander's cryptantha	None/ None/ 1B.1 /List A /MSCP	Desert dunes, Sonoran desert scrub(sandy)/ annual herb/ Feb-May/ 525-1312	No	Not expected to occur.	Although suitable vegetation is present, the project site is located outside of the species' known elevation range. Additionally, species is not known to occur within the vicinity[2].
Cryptantha holoptera winged cryptantha	None/ None/ 4.3 /List D	Mojavean desert scrub, Sonoran desert scrub/ annual herb/ Mar-Apr/ 328-5545	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation is present, species not known to occur within the vicinity[2]. Closest occurrence is approximately 11 miles east of the project site (Jepson eFlora 2014).
Cylindropuntia californica var. *californica* snake cholla	None/ None/ 1B.1 /List A	Chaparral, Coastal scrub/ perennial stem succulent/ Apr-May/ 98-492	No	Not expected to occur.	Although suitable vegetation is present, the project site is located outside of the species' known elevation range. Additionally, species is not known to occur within the vicinity[2].
Cylindropuntia fosbergii pink teddy-bear cholla	None/ None/ 1B.3 /None /MSCP	Sonoran desert scrub/ perennial stem succulent/ Mar-May/ 279-2789	No	Not expected to occur.	Suitable vegetation is present and the species is known to occur within the vicinity[2]; however, the project site is located outside of the species' known elevation range.
Cylindropuntia wolfii Wolf's cholla	None/ None/ 4.3 /List D /MSCP	Sonoran desert scrub/ perennial stem succulent/ Mar-May/ 328-3937	No	Low potential to occur.	The project site is located within the species' known elevation range, suitable vegetation and soils are present and the species is known to occur within the vicinity[2] with multiple occurrences approximately 2 miles northeast of the project site (Jepson eFlora 2014; SDNHM 2014a). However, due to the limited amount of suitable habitat present on site (3.23 acres), there is a low potential for this species to occur on site.

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Deinandra conjugens Otay tarplant	FT/ SE/ 1B.1 /List A	Coastal scrub, Valley and foothill grassland/clay/ annual herb/ May-Jun/ 82-984	No	Not expected to occur.	The project site is located outside of the species' known elevation range, no suitable vegetation is present, and the species is not known to occur within the vicinity[2].
Deinandra mohavensis Mojave tarplant	None/ SE/ 1B.3 /List A /MSCP	Chaparral, Coastal scrub, Riparian scrub/mesic/ annual herb/ (May),Jun-Oct(Jan),/ 2100-5249	No	Not expected to occur.	Although the project site is located within the species' known elevation range and suitable vegetation (semi-desert chaparral) is present, species is not known to occur within the vicinity[2]. Mesic soils are also absent from the project site and the nearest known occurrence is approximately 58 miles northwest of the project site.
Deinandra paniculata paniculate tarplant	None/ None/ 4.2 /List D	Coastal scrub, Valley and foothill grassland, Vernal pools/usually vernally mesic, sometimes sandy/ annual herb/ Apr-Nov/ 82-3084	No	Not expected to occur	The project site is located slightly above the species' known elevation range, no suitable vegetation or soils are present on site and the species not known to occur within the vicinity[2]. Mesic soils and vernal pools are also absent from the project site.
Delphinium hesperium ssp. *cuyamacae* Cuyamaca larkspur	None/ SR/ 1B.2 /List A	Lower montane coniferous forest, Meadows and seeps, Vernal pools/mesic/ perennial herb/ May-Jul/ 4003-5351	No	Not expected to occur.	No suitable vegetation is present; the project site is located outside of the species' known elevation range and species is not known to occur within the vicinity[2]
Dichondra occidentalis western dichondra	None/ None/ 4.2 /List D	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/ perennial rhizomatous herb/ (Jan),Mar-Jul/ 164-1640	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Dicranostegia orcuttiana Orcutt's bird's-beak	None/ None/ 2.3 /List B	Coastal scrub/ annual herb hemiparasitic/ (Mar),Apr-Jul(Sep),/ 33-1148	No	Not expected to occur.	The project site is located outside of the species' known elevation range, species is not known to occur within the vicinity[2] and there is no suitable vegetation present.

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Dieteria asteroides var. *lagunensis* Mount Laguna aster	None/ SR/ 2.3 /List B	Cismontane woodland, Lower montane coniferous forest/ perennial herb/ Jul-Aug/ 2625-7874	No	Not expected to occur.	Although the project site is located within the species' known elevation range and the species is known to occur within the vicinity[2], there is no suitable vegetation present.
Ditaxis serrata var. *californica* California ditaxis	None/ None/ 3.2 /List C	Sonoran desert scrub/ perennial herb/ Mar-Dec/ 98-3281	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation is present; however, the species is not known to occur within the vicinity[2].
Downingia concolor var. *brevior* Cuyamaca Lake downingia	None/ SE/ 1B.1 /List A /MSCP	Meadows and seeps(vernally mesic), Vernal pools/ annual herb/ May-Jul/ 4528-4921	No	Not expected to occur.	No suitable vegetation is present and the project site is located outside of the species' known elevation range. Species is not known to occur within the vicinity[2].
Dudleya alainae Banner dudleya	None/ None/ 3.2 /List C	Chaparral, Lower montane coniferous forest, Sonoran desert scrub/rocky/ perennial herb/ Apr-Jul/ 2428-3937	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation and soils are present, species is not known to occur within the vicinity[2].
Dudleya attenuata ssp. *attenuata* Orcutt's dudleya	None/ None/ 2.3 /List B	Coastal bluff scrub, Chaparral, Coastal scrub/rocky or gravelly/ perennial herb/ May-Jul/ 10-164	No	Not expected to occur.	Suitable vegetation and soils are present; however, the site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Dudleya blochmaniae ssp. *blochmaniae* Blochman's dudleya	None/ None/ 1B.1 /List A	Coastal bluff scrub, Chaparral, Coastal scrub, Valley and foothill grassland/rocky, often clay or serpentinite/ perennial herb/ Apr-Jun/ 16-1476	No	Not expected to occur.	Suitable vegetation and soils are present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].

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Dudleya brevifolia short-leaved dudleya	None/ SE/ 1B.1 /List A	Chaparral(maritime, openings), Coastal scrub/Torrey sandstone/ perennial herb/ Apr-May/ 98-820	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Dudleya multicaulis many-stemmed dudleya	None/ None/ 1B.2 /List A	Chaparral, Coastal scrub, Valley and foothill grassland/often clay/ perennial herb/ Apr-Jul/ 49-2592	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Dudleya variegata variegated dudleya	None/ None/ 1B.2 /List A	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools/clay/ perennial herb/ Apr-Jun/ 10-1903	No	Not expected to occur.	Suitable chaparral is present; however, the project site is located outside of the species' known elevation range, lacks vernal pools, and the species is not known to occur within the vicinity[2].
Dudleya viscida sticky dudleya	None/ None/ 1B.2 /List A /MSCP	Coastal bluff scrub, Chaparral, Cismontane woodland, Coastal scrub/rocky/ perennial herb/ May-Jun/ 33-1804	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Ericameria cuneata var. *macrocephala* Laguna Mountains goldenbush	None/ None/ 1B.3 /List A /MSCP	Chaparral(granitic)/ perennial shrub/ Sep-Dec/ 3921-6070	No	Not expected to occur.	Suitable vegetation and soils are present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Ericameria palmeri var. *palmeri* Palmer's goldenbush	None/ None/ 1B.1 /List B /MSCP	Chaparral, Coastal scrub/mesic/ perennial evergreen shrub/ (Jul),Sep-Nov/ 98-1969	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Eriogonum evanidum vanishing wild buckwheat	None/ None/ 1B.1 /List A	Chaparral, Cismontane woodland, Lower montane coniferous forest, Pinyon and juniper woodland/sandy or gravelly/ annual herb/ Jul-Oct/ 3609-7300	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].

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Eryngium aristulatum var. *parishii* San Diego button-celery	FE/ SE/ 1B.1 /List A	Coastal scrub, Valley and foothill grassland, Vernal pools/mesic/ annual/perennial herb/ Apr-Jun/ 66-2034	No	Not expected to occur.	Species is known to occur approximately 3.5 miles northeast of project site (CDFW 2014); however, the project site is located outside of the species' known elevation range and lacks suitable vegetation and vernal pools.
Eryngium pendletonense Pendleton button-celery	None/ None/ 1B.1 /List A	Coastal bluff scrub, Valley and foothill grassland, Vernal pools/clay, vernally mesic/ perennial herb/ Apr-Jun(Jul),/ 49-361	No	Not expected to occur.	No suitable vegetation or vernal pools are present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Eucnide rupestris annual rock-nettle	None/ None/ 2.3 /List B	Sonoran desert scrub/ annual herb/ Dec-Apr/ 1640-1969	No	Not expected to occur.	Suitable habitats are present; however, the project site is located outside of the species' known elevation range.
Euphorbia misera cliff spurge	None/ None/ 2.3 /List B	Coastal bluff scrub, Coastal scrub, Mojavean desert scrub/rocky/ perennial shrub/ Dec-Aug(Oct),/ 33-1640	No	Not expected to occur.	No suitable vegetation is present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Ferocactus viridescens San Diego barrel cactus	None/ None/ 2.3 /List B	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/ perennial stem succulent/ May-Jun/ 10-1476	No	Not expected to occur.	Suitable vegetation is present; however, vernal pools are absent, the project site is located outside of the species' known elevation range, and the species is not known to occur within the vicinity[2].
Frankenia palmeri Palmer's frankenia	None/ None/ 2.3 /List B	Coastal dunes, Marshes and swamps(coastal salt), Playas/ perennial herb/ May-Jul/ 0-33	No	Not expected to occur.	No suitable vegetation is present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Fremontodendron mexicanum Mexican flannelbush	FE/ SR/ 1B.1 /List A	Closed-cone coniferous forest, Chaparral, Cismontane woodland/gabbroic, metavolcanic, or serpentinite/ perennial evergreen shrub/ Mar-Jun/ 33-2349	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].

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Fritillaria biflora chocolate lily	None/None/ None /List D	Valley grassland, foothill woodland/ perennial herb/Mar-Apr/ 0 -3937	No	Not expected to occur	Although the project site is located within the species' known elevation range, there is no suitable vegetation present on site and the species is not known to occur within the vicinity[2].
Funastrum utahense Utah vine milkweed	None/ None/ 4.2 /List D	Mojavean desert scrub, Sonoran desert scrub/sandy or gravelly/ perennial herb/ (Mar),Apr-Jun(Sep),(Oct),/ 328-4708	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation and soils are present, species is not known to occur within the vicinity[2].
Galium angustifolium ssp. *borregoense* Borrego bedstraw	None/ SR/ 1B.3 /List A /MSCP	Sonoran desert scrub(rocky)/ perennial herb/ Mar/ 1148-4101	No	Low potential to occur.	The project site is located within the species' known elevation range and there are suitable soils and vegetation present; however, the species is not known to occur within the vicinity[2].
Galium angustifolium ssp. *jacinticum* San Jacinto Mountains bedstraw	None/ None/ 1B.3 /List A	Lower montane coniferous forest/ perennial herb/ Jun-Aug/ 4429-6890	No	Not expected to occur.	This species is known to occur within the vicinity[2]; however, the project site is located outside of the species' known elevation range and no suitable vegetation is present.
Grindelia hallii San Diego gumplant	None/ None/ 1B.2 /List A	Chaparral, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland/ perennial herb/ May-Oct/ 607-5725	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation is present, species is not known to occur within the vicinity[2].
Galium johnstonii Johnston's bedstraw	None/ None/ 4.3 /List D	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Riparian woodland/ perennial herb/ Jun-Jul/ 4003-7546	No	Not expected to occur.	Suitable vegetation is present and the species is known to occur within the vicinity[2]; however, the project site is located outside of the species' known elevation range.

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Githopsis diffusa ssp. *filicaulis* Mission Canyon bluecup	None/ None/ 3.1 /List C	Chaparral(mesic, disturbed areas)/ annual herb/ Apr-Jun/ 1476-2297	No	Not expected to occur.	The site lacks suitable mesic chaparral, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Hazardia orcuttii Orcutt's hazardia	FC/ ST/ 1B.1 /List A	Chaparral(maritime), Coastal scrub/often clay/ perennial evergreen shrub/ Aug-Oct/ 262-279	No	Not expected to occur.	The site lacks suitable maritime chaparral, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Herissantia crispa curly herissantia	None/ None/ 2.3 /List B	Sonoran desert scrub/ annual/perennial herb/ (Apr),Aug-Sep/ 2297-2379	No	Not expected to occur.	Suitable vegetation is present and the species is known to occur within the vicnity[2]; however, the project site is located outside of the species' known elevation range. One known occurrence approximately 2.3 miles northeast of the project site (CDFW 2014a). No additional known occurrences in vicinity.
Hesperocyparis forbesii Tecate cypress	None/ None/ 1B.1 /List A /MSCP	Closed-cone coniferous forest, Chaparral/clay, gabbroic or metavolcanic/ perennial evergreen tree/ NA/ 262-4921	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation and soils are present, species is not known to occur within the vicinity[2].
Hesperocyparis stephensonii Cuyamaca cypress	None/ None/ 1B.1 /List A	Closed-cone coniferous forest, Chaparral, Cismontane woodland, Riparian forest/gabbroic/ perennial evergreen tree/ NA/ 3396-5594	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicnity[2].
Heterotheca sessiliflora ssp. *sanjacintensis* San Jacinto golden-aster	None/None/1B.3 /List D	Woodlands/1200-4560/unresolved in Jepson	No	Not expected to occur	Although the project site is located within the species' known elevation range, there is no suitable vegetation present and species is not known to occur within the vicinity[2].

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Heuchera brevistaminea Laguna Mountains alumroot	None/ None/ 1B.3 /List A /MSCP	Broadleafed upland forest, Chaparral, Cismontane woodland, Riparian forest/rocky/ perennial rhizomatous herb/ Apr-Jul(Sep),/ 4495-6562	No	Not expected to occur.	No suitable vegetation is present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Heuchera rubescens var. *versicolor* San Diego County alumroot	None/ None/ 3.3 /List B	Chaparral, Lower montane coniferous forest/rocky/ perennial rhizomatous herb/ May-Jun/ 4921-13123	No	Not expected to occur.	Suitable vegetation is present; however, species is not known to occur within the vicinity[2] and the project site is located outside of the species' known elevation range.
Holocarpha virgata ssp. *elongata* graceful tarplant	None/ None/ 4.2 /List D /MSCP	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/ annual herb/ May-Nov/ 197-3609	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation is present, species is not known to occur within the vicinity[2].
Hordeum intercedens vernal barley	None/ None/ 3.2 /List C	Coastal dunes, Coastal scrub, Valley and foothill grassland(saline flats and depressions), Vernal pools/ annual herb/ Mar-Jun/ 16-3281	No	Not expected to occur	Although the project site is located within the species' known elevation range, no suitable vegetation or vernal pools are present and the species is not known to occur within the vicinity[2].
Horkelia cuneata var. *puberula* mesa horkelia	None/ None/ 1B.1 /List A	Chaparral(maritime), Cismontane woodland, Coastal scrub/sandy or gravelly/ perennial herb/ Feb-Jul(Sep),/ 230-2657	No	Not expected to occur.	No suitable vegetation is present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Horkelia truncata Ramona horkelia	None/ None/ 1B.3 /List A /MSCP	Chaparral, Cismontane woodland/clay, gabbroic/ perennial herb/ May-Jun/ 1312-4265	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation and soils are present, species is not known to occur within vicinity[2].
Horsfordia newberryi Newberry's velvet-mallow	None/ None/ 4.3 /List D	Sonoran desert scrub(rocky)/ perennial shrub/ Feb-Dec/ 10-2625	No	Not expected to occur.	Suitable vegetation and soils are present; however, the project site is located outside of the species' known elevation range.

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Hosackia crassifolia var. *otayensis* Otay Mountain lotus	None/ None/ 1B.1 /List A	Chaparral(metavolcanic, often in disturbed areas)/ perennial herb/ May-Aug/ 1247-3297	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation and soils are present species is not known to occur within the vicinity[2].
Hulsea californica San Diego sunflower	None/ None/ 1B.3 /List A /MSCP	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest/openings and burned areas/ perennial herb/ Apr-Jun/ 3002-9564	No	Low potential to occur.	The project site is located within the species' known elevation range, suitable vegetation is present, and the species is known to occur within the vicinity[2]; however, the nearest known occurrence is approximately 17 miles northwest of the project site.
Hulsea mexicana Mexican hulsea	None/ None/ 2.3 /List B /MSCP	Chaparral(volcanic, often on burns or disturbed areas)/ annual/perennial herb/ Apr-Jun/ 3937-3937	No	Not expected to occur.	Suitable vegetation is present and the species is known to occur within the vicinity[2]; however, the project site is located outside of the species' known elevation range. Nearest known occurrences are approximately 1.3 and 3.8 miles north of project site (CDFW 2014).
Hulsea vestita ssp. *callicarpha* beautiful hulsea	None/ None/ 4.2 /List D	Chaparral, Lower montane coniferous forest/rocky or gravelly, granitic/ perennial herb/ May-Oct/ 3002-10007	No	Low potential to occur.	Although the project site is located within the species' known elevation range and suitable vegetation and soils are present species is not known to occur within the vicinity[2].
Hymenothrix wrightii Wright's hymenothrix	None/ None/ 4.3 /List D	Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland/ perennial herb/ Jun-Oct/ 4593-5085	No	Not expected to occur.	The project site is located outside of the species' known elevation range, there is no suitable vegetation present and the species is not known to occur within the vicinity[2].
Isocoma menziesii var. *decumbens* decumbent goldenbush	None/ None/ 1B.2 /List A	Chaparral, Coastal scrub(sandy, often in disturbed areas)/ perennial shrub/ Apr-Nov/ 33-443	No	Not expected to occur.	Suitable vegetation and soils are present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].

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Iva hayesiana San Diego marsh-elder	None/ None/ 2.3 /List B	Marshes and swamps, Playas/ perennial herb/ Apr-Oct/ 33-1640	No	Not expected to occur.	No suitable vegetation is present and the project site is located outside of the species' known elevation range. Species is not known to occur within the vicinity[2].
Juglans californica Southern California black walnut	None/ None/ 4.2 /List D	Chaparral, Cismontane woodland, Coastal scrub/alluvial/ perennial deciduous tree/ Mar-Aug/ 164-2953	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range. Species is not known to occur within the vicinity[2].
Juncus acutus ssp. *leopoldii* southwestern spiny rush	None/ None/ 4.2 /List D	Coastal dunes(mesic), Meadows and seeps(alkaline seeps), Marshes and swamps(coastal salt)/ perennial rhizomatous herb/ (Mar),May-Jun/ 10-2953	No	Not expected to occur.	No suitable vegetation is present and the project site is located outside of the species' known elevation range.
Juncus cooperi Cooper's rush	None/ None/ 4.3 /List D	Meadows and seeps(mesic, alkaline or saline)/ perennial herb/ Apr-May(Aug),/ 853-5807	No	Not expected to occur	Although the project site is located within the species' known elevation range and the species is known to occur within the vicinity[2] (SDNHM 2014a); no suitable vegetation or soils are present on site.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	None/ None/ 1B.1 /List A	Marshes and swamps (coastal salt), Playas, Vernal pools/ annual herb/ Feb-Jun/ 3-4003	No	Not expected to occur	No suitable vegetation present on site. Species not known to occur within the vicinity[2].
Lepechinia cardiophylla heart-leaved pitcher sage	None/ None/ 1B.2 /List A	Closed-cone coniferous forest, Chaparral, Cismontane woodland/ perennial shrub/ Apr-Jul/ 1706-4495	No	Not expected to occur	Although the project site is located within the species' known elevation range and chaparral vegetation is present, species not known to occur from vicinity[2]. Nearest known occurrence is approximately 53 miles northwest of the project site (CDFW 2014a).
Lepechinia ganderi Gander's pitcher sage	None/ None/ 1B.3 /List A	Closed-cone coniferous forest, Chaparral, Coastal scrub, Valley and foothill grassland/Gabbroic or metavolcanic/ perennial shrub/ Jun-Jul/ 1001-3297	No	Not expected to occur.	Although the project site is located within the species' known elevation range and suitable vegetation and soils are present, species not known to occur from vicinity[2].

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					Nearest known occurrence is approximately 37 miles west of the project site (CDFW 2014a).
Lepidium flavum var. *felipense* Borrego Valley pepper-grass	None/ None/ 1B.2 /List A /MSCP	Pinyon and juniper woodland, Sonoran desert scrub/sandy/ annual herb/ Mar-May/ 1493-2756	No	Not expected to occur.	Suitable vegetation is present; however, no the project site is located outside of the species' known elevation range and the species is not known to occur within the vicnity[2].
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	None/ None/ 4.3 /List A	Chaparral, Coastal scrub/ annual herb/ Jan-Jul/ 3-2904	No	Not expected to occur.	Although suitable habitats are present and species is known to occur within the vicinity[2], the project site is located outside of the species' known elevation range.
Leptosiphon floribundus ssp. *hallii* Santa Rosa Mountains leptosiphon	None/ None/ 1B.3 /List A	Pinyon and juniper woodland, Sonoran desert scrub/ perennial herb/ May-Jul/ 3281-6562	No	Not expected to occur.	Although suitable vegetation is present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicnity[2].
Leptosyne maritima sea dahlia	None/ None/ 2.3 /List B	Coastal bluff scrub, Coastal scrub/ perennial herb/ Mar-May/ 16-492	No	Not expected to occur.	The project site is located outside of the species' known elevation range and there is no suitable vegetation present. Species is not known to occur within the vicinity[2].
Lessingia glandulifera var. *tomentosa* Warner Springs lessingia	None/ None/ 1B.3 /List A /MSCP	Chaparral(sandy)/ annual herb/ Aug-Oct/ 2854-4003	No	Not expected to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present; however, species not known to occur from vicinity[2]. Nearest known occurrence is approximately 46 miles north of the project site (CDFW 2014a).
Lewisia brachycalyx short-sepaled lewisia	None/ None/ 2.3 /List B /MSCP	Lower montane coniferous forest, Meadows and seeps/mesic/ perennial	No	Not expected to occur.	No suitable vegetation is present and the project site is located outside of the species'

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		herb/ Feb-Jun(Jul),/ 4495-7546			known elevation range. Species is not known to occur within the vicinity[2].
Lilium humboldtii ssp. *ocellatum* ocellated Humboldt lily	None/ None/ 4.2 /List D /MSCP	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland/openings/ perennial bulbiferous herb/ Mar-Jul(Aug),/ 98-5906	No	Low potential to occur.	The project site is located within the species' known elevation range and suitable vegetation is present; however, the species is not known to occur within the vicinity[2].
Lilium parryi lemon lily	None/ None/ 1B.2 /List A /MSCP	Lower montane coniferous forest, Meadows and seeps, Riparian forest, Upper montane coniferous forest/mesic/ perennial bulbiferous herb/ Jul-Aug/ 4003-9006	No	Not expected to occur.	No suitable vegetation is present and the project site is located outside of the species' known elevation range. Species is not known to occur within the vicinity[2].
Limnanthes alba ssp. *parishii* Parish's meadowfoam	None/ SE/ 1B.2 /List A	Lower montane coniferous forest, Meadows and seeps, Vernal pools/vernally mesic/ annual herb/ Apr-Jun/ 1969-6562	No	Not expected to occur.	The project site is located within the species' known elevation range however, the species is not known to occur within the vicinity[2] and there is no suitable vegetation present.
Linanthus maculatus Little San Bernardino Mtns. linanthus	None/ None/ 1B.2 /None	Desert dunes, Joshua tree "woodland", Mojavean desert scrub, Sonoran desert scrub/sandy/ annual herb/ Mar-May/ 640-6808	No	Low potential to occur.	The project site is located within the species' known elevation range, suitable soils and vegetation present and the species is known to occur within the vicinity[2]. There are no occurrences known within San Diego County and only one occurrence is known within Imperial County which is approximately 7.5 miles north of the project site (CDFW 2014a).
Linanthus orcuttii Orcutt's linanthus	None/ None/ 1B.3 /List A /MSCP	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland/openings/ annual herb/ May-Jun/ 3002-7037	No	Low potential to occur.	The project site is located within the species' known elevation range and suitable vegetation is present; however, the species is not known to occur within the vicinity[2].

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Lycium californicum California box-thorn	None/ None/ 4.2 /List D	Coastal bluff scrub, Coastal scrub/ perennial shrub/ (Dec),Mar-Aug/ 16-492	No	Not expected to occur.	Species not known to occur in the vicinity[2] of the project. Additionally, the site is outside of the species' known elevation range and there is no suitable vegetation present.
Lycium parishii Parish's desert-thorn	None/ None/ 2.3 /List B /MSCP	Coastal scrub, Sonoran desert scrub/ perennial shrub/ Mar-Apr/ 443-3281	No	Low potential to occur.	The project site is located within the species' known elevation range, suitable vegetation and soils are present and the species is known to occur within the vicinity[2]. Nearest known occurrence is approximately 5.5 miles northeast of the project (CDFW 2014a). However, due to the limited amount of suitable habitat on site (3.23 acres), there is a low potential for this species to occur on site.
Lyrocarpa coulteri Palmer's lyrepod	None/ None/ 4.3 /List D	Sonoran desert scrub(gravelly or rocky)/ perennial herb/ Dec-Apr/ 394-2608	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Malacothamnus aboriginum Indian Valley bush-mallow	None/ None/ 1B.2 /List A /MSCP	Chaparral, Cismontane woodland/Rocky, granitic, often in burned areas/ perennial deciduous shrub/ Apr-Oct/ 492-5577	No	Low potential to occur.	Suitable vegetation and soils are present and the project site is located within the species' known elevation range; however, species not known to occur within the vicinity[2].
Malperia tenuis brown turbans	None/ None/ 2.3 /List B	Sonoran desert scrub(sandy, gravelly)/ annual herb/ (Feb),Mar-Apr/ 49-1099	No	Not expected to occur.	Suitable vegetation and soils are present and the species is known to occur within the vicnity[2]; however, the project site is located outside of the species' known elevation range.
Matelea parvifolia spearleaf	None/ None/ 2.3 /List B	Mojavean desert scrub, Sonoran desert scrub/rocky/ perennial herb/ Mar-May/	No	Low potential to occur.	Suitable vegetation and soils are present, the project site is located within the species'

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		1444-3593			known elevation range and the species is known to occur approximately 3.7 miles northeast of the project site (CDFW 2014a); however, due to the limited amount of suitable desert scrub present, this species has a low potential to occur.
Mentzelia hirsutissima hairy stickleaf	None/ None/ 2.3 /List B	Sonoran desert scrub(rocky)/ annual herb/ Mar-May/ 0-2297	No	Not expected to occur.	Suitable vegetation and soils are present and the species is known to occur within the vicinity[2]; however, the project site is located outside of the species' known elevation range.
Mentzelia tricuspis spiny-hair blazing star	None/ None/ 2.3 /None	Mojavean desert scrub/sandy, gravelly, slopes, and washes/ annual herb/ Mar-May/ 492-4199	No	Low potential to occur.	Suitable vegetation and soils are present, the project site is located within the species' known elevation range and the species is known to occur approximately 3.5 miles northeast of the project site (CDFW 2014a); however, due to the limited amount of suitable desert scrub present, this species has a low potential to occur.
Mentzelia tridentata creamy blazing star	None/ None/ 1B.3 /None	Mojavean desert scrub/rocky, gravelly, sandy/ annual herb/ Mar-May/ 2297-3806	No	Low potential to occur.	Suitable vegetation and soils are present and the project site is located within the species' known elevation range; however, the species is not known to occur within the vicinity[2] and there is a limited amount of suitable desert scrub present.
Microseris douglasii ssp. *platycarpha* small-flowered microseris	None/ None/ 4.2 /List D	Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools/clay/ annual herb/ Mar-May/ 49-3510	No	Not expected to occur	No suitable vegetation present. Additionally, species not known to occur within vicinity[2].

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Mimulus clevelandii Cleveland's bush monkeyflower	None/ None/ 4.2 /List D /MSCP	Chaparral, Cismontane woodland, Lower montane coniferous forest/Gabbroic, often in disturbed areas, openings, rocky/ perennial rhizomatous herb/ Apr-Jul/ 1476-6562	No	Low potential to occur.	Although suitable vegetation, soils and elevation is present, species not known to occur in vicinity[2].
Mimulus diffusus Palomar monkeyflower	None/ None/ 4.3 /List D /MSCP	Chaparral, Lower montane coniferous forest/sandy or gravelly/ annual herb/ Apr-Jun/ 4003-6004	No	Not expected to occur.	Suitable vegetation and soils are present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Mimulus latidens Vernal pool monkeyflower	None/None/ considered but rejected /List A	Valley grassland, foothill woodland, wetland-riparian/ annual herb/ Apr-Jun/ 0-8202	No	Not expected to occur	No suitable vegetation present and species not known to occur in vicinity[2]of the project site.
Mirabilis tenuiloba slender-lobed four o'clock	None/ None/ 4.3 /List D	Sonoran desert scrub/ perennial herb/ (Feb),Mar-May/ 984-3593	No	Low potential to occur.	Suitable vegetation is present, the project site is located within the species' known elevation range and the species is known to occur within the vicinity[2]; however, due to the limited amount of suitable desert scrub present, this species has a low potential to occur.
Monardella hypoleuca ssp. *lanata* felt-leaved monardella	None/ None/ 1B.2 /List A /MSCP	Chaparral, Cismontane woodland/ perennial rhizomatous herb/ Jun-Aug/ 984-5167	No	Low potential to occur.	Although suitable vegetation is present, species not known to occur in vicinity[2]of the project site.
Monardella macrantha ssp. *hallii* Hall's monardella	None/ None/ 1B.3 /List A	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland/ perennial rhizomatous herb/ Jun-Oct/ 2395-7201	No	Low potential to occur.	Suitable vegetation is present and the project is located within the species' known elevation range; however, species not known to occur in vicinity[2].

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Monardella nana ssp. *leptosiphon* San Felipe monardella	None/ None/ 1B.2 /List A /MSCP	Chaparral, Lower montane coniferous forest/ perennial rhizomatous herb/ Jun-Jul/ 3937-6086	No	Not expected to occur.	Suitable vegetation is present; however, no the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Monardella stoneana Jennifer's monardella	None/ None/ 1B.2 /List A	Closed-cone coniferous forest, Chaparral, Coastal scrub, Riparian scrub/usually rocky intermittent streambeds/ perennial herb/ Jun-Sep/ 33-2592	No	Not expected to occur.	Suitable vegetation is present; however, no the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Monardella viminea willowy monardella	FE/ SE/ 1B.1 /List A	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland/alluvial ephemeral washes/ perennial herb/ Jun-Aug/ 164-738	No	Not expected to occur.	Suitable vegetation is present; however, no the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Mucronea californica California spineflower	None/ None/ 4.2 /List D	Chaparral, Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland/sandy/ annual herb/ Mar-Jul(Aug),/ 0-4593	No	Low potential to occur.	Suitable vegetation is present and the project site is located within the species' known elevation range; however, species not known to occur within the vicinity[2].
Myosurus minimus ssp. *apus* little mousetail	None/ None/ 3.1 /List C	Valley and foothill grassland, Vernal pools(alkaline)/ annual herb/ Mar-Jun/ 66-2100	No	Not expected to occur.	No suitable vegetation is present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Nama stenocarpa mud nama	None/ None/ 2.3 /List B	Marshes and swamps(lake margins, riverbanks)/ annual/perennial herb/ Jan-Jul/ 16-1640	No	Not expected to occur.	No suitable vegetation is present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Nasturtium gambelii Gambel's water cress	FE/ ST/ 1B.1 /List A	Marshes and swamps(freshwater or brackish)/ perennial rhizomatous herb/ Apr-Oct/ 16-1083	No	Not expected to occur.	No suitable vegetation is present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].

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Navarretia fossalis spreading navarretia	FT/ None/ 1B.1 /List A	Chenopod scrub, Marshes and swamps(assorted shallow freshwater), Playas, Vernal pools/ annual herb/ Apr-Jun/ 98-2149	No	Not expected to occur.	No suitable vegetation or vernal pools are present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Navarretia peninsularis Baja navarretia	None/ None/ 1B.2 /List A /MSCP	Chaparral(openings), Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland/mesic/ annual herb/ Jun-Aug/ 4921-7546	No	Not expected to occur.	Although suitable habitats are present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Navarretia prostrata prostrate vernal pool navarretia	None/ None/ 1B.1 /List A	Coastal scrub, Meadows and seeps, Valley and foothill grassland(alkaline), Vernal pools/Mesic/ annual herb/ Apr-Jul/ 49-3970	No	Not expected to occur	No suitable vegetation, vernal pools, or mesic conditions are present. Species is not known to occur within vicinity[2].
Nemacaulis denudata var. *denudata* coast woolly-heads	None/ None/ 1B.2 /List A	Coastal dunes/ annual herb/ Apr-Sep/ 0-328	No	Not expected to occur.	The project site is located outside of the species' known elevation range, there is no suitable vegetation present, and the species is not known to occur within vicinity[2].
Nemacaulis denudata var. *gracilis* slender cottonheads	None/ None/ 2.3 /List B	Coastal dunes, Desert dunes, Sonoran desert scrub/ annual herb/ (Mar),Apr-May/ 164-1312	No	Not expected to occur.	Suitable vegetation is present and the species is known to occur within the vicinity; however, the project site is located outside of the species' known elevation range.
Nolina cismontana chaparral nolina	None/ None/ 1B.2 /List A /MSCP	Chaparral, Coastal scrub/sandstone or gabbro/ perennial evergreen shrub/ (Mar),May-Jul/ 459-4183	No	Not expected to occur.	The project site is located within the species' known elevation range and suitable soils and vegetation are present; however, the species is not known to occur within the vicinity[2]. Nearest known occurrence is approximately 37 miles northwest of the project site (CDFW 2014a).

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Nolina interrata Dehesa nolina	None/ SE/ 1B.1 /List A	Chaparral(gabbroic, metavolcanic, or serpentinite)/ perennial herb/ Jun-Jul/ 607-2805	No	Not expected to occur.	Suitable vegetation and soils are present; however, the project site is located outside of the species' known elevation range. Additionally, species is not known to occur within the vicinity[2].
Ophioglossum californicum California adder's-tongue	None/ None/ 4.2 /List D	Chaparral, Valley and foothill grassland, Vernal pools(margins)/mesic/ perennial rhizomatous herb/ (Dec),Jan-Jun/ 197-1722	No	Not expected to occur.	Suitable vegetation is present; however, the site lacks vernal pools, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Opuntia wigginsii (Cylindropuntia echinocarpa) Wiggins' cholla	None/ None/ 3.3 /List C	Sonoran desert scrub(sandy)/ perennial stem succulent/ Mar/ 98-2904	No	Not expected to occur.	Although suitable vegetation and soils are present, the project site is located outside of the species' known elevation range.
Orcuttia californica California Orcutt grass	FE/ SE/ 1B.1 /List A	Vernal pools/ annual herb/ Apr-Aug/ 49-2165	No	Not expected to occur.	The project site is located outside of the species' known elevation range and there are no suitable vernal pools present. Species is not known to occur within the vicinity[2].
Ornithostaphylos oppositifolia Baja California birdbush	None/ SE/ 2.3 /List B	Chaparral/ perennial evergreen shrub/ Jan-Apr/ 180-2625	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Orobanche parishii ssp. *brachyloba* short-lobed broomrape	None/ None/ 4.2 /List D	Coastal bluff scrub, Coastal dunes, Coastal scrub/sandy/ perennial herb parasitic/ Apr-Oct/ 10-1001	No	Not expected to occur.	No suitable vegetation is present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Packera ganderi Gander's ragwort	None/ SR/ 1B.2 /List A /MSCP	Chaparral(burns, gabbroic outcrops)/ perennial herb/ Apr-Jun/ 1312-3937	No	Not expected to occur.	The project site is located within the species' known elevation range and suitable soils and vegetation are present; however,

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					the species is not known to occur within the vicinity[2]. Nearest known occurrence is approximately 28 miles west of the project site (CDFW 2014a).
Pectocarya peninsularis Baja California bur-comb	None/None/ None /List D	Sonoran desert; washes, roadsides, clearings/ annual herb/ Feb-Apr/ 98-984	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Penstemon clevelandii var. *connatus* San Jacinto beardtongue	None/ None/ 4.3 /List D	Chaparral, Pinyon and juniper woodland, Sonoran desert scrub/rocky/ perennial herb/ Mar-May/ 1312-4921	No	Low potential to occur.	Suitable vegetation, soils, and elevation is present. However, closest occurrence approximately 12 miles northwest of the project site (Jepson eFlora 2014).
Penstemon thurberi Thurber's beardtongue	None/ None/ 4.2 /List D	Chaparral, Joshua tree "woodland", Pinyon and juniper woodland, Sonoran desert scrub/ perennial herb/ May-Jul/ 1640-4003	No	Low potential to occur.	Suitable vegetation is present and the project site is located within the species' known elevation range; however, the species is not known to occur within the vicinity[2].
Pentachaeta aurea ssp. *aurea* golden-rayed pentachaeta	None/ None/ 4.2 /List D	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland, Valley and foothill grassland/ annual herb/ Mar-Jul/ 262-6070	No	Low potential to occur.	Suitable vegetation is present and the project site is located within the species' known elevation range; however, the species is not known to occur within the vicinity[2].
Perideridia gairdneri ssp. *gairdneri* Gairdner's yampah	None/ None/ 4.2 /List D	Broadleafed upland forest, Chaparral, Coastal prairie, Valley and foothill grassland, Vernal pools/vernally mesic/ perennial herb/ Jun-Oct/ 0-2001	No	Not expected to occur.	Suitable vegetation is present; however, the site lacks vernal pools, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].

Scientific Name Common Name	Sensitivity Code and Status (Federal/State/ CRPR/County/E CMSCP)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)	Verified on Project Site (direct/indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Phacelia nashiana Charlotte's phacelia	None/ None/ 1B.2 /None /MSCP	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland/usually granitic, sandy/ annual herb/ Mar-Jun/ 1969-7218	No	Low potential to occur.	Suitable vegetation is present and the project site is located within the species' known elevation range; however, the species is not known to occur within the vicinity[2].
Phacelia stellaris Brand's star phacelia	FC/ None/ 1B.1 /List A	Coastal dunes, Coastal scrub/ annual herb/ Mar-Jun/ 3-1312	No	Not expected to occur.	The project site is located outside of the species' known elevation range, there is no suitable vegetation present and the species' is not known to occur within the vicinity[2].
Pholistoma auritum var. *arizonicum* Arizona pholistoma	None/ None/ 2.3 /None /MSCP	Mojavean desert scrub/ annual herb/ Mar/ 902-2740	No	Not expected to occur.	Although the species is known to occur within the vicinity[2], the project site is located outside of the species' known elevation range.
Pilostyles thurberi Thurber's pilostyles	None/ None/ 4.3 /List D	Sonoran desert scrub/ perennial herb parasitic/ Dec-Apr/ 0-1198	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range.
Pinus torreyana ssp. *torreyana* Torrey pine	None/ None/ 1B.2 /List A	Closed-cone coniferous forest, Chaparral/Sandstone/ perennial evergreen tree/ NA/ 246-525	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Piperia cooperi chaparral rein orchid	None/ None/ 4.2 /List D /MSCP	Chaparral, Cismontane woodland, Valley and foothill grassland/ perennial herb/ Mar-Jun/ 49-5200	No	Low potential to occur.	The project site is located within the species' known elevation range and suitable vegetation is present; however, the species is not known to occur within the vicinty[2].
Piperia leptopetala narrow-petaled rein orchid	None/ None/ 4.3 /List D /MSCP	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest/ perennial herb/ May-Jul/ 1247-7300	No	Not expected to occur.	No suitable vegetation present and species not known to occur in the vicinity[2]of the project site

Scientific Name Common Name	Sensitivity Code and Status (Federal/State/ CRPR/County/E CMSCP)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)	Verified on Project Site (direct/indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Poa atropurpurea San Bernardino blue grass	FE/ None/ 1B.2 /List A /MSCP	Meadows and seeps(mesic)/ perennial rhizomatous herb/ (Apr),May-Jul(Aug),/ 4462-8054	No	Not expected to occur.	No suitable habitat is present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Pogogyne abramsii San Diego mesa mint	FE/ SE/ 1B.1 /List A	Vernal pools/ annual herb/ Mar-Jul/ 295-656	No	Not expected to occur.	The project site is located outside of the species' known elevation range and there are no suitable vernal pools present. Species is not known to occur within the vicinity[2].
Pogogyne nudiuscula Otay Mesa mint	FE/ SE/ 1B.1 /List A	Vernal pools/ annual herb/ May-Jul/ 295-820	No	Not expected to occur.	The project site is located outside of the species' known elevation range and there are no suitable vernal pools present. Species is not known to occur within the vicinity[2].
Polygala cornuta var. *fishiae* Fish's milkwort	None/ None/ 4.3 /List D	Chaparral, Cismontane woodland, Riparian woodland/ perennial deciduous shrub/ May-Aug/ 328-3281	No	Low potential to occur.	The project site is located within the species' known elevation range and suitable vegetation is present; however, the species is not known to occur within the vicnity[2].
Proboscidea althaeifolia desert unicorn-plant	None/ None/ 4.3 /List D	Sonoran desert scrub(sandy)/ perennial herb/ May-Aug(Sep),(Oct),/ 279-3281	No	Low potential to occur.	The project site is located within the species' known elevation range and suitable vegetation is present; however, the species is not known to occur within the vicnity[2].
Pseudorontium cyathiferum Deep Canyon snapdragon	None/ None/ 2.3 /None	Sonoran desert scrub(rocky)/ annual herb/ Feb-Apr/ 0-2625	No	Not expected to occur.	Suitable vegetation and soils are present and the species is known to occur within the vicinity[2]; however, the project site is located outside of the species' known elevation range.
Quercus cedrosensis Cedros Island oak	None/ None/ 2.3 /List B	Closed-cone coniferous forest, Chaparral, Coastal scrub/ perennial evergreen tree/ Apr-May/ 837-3150	No	Not expected to occur.	The project site is located within the species' known elevation range and suitable vegetation is present; however, the species

Scientific Name Common Name	Sensitivity Code and Status (Federal/State/ CRPR/County/E CMSCP)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)	Verified on Project Site (direct/indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
					is not known to occur within the vicnity[2]. Nearest known occurrence is approximately 33 miles west of the project site (CDFW 2014a).
Quercus dumosa Nuttall's scrub oak	None/ None/ 1B.1 /List A	Closed-cone coniferous forest, Chaparral, Coastal scrub/sandy, clay loam/ perennial evergreen shrub/ Feb-Apr(Aug),/ 49-1312	No	Not expected to occur.	Although suitable vegetation is present, the project site is located outside of the species' known elevation range.
Quercus engelmannii Engelmann oak	None/ None/ 4.2 /List D /MSCP	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland/ perennial deciduous tree/ Mar-Jun/ 164-4265	No	Low potential to occur.	Although suitable vegetation and elevations are present, species not known to occur in vicinity[2].
Rhus aromatica var. *simplicifolia* single-leaved skunkbrush	None/ None/ 2.3 /List B	Pinyon and juniper woodland/Usually granitic./ perennial deciduous shrub/ Mar-Apr/ 4003-4495	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range.
Ribes canthariforme Moreno currant	None/ None/ 1B.3 /List A /MSCP	Chaparral, Riparian scrub/ perennial deciduous shrub/ Feb-Apr/ 1115-3937	No	Low potential to occur.	Suitable vegetation is present and the project is located within the species' known elevation range; however, species is not known to occur within the vicinity[2].
Ribes viburnifolium Santa Catalina Island currant	None/ None/ 1B.2 /List A	Chaparral, Cismontane woodland/ perennial evergreen shrub/ Feb-Apr/ 98-1148	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range. Species is not known to occur within the vicinity[2].
Romneya coulteri Coulter's matilija poppy	None/ None/ 4.2 /List D	Chaparral, Coastal scrub/Often in burns/ perennial rhizomatous herb/ Mar-Jul/ 66-3937	No	Low potential to occur.	Although suitable vegetation and elevations are present, species not known to occur in vicinity[2].
Rosa minutifolia small-leaved rose	None/ SE/ 2.3 /List B	Chaparral, Coastal scrub/ perennial deciduous shrub/ Jan-Jun/ 492-525	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range. Additionally, species is not known to occur within the vicinity[2].

Scientific Name Common Name	Sensitivity Code and Status (Federal/State/ CRPR/County/E CMSCP)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)	Verified on Project Site (direct/indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Rubus glaucifolius var. *ganderi* Cuyamaca raspberry	None/ None/ 3.1 /List A /MSCP	Lower montane coniferous forest(gabbroic)/ perennial evergreen shrub/ May-Jun/ 3937-5495	No	Not expected to occur.	No suitable vegetation is present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].
Rupertia rigida Parish's rupertia	None/ None/ 4.3 /List D /MSCP	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pebble plain, Valley and foothill grassland/ perennial herb/ Jun-Aug/ 2297-8202	No	Low potential to occur.	Although suitable vegetation and elevations are present, species is not known to occur within the vicinity[2].
Saltugilia caruifolia caraway-leaved woodland-gilia	None/ None/ 4.3 /List D	Chaparral, Lower montane coniferous forest/Sandy, openings/ annual herb/ May-Aug/ 2756-7546	No	Low potential to occur.	Suitable vegetation and soils are present, the project site is located within the species' known elevation range; however, the species is not known to occur within the vicnity[2].
Salvia eremostachya desert sage	None/ None/ 4.3 /List D	Sonoran desert scrub(rocky or gravelly)/ perennial evergreen shrub/ Mar-May/ 2297-4593	No	Low potential to occur.	Suitable vegetation is present and the project site is located within the species' known elevation range; however, species is not known to occur within the vicinity[2].
Salvia munzii Munz's sage	None/ None/ 2.3 /List B	Chaparral, Coastal scrub/ perennial evergreen shrub/ Feb-Apr/ 394-3494	No	Low potential to occur.	Suitable vegetation is present and the project site is located within the species' known elevation range; however, species is not known to occur within the vicinity[2].
Scutellaria bolanderi ssp. *austromontana* southern mountains skullcap	None/ None/ 1B.2 /List A	Chaparral, Cismontane woodland, Lower montane coniferous forest/mesic/ perennial rhizomatous herb/ Jun-Aug/ 1394-6562	No	Not expected to occur.	Suitable vegetation is present and the project site is located within the species' known elevation range; however, suitable soils (mesic) are not present and the species is not known to occur within the vicinity[2].
Selaginella asprella bluish spike-moss	None/ None/ 4.3 /List D	Cismontane woodland, Lower montane coniferous forest, Pinyon and juniper woodland, Subalpine coniferous forest,	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range. Additionally, species

Scientific Name Common Name	Sensitivity Code and Status (Federal/State/ CRPR/County/E CMSCP)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)	Verified on Project Site (direct/indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
		Upper montane coniferous forest/granitic, rocky/ perennial rhizomatous herb/ Jul/ 5249-8858			is not known to occur within the vicinity[2].
Selaginella cinerascens ashy spike-moss	None/ None/ 4.1 /List D	Chaparral, Coastal scrub/ perennial rhizomatous herb/ NA/ 66-2100	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range. Additionally, species is not known to occur within the vicinity[2].
Selaginella eremophila desert spike-moss	None/ None/ 2.3 /List B	Chaparral, Sonoran desert scrub(gravelly or rocky)/ perennial rhizomatous herb/ (May),Jun(Jul),/ 656-2953	No	Not expected to occur.	Suitable vegetation and soils are present; however, the project site is located outside of the species' known elevation range.
Senecio aphanactis chaparral ragwort	None/ None/ 2.3 /List B	Chaparral, Cismontane woodland, Coastal scrub/sometimes alkaline/ annual herb/ Jan-Apr/ 49-2625	No	Not expected to occur.	Suitable vegetation is present and the species is known to occur within the vicinity[2], the project site is located outside of the species' known elevation range.
Senna covesii Coves' cassia	None/ None/ 2.3 /List B	Sonoran desert scrub(sandy)/ perennial herb/ Mar-Jun/ 935-3510	No	Low potential to occur.	Although suitable vegetation and soils are present and the project site is located within the species' known elevation range, the species is not known to occur in vicinity[2].
Sibaropsis hammittii Hammitt's clay-cress	None/ None/ 1B.2 /List A /MSCP	Chaparral(openings), Valley and foothill grassland/clay/ annual herb/ Mar-Apr/ 2362-3494	No	Low potential to occur.	Although suitable vegetation and soils are present and the project site is located within the species' known elevation range, the species is not known to occur in vicinity[2].
Spermolepis echinata bristly scaleseed	None/ None/ 2.3 /List B	Sonoran desert scrub(sandy or rocky)/ annual herb/ Mar-Apr/ 197-4921	No	Low potential to occur.	Although suitable vegetation and soils are present and the project site is located within the species' known elevation range, the species is not known to occur in vicinity[2].
Stemodia durantifolia purple stemodia	None/ None/ 2.3 /List B	Sonoran desert scrub(often mesic, sandy)/ perennial herb/ Jan-Dec/ 591-984	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range. Additionally, the species is not known to occur in vicinity[2].

Scientific Name Common Name	Sensitivity Code and Status (Federal/State/ CRPR/County/E CMSCP)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)	Verified on Project Site (direct/indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Stipa diegoensis San Diego County needle grass	None/ None/ 4.2 /List D	Chaparral, Coastal scrub/rocky, often mesic/ perennial herb/ Feb-Jun/ 33-2625	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range. Additionally, the species is not known to occur in vicinity[2].
Streptanthus bernardinus Laguna Mountains jewel-flower	None/ None/ 4.3 /List D	Chaparral, Lower montane coniferous forest/ perennial herb/ May-Aug/ 2198-8202	No	Low potential to occur.	Although suitable vegetation and soils are present and the project site is located within the species' known elevation range, the species is not known to occur in vicinity[2].
Stylocline citroleum oil neststraw	None/ None/ 1B.1 /List A	Chenopod scrub, Coastal scrub, Valley and foothill grassland/clay/ annual herb/ Mar-Apr/ 164-1312	No	Not expected to occur.	No suitable vegetation is present and the project site is located outside of the species' known elevation range.
Suaeda esteroa estuary seablite	None/ None/ 1B.2 /List A	Marshes and swamps(coastal salt)/ perennial herb/ May-Oct(Jan),/ 0-16	No	Not expected to occur.	No suitable vegetation is present and the project site is located outside of the species' known elevation range.
Suaeda taxifolia woolly seablite	None/ None/ 4.2 /List D	Coastal bluff scrub, Coastal dunes, Marshes and swamps(margins of coastal salt)/ perennial evergreen shrub/ Jan-Dec/ 0-164	No	Not expected to occur	No suitable vegetation is present and the project site is located outside of the species' known elevation range.
Symphyotrichum defoliatum San Bernardino aster	None/ None/ 1B.2 /None	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Valley and foothill grassland(vernally mesic)/near ditches, streams, springs/ perennial rhizomatous herb/ Jul-Nov/ 7-6693	No	Not expected to occur	The project site is located within the species known elevation range and the species is known to occur within the vicinity[2]; however, no suitable vegetation is present and site lacks vernally mesic conditions. Nearest known occurrence located approximately 2.7 miles northeast of the project site (CDFW 2014).
Thermopsis californica var. *semota* velvety false lupine	None/ None/ 1B.2 /List A /MSCP	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland/ perennial rhizomatous herb/ Mar-Jun/ 3281-6135	No	Not expected to occur.	No suitable vegetation is present, the project site is located outside of the species' known elevation range and the species is not known to occur within the vicinity[2].

Scientific Name Common Name	Sensitivity Code and Status (Federal/State/ CRPR/County/E CMSCP)[1]	Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)	Verified on Project Site (direct/indirect evidence)	Potential to Occur on Site	Factual Basis for Determination
Texosporium sancti-jacobi Woven-spored lichen	None/None/ 3 /None	Chaparral (openings)/on soil, small mammal pellets, dead twigs, and on *Selaginella* spp/crustose lichen terrestrial/951-2165	No	Not expected to occur	Although suitable vegetation and substrates are present, the project site is located outside of the species' known elevation range and the species it not know to occur in the vicinity[2]. In addition, *Selaginella* sp. were not observed on site during biological surveys and the closest documented occurrence approximately 53 miles northwest of the project site.
Viguiera laciniata San Diego County viguiera	None/ None/ 4.2 /List D	Chaparral, Coastal scrub/ perennial shrub/ Feb-Jun(Aug),/ 197-2461	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range. Additionally, species is not known to occur within the vicinity[2].
Viguiera purisimae La Purisima viguiera	None/ None/ 2.3 /List A	Coastal bluff scrub, Chaparral/ shrub/ Apr-Sep/ 1198-1394	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range. Additionally, species is not known to occur within the vicinity[2].
Viola purpurea ssp. *aurea* golden violet	None/ None/ 2.3 /List B	Great Basin scrub, Pinyon and juniper woodland/sandy/ perennial herb/ Apr-Jun/ 3281-8202	No	Not expected to occur.	Suitable vegetation is present; however, the project site is located outside of the species' known elevation range. Additionally, species is not known to occur within the vicinity[2].
Xanthisma junceum rush-like bristleweed	None/ None/ 4.3 /List D /MSCP	Chaparral, Coastal scrub/ perennial herb/ Jun-Jan/ 787-3281	No	Low potential to occur.	Suitable vegetation is present and the project site is located within the species' known elevation range; however, species is not known to occur within the vicinity[2].
Xylorhiza orcuttii Orcutt's woody-aster	None/ None/ 1B.2 /List A /MSCP	Sonoran desert scrub/ perennial herb/ Mar-Apr/ 0-1198	No	Not expected to occur.	Suitable vegetation is present; however, the site is located outside of the species' known elevation range.

[1] **Status:**

CE: Candidate for federally listed as endangered.

FE: Federally listed as endangered.
FT: Federally listed as threatened.
SE: State-listed as endangered.
ST: State-listed as threatened.
SR: State-listed as rare.
MSCP: Draft Covered Species under the ECMSCP.

CRPR: California Rare Plant Rank
1A (formerly List 1A): Plants Presumed Extinct in California
1B (formerly List 1B): Plants Rare, Threatened, or Endangered in California and Elsewhere
2 (formerly List 2): Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3 (formerly List 3): Plants About Which We Need More Information—A Review List
4 (formerly List 4): Plants of Limited Distribution—A Watch List

- 0.1: Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- 0.2: Fairly threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)
- 0.3: Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

[2] " Vicinity" is based on a search of the CNDDB and CNPS databases for the Jacumba quad and the six surrounding quads (Carrizo Mtn, Sweeney Pass, Sombrero Peak, In-ko-pah Gorge, Live Oak Springs, and Tierra del Sol) conducted in July 2014. Also includes a search of species detected within 5 miles from the project site (Jepson eflora 2014) and species within the U28, U29, T28, and T29 grids (SDNHM 2014a) conducted in July 2014.

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APPENDIX E

Special-Status Plant Habitat Suitability Model

APPENDIX E
Special-Status Plant Habitat Suitability Model

Species Information					Habitat Suitability Inputs			Output
Scientific Name/Common Name	*Sensitivity Code and Status (Federal/ State/CRPR/ County/ ECMSCP)*[1]	*Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)*	*Potential to Occur on Site*	*Factual Basis for Determination*[2]	*Suitable Vegetation Communities On Site*	*Elevation Range (feet)*	*Soils/Other*[3]	*Total Suitable Acreage On Site*
Acmispon haydonii pygmy lotus	None/ None/ 1B.3 /List A /MSCP	Pinyon and juniper woodland, Sonoran desert scrub/rocky/ perennial herb/ Jan-Jun/ 1706-3937	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicnity[2]. The closest occurrences are approximately 1.5 miles east and north of the project site (CDFW 2014a; Jepson eFlora 2014; SDNHM 2012a). Therefore, there is a moderate potential for this species to occur on site.	Peninsular Juniper Woodland and Scrub; Sonoran mixed woody scrub	1706-3937	Acid igneous rock; Sloping gullied land; Rough broken land	90.6
Astragalus douglasii var. *perstrictus* Jacumba milk-vetch	None/ None/ 1B.2 /List A /MSCP	Chaparral, Cismontane woodland, Pinyon and juniper woodland, Riparian scrub, Valley and foothill grassland/rocky/ perennial herb/ Apr-Jun/ 2953-4495	High potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. One CNDDB occurrence overlaps with the northwest corner of project site and additional occurrences occur within the vicnity[2]. Species also observed during surveys for ECO Substation project site (CPUC and BLM 2011). Therefore, there is a high potential for this species to occur on site.	Peninsular Juniper Woodland and Scrub; Semi-desert chaparral;	2953-4495	Acid igneous rock; Sloping gullied land; Rough broken land	217.7

Species Information					Habitat Suitability Inputs			Output
Scientific Name/Common Name	*Sensitivity Code and Status (Federal/ State/CRPR/ County/ ECMSCP)*[1]	*Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)*	*Potential to Occur on Site*	*Factual Basis for Determination*[2]	*Suitable Vegetation Communities On Site*	*Elevation Range (feet)*	*Soils/Other*[3]	*Total Suitable Acreage On Site*
Berberis fremontii Fremont barberry	None/ None/ 2.3 /List C /MSCP	Chaparral, Joshua tree "woodland", Pinyon and juniper woodland/rocky/ perennial evergreen shrub/ Apr-Jun/ 2756-6070	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicinity[2]. The closest occurrences are approximately 1.8 and 3.0 miles west of the project site (CDFW 2014a). Therefore, there is a moderate potential for this species to occur on site.	Peninsular Juniper Woodland and Scrub; Semi-desert chaparral;	2756-6070	Acid igneous rock; Sloping gullied land; Rough broken land	217.7
Calliandra eriophylla pink fairy-duster	None/ None/ 2.3 /List B /MSCP	Sonoran desert scrub(sandy or rocky)/ perennial deciduous shrub/ Jan-Mar/ 394-4921	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicintiy[2] with two occurrences approximately 6.5 miles east of the project site (CDFW 2014a, Jepson eFlora 2014). Therefore, there is a moderate potential for this species to occur on site.	Sonoran mixed woody scrub;	394-4921	Acid igneous rock; Mecca coarse sandy loam, 2-5% slope; Rositas loamy coarse sand, 2-9% slope; Sloping gullied land; Rough broken land	3.2
Caulanthus simulans Payson's jewel-flower	None/ None/ 4.2 /List D /MSCP	Chaparral, Coastal scrub/sandy, granitic/ annual herb/ (Feb),Mar-May(Jun),/ 295-7218	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species known to occur within the vicnity[2]. Several occurrences are located approximately 6 miles (and greater) west of the project site	Semi-desert chaparral;	295-7218	Acid igneous rock; Mecca coarse sandy loam, 2-5% slope; Rositas loamy coarse sand, 2-9% slope; Sloping gullied land; Rough broken land	186.9

Species Information					Habitat Suitability Inputs			Output
Scientific Name/Common Name	*Sensitivity Code and Status (Federal/ State/CRPR/ County/ ECMSCP)*[1]	*Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)*	*Potential to Occur on Site*	*Factual Basis for Determination*[2]	*Suitable Vegetation Communities On Site*	*Elevation Range (feet)*	*Soils/Other*[3]	*Total Suitable Acreage On Site*
				(CDFW 2014a, Jepson eFlora 2014). Therefore, there is a moderate potential for this species to occur on site.				
Cylindropuntia wolfii Wolf's cholla	None/ None/ 4.3 /List D /MSCP	Sonoran desert scrub/ perennial stem succulent/ Mar-May/ 328-3937	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicinity[2] with multiple occurrences approximately 2 miles northeast of the project site (Jepson eFlora 2014; SDNHM 2014a). Therefore, there is a moderate potential for this species to occur on site.	Sonoran mixed woody scrub;	328-3937	Acid igneous rock; Mecca coarse sandy loam, 2-5% slope; Rositas loamy coarse sand, 2-9% slope; Sloping gullied land; Rough broken land	3.2
Deinandra floribunda Tecate tarplant	None/ None/ 1B.2 /List A /MSCP	Chaparral, Coastal scrub/ annual herb/ Aug-Oct/ 230-4003	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicnity[2]. The closest occurrence is approximately 1.8 miles west of project site (CDFW 2014a). Therefore, there is a moderate potential for this species to occur on site.	Semi-desert chaparral;	230-4003	Acid igneous rock; Mecca coarse sandy loam, 2-5% slope; Rositas loamy coarse sand, 2-9% slope; Sloping gullied land; Rough broken land	186.9
Delphinium parishii ssp.	None/ None/ 4.3 /List D	Chaparral, Cismontane	High potential to	The project site is located within the species' known elevation	Peninsular Juniper	1969-5906	Acid igneous rock; Mecca coarse sandy	307.0

Species Information					Habitat Suitability Inputs			Output
Scientific Name/Common Name	*Sensitivity Code and Status (Federal/ State/CRPR/ County/ ECMSCP)*[1]	*Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)*	*Potential to Occur on Site*	*Factual Basis for Determination*[2]	*Suitable Vegetation Communities On Site*	*Elevation Range (feet)*	*Soils/Other*[3]	*Total Suitable Acreage On Site*
subglobosum Colorado Desert larkspur		woodland, Pinyon and juniper woodland, Sonoran desert scrub/ perennial herb/ Mar-Jun/ 1969-5906	occur.	range and suitable vegetation is present. Species observed during surveys for ECO Substation project (CPUC and BLM 2011) and many potential occurrences noted in the vicinity (Jepson eFlora 2014).	Woodland and Scrub; Semi-desert chaparral; Sonoran mixed woody scrub;		loam, 2-5% slope; Rositas loamy coarse sand, 2-9% slope; Sloping gullied land; Rough broken land	
Geraea viscida sticky geraea	None/ None/ 2.3 /List B /MSCP	Chaparral(often in disturbed areas)/ perennial herb/ May-Jun/ 1476-5577	High potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species has many occurrences within the vicinity[2], nearest occurrences approximately 1.3 miles north and 2 miles east of the project (CDFW 2014a). In addition, this species was observed during surveys for ECO Substation (CPUC and BLM 2011). Therefore, there is a high potential for this species to occur on site.	Semi-desert chaparral; Disturbed	1476-5577	Acid igneous rock; Mecca coarse sandy loam, 2-5% slope; Rositas loamy coarse sand, 2-9% slope; Sloping gullied land; Rough broken land	199.5
Harpagonella palmeri Palmer's grapplinghook	None/ None/ 4.2 /List D /MSCP	Chaparral, Coastal scrub, Valley and foothill grassland/clay/ annual herb/ Mar-May/ 66-3133	High potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicinity[2] of the project site (Jepson eFlora 2014; SDNHM	Semi-desert chaparral	66-3133	Sloping gullied land;	65.6

Species Information					Habitat Suitability Inputs			Output
Scientific Name/Common Name	*Sensitivity Code and Status (Federal/ State/CRPR/ County/ ECMSCP)*[1]	*Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)*	*Potential to Occur on Site*	*Factual Basis for Determination*[2]	*Suitable Vegetation Communities On Site*	*Elevation Range (feet)*	*Soils/Other*[3]	*Total Suitable Acreage On Site*
				2014a) and was observed at ECO Substation project site (RBC 2009a). Therefore, there is a high potential for this species to occur on site.				
Ipomopsis tenuifolia slender-leaved ipomopsis	None/ None/ 2.3 /List B	Chaparral, Pinyon and juniper woodland, Sonoran desert scrub/gravelly or rocky/ perennial herb/ Mar-May/ 328-3937	High potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species has many known occurrences within the vicinity[2]. There are approximately 32 occurrences within 5 miles of the project site. The closest occurrences occur approximately 0.3 miles northwest and southeast of the project site (CDFW 2014a). In addition, this species was also observed during surveys for ECO Substation (CPUC and BLM 2011). Therefore, there is a high potential for this species to occur on site.	Peninsular Juniper Woodland and Scrub; Semi-desert chaparral; Sonoran mixed woody scrub;	328-3937	Acid igneous rock; Sloping gullied land; Rough broken land	220.9
Lathyrus splendens pride-of-California	None/ None/ 4.3 /List D /MSCP	Chaparral/ perennial herb/ Mar-Jun/ 656-5003	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur in the vicinity[2]. In addition, this species was	Semi-desert chaparral;	656-5003	Acid igneous rock; Mecca coarse sandy loam, 2-5% slope; Rositas loamy coarse sand, 2-9% slope; Sloping gullied land;	186.9

Species Information					Habitat Suitability Inputs			Output
Scientific Name/Common Name	*Sensitivity Code and Status (Federal/ State/CRPR/ County/ ECMSCP)*[1]	*Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)*	*Potential to Occur on Site*	*Factual Basis for Determination*[2]	*Suitable Vegetation Communities On Site*	*Elevation Range (feet)*	*Soils/Other*[3]	*Total Suitable Acreage On Site*
				observed during surveys for ECO Substation (CPUC and BLM 2011). Therefore, there is a moderate potential for this species to occur on site.			Rough broken land	
Linanthus bellus desert beauty	None/ None/ 2.3 /List B /MSCP	Chaparral(sandy)/ annual herb/ Apr-May/ 3281-4593	High potential to occur.	The project site is located slightly below the species' known elevation range; however, there is suitable vegetation and soils present. One known occurrence overlaps with project site; however, exact location of occurrence unknown (CDFW 2014a). In addition, this species was also observed during surveys for ECO Substation (CPUC and BLM 2011). Several additional occurrences in the vicinity[2]. Therefore, there is a high potential for this species to occur.	Semi-desert chaparral	3281-4593	Acid igneous rock; Mecca coarse sandy loam, 2-5% slope; Rositas loamy coarse sand, 2-9% slope; Sloping gullied land; Rough broken land	186.9
Lupinus excubitus var. *medius* Mountain Springs bush lupine	None/ None/ 1B.3 /List A /MSCP	Pinyon and juniper woodland, Sonoran desert scrub/ perennial shrub/ Mar-May/ 1394-4495	High potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. One known occurrence is directly outside the northwest corner of project boundary (CDFW 2014a). Approximately 20 additional occurrences within 5 miles of project site (CDFW	Peninsular Juniper Woodland and Scrub; Sonoran mixed woody scrub	1394-4495	Acid igneous rock; Mecca coarse sandy loam, 2-5% slope; Rositas loamy coarse sand, 2-9% slope; Sloping gullied land; Rough broken land	120.1

Species Information					Habitat Suitability Inputs			Output
Scientific Name/Common Name	*Sensitivity Code and Status (Federal/ State/CRPR/ County/ ECMSCP)*[1]	*Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)*	*Potential to Occur on Site*	*Factual Basis for Determination*[2]	*Suitable Vegetation Communities On Site*	*Elevation Range (feet)*	*Soils/Other*[3]	*Total Suitable Acreage On Site*
				2014a) and additional occurrences are known to occur within the vicinity[2]. Therefore, there is a high potential for this species to occur.				
Lycium parishii Parish's desert-thorn	None/ None/ 2.3 /List B /MSCP	Coastal scrub, Sonoran desert scrub/ perennial shrub/ Mar-Apr/ 443-3281	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicinity[2]. Nearest known occurrence is approximately 5.5 miles northeast of the project (CDFW 2014a). Therefore, there is a moderate potential for this species to occur on site.	Sonoran mixed woody scrub;	443-3281	Acid igneous rock; Mecca coarse sandy loam, 2-5% slope; Rositas loamy coarse sand, 2-9% slope; Sloping gullied land; Rough broken land	3.2
Mimulus aurantiacus var. *aridus* low bush monkeyflower	None/ None/ 4.3 /List D	Chaparral(rocky), Sonoran desert scrub/ perennial evergreen shrub/ Apr-Jul/ 2461-3937	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and rocky soils are present. Species was observed during surveys for ECO Substation project (CPUC and BLM 2011) and many occurrences are known to occur within the vicinity[2] (Jepson eFlora 2014). Therefore, there is a moderate potential for this species to occur on site.	Semi-desert chaparral; Sonoran mixed woody scrub;	2461-3937	Acid igneous rock; Mecca coarse sandy loam, 2-5% slope; Rositas loamy coarse sand, 2-9% slope; Sloping gullied land; Rough broken land	186.9

Species Information					Habitat Suitability Inputs			Output
Scientific Name/Common Name	*Sensitivity Code and Status (Federal/ State/CRPR/ County/ ECMSCP)*[1]	*Habitat Requirements/ Life Form/ Blooming Period/ Elevational Range (feet)*	*Potential to Occur on Site*	*Factual Basis for Determination*[2]	*Suitable Vegetation Communities On Site*	*Elevation Range (feet)*	*Soils/Other*[3]	*Total Suitable Acreage On Site*
Streptanthus campestris southern jewel-flower	None/ None/ 1B.3 /List A	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland/rocky/ perennial herb/ (Apr),May-Jul/ 2953-7546	Moderate potential to occur.	The project site is located within the species' known elevation range and suitable vegetation and soils are present. Species is known to occur within the vicinity[2] with the nearest occurrence occurring approximately 2 miles northeast and 4.8 miles northwest of the project site (CDFW 2014a). Additional occurrences approximately 2 miles east of the site (Jepson eFlora 2014). Therefore, there is a moderate potential for this species to occur on site.	Peninsular Juniper Woodland and Scrub; Semi-desert chaparral;	2953-7546	Acid igneous rock; Sloping gullied land; Rough broken land	217.7
Tetracoccus dioicus Parry's tetracoccus	None/ None/ 1B.2 /List A	Chaparral, Coastal scrub/ perennial deciduous shrub/ Apr-May/ 541-3281	Moderate potential to occur.	Suitable vegetation is present; the project site is located within the species' known elevation range and the nearest known occurrence is approximately 2.5 miles west of the project site (CDFW 2014a). Therefore, there is a moderate potential for this species to occur on site.	Semi-desert chaparral	541-3281	Acid igneous rock; Mecca coarse sandy loam, 2-5% slope; Rositas loamy coarse sand, 2-9% slope; Sloping gullied land; Rough broken land	186.9

1 Status:

CE: Candidate for federally listed as endangered.
FT: Federally listed as threatened.
SE: State-listed as endangered.

SR: State-listed as rare.MSCP: Draft Covered Species under the ECMSCP

CRPR: California Rare Plant Rank
1A (formerly List 1A): Plants Presumed Extinct in California
1B (formerly List 1B): Plants Rare, Threatened, or Endangered in California and Elsewhere
2 (formerly List 2): Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3 (formerly List 3): Plants About Which We Need More Information—A Review List
4 (formerly List 4): Plants of Limited Distribution—A Watch List

- 0.1: Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- 0.2: Fairly threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)
- 0.3: Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

2 "Vicinity" is based on a search of the CNDDB and CNPS databases for the Jacumba quad and the six surrounding quads (Carrizo Mtn, Sweeney Pass, Sombrero Peak, In-ko-pah Gorge, Live Oak Springs, and Tierra del Sol) conducted in July 2014. Also includes a search of species detected within 5 miles from the project site (Jepson eflora 2014) and species within the U28, U29, T28, and T29 grids (SDNHM 2014a) conducted in July 2014.

3 All soil types were used in the habitat suitability model for cases where preferred soils data was not available.

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APPENDIX F

Special-Status Wildlife Species Detected or Potentially Occurring in the Project Area

APPENDIX F
Special-Status Wildlife Species Detected or Potentially Occurring in the Project Area

Scientific Name/ Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
		Reptiles			
Aspidoscelis hyperythra beldingi Belding's orange-throated whiptail	None/SSC (for full species)/Group 2, MSCP	Coastal sage scrub, chamise-redshank chaparral, mixed chaparral, valley-foothill hardwood especially in areas with summer fog. Found from Santa Ana River (Orange Co.) and near Colton (San Bernardino Co.), west of Peninsular ranges, south throughout Baja California (1, 2).	No	High	Suitable habitat (including potential termite food source[4]) is present within the project area. Species is recorded in the CNDDB 7-quad search[2] and was observed during surveys for the ECO Substation (CPUC and BLM 2011).
Salvadora hexalepis virgultea Coast patch-nosed snake	None/SSC/Group 2, MSCP	Semi-arid brushy areas and chaparral in canyons, rocky hillsides, plains from northern Carrizo Plains south through coastal zone, south and west of the deserts into coastal northern Baja California; below sea level to 2,130m (1).	No	Moderate	Suitable habitat is present within the project area. Not recorded in the CNDDB 7-quad search[2]
Lichanura trivirgata Rosy boa	None/None/Group 2 (for subspecies *L.t.roseofusca*)	Arid scrublands, semi-arid shrublands, rocky shrublands, rocky deserts, canyons, other rocky areas, riparian areas, desert and chaparral areas. Occurs throughout Southern California from the coast to the Mojave and Colorado deserts. Prefer areas with moderate to dense vegetation and rocky cover (1, 2).	No	High	Suitable scrub habitat with rock outcroppings present on site. Species is documented in the Live Oak Springs quadrangle (CNDDB 2014).
Aspidoscelis tigris stejnegeri San Diegan tiger whiptail	None/None/Group 2	Variety of habitats, primarily hot and dry open areas with sparse foliage - chaparral, woodland, riparian. Occurs in coastal southern California, west of Peninsular Ranges and south of Transverse Ranges, north to Ventura Co; 0 to 2,130m (1).	No	High	Suitable scrub habitat with rock outcroppings present on site. Potential termite food sources present onsite[4]. Species is documented in the Live Oak Springs quadrangle (CNDDB 2014). Project site is within elevational range for this species.
Crotalus ruber ruber Northern Red-diamond rattlesnake	None/SSC/Group 2, MSCP	Arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, cultivated areas, rocky areas, dense vegetation. Occurs along coastal San Diego County to the eastern slopes of the mountains and north through western Riverside co. into southernmost San Bernardino	No	High	Suitable habitat is present within the rocky outcrops observed on site. Also, any area with dense vegetation provides suitable habitat, including semi-desert chaparral, Sonoran mixed woody scrub, upper Sonoran subshrub scrub, and

Scientific Name/ Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
		Co.; 0 - 900m (1,2).			Peninsular juniper woodland and scrub. Species is documented in the In-Ko-Pah Gorge, Jacumba, and Sweeney Pass quadrangles (CNDDB 2014).
Coleonyx variegatus abbotti San Diego banded gecko	None/None/Group 1	Rocky areas in coastal sage and chaparral, and occurs most often in granite or rocky outcrops in coastal and cismontane southern California from interior Ventura Co. south, and is absent from extreme outer coast (1, 2).	No	Moderate	Suitable habitat is present the project area. Not recorded in the CNDDB 7-quad search[2]
Phrynosoma blainvillii Blainville's horned lizard	None/SSC/Group 2, MSCP	Areas of sandy soil and low vegetation in valleys, foothills, semiarid mountains, grasslands, chaparral, woodland, coniferous forest, sandy areas. Often found near ant hills and in lowlands along sandy washes with scattered shrubs and along dirt roads. Occurs along the Pacific coast from the Baja California border west of the deserts and the Sierra Nevada, north to the Bay Area, and inland to Shasta Reservoir; 0-2,483m (1).	No	High	Species not observed during biological surveys. However, one CNDDB record within the northern border of the solar project site (CNDDB 2014). Species also documented in the Jacumba, Live Oak Springs, Sombrero Peak, and Tierra Del Sol quadrangles (CNDDB 2014). In addition, presence of harvester ants[3] would provide a food source for this species.
Gambelia copeii Cope's leopard lizard	None/None/ MSCP	Coastal sage scrub, chaparral, oak woodland. Prefers flat areas with open space and avoids densely vegetated areas.	No	Moderate	Suitable chaparral habitat is present on site. Not recorded in the CNDDB 7-quad search[2]
Anniella pulchra (pulchra) California (Silvery) legless lizard	None/SSC/Group 2, MSCP	Moist habitats. Loose soils with plant cover, beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, stream terraces with sycamores, cottonwoods, or oaks. Found under surface objects such as rocks, boards, driftwood, logs, leaf litter; 0-1,799m (1).	No	Moderate	Suitable habitat is present within the project area. Not recorded in the CNDDB 7-quad search[2]
Sceloporus graciosus vanderburgianus Southern sagebrush lizard	None/None/Group 2	Shrublands such as chaparral, manzanita, ceanothus; open pine and Douglas-fir forests in mountains; found in areas with scattered low bushes, abundant sun. Transverse and Peninsular ranges of southern California, Sierra San Pedro Martir of northern Baja California. Subspecies found at higher elevations: 1,371-2,926m (1).	No	Moderate	Suitable chaparral and scattered low bushes present. Project area within suitable elevation range of the subspecies. Not recorded in the CNDDB 7-quad search[2]

Scientific Name/ Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
		Birds			
Accipiter cooperii (nesting) Cooper's hawk	None/WL/Group 1	Dense stands of live oak, riparian deciduous, forest habitats near water frequently used. Breeds in southern Sierra Nevada foothills, New York Mts., Owens Valley, other local areas in southern California, 0-2,700m (2).	No	Low (nesting); High (non-breeding)	Species recorded in the Live Oak Springs and Jacumba quadrangles (CDFW 2014a) in the vicinity (SDNHM 2014b) and during surveys for ECO Substation and (CPUC and BLM 2011).
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	None/WL/Group 1, MSCP	Sparse mixed chaparral and coastal scrub habitats (especially coastal sage) in southern California on slopes of Transverse and Coastal ranges, north to Los Angeles County, and northwestern Baja California. Found on steep, rocky hillsides with grass and forb patches, and grassy slopes with low shrub cover, if rock outcrops are present (2, 4).	No	Moderate (nesting and non-breeding)	Species documented in the vicinity (SDNHM 2014b). Suitable chaparral and rock outcrop habitat is present within the project area. Not recorded in the CNDDB 7-quad search[2]
Aquila chrysaetos (nesting and wintering) Golden eagle	BCC/ FP, WL/Group 1, MSCP	Open country, especially hilly and mountainous regions; grassland, coastal sage scrub, chaparral, oak savannas, open coniferous forest. Rolling foothills, mountain areas, sage-juniper flats, desert throughout California (2).	No	Not expected (nesting); Moderate (non-breeding)	Generally suitable foraging habitat is present within the project area, though may be too densely vegetated in some portions; No suitable nesting habitat on site. Documented in the Carrizo Mtn, Jacumba, and Sombrero Peak quadrangles (CNDDB 2014) and confirmed breeding north of the project site (SDNHM 2014b).
Artemisiospiza belli **Bell's sage sparrow**	**BCC/WL/Group 1, MSCP**	**Occurs in low, dense stands of shrubs; chaparral dominated by chamise, coastal scrub dominated by sage. Coast Ranges from northern California to northwestern Baja California, western slope of Sierra Nevada (2). Nominate form of species designated as special-status.**	**Observed**	**N/A**	**Observed on site during biological surveys but not mapped. Species is also documented in the vicinity (SDNHM 2014b). The project area contains suitable chaparral. Not recorded in the CNDDB 7-quad search[2]**
Athene cunicularia (burrow sites and some wintering sites) Burrowing owl	BCC/SSC/Group 1, MSCP	Open, dry grassland and desert habitats; grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats throughout the state, 0-1,600m (2).	Negative surveys	Moderate to low (burrow and	The project area contains some open suitable habitat for this species, but much more atypical habitat is present (i.e., they do not prefer habitat where they are

Scientific Name/ Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
				wintering)	unable to view their surroundings). Only three suitable burrowing locations (including one complex) were observed during surveys; however, no BUOW sign was present. Although not recorded in the CNDDB 7-quad search[2], a single burrowing owl was observed foraging within the ECO Substation[1] (CPUC and BLM 2011)
Buteo regalis (wintering) Ferruginous hawk	BCC/SSC, WL/Group 1, MSCP	Open, grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, fringes of pinyon-juniper habitats. Uncommon winter resident at low elevations and open grasslands of Modoc Plateau, Central Valley, Coast Ranges. Common winter resident in southwestern California (2).	No	Not expected (nesting); Moderate (non-breeding)	Suitable habitat is present within the project area. May use the project area to forage during the winter. However, project area is outside the recorded breeding range for this species. Not recorded in the CNDDB 7-quad search[2]
Cathartes aura **Turkey vulture**	**None/None/Group 1, MSCP**	**Rangeland, agriculture, grassland; uses cliffs and large trees for roosting, nesting and resting throughout most of California during breeding season (2).**	**Observed**	**N/A**	**Observed occasionally foraging overhead onsite during biological surveys. Suitable foraging habitat present. No suitable breeding habitat present. Species also documented in the vicinity (CPUC and BLM 2011; SDNHM 2014b).**
Eremophila alpestris actia **California horned lark**	**None/WL/Group 2, MSCP**	**Open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, fallow grain fields south of Humboldt Co. in coast ranges, in San Joaquin Valley except extreme southern end (2, 4).**	**Observed**	**N/A**	**Observed on site during biological surveys with several individuals generally occurring at mapped locations (although highly mobile). Although species documented onsite and in the vicinity (CPUC and BLM 2011; SDNHM 2014b), the project area lacks suitable grassland nesting habitat for this species. This species is expected to occur onsite during the**

[1] Burrowing owl was concluded to be a signle transient individual.

Scientific Name/ Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
					non-breeding season. Not recorded in the CNDDB 7-quad search[2]
Falco mexicanus (nesting) Prairie falcon	BCC/WL/Group 1	Grassland, savannas, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs. Southeastern deserts northwest through Central Valley and along inner Coast Ranges and Sierra Nevada (2).	No	Not expected (nesting); High (non-breeding)	Species documented in the Carrizo Mtn., In-ko-pah Gorge, Jacumba, Live Oak Springs, Sombrero Peak, Sweeney Pass, and Tierra Del Sol quadrangles (CNDDB 2014) and in the vicinity (SDNHM 2014b). No suitable nesting habitat on site. Suitable foraging habitat includes desert scrub.
***Lanius ludovicianus* (nesting) Loggerhead shrike**	**BCC/SSC/Group 1, MSCP**	**Open habitats with scattered shrubs, trees or other perches; highest density in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats. Found in foothills and lowlands throughout California (2).**	**Observed**	**N/A**	**Observed onsite during biological surveys. Suitable shrub perches and pinyon-juniper present on site. Species documented breeding in the vicinity (SDNHM 2014b).**
***Sialia mexicana* Western bluebird**	**None/None/Group 2**	**Open forests of deciduous, coniferous or mixed trees, savanna, edges of riparian woodland. Common throughout California excluding higher mountains and eastern deserts (2).**	**Observed**	**N/A**	**Observed onsite during biological surveys. Species is also documented in the vicinity (SDNHM 2014b). Although no suitable nesting habitat occurs, there is suitable foraging habitat present.**
***Tyto alba* Barn owl**	**None/None/Group 2**	**Open habitats including grassland, chaparral, riparian, and other wetlands throughout the state, 0-1,680m (2).**	**Observed**	**N/A**	**Observed during biological surveys. Suitable foraging (chaparral) habitat present. No suitable nesting habitat on site. Species also documented in the vicinity (SDNHM 2014b).**
Vireo vicinior (nesting) Gray vireo	BCC /SSC/Group 1, MSCP	Summer resident in arid pinyon-juniper, juniper, and chamise-redshank chaparral habitats in mountains of southern California, 600-2,000m (2).	No	Moderate (nesting and non-breeding)	Suitable nesting habitat (juniper) present on site. Species also documented in the vicinity (SDNHM 2014b).

Scientific Name/ Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
		Mammals			
Antrozous pallidus Pallid bat	None/SSC/Group 2, MSCP/ WBWG:H	Grasslands, shrublands, woodlands, forests; most common in open dry habitats with rocky outcrops for roosting. Found throughout low elevations of California, except for high Sierra Nevada and northwestern corner of the state south to Mendocino Co. (2).	No	Moderate	Suitable rocky outcrops and rock crevices for roosting present within the project area. Documented in the Jacumba and Sweeney Pass quadrangles (CNDDB 2014).
Chaetodipus californicus femoralis Dulzura pocket mouse	None/SSC/Group 2	Occurs in a variety of habitats including coastal scrub, chaparral, and grasslands. Micro habitat includes grass-chaparral edges (6).	No	Moderate	Project area has dry climate and suitable chaparral habitat. Documented in the Live Oak Springs and Sombrero Peak quadrangles (CNDDB 2014).
Chaetodipus fallax fallax Northwestern San Diego pocket mouse	None/SSC (full species)/Group 2	Occurs in coastal scrub, chaparral, grasslands, sagebrush, and similar habitats in western San Diego County. Micro habitat includes sandy, herbaceous areas, usually in association with rocks or coarse gravel (6).	No	High	Marginal records include Jacumba, but site is located on range boundaries between this subspecies and the pallid San Diego pocketmouse (*C. f. pallidus*), which has the same SSC status and occurs on the eastern slope of the coast range mountains. Not recorded in the CNDDB 7-quad search[2]
Chaetodipus fallax pallidus Pallid San Diego pocket mouse	None/SSC (full species)/Group 2	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland. Along southern margins of Mojave Desert, along northern slopes of San Bernardino Mts., western edge of Colorado Desert south to Baja California (6).	No	Moderate	Suitable chaparral and pinyon-juniper habitat found with the project area. Documented in the In-Ko-Pah Gorge quadrangle (CNDDB 2014).
Euderma maculatum Spotted bat	None/SSC/Group 2/ WBWG:H	Foothills, mountains, desert regions of southern California including arid deserts, grasslands, mixed conifer forests. Roosts in rock crevices, cliffs. Feeds over water and along washes (2).	No	Moderate	Suitable roosting habitat found within the project area (rock crevices). Not recorded in the CNDDB 7-quad search[2]

Scientific Name/ Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
Lepus californicus bennettii **San Diego black-tailed jackrabbit**	**None/SSC/Group 2, MSCP**	**Arid habitats with open ground; grasslands, coastal sage scrub, agriculture, disturbed areas, rangelands in southern California (2, 4).**	**Observed**	**N/A**	**Observed onsite during biological surveys. Suitable chaparral and scrub habitats found within the project area. Documented in the Live Oak Springs quadrangle (CNDDB 2014) and in the vicinity (CPUC and BLM 2011).**
Macrotus californicus California leafed-nosed bat	None/SSC/Group 2/ WBWG:H	Desert riparian, desert wash, desert scrub, desert succulent shrub, alkali desert scrub, and palm oasis. Found from Riverside, Imperial, San Diego, and San Bernardino Cos. south to Mexican border; fairly common along parts of Colorado River, elevation approximately 600m (2).	No	Moderate (foraging); Low (roosting)	Site supports suitable foraging habitat and is within range of species. Species prefers caves or mines for roosting, which are not present on site; however rugged rocky outcrops are present and may provide some limited roosting opportunities. Documented in the Sweeney Pass quadrangle (CDFW 2014a).
Myotis ciliolabrum Western small-footed myotis	None/None/Group 2/ WBWG:M	Occurs in a wide variety of habitats, primarily in arid wooded and brushy uplands near water. In coastal California it occurs from Contra Costa Co. south to the Mexican border; occurs on in the Sierra Nevada and Great Basin and desert habitats from Modoc to Kern and San Bernardino Cos. Found from sea level to at least 2700m (2).	No	Moderate	Suitable rock crevices present in the project area. Not recorded in the CNDDB 7-quad search[2]
Myotis evotis Long-eared myotis	None/None/Group 2/ WBWG:M	Roosts in buildings, crevices, under bark, and snags. Caves used as night roosts. Feeds along habitat edges, in open habitats, and over water. Occurs primarily along entire coast and in Sierra Nevada, Cascades, Great Basin, and 0-2,700 m (2).	No	Moderate	Suitable rock crevices present in the project area. Not recorded in the CNDDB 7-quad search[2]
Myotis thysanodes Fringed myotis	None /None/Group 2/ WBWG:H	Pinyon-juniper, valley foothill hardwood, hardwood-conifer habitats. Roosts in caves, mines, buildings, or crevices. Forges over open habitats, early successional stages, streams, lakes, and ponds. Found throughout California except Central Valley and Colorado and Mojave Deserts (2).	No	Moderate	Suitable rock crevices present in the project area. Not recorded in the CNDDB 7-quad search[2]

Scientific Name/ Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
Myotis volans Long-legged myotis	None/None/Group 2/ WBWG:H	Occupies woodland and forest habitats over 1200m. Feeds over open water and over open habitats such as chaparral and coastal scrub, using denser woodlands and forests for cover and reproduction. Roosts in rock crevices, buildings, under tree bark, in snags, mines, caves. Found in coastal ranges, Cascade/Sierra Nevada ranges, Great Basin, and ranges in Mojave Desert (2).	No	Moderate	Suitable rock crevices present in the project area. Documented in the Sweeney Pass quadrangle (CNDDB 2014).
Neotoma lepida intermedia **San Diego desert woodrat**	**None/SSC/Group 2**	**Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats. Found south of San Luis Obispo Co. to San Diego Co. and San Bernardino and Riverside Cos., 0-2600m (2, 4).**	**Potentially Detected**	**N/A**	**Woodrat middens observed during biological surveys. Suitable juniper and chaparral habitats on site. Documented in the In-Ko-Pah Gorge and Live Oak Springs quadrangles (CNDDB 2014).**
Nyctinomops femorosaccus Pocketed free-tailed bat	None/SSC/Group 2/ WBWG:M	Rocky desert areas with high cliffs or rock outcrops. Pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, palm oasis in Riverside, San Diego, Imperial Cos. (2).	No	Moderate	Suitable roosting habitat found within the project area. Not recorded in the CNDDB 7-quad search[2]
Nyctinomops macrotis Big free-tailed bat	None/SSC/Group 2/ WBWG:MH	Rugged, rocky canyons in Riverside, Los Angeles, and San Diego Cos., but scattered records across California to Oakland (2, 6).	No	Moderate	Suitable roosting habitat found within the project area. Not recorded in the CNDDB 7-quad search[2]
Odocoileus hemionus Mule deer	None/None/Group 2	Coastal sage scrub, chaparral, riparian, woodlands, forest; often browses in open areas adjacent to cover throughout California, except deserts and intensely farmed areas (2).	No	High	Suitable chaparral habitat present and site has good connectivity to other large open space areas. Openings in border fence may facilitate movement to habitats south of the border. However, regular patrols may reduce the suitability of the habitat. Not tracked in CDFW (2014) because not considered special-status by state or federal agencies.

Scientific Name/ Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
Perognathus longimembris internationalis Jacumba pocket mouse	None/SSC/Group 2, MSCP	Desert riparian, desert scrub, desert wash, coastal scrub, and sagebrush in San Diego and Riverside Cos. (2, 6).	No	Moderate	Suitable habitat within the project area. Not recorded in the CNDDB 7-quad search[2]
Puma concolor Mountain lion	None/None/Group 2	Coastal sage scrub, chaparral, riparian, woodlands, forest; rests in rocky areas, and on cliffs and ledges that provide cover. Most abundant in riparian areas and brushy stages of most habitats throughout California except deserts (2).	No	High	Suitable chaparral and rocky areas in project area. Site has good connectivity to other large open space areas. Openings in border fence may facilitate movement to habitats south of the border. However, regular patrols may reduce the suitability of the habitat.
		Invertebrates			
Apodemia mormo peninsularis Mormon metalmark	None/None/Group 1	Meadows. Larval host plant *Eriogonum wrightii* ssp. membranaceum. Specimen from meadows in Laguna Mts., 1,676m (10)	No	Moderate	Not observed during biological surveys. Suitable buckwheat habitat within the project area. Not recorded in the CNDDB 7-quad search[2]
***Danaus plexippus* Monarch butterfly**	**None/None/Group 2**	**Overwinters in eucalyptus groves from San Francisco south to northern Baja California (4).**	**Observed**	**N/A**	**Observed during biological surveys. However, no eucalyptus groves within the project area and species not recorded in the CNDDB 7-quad search[2]. No larvae host plants or foraging plants (i.e., milkweeds; *Asclepias*) observed onsite.**

[1] **Status Designations:**

Federal Designations:

BCC	Fish and Wildlife Service: Birds of Conservation Concern
FC	Candidate for federal listing as threatened or endangered
(FD)	Federally-delisted; monitored for five years
FE	Federally-listed Endangered
FT	Federally-listed as Threatened
MNBMC	Fish and Wildlife Service Migratory Nongame Birds of Management Concern
USBC	United States Bird Conservation Watch List
FPT	Federally Proposed Threatened

State Designations:

SSC	California Special Concern Species
FP	California Department of Fish and Game Fully Protected Species
WL	California Department of Fish and Game Watch List Species
SE	State-listed as Endangered
ST	State-listed as Threatened
SC	State Candidate for Endangered
(SD)	State Delisted
County Designations:	
Group 1	
Group 2	
Group 3	
MSCP	East County MSCP draft covered species
Other Designations:	
WBWG:H	Western Bat Working Group: High Priority
WBWG:LM	Western Bat Working Group: Low-Medium Priority
WBWG:M	Western Bat Working Group: Medium Priority
WBWG:MH	Western Bat Working Group: Medium-High Priority
AFS:EN	American Fisheries Society: Endangered
AFS:TH	American Fisheries Society: Threatened
AFS:VU	American Fisheries Society: Vulnerable
XERCES:CI	Xerces Society – Critically Endangered

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Notes:

[2] The 7-quad search includes species recorded in CNDDB or USFWS databases for the Jacumba and 6 surrounding quadrangles (Carrizo Mtn, Sweeney Pass, Sombrero Peak, In-ko-pah Gorge, Live Oak Springs, and Tierra del Sol).

[3] Harvester ants are a primary source of food for Blainville's horned lizards (Californiaherps.com 2014).

[4] Signs of termite were observed during biological surveys.

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APPENDIX G

Special-Status Wildlife Species Not Expected to Occur or Rarely Occurring in the Project Area

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Special-Status Wildlife Species Not Expected or Rarely Occurring in Project Area

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
		Amphibians			
Anaxyrus californicus Arroyo toad	FE/SSC/Group 1, MSCP	Washes, arroyos, sandy riverbanks, riparian areas with willows, sycamores, oaks cottonwoods. Requires exposed sandy stream sides with stable terraces to burrow with scattered vegetation and calm pools with sandy/gravel bottoms for breeding. Found west of desert in coastal areas from upper Salinas River in San Luis Obispo Co. to northwestern Baja California; 0-900m(1).	No	Not expected	The project area lacks suitable stream habitat for this species. Arroyo toads are not known from this area and are not recorded in the CNDDB 7-quad search[2]
Bufo punctatus Red spotted toad	None/None/MSCP	Rocky desert streams, oases, pools in rocky arroyos, cattle tanks, grassland, oak woodland, scrubland, river floodplains.	No	Not expected	The project area lacks suitable stream or similar habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Spea hammondii Western spadefoot	None/SSC/Group 2, MSCP	Sandy/gravelly soils within mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Breeds in rain pools that do not have bullfrogs, fish, or crayfish. Found throughout Great Valley and foothills south of Redding, throughout South Coast Ranges in southern California south of Transverse Mts and west of Peninsular Mts; 0-1,365m (1).	No	Low	The project area has limited breeding resources (temporary pools formed by winter rains). Not recorded in the CNDDB 7-quad search[2]
Rana draytonii California Red-legged frog	FT/SSC/Group 1, MSCP	Humid forests, woodlands, grasslands, coastal scrub, and stream sides with plant cover. Most common in lowland and foothills. Frequently found in woods adjacent to streams. Breeds in permanent or ephemeral water sources. Ephemeral habitats require burrows or other refuges for estivation when wetlands are dry. Occurs along coast ranges south from Mendocino Co. south and in portions of Sierra Nevada and Cascades ranges; 0-1,525m (1,2).	No	Not expected	The project area lacks suitable wetland or stream habitat for this highly aquatic species. Not recorded in the CNDDB 7-quad search[2]

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
Batrachoseps major aridus Desert slender salamander	FE/SE/Group 1, MSCP	Limited geographic distribution: known only from Hidden Palm Canyon and Guadalupe Canyon on east slope of Santa Rosa Mts, Riverside Co. Occurs under limestone sheets, rocks, and talus; at the base of damp, shaded locations (e.g., spring oasis, moist cliffs) without direct sunlight (1).	No	Not expected	The project area lacks suitable habitat for this species. Not recorded in the CNDDB 7-quad search[2] and project site not within known geographic distribution.
Ensatina ensatina klauberi Large-blotched salamander	None/SSC/Group 1, MSCP	Moist shaded evergreen and deciduous forests, oak woodlands, under rocks, logs, debris, especially peeled off bark. Found in peninsular ranges of southern California and eastern San Bernardino Mts. (1).	No	Not expected	The project area lacks suitable habitat (moist shaded woodland/forests) for this species. Not recorded in the CNDDB 7-quad search[2]
Rana muscosa Southern mountain yellow-legged frog	FE (Population in San Gabriel, San Jacinto & SB Mts only), NONE/SC, SSC/Group 1, MSCP	Lakes, ponds, meadow streams, isolated pools, sunny riverbanks, montane riparian, lodgepole pine, subalpine conifer, and wet meadow habitats. Occurs in the Sierra Nevada from Fresno Co. to Kern Co. In southern California isolated populations exist in the San Gabriel, San Bernardino, and San Jacinto Mts; Sierra elevations range from 370 to over 3,650m (1, 2).	No	Not expected	The project area lacks suitable stream/wetland habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Reptiles					
Coleonyx switaki Switak's banded gecko, barefoot gecko	None/ST/ Group 2, MSCP	Primarily in rocky areas at the heads of canyons. Found in areas of massive rocks and rock outcrops, rock cracks and crevices. Found in Peninsular Ranges and at Scissor Crossing near Anza Borrego Desert (2).	No	Low	SUitablke habitat includes more boulder habitat than present on site. It also is tied to the desert eastern slopes and acnyons of the Peninnisular Range in San Diego and Imperial counties. Species documented in the Carrizo Mountain, In-Ko-Pah Gorge, Jacumba, and Sweeny Pass quadrangles (CNDDB 2014).
Sauromalus ater Common chuckwalla	None/None/Group 2, MSCP	Rocky flats and hillsides, lava flows, large outcrops, creosote bush habitats. Also found in atypical places (e.g., burrows in dirt, piles of railroad ties, artificial rip-rap). Found in Mojave and Colorado deserts from desert slopes of mountains, north through Owens Valley and east to Colorado River, 0-1,800m (1).	No	Low	The project site does not include large rocky outcrops with fissures. In general, the species occurs on the eastern desert slopes and desert alluvial areas in San Diego county. Not recorded in the CNDDB 7-quad search[2]

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
Plestiodon skiltonianus interparietalis Coronado skink	None/SSC/Group 2, MSCP	Grassland, woodlands, pine forests, chaparral, especially open sunny areas (e.g., clearings, edges of creeks) and rocky areas near streams with lots of vegetation. Also found in areas away from water. Occurs in inland southern California south through the north Pacific coast region of northern Baja California (1).	No	Low	Although suitable chaparral habitats are present, the project area lacks suitable moist habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Lampropeltis zonata (pulchra) California mountain kingsnake (San Diego population)	None/SSC/Group 2, MSCP	Coniferous forests, oak pine woodlands, riparian woodlands, chaparral, manzanita, coastal sage scrub, wooded areas near a stream with rock outcrops, talus, or rotting logs. In central San Diego Co. peninsular range s- Laguna, Palomar, Volcan, and Hot Springs Mts., Santa Ana Mts., and in Hollywood Hills, Santa Monica Mts., 0-2,750m (1).	No	Not expected	Although suitable chaparral habitats are present, the project area lacks suitable stream/moist habitat for this species. Not recorded in the CNDDB 7-quad search[2] and known distribution range north of the project site (1).
Diadophis punctatus similis San Diego ring-necked snake	None/None/Group 2	Prefers moist habitats, including wet meadows, rocky hillsides, gardens, farmlands, grassland, chaparral, mixed coniferous forests, woodlands. Found mainly in San Diego Co. along the coast and into the Peninsular range and into southwestern San Bernardino Co. (1).	No	Low	The project area lacks suitable moist wetland habitats and limited moist situations (e.g., precipitation) for this species. Not recorded in the CNDDB 7-quad search[2]
Thamnophis hammondii Two-striped garter snake	None/SSC/ Group 1, MSCP	Associated with permanent or semi-permanent bodies of water in a variety of habitats: rocky areas, oak woodland, chaparral, brushland, coniferous forest. Found on Diablo Range, South Coast and Transverse ranges, and Santa Catalina Island; 0-2,400m (1, 2).	No	Not expected	The project area lacks suitable wetland habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Actinemys marmorata pallida Western pond turtle	None/SSC/Group 1, MSCP	Ponds, rivers, streams, creeks, marshes, irrigation ditches with abundant vegetation and either rocky or muddy bottoms, woodland, forests, and grasslands. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish or sea water. Found in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and in the	No	Not expected	The project area lacks suitable wetland habitat for this species. Not recorded in the CNDDB 7-quad search[2]

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
		Mojave Desert along the Mojave River and its tributaries; 0-1,430 m (1, 2).			
Phrynosoma mcallii Flat-tailed horned lizard	None/SSC/Group 1, MSCP	Fine sand and sparse vegetation in desert washes and desert flats. It is probably most abundant in areas of creosote bush and is found in desert scrub, wash, succulent shrub, and alkali scrub habitats. Common in areas with high density of harvester ants and fine windblown sand, rarely occurs on dunes. Found in central Riverside, eastern San Diego and Imperial Cos., 0-180m (1, 2).	No	Low	The project area is above the recorded elevation range for this species. Species documented in the Carrizo Mtn, In-ko-pah Gorge, Sombrero Peak, and Sweeney Pass quadrangles (CDFW 2014a).
Taricha torosa torosa Coast range newt (Monterey Co. south only)	None/SSC/Group 2, MSCP	Wet forests, oak forests, chaparral, rolling grasslands; in southern California, occupies drier chaparral, oak woodland, grasslands. Coastal ranges from central Mendocino Co. south to northern San Diego Co. south to the vicinity of Boulder Creek. Found the length of the Sierra, primarily in foothills. Monterey Co. to San Diego Co. Migrations to and from breeding site may occasionally exceed 1 km; 0-1,830m (1, 2).	No	Low	Although suitable habitat (chaparral) is present, its known range is west of the project area (1). Not recorded in the CNDDB 7-quad search[2]
Thamnophis sirtalis ssp. *novum* (*Thamnophis sirtalis* spp.) South Coast garter snake (Common garter snake)	None/SSC/Group 2	Permanent or semi-permanent bodies of water in a variety of habitats. Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools. Coastal plain from Ventura to San Diego Co., 0-850m (2, 3).	No	Not expected	The project area lacks suitable wetland habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Uma notate Colorado Desert fringe-toed lizard	None/SSC/Group 1, MSCP	Fine, loose, wind-blown sand dunes, dry lakebeds, sandy beaches or riverbanks, desert washes, and sparse desert scrub in Colorado and Sonoran deserts south of the Salton Sea in Imperial and San Diego Co., 0-180m (2).	No	Not expected	The project area lacks suitable desert habitat and above known elevational range. Species range known east of project site (1). Not recorded in the CNDDB 7-quad search[2]

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
		Birds			
Accipiter striatus **(nesting) Sharp-shinned hawk**	**BCC/SSC/Group 1**	**Nests in coniferous forests, ponderosa pine, black oak, riparian deciduous, mixed conifer, Jeffrey pine; winters in lowland woodlands and other habitats. Common migrant and winter resident throughout California. Probably breeds south in Coast Ranges and at scattered locations in Transverse and Peninsular Ranges (2).**	**Observed**	**N/A**	**Observed during foraging (contour flight) during winter raptor surveys. Species has also been documented in the vicinity (SDNHM 2014b). Although suitable foraging habitat onsite, no suitable nesting habitat present.**
Aechmophorus occidentalis Western grebe	None/None/Group 1	Along coast in marine subtidal and estuary waters. Uncommon to fairly common on large lakes near coast and inland at low elevations. Breed on large, marshy lakes, normally deeper than required by eared grebe. Nest on Modoc Plateau and south locally to Inyo Co.; also Sacramento National Wildlife Refuge, Salton Sea, Colorado River, and Sweetwater Reservoir (2).	No	Not expected	The project area lacks perennial water sources. This species may inhabit the project area as stopover or during the winter. Not recorded in the CNDDB 7-quad search[2]
Agelaius tricolor (colony) Tricolored Blackbird	BCC/SSC/Group1, MSCP	Breeds in emergent wetland with tall, dense cattails or tules; willow, blackberry, tall herb thickets. Feeds in grassland and cropland habitats. Found throughout Central Valley and coastal areas south of Sonoma Co. (2).	No	Not expected to nest	The project area lacks suitable wetland habitat. Documented in the Jacumba quadrangle (CDFW 2014a) and the vicinity (SDNHM 2014b).
Ammodramus savannarum (nesting) Grasshopper sparrow	None/SSC/Group 1, MSCP	Dry, dense grasslands, especially with a variety of grasses and tall forbs, scattered shrubs for singing perches. Summer resident and breeder in foothills and lowlands west of Cascade-Sierra Nevada crest from Mendocino and Trinity Cos. south to San Diego Co. In southern California, occurs on hillsides and mesas in coastal areas, breeds up to 1,500m (2).	No	Not expected	The breeding and winter records for grasshopper sparrow are concentrated along the coastal ranges. Winter records are very rare in eastern San Diego County (Unitt 2004). Project site is also above species' elelvational range. Not recorded in the CNDDB 7-quad search[2]
Anas strepera Gadwall	None/None/Group 2	Interior valleys, wetlands, ponds, and streams. Feeds and rests in freshwater lacustrine and emergent habitats, and to a lesser extent,	No	Not expected	The project area lacks perennial water sources. This species may inhabit the project area as stopover or during the

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
		estuarine and saline emergent habitats, and nests in nearby herbaceous and cropland habitats. Common in Central Valley and less common in Coast Range foothills of central and southern California. Locally common in Imperial Valley and along Colorado River, October to March. Breeds on northeastern plateau and east of Sierra Nevada (2).			winter. Species documented in the vicinity (SDNHM 2014b).
Campylorhynchus brunneicapillus sandiegensis Coastal cactus wren (San Diego & Orange Counties only)	BCC/SSC/Group 1 , MSCP	Southern cactus scrub, maritime succulent scrub, cactus thickets in coastal sage scrub. In arid parts of westward-draining slopes of southern California (2).	No	Not expected	Project site is located east of the mountains, outside of the coastal range of the special-status subspecies *C. b. sandiegensis* (Shuford and Gardali 2008). Although *C. brunneicapillus* was observed on site during butterfly surveys, it was the interior, non-special-status species which also has been documented breeding in the vicinity (SDNHM 2014b). Additionally, the project site lacks suitable cactus thickets on site for the coastal subspecies. Not recorded in the CNDDB 7-quad search[2]
Chen caerulescens (winter) Snow goose	None/None/Group 2	Fresh emergent wetlands, adjacent lacustrine waters, and nearby wet croplands, pastures, meadows, and grasslands. Occasionally found in saline (brackish) emergent wetlands and adjacent estuarine waters. Found primarily in Central Valley; less common southward in the interior but abundant in Imperial Valley and locally common along Colorado River. Found regularly only in southern California along Coast Ranges and immediate coast from mid-November to February (2).	No	Not expected	The project area lacks perennial water sources. This species may inhabit the project area as stopover or during the winter. Species documented in the vicinity (SDNHM 2014b).
Ardea herodias (nesting colony)	None/None/Group 2	Variety of habitats, but primarily shallow estuaries and fresh and saline emergent wetlands; lakes, rivers, marshes, mudflats, estuaries, saltmarsh,	No	Not expected	The project area lacks perennial water sources. This species may inhabit the project area as stopover or during the

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
Great blue heron		riparian habitats. Found throughout most of California. Few rookeries in southern California; more numerous in northern California (2).			winter. Not recorded in the CNDDB 7-quad search[2]
Asio flammeus (nesting) Short-eared owl	None/SSC/ Group 2	Open areas with few trees, such as grasslands, prairies, dunes, meadows, irrigated lands, saline and fresh emergent wetlands. Breeds in coastal areas in Del Norte and Humboldt Cos., San Francisco Bay Delta, northeastern Modoc plateau, east side of Sierra from Lake Tahoe south to Inyo Co., and San Joaquin Valley. Uncommon winter migrant in southern California, and widespread during winter in Central Valley and coastline (2).	No	Not expected	The project area lacks suitable habitat. Additionally, the project area is outside of the typical winter range for this species, where it occurs near the coastline (Zeiner et al. 1990). Not recorded in the CNDDB 7-quad search[2]
Asio otus (nesting) Long-eared owl	None/SSC/Group 1, MSCP	Riparian, live oak thickets, other dense stands of tree. Uncommon winter visitor in southern California deserts and Central Valley; uncommon resident throughout the rest of the state (2).	No	Not expected	Although species was documented in the Tierra del Sol quadrangle (CDFW 2014a), the project area lacks suitable riparian, oak thickets, or other dense stands of trees.
Aythya americana (nesting) Redhead	None/SSC/Group 2	Lacustrine waters, foothills and coastal lowlands, and along the coast and Colorado River. Nests in fresh emergent wetland bordering open water. Found south of Modoc Co. to Mono Co., Central Valley, Monterey Co. south to Ventura Co.; breeds in Central Valley, eastern Kern Co., coastal southern California, and Salton Sea (2).	No	Not expected	Although species documented in the vicinity (SDNHM 2014b), the project area lacks open perennial water sources.
Branta canadensis Canada goose	None/None/Group 2	Lakes, fresh emergent wetlands, moist grasslands, croplands, pastures, and meadows. Winter migrant throughout Central Valley, Salton Sea, northeastern California, also along Colorado River (2).	No	Low	Although species documented in the vicinity (SDNHM 2014b), the project area lacks perennial water sources. This species may inhabit the project area as stopover or during the winter.
Bucephala islandica (nesting) Barrow's golden eye	None/SSC/Group 2	Estuarine (lagoons and bays) and brackish lacustrine waters. Found along central California coast, San Francisco Bay, Marin and Sonoma Cos., Colorado River (2).	No	Not expected	The project area lacks perennial water sources. Not recorded in the CNDDB 7-quad search[2]

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
Buteo lineatus Red-shouldered hawk	None/None/Group 1	Riparian and woodland habitats interspersed with swamps and wetlands found along coast, southern deserts, and in Central Valley, 0-1,500m (2).	No	Not expected	Although species documented in the vicinity (SDNHM 2014b), project area lacks riparian/wetland and woodland habitats.
Buteo swainsoni (nesting) Swainson's hawk	BCC/ST/Group 1, MSCP	Forages in grasslands or suitable grain or alfalfa fields or livestock pastures; breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in Central Valley (2).	No	Not expected	Expected only as an occasional, temporary visitor during migration. Species not known to nest or winter in San Diego County. No suitable nesting or foraging habitat present. Not recorded in the CNDDB 7-quad search[2]
Butorides virescens Green heron	None/None/Group 2	Nests and roosts in valley foothill and desert riparian habitats; feeds in fresh emergent wetland, lacustrine, slow-moving riverine habitats. Resident in foothills and lowlands throughout California; common August to March in southern coastal ranges, in summer along Colorado River, and found all year at Salton Sea (2).	No	Not expected	Lack of suitable freshwater habitat. Not recorded in the CNDDB 7-quad search[2]
Cerorhinca monocerata (nesting colony) Rhinoceros auklet	None/WL/Group 2 (for Oceanic - Winter)	Marine pelagic waters. Nests in a burrow on undisturbed, forested or unforested islands, and probably in cliff caves. Found off northern and central California, and south of northern Channel Islands. Breeds off Del Norte and Humboldt Cos., and Farallon Islands (2).	No	Not expected	The project area lacks large bodies of water and suitable nesting habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Charadrius nivosus nivosus (nesting) Western snowy plover	FT (Pacific coastal population), BCC (non-listed subspecies)/SSC (coastal and interior populations)/Group 1	Sandy marine and estuarine shores. Nests on these habitats and salt pond levees. Nesting areas in Salton Sea, Mono Lake, shores of alkali lakes of northeastern California, Central Valley, and southeastern deserts (2).	No	Not expected	The project area lacks suitable nesting habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Charadrius montanus (wintering) Mountain plover	FPT, BCC/SSC/Group 2	Nests in open, shortgrass prairies or grasslands; winters in shortgrass plains, plowed fields, open sagebrush, and sandy deserts. Winters in short grasslands and plowed fields of Central Valley below 1,000m (2).	No	Not expected	The project area lacks suitable grassland nesting habitat for this species. Not recorded in the CNDDB 7-quad search[2]

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
Chlidonias niger (nesting colony) Black tern	None/SSC/Group 2 (Non-breeder)	Freshwater lakes, marshes, ponds, coastal lagoons. Breeds in freshwater habitats but common on bays, salt ponds, river mouths, pelagic waters during spring and fall migration. Found throughout fresh emergent wetlands of California (2).	No	Not expected	The project area lacks suitable freshwater habitats for this species. Not recorded in the CNDDB 7-quad search[2]
Circus cyaneus (nesting) Northern harrier	None/SSC/Group 1, MSCP	Open wetlands (nesting), pasture, old fields, dry uplands, grasslands, rangelands, coastal sage scrub. Resident of northeastern plateau and coastal areas; less common resident in Central Valley. Breeds at marsh edge in shrubby vegetation in Central Valley and Sierra Nevada (0-1700m), and northeastern California (up to 800m) (2).	No	Not expected	Species documented in the vicinity (SDNHM 2014b). The species is only expected as a winter visitor in the more open area of scrub and chaparral communities on site. The project area lacks suitable wetlands for breeding. Not recorded in the CNDDB 7-quad search[2]
Coccyzus americanus occidentalis (nesting) Western yellow billed cuckoo	FC, BCC/SE/Group 1	Dense, wide riparian woodlands and forest with well-developed understories. Valley foothill and desert riparian habitats scattered throughout California – Colorado River, Sacramento and Owens Valleys, South Fork of the Kern River, Santa Ana River, and Amargosa River (2).	No	Not expected	The project area lacks suitable riparian habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Contopus cooperi (nesting) Olive-sided flycatcher	BCC/SSC/Group 2	Summer resident in a wide variety of forest and woodland habitats. Preferred nesting habitats include mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir, and lodgepole pine. Found throughout California excluding deserts, Central Valley and other lowland valleys and basins, below 2,800m (2).	No	Not expected	Although species documented in the vicinity (SDNHM 2014b), the project area lacks suitable woodland habitat for this species.
Cypseloides niger (nesting) Black swift	BCC/SSC/Group 2 (non-breeder)	Nests in moist crevices or caves on sea cliffs or near waterfalls in deep canyons; forages over many habitats. Nests in Sierra Nevada, Cascade Range, San Gabriel, San Bernardino, San Jacinto Mts., coastal bluffs and mountains from San Mateo Co. south to San Luis Obispo Co. (2).	No	Not expected	The project area lacks suitable moist cliffs for nesting. Not recorded in the CNDDB 7-quad search[2]

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Dendrocygna bicolor (nesting) Fulvous whistling-duck	None/SSC/ Group 2	Fresh emergent wetlands, shallow lacustrine and quiet riverine waters; feeds in wet croplands and pastures. Nests in dense wetlands of cattails in Imperial Valley along south end of Salton Sea (2).	No	Not expected	The project area lacks suitable wetland habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Egretta rufescens Reddish egret	None/None/Group 2	Forages in saltmarsh, mudflats, coastal lagoons, barren sand, salt ponds; nests on natural islands or man-made dredge spoil islands occasionally on coastal mainland. Found in southwestern and central coastal California (4).	No	Not expected	The project area lacks suitable saltmarsh habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Elanus leucurus (nesting) White-tailed kite	None/FP/Group 1, MSCP	Open grasslands, savanna-like habitats, agriculture, wetlands, oak woodlands, riparian, herbaceous and open stages of most habitats in cismontane California, near agricultural areas. Found in coastal and valley lowlands of California (2).	No	Not expected	Project location is generally too high in elevation and lacks suitable nesting habitat. Not recorded in the CNDDB 7-quad search[2]
Empidonax traillii extimus (nesting) Southwestern willow flycatcher	FE/SE/Group 1, MSCP	Riparian obligate - Riparian woodlands along streams and rivers with mature, dense tree or shrub cover where surface water or soil moisture present; may nest in habitats variable in dominant plant species (both native and exotic). In California, breeding range includes southern California; from near sea level California to more than 2,600m in Arizona/SW Colorado (5).	No	Not expected	The project area lacks suitable riparian habitat for this species Not recorded in the CNDDB 7-quad search[2]
Falco columbarius (wintering) Merlin	None/WL/Group 2	Coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, montane hardwood-conifer habitats, ponderosa pine. Found throughout western half of state below 1,500m (2).	No	Not expected	No suitable habitat present on site. Not recorded in the CNDDB 7-quad search[2]
Falco peregrinus anatum (nesting) American peregrine falcon	(FD), BCC/(SD), FP/Group 1 Endemic	Nests in woodland, forest, coastal habitats along coast north of Santa Barbara and in Sierra Nevada, and other mountains of northern California. Winters in Central Valley, and is found in other riparian areas and coastal/inland wetlands (2).	No	Not expected	No suitable nesting habitat present and project area lacks wintering (riparian/wetland) habitats. Not recorded in the CNDDB 7-quad search[2]

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Fratercula cirrhata (nesting colony) Tufted puffin	None/SSC/Group 2 (Oceanic)	Rocky outcroppings on islands, not necessarily near the nest, and on the ocean. Common at nesting colonies, and on nearby marine pelagic and subtidal waters. Nests on islands and, less commonly, on coastal cliffs. Found along coast from Prince Island in Del Norte Co. to Point Conception (2).	No	Not expected	No suitable coastal cliffs to support nesting, found within the project area. Not recorded in the CNDDB 7-quad search[2]
Gavia immer (nesting) Common loon	None/SSC/Group 2 (winter)	Estuarine and subtidal marine habitats along entire coast (Sept-May). Uncommon on large, deep lakes in valleys and foothills; common migrant along coast, including offshore, in November and May (2).	No	Not expected	The project area lacks suitable wetland habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Grus canadensis canadensis (wintering) Lesser sandhill crane	None/SSC/Group 2 (full species)	Wet meadow, shallow lacustrine, and fresh emergent wetland habitats during summer; annual and perennial grassland habitats, moist croplands, and open, emergent wetlands during winter. Winters in San Joaquin, Imperial valleys; Carrizo Plain, Brawley, and Blythe (2).	No	Not expected	The project area lacks suitable wetland habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Grus canadensis tabida (nesting and wintering) Greater sandhill crane	None/ST, FP/Group 2 (full species)	Wet meadow, shallow lacustrine, and fresh emergent wetland habitats during summer; annual and perennial grassland habitats, moist croplands, and open, emergent wetlands during winter. Breeds in Siskiyou, Modoc, Lassen Cos., and Sierra Valley. Winters in Sacramento and San Joaquin valleys. Was more common in southern California (2).	No	Not expected	The project area lacks suitable wetland habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Haliaeetus leucocephalus (nesting and wintering) Bald eagle	(FD), BCC/SE, FP/Group 1 (winter)	Large bodies of water and flowing rivers with abundant fish, with adjacent snags or other perches; breeds in northern California and is found during winter at few locations throughout southern California (2).	No	Not expected	There are no winter records for this species in the vicinity (Unitt 2004) and there are no lakes in the project area. Not recorded in the CNDDB 7-quad search[2]
Icteria virens (nesting) Yellow-breasted chat	None/SSC/Group 1	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles and dense brush. Coastal California, foothills of Sierra	No	Not expected	Although species is documented in the vicinity (SDNHM 2014b), the project area lacks suitable wetland habitat for this

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		Nevada. Breeds locally on coast in southern California and very locally inland, at elevations up to 1450m in valley foothill riparian, and up to 2050m east of Sierra Nevada in desert riparian habitats (2).			species. Not recorded in the CNDDB 7-quad search[2]
Ixobrychus exilis (nesting) Least bittern	BCC/SSC/Group 2, MSCP	Dense emergent wetland vegetation, sometimes interspersed with woody vegetation and open water. Nests in emergent wetlands. Common summer resident at Salton Sea and Colorado River. Breeds locally in Owens Valley and Mojave Desert and uncommon in emergent wetlands of cattails and tules in San Diego Co., and Sacramento and San Joaquin Valleys (2).	No	Not expected	The project area lacks suitable wetland habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Junco hyemalis caniceps (nesting) Gray-headed junco	None/WL/Group 2 (winter-rare)	Found in forests and woodlands from montane hardwood-conifer forests up through alpine dwarf-shrub habitats. Breeds locally in White and Grapevine Mts., and on Clark Mt. in southeastern California. Species is more common east of Sierra Nevada during winter (2).	No	Not expected	The project area lacks suitable nesting habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Leucophaeus atricilla (nesting colony) Laughing gull	None/WL/Group 2 (non breeding, very rare)	Flocks rest on salt-pond dikes and sandpits. Breeds along seacoasts, bays, salt marshes, dunes, beaches, estuaries, rarely on large inland bodies of water. Formerly nested at southern end of Salton Sea (4).	No	Not expected	Habitat typical for supporting this species is not present on-site. Individuals may be detected during migration, but there is low potential for that. Not recorded in the CNDDB 7-quad search[2]
Larus californicus (nesting colony) California gull	None/WL/Group 2 (non breeding)	Along the coast: sandy beaches, mudflats, rocky intertidal and pelagic areas of marine and estuarine habitats, fresh and saline emergent wetlands. Inland: lacustrine, riverine, and cropland habitats, landfill dumps, and open lawns in cities. Nests in alkali and freshwater lacustrine habitats; adults roost along shorelines, landfills, pastures, and on islands. Nest along northeastern plateau region and at Mono Lake (2).	No	Not expected	There are no bodies of water or landfills to host this species on-site. A migrant could pass over the site, but it is unlikely that it would stop. Not recorded in the CNDDB 7-quad search[2]

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Laterallus jamaicensis coturniculus California black rail	BC/ST, FP/Group 2	Saline, brackish, and fresh emergent wetlands mostly in central coastal California (2).	No	Not expected	Habitat typical for supporting this species is not present on-site. Individuals could be detected during migration, but there is low potential for that. Not recorded in the CNDDB 7-quad search[2]
Melanerpes lewis (winter) Lewis' woodpecker	BCC/None/Group 1	Open oak savannahs, broken deciduous and coniferous habitats. Eastern slopes of coast ranges south to San Luis Obispo Co., winters in Central Valley, Modoc Plateau, and Transverse and other ranges in southern California. Breeds eastern slopes of coast ranges, Sierra Nevada, Cascade Range (2).	No	Not expected	No suitable habitats present on site. Additionally, breeding is not expected as this species is only found in San Diego County during migration and winter. Not recorded in the CNDDB 7-quad search[2]
Mycteria Americana (Non-breeding, very rare) Wood stork	None/SSC/Group 2	Shallow, relatively warm waters with fish for prey. Nests colonially. Found at south end of Salton Sea, San Diego Wild Animal Park (2).	No	Not expected	Habitat typical for supporting this species is not present on-site. Individuals could be detected during migration, but there is low potential for that. Not recorded in the CNDDB 7-quad search[2]
Numenius americanus (nesting) Long-billed curlew	BCC/WL/Group 2 (non-breeding)	Nests in upland shortgrass prairies and wet meadows in northeast California; winters in coastal estuaries, open grasslands and croplands along California coast, and in Central and Imperial valleys (2).	No	Not expected	Habitat typical for supporting this species is not present on-site. Not recorded in the CNDDB 7-quad search[2]
Oceanodroma furcata (nesting colony) Fork-tailed storm petrel	None/SSC/Group 2 (Ocean)	Visitor on open ocean along the entire coast; found in bays and harbors particularly after storms. Breeds on islets in Del Norte and Humboldt Cos (2).	No	Not expected	Habitat typical for supporting this species is not present on-site. Individuals could be detected during migration, but there is low potential for that. Not recorded in the CNDDB 7-quad search[2]
Oceanodroma homochroa (nesting colony) Ashy storm petrel	BCC/SSC/Group 2 (Ocean)	Open sea. Nests in natural cavities and sea caves, mainly talus but also larger rock. Resident of offshore waters from Cape Mendocino to northern Baja California, Mexico. Breeds on offshore islands from Southeast Farallon Island to Los Coronados (2).	No	Not expected	Habitat typical for supporting this species is not present on-site. Individuals could be detected during migration, but there is low potential for that. Not recorded in the CNDDB 7-quad search[2]

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Oceanodroma melania (nesting colony) Black storm petrel	None/SSC/Group 2 (Ocean)	Open sea from Monterey Bay south during April to October. Nests in burrows and rock cavities on Santa Barbara Island and Sutil Island (2).	No	Not expected	Habitat typical for supporting this species is not present on-site. Individuals could be detected during migration, but there is low potential for that. Not recorded in the CNDDB 7-quad search[2]
Oreothylpis luciae (nesting) Lucy's warbler	BCC/SSC/Group 1, MSCP	Desert wash and desert riparian habitats, especially dominanted by mesquite; saltcedar and other thickets. Breeds along Colorado River, common locally in a few other desert areas, rare near Salton Sea. Rare transient in other southern interior locations and rare fall transient along the coast, mainly in San Diego Co. (2).	No	Not expected	The project area lacks suitable riparian habitat. Not recorded in the CNDDB 7-quad search[2]
Oreortyx pictus eremophilus Mountain quail	None/ None/Group 2	Dense montane chaparral and brushy areas within coniferous forest, pinyon-juniper-yucca associations; uses shrubs, brush stands and trees on steep slopes for cover in most major montane habitats of the state (2).	No	Low	Dense habitat typically used by this species is not present. Not recorded in the CNDDB 7-quad search[2]
Pandion haliaetus (nesting; rarely breeds in San Diego) Osprey	None/ WL/Group 1	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats (primarily ponderosa pine through mixed conifer), but widely observed along the coast. Breeds from Cascade Ranges south to Lake Tahoe and along northwest coast. Uncommon breeder along southern Colorado River. Uncommon along coast of southern California (2).	No	Not expected	Habitat typical for supporting this species is not present on-site. Individuals could be detected during migration, but there is low potential for that. Not recorded in the CNDDB 7-quad search[2]
Passerculus guttatus [sandwichensis] beldingi/ Belding's savannah sparrow	None/SE/Group 1	Scattered southern coastal wetlands in southwestern California (2).	No	Not expected	The project area lacks suitable saltmarsh habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Passerculus rostratus [sandwichensis] rostratus (wintering)	None/SSC/Group 2	Grassland, saline emergent wetlands from central coastal and southern California; Santa Cruz, Morro Bay, San Miguel Island, San	No	Not expected	The project area lacks suitable saltmarsh habitat for this species. Not recorded in the CNDDB 7-quad search[2]

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Large-billed savannah sparrow		Clemente Island, San Diego (2, 4).			
Pelecanus erythrorhynchos (nesting colony) American white pelican	None/SSC/Group 2 (winter)	Open water, coastal bays, large inland lakes. Nests at large lakes in Klamath Basin. Common migrant at Salton Sea, Colorado River and rare during winter at Salton Sea, Morro Bay, San Diego Bay (2).	No	Not expected	Habitat typical for supporting this species is not present on-site. Individuals could be detected during migration, but there is low potential for that. Not recorded in the CNDDB 7-quad search[2]
Pelecanus occidentalis californicus (nesting colony and communal roosts) Brown pelican (California)	(FD)/(SD), FP/Group 2	Open sea, large water bodies, coastal bays and harbors, estuarine, marine subtidal, and marine pelagic waters along coast and breeds on Channel Islands (2).	No	Not expected	Habitat typical for supporting this species is not present on-site. Individuals could be detected during migration, but there is low potential for that. Not recorded in the CNDDB 7-quad search[2]
Phalacrocorax auritus (nesting colony) Double-crested cormorant	None/WL/Group 2 (non-breeding)	Lakes, rivers, reservoirs, estuaries, ocean; nests in tall trees, rock ledges on cliffs, rugged slopes. Resident along coast and inland waters. Common August to May at Salton Sea and Colorado River reservoirs, also found south of San Luis Obispo Co. and Central Valley (2).	No	Not expected	Habitat typical for supporting this species is not present on-site. Individuals could be detected during migration, but there is low potential for that. Not recorded in the CNDDB 7-quad search[2]
Piranga rubra (nesting) Summer tanager	None/SSC/Group 2	Nests in desert riparian woodland dominated by cottonwoods and willows; winter habitats include parks and residential areas. Found along lower Colorado River and locally in southern California deserts (2).	No	Not expected	Lack of suitable habitat within the project area and outside of the recorded breeding range for this species. Not recorded in the CNDDB 7-quad search[2]
Plegadis chihi (nesting colony) White-faced Ibis	None/WL/Group 1	Nests in marsh; winter foraging in shallow lacustrine waters, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields and estuaries. Uncommon summer resident in areas of southern California (esp. Salton Sea area), rare visitor to Central Valley (2).	No	Not expected	Habitat typical for supporting this species is not present on-site. Not recorded in the CNDDB 7-quad search[2]
Polioptila californica	FT/SSC/Group 1,	Coastal sage scrub, coastal sage scrub-chaparral mix, coastal sage scrub-grassland	No	Not	The project area lacks suitable habitat and is well east of the recorded range for

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californica Coastal California gnatcatcher	MSCP	ecotone, riparian in late summer. Found from eastern Orange and southwestern Riverside Cos. south through coastal foothills of San Diego Co. (2).		expected	this species. Not recorded in the CNDDB 7-quad search[2]
Progne subis (nesting) Purple martin	None/SSC/County 1, MSCP	Nests in tall sycamores, pines, oak woodlands, coniferous forest; forages over riparian, forest and woodland. Found throughout the state in wooded, low-elevation habitats. Rare and local breeder in the south in mountain ranges and along coast (2).	No	Not expected	No suitable habitat present on site. Individuals could be detected during migration, but there is low potential for that. Not recorded in the CNDDB 7-quad search[2]
Pyrocephalus rubinus (nesting) Vermillion flycatcher	None/SSC/Group 1 (for *P.r.flammeus*) , MSCP	Nesters inhabit cottonwood, willow, mesquite, and other vegetation in desert riparian habitat adjacent to irrigated fields, irrigation ditches, pastures and other open, mesic areas in isolated patches. Found along Colorado River, especially near Blythe, Riverside Co. (2).	No	Not expected	No suitable riparian/mesic habitat on site. Not recorded in the CNDDB 7-quad search[2]
Rallus longirostris levipes Light-footed clapper rail	FE/SE, FP/Group 1	Coastal saline emergent wetlands along southern California from Santa Barbara Co. to San Diego Co. (2).	No	Not expected	The project area lacks suitable wetland habitat. Not recorded in the CNDDB 7-quad search[2]
Riparia riparia (nesting) Bank swallow	None/ST/Group 1	Riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils, into which it digs nesting holes; most breeding occurs along banks of Sacramento and Feather Rivers (2).	No	Not expected	The project area lacks suitable nesting habitat. Not recorded in the CNDDB 7-quad search[2]
Rynchops niger (nesting colony) Black skimmer	BCC/SSC/Group 1	Roosting takes place on sandy beaches or gravel bars. Rarely alights on water. Visitor to coastal estuaries and river mouths. Summer resident at Salton Sea. Yearlong resident at San Diego Bay. Known infrequently from additional interior locations on Colorado River and Lakeview, Riverside Co. (2).	No	Not expected	The project area lacks suitable nesting habitat. Not recorded in the CNDDB 7-quad search[2]
Setophaga petechia brewsteri [Aestiva	BCC/SSC/Group 2, MSCP	Nests in lowland and foothill riparian woodlands; montane chaparral, open ponderosa pine, mixed	No	Not expected	Although species documented in the vicinity (SDNHM 2014b), the project area

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group] (nesting) Yellow warbler (California)		conifer habitats up to 2500m; winters in a variety of habitats. Breeds from coast range in Del Norte Co., east to Modoc plateau, south to Santa Barbara and Ventura Cos., western slope of Sierra Nevada south to Kern Co.; also breeds in ranges in San Diego Co. (2).			lacks suitable riparian habitat for this species. Not recorded in the CNDDB 7-quad search[2]
Sternula antillarum browni (nesting colony) California least tern	FE/SE, FP/Group 1	Breeding colonies located in marine and estuarine shores in southern California, and in San Francisco Bay in abandoned salt ponds and estuarine shores. Feeds in nearby waters. Are migratory to California (2).	No	Not expected	The project area lacks suitable nesting habitat. Not recorded in the CNDDB 7-quad search[2]
Strix occidentalis occidentalis California spotted owl	BCC /SSC/Group 1, MSCP	Dense, old-growth, multi-layered mixed conifer, redwood and Douglas-fir habitats in northern California; oak and oak-conifer habitats in southern California; 0-2,300m (2).	No	Not expected	No suitable habitat in project area. Not recorded in the CNDDB 7-quad search[2]
Synthliboramphus hypoleucus (nesting colony) Xantus' murrelet, Guadalupe murrelet	FC, BCC/ST/Group 2 (oceanic) / WLBCC	Offshore waters. Rare visitor to southern offshore waters in late summer and fall (2).	No	Not expected	The project area lacks large bodies of water for this species Not recorded in the CNDDB 7-quad search[2]
Thalasseus elegans (nesting colony) Elegant Tern	None/WL/Group 1	Coastal waters, estuaries, large bays and harbors, mudflats; rarely occur offshore and never found inland. Found along coastal California, most common in southern California, not found north of Marin Co. (2).	No	Not expected	The project area lacks suitable coastal habitat for this species. Project is not located along the coast. Species not recorded in the CNDDB 7-quad search[2]
Toxostoma bendirei Bendire's thrasher	BCC/SSC/Group 2 (non-breeding)	Flat areas of desert succulent shrub and Joshua tree habitats in Mojave desert area of San Bernardino and western Kern Cos. (2).	No	Not expected	The project area lacks suitable desert succulent scrub habitat for this species. Not recorded in the CNDDB 7-quad search[2]

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
Toxostoma lecontei lecontei Le Conte's thrasher	None/None/Group 2 (for subspecies *T.l.lecontei*) , MSCP	Open desert wash, desert scrub, alkali desert scrub, desert succulent shrub habitats, Joshua tree habitat with scattered shrubs. Uncommon to rare, local resident in southern California deserts from southern Mono Co. to the Mexican border and in San Joaquin Valley (2).	No	Low(nesting and non-breeding)	Suitable desert scrub habitats not present. Suitable habitat occurs in the more eastern and northern desert areas. Documented north of the project site (SDNHM 2014b). Not recorded in the CNDDB 7-quad search[2]
Toxostoma crissale Crissal thrasher	None/SSC/Group 1, MSCP	Dense thickets of shrubs or low trees in desert riparian and desert wash habitats. Also, dense sagebrush and other shrubs in washes within juniper and pinyon-juniper habitats up to 1, 800m. Common in Colorado River Valley; less common in eastern Mojave Desert, Imperial, Coachella and Borrego valleys (2).	No	Not expected	The project area lacks suitable desert riparian habitat for this species. The species range is located east of the project site (Zeiner et al. 1990). Not recorded in the CNDDB 7-quad search[2]
Vireo bellii pusillus (nesting) Least Bell's vireo	FE/SE/Group 1, MSCP	Willows and low, dense valley foothill riparian habitat and lower portions of canyons; along western edge of deserts in desert riparian habitat, 0-600m. Found in San Benito and Monterey Cos., and coastal southern California from Santa Barbara Co. south (2).	No	Not expected	Although documented in the Carrizo Mountain and Sombrero Peak quadrangles (CDFW 2014a), no suitable riparian habitat is present.
Xanthocephalus xanthocephalus (nesting) Yellow-headed blackbird	None/ SSC/ MSCP	Nests in freshwater emergent wetlands with dense vegetation and deep water; often along the borders of lakes or ponds.	No	Not expected	No suitable wetland or similar habitats in project area. Not recorded in the CNDDB 7-quad search[2]
Mammals					
Bassariscus astutus Ringtail	None/None/Group 2, MSCP	Mixed forests and shrublands near rocky areas or riparian habitats. Forages near water and is seldom found more than 1 km from a water source. Is widely distributed throughout California (2).	No	Not expected	No suitable forest and riparian habitat found on site. Not recorded in the CNDDB 7-quad search[2]
Choeronycteris mexicana Mexican long-tongued bat	None/SSC/Group 2/WBWG:M	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland. Roosts in caves, mines, and buildings. Summer resident in San Diego Co. (2).	No	Low	No suitable roosting habitat found within the project area. Species' distribution along western San Diego County (Zeiner et al. 1990). Not recorded in the CNDDB 7-quad search[2]

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
Corynorhinus townsendii Townsend's big-eared bat	None/SC/Group 2, MSCP/ WBWG:H	Mesic habitats, gleans from brush or trees or feeds along habitat edges. Found in all habitats but subalpine and alpine throughout California (2).	No	Low	Project area is dry climate with limited suitable forage habitat. Documented in the Sweeney Pass quadrangle (CDFW 2014a).
Dipodomys merriami collinus *Earthquake Merriam's kangaroo rat*	None/ None/ MSCP	Riversidean alluvial fan sage scrub, flood plains, sandy and sandy loam soils	No	Not expected	No suitable habitat present on site. Although *Dipodomys* sp. documented onsite during butterfly surveys, this subspecies was not recorded in the CNDDB 7-quad search[2].
Dipodomys stephensi Stephens' kangaroo rat	FE/ST/Group 1, MSCP	Open habitat, grassland, sparse coastal sage scrub, sandy loam and loamy soils with low clay content; gentle slopes (<30%) and sparse vegetative cover. Found around San Jacinto Valley (2).	No	Not expected	Site is outside of the species range, and no suitable grassland habitat present on site. Although *Dipodomys* sp. documented onsite during butterfly surveys the species was not recorded in the CNDDB 7-quad search[2].
Eumops perotis californicus Greater western mastiff bat	None/SSC/Group 2/ WBWG:H	Occurs in many open, semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, and more. Roosts in crevices in cliff faces, high buildings, trees, and tunnels (6).	No	Low	Minimal roosting habitat found within the project area. Site is slightly above the known upper elevation limit for the species. Documented in the Sweeney Pass quadrangle (CDFW 2014a).
Lasiurus blossevillii Western red bat	None/SSC/Group 2/ WBWG:H	Prefers edges with trees for roosting and open areas for foraging. Roosts in woodlands and forests. Forages over grasslands, shrublands, woodlands, forests, and croplands. Found south of Shasta Co. to Mexican border, and west of the Sierra Nevada/Cascade crest. In winter, occupies coastal regions and lowlands south of San Francisco Bay (2).	No	Low	No suitable roosting habitat found within the project area; low potential to forage on site. Not recorded in the CNDDB 7-quad search[2]
Lasiurus xanthinus Western yellow bat	None/SSC/None/ WBWG:H	Uncommon in California, known only in Los Angeles and San Bernardino Co. south to the Mexican border. Recorded below 2000 ft in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts and feeds in, and near, palm oases and riparian habitats (2)	No	Low	No suitable oasis or riparian habitat on site. Although documented in the Sweeney Pass quadrangle (CDFW 2014a), project area is also above the documented known range for this species (below 2000 ft).

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
Myotis yumanensis Yuma myotis	None /None/Group 2/ WBWG:LM	Closely tied to open water which is used for foraging; open forests and woodlands are optimal habitat throughout California, 0-3,300m (2).	No	Low	No suitable foraging habitat found within the project area. Not recorded in the CNDDB 7-quad search[2]
Onychomys torridus ramona Southern grasshopper mouse	None/SSC/Group 2, MSCP	Alkali desert scrub and other desert scrub habitats, sparse coastal scrub, especially with friable soils for digging in Mojave Desert and southern Central Valley (2).	No	Low	No suitable grassland habitat found within the project area. Documented in the In-Ko-Pah Gorge, Jacumba, Live Oak Springs, Sombrero Peak, and Tierra Del Sol quadrangles (CDFW 2014a).
Ovis canadensis nelsoni pop. 2 Peninsular bighorn sheep DPS	FE/ST, FP/Group 1, MSCP	Alpine dwarf-shrub, low sage, sagebrush, bitterbrush, pinyon-juniper, palm oasis, desert riparian, desert succulent shrub, desert scrub, subalpine conifer, perennial grassland, montane chaparral, and montane riparian from San Jacinto and Santa Rosa ranges south to Mexico (2).	No	Not expected	Outside of known range of the species. While suitable rocky, steep terrain present in the project area. They have only been documented in the In-Ko-Pah Gorge, Jacumba, Live Oak Springs, Sombrero Peak, and Sweeney Pass quadrangles (CNDDB 2014) east of the project area. Interveneing unsuitable dense vegetation is present between occupied areas and USFWS Critical Habitat, and this site
Perognathus longimembris bangsi Palm Springs pocket mouse	None/ SSC/ MSCP	Desert riparian, desert scrub, desert wash and sagebrush. Most common in creosote-dominated desert scrub; rarely on rocky sites.	No	Not expected	Outside of range. Limited suitable habitat on site. Not recorded in the CNDDB 7-quad search[2]
Perognathus longimembris brevinasus Los Angeles pocket mouse	None/SSC/Group 2, MSCP	Lower elevation grassland, alluvial sage scrub, and coastal sage scrub. Historically occurred in the coastal basins of southern California, from San Fernando and Burbank in the San Fernando Valley east to Cabazon, south through the San Jacinto and Temecula Valleys to Aguanga, Warner Pass, Vail, and Temecula. Current range does not include the San Fernando Valley (7).	No	Not expected	Outside of range. No suitable grassland habitat within the project area. Not recorded in the CNDDB 7-quad search[2]
Perognathus longimembris	FE/SSC/Group 1	Coastal dunes, river alluvium, coastal sage scrub with firm sandy soils; along immediate	No	Not expected	Outside of range. No suitable grassland onsite and project area is not along coast.

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
pacificus Pacific pocket mouse		coast in San Diego, Orange, and Los Angeles Cos. (4, 6).			Not recorded in the CNDDB 7-quad search[2]
Spermophilus tereticaudus chlorus Palm Springs round-tailed ground squirrel	None/ SSC/ MSCP	Desert succulent shrub, desert wash, desert scrub, alkali desert scrub, and levees in cropland habitat. Also found in urban habitat. Found from -60 to 900m (-180 to 2900 ft) elevation.	No	Not expected	Suitable desert scrub habitat found within the project area. However, project area is higher than the species' recorded elevation range. Not recorded in the CNDDB 7-quad search[2]
Taxidea taxus American badger	None/SSC/Group 2, MSCP	Dry, open treeless areas, grasslands, coastal sage scrub, especially with friable soils throughout California (2).	No	Not expected	No burrows or digging sign was observed. Not recorded in the CNDDB 7-quad search[2]
Invertebrates					
Ariolimax columbianus stramineus Palomar banana slug	None/None/Group 2, MSCP	Humid coastal forests; Santa Cruz Island (9).	No	Not expected	Project area not near coast. Outside of range. Not recorded in the CNDDB 7-quad search[2]
Branchinecta sandiegonensis San Diego fairy shrimp	FE/None/Group 1	Small, shallow vernal pools, occasionally ditches and road ruts in coastal mesa system of southern California and Baja California (4).	No	Not expected	No vernal pools within the project area. Not recorded in the CNDDB 7-quad search[2]
Brennania belkini Belkin's dune tanabid fly	None/None/Group 2	Coastal sand dunes of southern California. Only CNDDB records are from USGS Quad: Venice, Los Angeles Co. (6).	No	Not expected	No sand dunes within the project area. Outside of range. Not recorded in the CNDDB 7-quad search[2]
Callophrys thornei Thorne's hairstreak butterfly	FC/None/Group 1	Tecate cypress on chaparral-covered dry rocky slopes, Otay Mt. (4).	No	Low	No Tecate cypress habitat on site. Not observed during butterfly surveys. Not recorded in the CNDDB 7-quad search[2]
Cicindela gabbii Western tidal flat tiger beetle	None/None/Group 2	Estuaries and mudflats; generally on dark-colored mud; occasional on dry saline flats of estuaries or mouth of river, Orange and San Diego Cos. (6).	No	Not expected	No suitable estuaries within the project area. Not recorded in the CNDDB 7-quad search[2]
Cicindela hirticollis gravida Hairy-necked tiger beetle	None/None/Group 2	Clean, dry, light-colored sand in upper zone of the beach dunes, close to non-brackish water along coastal California (6).	No	Not expected	Project area not near coast. Not recorded in the CNDDB 7-quad search[2]

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
Cicindela latesignata obliviosa Western beach tiger beetle	None/None/Group 2	Inhabited the Southern California coastline, from La Jolla north to the Orange Co. line. Occupied saline mudflats and moist sandy spots in estuaries of small streams in the lower zone. Has not been observed in 20 years (4).	No	Not expected	Project area not near coast and no mudflats or beaches on site. Not recorded in the CNDDB 7-quad search[2]
Cicindela senilis frosti Senile tiger beetle	None/None/Group 2	Coastal salt marshes; fresh/brackish lagoons, open patches of Salicornia, dried salt pans, muddy alkali area. Records in Riverside, San Diego, Los Angeles, Ventura Cos. (4, 6).	No	Not expected	No salt marshes within the project area. Not recorded in the CNDDB 7-quad search[2]
Cicindela trifasciata sigmoidea S-banded tiger beetle	None/None/Group 2	Has been identified along the fringe of a mudflat and low marsh habitat in San Diego Co. (10).	No	Not expected	No suitable mudflats or marshes within the project area. Not recorded in the CNDDB 7-quad search[2]
Coelus globosus Globose dune beetle	None/None/Group 1	Fore dunes, sand hummocks, back dunes along immediate coast. Larvae, adults spend time under vegetation or debris from Santa Cruz south to Ventura Cos. Possibly extirpated in San Diego and other coastal counties (4).	No	Not expected	No coastal dunes on site. Not recorded in the CNDDB 7-quad search[2]
Euphydryas editha quino Quino checkerspot butterfly	FE/None/Group 1, MSCP/XERCES:CI	Sparsely vegetated hilltops, ridgelines, occasionally rocky outcrops; host plant *Plantago erecta* and nectar plants must be present, San Diego and Riverside Cos. (4).	No	Low potential	Not observed during focused surveys. Host plants not found within the project area. However, documented in the Jacumba, Live Oak Springs, Sombrero Peak and Tierra Del Sol quadrangles (CDFW 2014a; USFWS 2014) and within ECO Substation approximately 3.5 miles W of the project site (RBC 2009b, 2010).
Euphyes vestris harbisoni Harbison's dun skipper	None/None/Group 1, MSCP	Canyon bottoms, creeks, seeps beneath shade of oak trees in riparian habitats supporting host plant Carex spissa growing near *Toxicodendron diversilobum*. Found throughout western San Diego Co. to Santa Ana Mts. Of Orange Co., with largest population in Ramona-Escondido area (11).	No	Not expected	Not observed during butterfly surveys. No suitable wetlands found within the project area. Not recorded in the CNDDB 7-quad search[2]
Helminthoglypta traskii coelata	None/ None/Group 2, MSCP	Coastal San Diego County (6).	No	Not expected	No suitable wetlands within the project area. Not recorded in the CNDDB 7-quad

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
(Helminthoglypta coelata) Peninsular Range shoulderband snail (Mesa shoulderband snail)					search[2]
Linderiella occidentalis California fairy shrimp	None/None/Group 1	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity and TDS. Central Valley, Santa Rosa Plateau (4).	No	Not expected	No suitable pools within the project site. Not recorded in the CNDDB 7-quad search[2]
Lycaena hermes Hermes copper	FC/None/Group 1, MSCP	Coastal sage scrub, southern mixed chaparral supporting at least 5% cover of host plant *Rhamnus crocea*. Adults visit *Eriogonum fasciculatum* and *Helianthus gracilentus*. On well-drained hillsides and canyon bottoms, coastal San Diego Co. south to Santo Tomas, Baja California (4).	No	Not expected	Not observed during butterfly surveys. Larval host plant not present on site. Not recorded in the CNDDB 7-quad search[2]
Megathymus yuccae (harbisoni) Yucca giant skipper	None/None/Group 2	Coastal dunes, open yucca flats, desert canyons, open woodland, grassland, and old fields. Record from eastern San Diego Co. near Scissors Crossing (4, 8).	No	Not expected	Not observed during butterfly surveys. Outside of range. No suitable habitat within the project area. Not recorded in the CNDDB 7-quad search[2]
Panoquina errans Wandering skipper	None/None/ Group 1	Salt marsh from Los Angeles to Baja California, Mexico. Host plant Distichlis spicata in salt marshes or near beaches, mouths of rivers (4).	No	Not expected	Not observed during butterfly surveys. No suitable salt marsh habitat on site. Not recorded in the CNDDB 7-quad search[2]
Papilio multicaudata Two-tailed swallowtail	None/None/Group 1	Semi-arid canyon land, mid-level mountains, canyon bottoms; groves, parks, roadsides (4).	No	Not expected	Not observed during butterfly surveys. No suitable habitat within the project area. Not recorded in the CNDDB 7-quad search[2]
Plebejus saepiolus hilda Hilda greenish blue	None/None/Group 1	Grassy meadow, near small pond; oviposit on *Trifolium wormskioldii*. In San Bernardino Mts (8).	No	Not expected	No suitable habitat found on site. Not recorded in the CNDDB 7-quad search[2]
Pseudocopaeodes	None/None/Group 1,	Desert seeps, alkali flats of Kern River, Kern Co. Host plant grass: Distichils spicata var. spicata	No	Not	Not observed during butterfly surveys. No suitable habitat found on site. Not

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
eunus eunus Alkali skipper	MSCP	(4).		expected	recorded in the CNDDB 7-quad search[2]
Pyrgus ruralis lagunae Laguna Mountain skipper	FE/None/Group 1, MSCP/XERCES:CI	Only in a few open meadows in yellow pine forest between 1,524 and 1,829 m in the vicinity of Mt. Laguna and Palomar Mt. Eggs laid on leaves of Horkelia clevelandi. Larvae feed on leaves and overwinter on the host plant (4).	No	Not expected	Not observed during butterfly surveys. Project area is lower than the species' recorded elevation range. Not recorded in the CNDDB 7-quad search[2]
Streptocephalus woottoni Riverside fairy shrimp	FE/None/Group 1	Deep, long-lived vernal pools, vernal pool-like seasonal ponds, stock ponds; warm water pools that have low to moderate dissolved solids; in patches of grassland or agriculture interspersed in coastal sage scrub vegetation in southern California (4).	No	Not expected	No vernal pools within the project area. Not recorded in the CNDDB 7-quad search[2]
Trigonoscuta blaisdelli Blaisdell trigonoscuta weevil	None/None/Group 2	Trigonoscuta sp.: Coastal, desert, or inland sand dunes; wide variety of plant types used; the larvae feed on the roots and the adults on the leaves (12).	No	Not expected	No dunes within the project area. Not recorded in the CNDDB 7-quad search[2]
Tryonia imitator Mimic tryonia, California brackishwater snail	None/None/Group 2	Coastal lagoons, herbaceous wetlands, brackish salt marshes; distributed among semi-continuous estuarine habitats along coast (4).	No	Not expected	No lagoons or salt marshes wthin the project area. Not recorded in the CNDDB 7-quad search[2]
Fish					
Oncorhynchus mykiss irideus Southern steelhead - southern California DPS	FE/SSC/Group 1/ AFS:EN	Oncorhynchus mykiss ssp. irideus: Santa Maria River south to southern extent of range (San Mateo Creek in San Diego Co.); Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions. Ocean, rivers, creeks, large inland lakes, juveniles spend time in ocean before returning to natal stream to spawn; prefer summer temperatures 10-15C. Migration requires deep (3m) pools with cover along river course (4).	No	Not expected	No suitable streams or wetlands within the project area. Not recorded in the CNDDB 7-quad search[2]

Scientific Name / Common Name	Status (Federal/ State/ County/Other)[1]	Habitat Preferences / Requirements	Verified On Site (Direct/Indirect Evidence)	Potential To Occur On Site	Factual Basis For Determination
Gila orcuttii Arroyo chub	None/SSC/Group 1/ AFS:VU	Permanent, small to moderate sized, moderate to high gradient streams with flow; headwaters, creeks, small to medium rivers, intermittent streams. Prefer slow moving sections with sand or mud substrate. Found in southern California watersheds (4).	No	Not expected	No suitable streams or wetlands within the project area. Not recorded in the CNDDB 7-quad search[2]
Cyprinodon macularius Desert pupfish	FE/SE/Group 2, AFS:EN	Desert springs, outflow marshes, river-edge marshes, backwaters, saline pools, streams, water less than 1m depth. Tolerates low oxygen levels, high temperatures, high salinity; can live in salinities from fresh water to 68 ppt., can withstand temperatures from 9-45 C and DO levels down to 0.1 ppm. Found from San Felipe Creek, San Sebastian Marsh, Salt Creek, Salton Sea (4).	No	Not expected	No suitable streams or wetlands within the project area. Not recorded in the CNDDB 7-quad search[2]
Gasterosteus aculeatus williamsoni Unarmored threespine stickleback	FE/SE, FP/Group 2 / AFS:EN	Clear, cool, slow-flowing streams with sand or mud substrate, weedy pools, backwaters, among emergent vegetation at stream edge, in abundant aquatic vegetation in Santa Clara River drainage (4).	No	Not expected	No suitable streams or wetlands within the project area. Not recorded in the CNDDB 7-quad search[2]
Eucyclogobius newberryi Tidewater goby	FE/SSC/Group 1/ AFS:EN	Coastal lagoons, upper ends of lagoons created by small coastal streams, fresh to brackish water in lower sections of coastal streams; occurs in water 25-100cm deep and prefers mud substrates and areas of high dissolved oxygen. Found with sparse distribution along coast of California south of Del Norte Co. to San Diego Co. (4).	No	Not expected	No suitable streams or wetlands within the project area. Not recorded in the CNDDB 7-quad search[2]

[1] **Status Designations:**
Federal Designations:

BCC	Fish and Wildlife Service: Birds of Conservation Concern
FC	Candidate for federal listing as threatened or endangered
(FD)	Federally-delisted; monitored for five years
FE	Federally-listed Endangered
FT	Federally-listed as Threatened

MNBMC	Fish and Wildlife Service Migratory Nongame Birds of Management Concern
USBC	United States Bird Conservation Watch List
FPT	Federally Proposed Threatened
State Designations:	
SSC	California Special Concern Species
FP	California Department of Fish and Game Fully Protected Species
WL	California Department of Fish and Game Watch List Species
SE	State-listed as Endangered
ST	State-listed as Threatened
SC	State Candidate for Endangered
(SD)	State Delisted
County Designations:	
Group 1	
Group 2	
Group 3	
MSCP	East County MSCP draft covered species
Other Designations:	
WBWG:H	Western Bat Working Group: High Priority
WBWG:LM	Western Bat Working Group: Low-Medium Priority
WBWG:M	Western Bat Working Group: Medium Priority
WBWG:MH	Western Bat Working Group: Medium-High Priority
AFS:EN	American Fisheries Society: Endangered
AFS:TH	American Fisheries Society: Threatened
AFS:VU	American Fisheries Society: Vulnerable
XERCES:CI	Xerces Society – Critically Endangered

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Notes:

[2] The 7-quad search includes species recorded in CNDDB or USFWS databases for the Jacumba and 6 surrounding quadrangles (Carrizo Mtn, Sweeney Pass, Sombrero Peak, In-ko-pah Gorge, Live Oak Springs, and Tierra del Sol).

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APPENDIX H

Jacumba Solar
Quino Checkerspot Butterfly Report

DUDEK

MAIN OFFICE
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 760.942.5147 T 800.450.1818 F 760.632.0164

June 6, 2013 7524

U.S. Fish and Wildlife Service
Attention: Recovery Permit Coordinator
6010 Hidden Valley Road
Carlsbad, California 92011

Subject: 2013 Focused Quino Checkerspot Butterfly Survey Report for the Proposed Jacumba Solar Energy Project, San Diego County, California

Dear Recovery Permit Coordinator:

This letter report documents the spring 2013 results of a focused survey conducted by Dudek for the federally listed endangered Quino checkerspot butterfly (*Euphydryas editha quino*; QCB). This survey was conducted in support of the Jacumba Solar Energy project, a proposed solar energy development project east of the community of Jacumba in the southeastern portion of the County of San Diego, California. This report is intended to satisfy reporting requirements for the following QCB-permitted biologists: Anita M. Hayworth, PhD, (TE781084-6); Brock A. Ortega (TE813545-6); Jeff D. Priest (TE840619-2); Kamarul J. Muri (TE051250-0); Paul M. Lemons (TE051248-4); and Vipul R. Joshi (TE019949-0).

PROJECT LOCATION AND EXISTING CONDITIONS

The proposed Jacumba Solar Energy project is comprised of two major components: 1) the approximate 300-acre Jacumba Solar Energy site and 2) construction of a new 1,000-foot-long 138-kilovolt (kV) generation-tie transmission line (gen-tie alignment site) required to connect the energy system to the existing Eco Substation. The 2013 QCB survey efforts were conducted within the proposed Jacumba Solar Energy Project site in an area totaling approximately 330 acres.

The proposed 330-acre study area is situated within the following 11 Assessor's Parcel Numbers (APNs): 661-041-02-00; 661-041-03-00; 661-041-04-00; 661-041-05-00; 661-080-01-00; 661-080-04-00; 661-080-05-01; 661-080-05-02; 661-080-06-00; 661-080-08-00; and 661-080-10-00. The project is located on private land approximately 3.5 miles east of the community of Jacumba, 0.5 mile south of Interstate 8 (I-8), and approximately 1.15 miles west of Imperial County in Southeastern San Diego County, California, (see Figure 1, Regional Map). More specifically, the study area is situated south of Old Highway 80 and immediately north of the U.S.–Mexico Border, within the Jacumba U.S. Geological Survey 7.5-minute quadrangle, Township 18 South, Ranges 8 East, Sections 2 and 11 (see Figure 2, Vicinity Map).

The study area is undeveloped with on-site elevation ranging between 3,010–3,160 feet above mean sea level (amsl). The site is relatively flat, except for a low hill near the southwest corner and several unvegetated channels that generally flow to the northwest across the site.

According to the U.S. Department of Agriculture (USDA) (2013), there are five soil types found in the project area; descriptions of these soil types, based on Bowman (1973) and the Web Soil Survey (USDA) (2013), appear below.

Acid igneous rock land soil is found in rough broken terrain. The topography ranges from low hills to very steep mountains. Large boulders and rock outcrops of granite, quartz diorite, gabbro, basalt, and other rock types cover greater than 50–90% of the total area of this soil type. The soil material is very shallow, consisting of loam to loamy course sand textures over decomposed granite or basic igneous rock. Pockets of deep soils are present between the rocks in some locales. Many areas are practically barren and have very rapid runoff. The vegetation for this soil type varies by elevation and climate. In the foothills and mountains, acid igneous rock land supports various chaparral vegetation communities.

The Mecca series consists of well-drained, very deep coarse sandy loams derived from granitic alluvium. The A horizon is composed of brown to dark brown, moderately alkaline coarse sandy loam and is 8–12 inches thick. The C horizon ranges from yellowish-brown or dark yellowish-brown to light brown or reddish brown in color and a moderately alkaline calcareous coarse sandy loam to loam texture. This horizon extends to a depth of more than 60 inches. These soils are found on alluvial fans and alluvial plains with slopes of 0–5% and contain moderate permeability. Mecca soils occur at elevations ranging from 200–2,000 feet. The Mecca soil inclusion within the project area is the Mecca coarse sandy loam with 2–5% slopes. This soil is gently sloping with slow runoff. Native vegetation expected on this soil type include cactus, creosote bush (*Larrea tridentata*), ocotillo (*Fouquieria splendens*), and annual grasses. Mecca soils are also used for range, irrigated alfalfa, small grain, and truck crops.

The Rositas series consists of excessively drained, very deep loamy coarse sands derived from granitic alluvium. The A horizon is approximately 3–8 inches thick, ranging from light brownish gray to pale brown or very pale brown in color and from loamy coarse sand or fine sand to sandy in texture. The C horizon extends to a depth of more than 60 inches. It ranges from pale brown to very pale brown or light yellowish brown in color and from gravelly coarse sand to loamy fine sand in texture. The Rositas soil inclusion within the project area is the Rositas loamy coarse sand, 2–9% slopes (RsC). This soil is gently to moderately sloping and found on alluvial fans and alluvial plains with slopes averaging 5%. Rositas soils occur at elevations ranging from 100–2,000 feet. This soil series has a water holding capacity of 3–4 inches, with rapid permeability and slow to medium runoff. Native vegetation expected on this soil type is mainly ocotillo, cholla (*Cylindropuntia* sp.), creosote bush, saltbush (*Atriplex* sp.), and annual grasses.

The Rough Broken Land (RuG) series is made up of well drained to excessively drained soils associated with steep and very steep land. Areas of exposed raw sediments are commonly found within this soil series, including areas of very shallow soils. Runoff is rapid to very rapid and vegetation consists of sparse cover of low woody shrubs.

The Sloping Gullied Land (SrD) series occurs on alluvial fans in the desert adjacent to mountains. This soil series is found within steep talus slopes and fans below basalt ledges in the vicinity of Jacumba. The texture ranges from clay loam to gravelly, cobbly sand derived from igneous, sedimentary, and metamorphic rocks. Limy material has been exposed where gullies have dissected areas of old alluvium. The soils are shallow to moderately deep underlain by basalt, volcanic tuff, and gravel with medium to very rapid runoff. Native vegetation expected on this soil type is primarily desert shrubs, cactus, and annual forbs and grasses with sparse cover.

VEGETATION COMMUNITIES

Six plant communities and land cover types were mapped within the focused QCB survey area, including disturbed land, Peninsular juniper woodland and scrub, semi-desert chaparral, Sonoran mixed woody scrub, upper Sonoran subshrub scrub, and urban/developed. The acreages of each community type within the project site are shown in Table 1, Vegetation Communities within the Focused Quino Checkerspot Butterfly Survey Area for the Jacumba Solar Energy Project. Descriptions of each vegetation community (with Holland numeric codes) are provided following Table 1. Holland (1986) and Oberbauer et al. (2008) were used to describe vegetation communities on site. The *Manual of California Vegetation* (2nd edition) (Sawyer et al. 2009) was utilized as an additional reference to help determine characteristics (such as percentage of species cover) of various classifications.

Table 1
Vegetation Communities within the Focused Quino Checkerspot Butterfly Survey Area for the Jacumba Solar Energy Project

Vegetation Community or Land Cover	Holland Code	Acres
Disturbed Land	11300	13.1
Peninsular Juniper Woodland and Scrub	72320	127.06
Semi-Desert Chaparral	37400	179.86
Sonoran Mixed Woody Scrub	33210	3.23
Upper Sonoran Subshrub Scrub	39000	3.58
Urban/Developed	12000	3.12
	Total	329.95

Disturbed Land (11300)

Disturbed land refers to areas that have been permanently altered by previous human activity that has eliminated all future biological value of the land for most species. The native or naturalized vegetation is no longer present, and the land lacks habitat value for sensitive wildlife, including potential raptor foraging.

Disturbed land found throughout the study area consists primarily of unpaved roads (Figure 3). These roads have been graded and contain little native vegetation. Disturbed land makes up 13.1 acres and is scattered in various locations throughout the study area.

Peninsular Juniper Woodland and Scrub (72320)

Peninsular juniper woodland and scrub consists of relatively dense pinon woodland dominated by Parry pinyon (*Pinus quadrifolia*), with California juniper (*Juniperus californica*) occurring within xeric sites below the trees' dripline. This community occurs in alluvial fans and desert slopes that are slightly lower and more xeric than the peninsular pinon woodland community (72310) with which it intergrades (Holland 1986). Other dominant species include Parry's beargrass (*Nolina parryi*), Sonoran scrub oak (*Quercus turbinella*), Mojave yucca (*Yucca schidigera*), and sagebrush (*Artemisia tridentata*).

Peninsular juniper woodland and scrub observed on site contains California juniper at greater than 4% absolute cover and lacks pines (*Pinus* sp.). Other commonly occurring species include creosote bush, jointfir (*Ephedra* sp.), goldenbush (*Ericameria* spp.), and snakeweed (*Gutierrezia* sp.). Peninsular juniper woodland and scrub occurs in large patches throughout the study area (predominately found within Survey Areas 2 and 3), totaling 127.06 acres (Figure 3).

Semi-Desert Chaparral (37400)

According to Holland (1986), semi-desert chaparral is similar to northern mixed chaparral (37710), but it is typically not quite as tall (1.5–3 meters, or 4.9–10 feet) and more open. Dominant taxa within this community include *Juniperus* sp., *Eriogonum* sp., and *Opuntia* sp. Characteristic species include chamise, *Arctostaphylos* sp., *Ceanothus* sp., *Quercus* sp., and a variety of other shrubs and subshrubs. This community is found on the high desert plateaus and escarpment of the Peninsular Range in San Diego County associated with drier, cooler winters (Holland 1986).

On site, semi-desert chaparral is found within areas where California juniper is less prominent (less than 4% absolute cover), including areas where California junipers have burned in the past and have not yet recovered. The semi-desert chaparral on site includes creosote bush, jointfir,

goldenbush, cholla, Eastern Mojave buckwheat, and deerweed (*Acmispon glaber*). Semi-desert chaparral is the dominant vegetation community on site, totaling 179.86 acres within the study area (Figure 3).

Sonoran Mixed Woody Scrub (33210)

According to Holland (1986), Sonoran mixed woody scrub is similar to Sonoran mixed woody and succulent scrub (33220) but with additional woody species. Characteristic species include creosote bush, burrobush (*Ambrosia dumosa*), ocotillo, *Opuntia* sp., brittlebush (*Encelia farinosa*), and *Krameria* sp. In San Diego County, this community is associated with lower alluvial fans above the desert floor and below the coarse mountain substrates (Holland 1986).

Sonoran mixed woody scrub on site lack California juniper and are dominated by creosote bush, in addition to other shrub and succulent cover. Other commonly occurring species include jointfir, cholla, goldenbush, snakeweed, and strawberry cactus (*Mammillaria dioica*). Sonoran mixed woody scrub occurs in one small patch comprised of 3.23 acres toward the central portion of the study area (Figure 3).

Upper Sonoran Subshrub Scrub (39000)

Upper Sonoran subshrub scrub is comprised of low, fairly penetrable scrub of soft-wooded, summer-dormant, drought-tolerant shrubs (Holland 1986). It is usually associated with well-drained soils derived from sandstone, shale, or sterile white diatomaceous deposits. In San Diego County, it intergrades with some chaparrals at higher elevations. Dominant vegetation found on site varies but usually includes narrowleaf goldenbush (*Ericameria linearifolia*), Eastern Mojave buckwheat (*Eriogonum fasciculatum* var. *polifolium*), bladderpod spiderflower (*Isomeris arborea arborea*), or California jointfur (*Ephedra californica*) (Holland 1986).

Areas mapped as upper Sonoran subshrub scrub are dominated by Eastern Mojave buckwheat, goldenbush, jointfir, cholla, and deerweed. This area contains native shrub cover but lacks California juniper and creosote bush. Sonoran subshrub scrub occurs in one patch (approximately 3.58 acres) located along the southern portion of the study area (Figure 3).

Urban/Developed (12000)

Urban/developed land refers to areas that have been constructed upon or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large

amount of debris or other materials (Oberbauer et al. 2008). Approximately 3.12 acres of urban/developed areas associated with Old Highway 80 occur within the study area (Figure 3).

QUINO CHECKERSPOT BUTTERFLY SURVEY

Methods

Focused QCB surveys for the entire site were conducted over five visits within a 6-week period between March 14 and April 24, 2013. In order to accommodate for adverse weather conditions (e.g., temperature less than 60°F at ground level on a clear day; temperatures less than 70°F on an overcast or cloudy day; and/or sustained winds greater than 15 miles per hour) experienced during the scheduled survey dates, additional surveys were conducted at the end of the survey period (week 6) for Survey Area 4/week 4, Survey Area 1/week5, and Survey Area 2/week 5. Surveys were conducted by QCB-permitted biologists Anita M. Hayworth, PhD, (TE781084-6); Brock A. Ortega (TE813545-5); Jeff D. Priest (TE840619-2); Kamarul J. Muri (TE051250-0); Paul M. Lemons (TE051248-4; Vipul R. Joshi (TE019949-0) Callie J. Ford (independent investigator; Patricia C. Schuyler (independent investigator); and Tricia L. Wotipka (independent investigator) in accordance with current U.S. Fish and Wildlife Service (USFWS) protocol (USFWS 2002; 67 FR 18355–18395).

The site was divided into four survey polygons, each representing a single-day survey effort (i.e., in accordance with USFWS protocol) (see Table 2, 2013 Quino Checkerspot Butterfly Survey Polygons). These survey areas were numbered and assigned to Dudek's permitted biologists and independent investigators. The biologists were provided with 200-scale (1 inch = 200 feet) aerial photographs of each survey polygon. These photographs were used for mapping host plant populations and QCB, if observed. Binoculars were used to aid in detecting and identifying butterfly and other wildlife species. GPS units also were available for recording locations of host plant populations.

Table 2
2013 Quino Checkerspot Butterfly Survey Polygons

Survey Area	Acreage of Survey Area
1	80
2	85
3	81
4	85

The survey methods consisted of slowly walking roughly parallel transects throughout all potential habitats within the survey area (i.e., all areas that were not excluded per the survey protocol, generally including sage scrub, open chaparral, grasslands, open or sparsely vegetated areas, rocky outcrops, trails, and dirt roads). Survey routes were arranged to thoroughly cover the survey area at a rate of no more than 10–15 acres per hour. After the first week of surveys, areas of thick chaparral were excluded from the survey areas, the polygons were further refined, and survey hours were adjusted accordingly. All wildlife species were recorded and are included in Appendix A.

Surveys were conducted only during acceptable weather conditions (i.e., surveys were not conducted during fog, drizzle, or rain; sustained winds greater than 15 miles per hour measured 4–6 feet above ground level; temperature in the shade at ground level less than 60°F on a clear, sunny day; or temperature in the shade at ground level less than 70°F on an overcast or cloudy day). Survey times, personnel, and conditions during the QCB survey are shown in Table 3, Schedule of Focused Quino Checkerspot Butterfly Surveys and Environmental Conditions. Photocopies of the surveyor's field notes are included as Appendix B.

Table 3
Schedule of Focused Quino Checkerspot Butterfly Surveys and Environmental Conditions

Week	Date	Time	Range of Conditions			Personnel
			Temperature Range (°F)	*Percent Cloud Cover (% cc)*	*Wind (miles per hour (mph))*	
Survey Area 1						
1	3/14/13	09:45–15:05	69–78	0–0	6–8 to 4–6	KJM
2	3/25/13	09:30–15:00	68–72	0–10	2–6 to 6–8	KJM
3	3/29/13	09:30–14:50	66–80	10–80	0–2 to 4–6	TLW
4	4/5/13	09:00–16:00	60–78	10–0	3–5 to 5–10; gusts to 10	BAO
5	*	N/A	N/A	N/A	N/A	N/A
6	4/1913	12:00–16:00	72–75	0–0	4–8 to 4–8	AMH, CJF, PCS
Survey Area 2						
1	3 /14/13	11:00–17:00	79–80	0–0	5–8 to 0–2	TLW
2	3/21/13	09:30–15:30	60–70	30–0	3–6 to 3–6	TLW
3	3/29/13	10:30–16:20	70–73	100–80	3–5; gusts to 10	BAO
4	4/4/13	08:30–14:30	70–80	80–90	0–1 to 3–8; gusts to 10	JDP
5	*	N/A	N/A	N/A	N/A	N/A
6	4/19/13	08:10–12:00	63–72	0–0	4–8 to 4–8, gusts to 11	AMH, CJF, PCS

Table 3
Schedule of Focused Quino Checkerspot Butterfly Surveys and Environmental Conditions

Week	Date	Time	Range of Conditions			Personnel
			Temperature Range (°F)	*Percent Cloud Cover (% cc)*	*Wind (miles per hour (mph))*	
Survey Area 3						
1	3/18/13	09:05–13:00	70–86	30–30	0–1	AMH, CJF, PCS
2	3/25/13	09:20–14:30	66–78	0–0	0–2 to 6–8	TLW
3	4/3/13	08:30–14:15	70–81	0–0	0–2 to 3–4	TLW
4	*	N/A	N/A	N/A	N/A	N/A
5	4/11/13	08:30–16:30	60–74	0–0	1–5; gusts to 10	BAO
6	4/17/13	08:30–14:15	64–73	0–0	0–3 to 1–4; gusts to 7–12	PML
Survey Area 4						
1	3/18/13	13:00–17:00	86–84	5–50	0–5 to 2–6; gusts to 8	AMH, CJF, PCS
2	3/21/13	10:45–16:10	61–71	70–70	4–5 to 3–5	BAO
3	4/2/13	10:00–16:00	64–82	0–0	2–4 to 3–5	VRJ, SKV
4	4/4/13	10:00–15:00	76–76	80–50	5–3 to 3–9, gusts to 10	KJM, SKV, JMW
5	4/11/13	08:45–14:45	75–82	5–0	2–6 to 8–12, gusts to 12–20	JDP

* Survey not conducted due to adverse weather conditions.

AMH = Anita M. Hayworth, PhD (TE-781084-6)
BAO = Brock A. Ortega (TE-813545-5)
JDP = Jeffrey D. Priest (TE-840619-2)
KJM = Kamarul J. Muri (TE-051250-0)
PML = Paul M. Lemons (TE-051248-4)
VRJ = Vipul R. Joshi (TE-019949-0)
PCS = Patricia C. Schuyler
CJF = Callie J. Ford
SKV = Shane Valiere
TLW = Tricia L. Wotipka
JMW = Jonathan M. Walker

RESULTS

No QCB were observed during the 2012 focused survey. Twenty-six butterfly species were observed during the surveys. The weeks in which these butterflies were observed are shown in Table 4, Butterflies Observed on Site. It was not always feasible to distinguish the species of two genera, *Vanessa* and *Anthocharis*; therefore, although these genera are represented in Table 4 below, they are not included in the total butterfly species observed during surveys.

Table 4
Butterflies Observed on Site

Scientific Name	Common Name	Week					
		1 *3/14–3/20*	*2* *3/21–3/27*	*3* *3/28–4/3*	*4* *4/4–4/10*	*5* *4/11–4/17*	*6* *4/18–4/24*
Hesperiidae – Skippers							
Erynnis funeralis	Funeral duskywing	X	X	—	X	—	—
Nymphalidae – Brush-Footed Butterflies							
Danaus plexippus	Monarch	—	—	X	—	—	—
Euphydryas chalcedona	Chalcedon checkerspot	X	X	X	X	X	X
Junonia coenia	Common buckeye	X	X	X	X	X	—
Vanessa sp.	Lady sp.	X	X	X	—	—	X
Vanessa annabella	West coast lady	X	—	X	—	—	—
Vanessa cardui	Painted lady	X	—	—	—	—	—
Lycaenidae – Blues and Hairstreaks							
Callophrys dumetorum	Bramble hairstreak	—	—	X	—	—	—
Callophrys gryneus	Juniper hairstreak	—	X	X	X	X	X
Callophrys gryneus loki	'Loki' juniper hairstreak	X	X	X	—	—	—
Callophrys gryneus thornei	'Thorne's' juniper hairstreak	X	—	—	—	—	—
Callophrys perplexa	Perplexing (green) hairstreak	X	X	X	—	—	—
Glaucopsyche lygdamus	Silvery blue	X	—	X	—	—	—
Glaucopsyche lygdamus australis	Southern blue	X	—	—	—	—	—
Plebejus acmon	Acmon blue	—	X	X	—	—	—
Papilionidae – Swallowtails							
Papilio polyxenes coloro	Desert black swallowtail	X	—	—	—	—	—
Papilio rutulus	Western swallowtail	X	—	—	—	—	—
Papilio zelicaon	Anise swallowtail	X	X	X	X	X	—
Peiridae – Whites and Sulfurs							
Anthocharis sp.	Orangetip sp.	X	X	—	X	—	—
Anthocharis sara	Sara orangetip	X	X	X	X	X	—
Anthocharis cethura	Desert orangetip	X	—	—	—	—	—

Table 4
Butterflies Observed on Site

Scientific Name	Common Name	Week 1 3/14–3/20	2 3/21–3/27	3 3/28–4/3	4 4/4–4/10	5 4/11–4/17	6 4/18–4/24
Colias eurydice	California dogface	—	—	X	X	X	—
Colias eurytheme	Orange sulphur	—	—	—	X	X	—
Colias harfordi	Harford's Sulfur	—	—	X	—	—	—
Euchloe hyantis	Pearly marble	—	X	X	X	—	—
Euchloe lotta	Desert marble	—	—	—	—	—	X
Pontia protodice	Common white	—	X	X	X	X	—
Riodinidae – Metalmarks							
Apodemia virgulti	Behr's metalmark	X	X	—	X	—	—

No QCB larval host plants were observed within the study area during focused surveys. Table 5, QCB Larval Food and Adult Nectar Plants, includes the known and observed adult QCB nectar plants (according to Mattoni et al. 1997; USFWS 2002, 2003; 67 FR 18355–18395). Larval host plants are also included in Table 5 and are in bold print.

Table 5
QCB Larval Food and Adult Nectar Plants[1]

Scientific Name	Common Name	Observed During Focused Survey
Apiaceae – Carrot Family		
Lomatium dasycarpum ssp. *dasycarpum*	woolly-fruit lomatium	—
Lomatium utriculatum	common lomatium	—
Asteraceae – Sunflower Family		
Achillea millefolium	yarrow, milfoil	—
Lasthenia californica	common goldfields	X
Lasthenia coronaria	southern goldfields	—
Layia platyglossa	common tidy tips	—
Boraginaceae – Borage Family		
Amsinckia menziesii	rancher's fireweed	X
Amsinckia menziesii var. *intermedia*	rancher's fiddleneck	—
Amsinckia menziesii var. *menziesii*	rigid fiddleneck	—
Cryptantha spp. or *Plagiobothrys* spp.	popcorn flower	X
Fabaceae – Pea Family		
Lotus spp.	deerweed, spanishclover, lotus	X

Table 5
QCB Larval Food and Adult Nectar Plants[1]

Scientific Name	Common Name	Observed During Focused Survey
Hydrophyllaceae – Waterleaf Family		
Eriodictyon crassifolium var. *crassifolium*	thickleaf yerba santa	—
Eriodictyon trichocalyx var. *trichocalyx*	hairy yerba santa	—
Phacelia distans	wild-heliotrope	X
Lamiaceae – Mint Family		
Salvia columbariae	chia	—
Plantaginaceae – Plantain Family		
Plantago erecta[2]	dot-seed plantain	—
Plantago patagonica	woolly plantain	—
Polemoniaceae – Phlox Family		
Gilia angelensis	grassland gilia	—
Gilia capitata ssp. *abrotanifolia*	ball gilia	—
Linanthus spp.	ground pink	X
Polygonaceae – Buckwheat Family		
Eriogonum fasciculatum var. *foliolosum*	California buckwheat	X
Scrophulariaceae – Figwort Family		
Antirrhinum coulterianum	Coulter's snapdragon	—
Castilleja exserta	common owl's-clover	—
Collinsia sp.	Chinese houses	—
Cordylanthus rigidus ssp. *setiger*	dark-tipped bird's-beak	—
Keckiella antirrhinoides var. *antirrhinoides*	yellow bush-penstemon	—
Keckiella cordifolia	climbing bush penstemon	—
Liliaceae – Lily Family		
Allium haematochiton	red-skin onion	—
Allium peninsulare	red-flower onion	—
Allium praecox	early onion	—
Dichelostemma capitatum	blue dicks	—
Muilla clevelandii	San Diego goldenstar	—
Muilla maritima	common muilla	—

[1] List derived from Mattoni et al. 1997; USFWS 2002, 2003; 67 FR 18355–18395 (for *Euphydryas editha*).
[2] Plants listed in **bold** print are known QCB larval host plant species.

Dudek certifies that the information in this survey report and attached exhibits fully and accurately represents the work conducted by the QCB-permitted biologists who conducted this focused survey.

Please feel free to contact me at 760.479.4254 or bortega@dudek.com if you have any questions regarding the contents of this report.

Sincerely,

Paul M. Lemons	Brock A. Ortega	Anita M. Hayworth
Permit #TE051248-4	Permit #TE813545-5	Permit #TE781084
Kamarul J. Muri	Jeffrey D. Priest	Vipul R. Joshi
Permit # TE051250-0	Permit #TE840619-2	Permit # TE019949-0

Att: Figure 1, Regional Map
Figure 2, Vicinity Map
Figure 3, Biological Resources
Appendix A – List of Wildlife Species Observed during the 2013 Jacumba Solar Energy Project QCB Survey
Appendix B – 2013 Jacumba Solar Energy Project QCB Survey Field Notes

cc: Andy Flajole, NextEra Energy
David Hochart, Dudek

REFERENCES CITED

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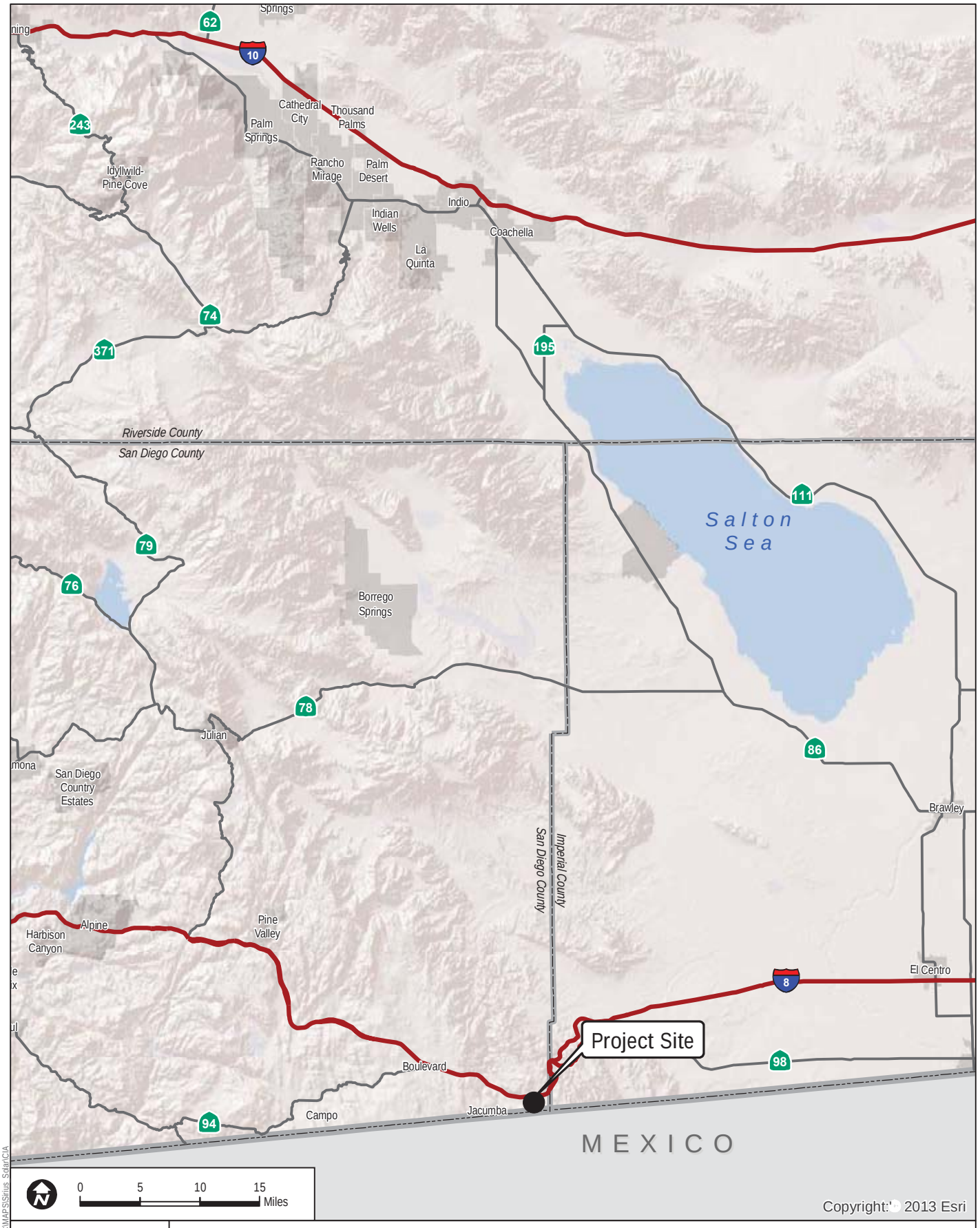


DUDEK

7524

FIGURE 1

Regional Map

Jacumba Solar Energy Project

Z:\Projects\7259011\MAPDOC\MAPS\Sirius Solar\CIA

DUDEK

7524

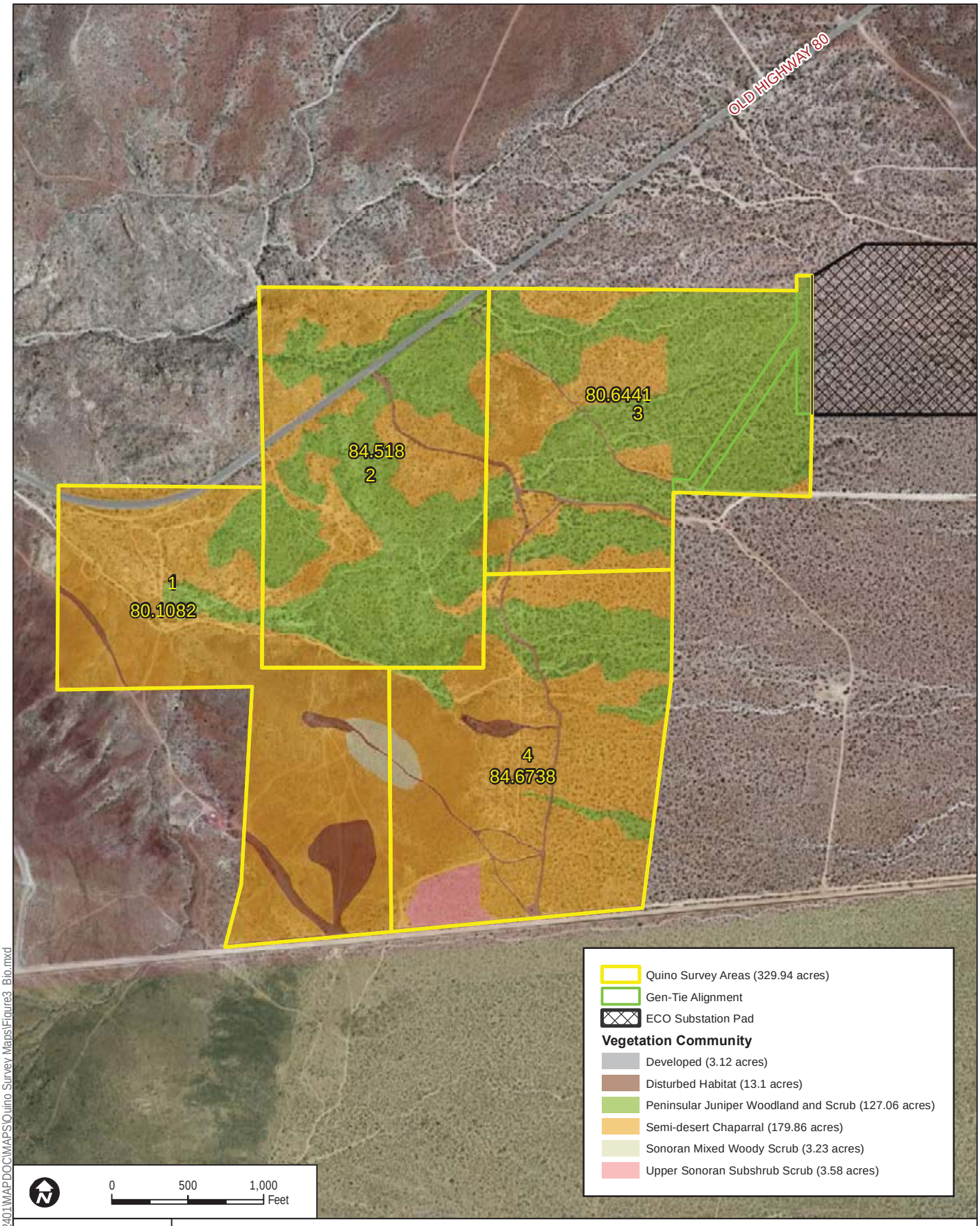
SOURCE: Bing 2012

FIGURE 2

Vicinity Map - Project Site

Jacumba Solar Energy Project

Z:\Projects\7259011\MAPDOC\MAPS\Sirius Sabal\CIA



Path: Z:\Projects\7752401\MAPDOC\MAPS\Quino Survey Maps\Figure3_Bio.mxd

DUDEK

7525

AERIAL SOURCE: ESRI 2013

FIGURE 3

Total Project Area - Quino Survey Index Map

Jacumba Solar Energy Project

APPENDIX A

List of Wildlife Species Observed during the 2013 Jacumba Solar QCB Survey

APPENDIX A
List of Wildlife Species Observed during the 2013 Jacumba Solar QCB Survey

WILDLIFE SPECIES – VERTEBRATES

REPTILES

***VIPERIDAE* – VIPERS**

Crotalus oreganus helleri – southern pacific rattlesnake

***IGUANIDAE* – IGUANID LIZARDS**

Aspidoscelis tigris – western whiptail
Petosaurus mearnsi – banded rock lizard
Sceloporus occidentalis – western fence lizard
Sceloporus orcutti – granite spiny lizard
Uta stansburiana – side-blotched lizard

BIRDS

***ACCIPITRIDAE* – HAWKS**

Buteo jamaicensis – red-tailed hawk

***AEGITHALIDAE* – BUSHTITS**

Psaltriparus minimus – bushtit

***ALAUDIDAE* – LARKS**

Eremophila alpestris – horned lark

***APODIDAE* – SWIFTS**

Aeronautes saxatalis – white-throated swift

***CAPRIMULGIDAE* – GOATSUCKERS**

Chordeiles minor– common nighthawk

***CATHARTIDAE* – NEW WORLD VULTURES**

Cathartes aura – turkey vulture

***COLUMBIDAE* – PIGEONS AND DOVES**

Zenaida macroura – mourning dove

***CORVIDAE* – JAYS AND CROWS**

Aphelocoma californica – western scrub-jay
Corvus corax – common raven

***CUCULIDAE* – CUCKOOS AND ROADRUNNERS**

Geococcyx californianus – greater roadrunner

***EMBERIZIDAE* – BUNTINGS AND SPARROWS**

Amphispiza belli – sage sparrow
Amphispiza bilineata – black-throated sparrow
Chondestes grammacus – lark sparrow
Junco hyemalis – dark-eyed junco
Pipilo crissalis – California towhee
Pipilo maculatus – spotted towhee
Spizella breweri – Brewer's sparrow
Spizella passerina – chipping sparrow
Zonotrichia leucophrys – white-crowned sparrow

***FRINGILLIDAE* – FINCHES**

Carpodacus mexicanus – house finch

***ICTERIDAE* – BLACKBIRDS AND ORIOLES**

Icterus parisorum – Scott's oriole

***MIMIDAE* – THRASHERS**

Mimus polyglottos – northern mockingbird
Toxostoma redivivum – California thrasher

***ODONTOPHORIDAE* – NEW WORLD QUAIL**

Callipepla californica – California quail

***PARULIDAE* – WOOD WARBLERS**

Setophaga nigrescens – black-throated gray warbler

***PICIDAE* – WOODPECKERS**

Picoides nuttallii – Nuttall's woodpecker

***PTILOGONATIDAE* – SILKY-FLYCATCHERS**

Phainopepla nitens – phainopepla

***SYLVIIDAE* – GNATCATCHERS**

Polioptila caerulea – blue-gray gnatcatcher
Polioptila melanura – black-tailed gnatcatcher

***TIMALIIDAE* – LAUGHINGTHRUSH AND WRENTIT**

Chamaea fasciata – wrentit

***TROCHILIDAE* – HUMMINGBIRDS**

Calypte costae – Costa's hummingbird

***TROGLODYTIDAE* – WRENS**

Campylorhynchus brunneicapillus – cactus wren
Salpinctes obsoletus – rock wren
Thryomanes bewickii – Bewick's wren

***TURDIDAE* – THRUSHES**

Turdus migratorius – American robin

***TYRANNIDAE* – TYRANT FLYCATCHERS**

Myiarchus cinerascens – ash-throated flycatcher

MAMMALS

***CANIDAE* – WOLVES AND FOXES**

Canis latrans – coyote

***GEOMYIDAE* – POCKET GOPHERS**

Thomomys bottae – Botta's pocket gopher

***HETEROMYIDAE* – POCKET MICE AND KANGAROO RATS**

Dipodomys sp. – kangaroo rat

***LEPORIDAE* – HARES AND RABBITS**

Lepus californicus – black-tailed jackrabbit
Sylvilagus audubonii – desert cottontail
Sylvilagus bachmani – brush rabbit

***MURIDAE* – RATS AND MICE**

Neotoma sp. – woodrat sp.

***SCIURIDAE* – SQUIRRELS**

Ammospermophilus leucurus – white-tailed antelope ground squirrel
Spermophilus beecheyi – California ground squirrel
Tamias sp. – chipmunk

WILDLIFE SPECIES – INVERTEBRATES

ANTS, BEES, WASPS, AND HORNETS

***FORMICIDAE* – ANTS**

Pogonomyrmex sp. – harvester ant

BUTTERFLIES AND MOTHS

***ARCTIIDAE* – TIGER AND LICHEN MOTHS**

Arctia caja – tiger moth

***HESPERIIDAE* – SKIPPERS**

Erynnis funeralis – funereal duskywing

***LYCAENIDAE* – BLUES, HAIRSTREAKS, AND COPPERS**

Callophrys dumetorum – bramble hairstreak
Callophrys dumetorum perplexa – perplexing (green) hairstreak
Callophrys gryneus – juniper hairstreak
Callophrys gryneus loki – 'loki' juniper hairstreak
Callophrys gryneus thornei – 'Thorne's' juniper hairstreak
Glaucopsyche lygdamus – silvery blue
Glaucopsyche lygdamus australis – southern blue
Plebejus acmon – acmon blue

***NYMPHALIDAE* – BRUSH-FOOTED BUTTERFLIES**

Euphydryas chalcedona – chalcedon checkerspot
Danaus plexippus – monarch
Junonia coenia – common buckeye
Vanessa sp. – lady
Vanessa annabella – west coast lady
Vanessa cardui – painted lady

***PAPILIONIDAE* – SWALLOWTAILS**

Papilio polyxenes coloro – desert black swallowtail
Papilio rutulus – western tiger swallowtail
Papilio zelicaon – anise swallowtail

***PIERIDAE* – WHITES AND SULFURS**

Anthocharis sp. – orangetip sp.
Anthocharis sara – Sara orangetip
Anthocharis cethura – desert orangetip
Colias eurydice – California dogface
Colias eurytheme – orange sulphur
Colias harfordi – Harford's Sulfur
Euchloe hyantis – pearly marble
Euchloe lotta – desert marble
Pontia protodice – common white

***RIODINIDAE* – METALMARKS**

Apodemia mormo virgulti – Behr's metalmark

* Signifies introduced (non-native) species

INTENTIONALLY LEFT BLANK

APPENDIX B

2013 Jacumba Solar QCB Survey Field Notes

3/21/13 Jacumba 4 BAD

~~[illegible]~~ 1045 - 1610

high clouds

5mph - 3/5

61° - 71°

ephedra, erodium

Juniper

interesting buckwheats

Juniper, few creosote

fiddleneck

Jojoba

CATH BTSP

NOMO BGGN

POGO

HOFI

BTJR

Pogono ants = ^coast^ Horned lizard pot.

unop.

Kangaroo rats

CAQU

Coyote scat

horse tracks

woodrat midden in a creosote bramble

desert cottontail

Termites = whiptail pot.

TUVU

LASP

ANise swallowtail 1 ^(1230)^ ||||

Antelope GS

Sage SP verdin!

Bl Throated SP.

Perplex H.S. ||

Juniper H.S. |

CORA

Orange tip |||| ||

Funereal Dw |||

Common white ||||

Few butterflies

many more heading west.

3/29/13 Jacumba Area 2

BAO

1030 - 1620

100% - 60%

70° - 73° F

3 - 5 mph gusts to 10 mph

CATO	Sara orangetip IIII
WCSP	Anise swallowtail II
RTHA	pearly marble IIII
MODO	common white III
NOMO	Chalcedon C.S. III
DEJU	green hairstreak IIII
BUSH	Juniper hairstreak VII
Antelope ground sq	Acmon blue II
cottontail	Monarch
BTJR	
LOSH	
TUVU	
BTSP	
coyote	
woodrat middens	
PHAI	
CORA	
CAQU	

4/5/13 Jacumba
BAD Area 1

09:00	60°F	3-5 mph	clr
11:30	73°F	5-10 mph	clr
16:00	78°F	3-5 gusts to 10	clr

woodrat midden
Pogonomyrex sp.
btJR
western whiptail
CAQU
BTSP
CATO
SPTO
CAS
Antelope G.S.
BTJR
CORA
CATH
GRRO
cottontail

II chalcedon checkerspot II
Funereal duskywing ||||| ||||| II
Orangetip ||||| ||||| ||||| II
Pearly marble III
Juniper Hairstreak VV II
sulphur II
Cal dogface I
Cal buckeye III

BAO Jacumba 3

4/11/2013 0830-1630

60°F - 74°F

clr - clr

1-5 mph w/ gusts to 10 mph

Sara's orangetip |||| ||
Marble |||
Anise swallowtail |||
chalcedon ||
buckeye |||
blue sp ||||
Juniper hairstreak |||| |||| |||
Cal. dogface ||

RTHA	CAWR (heard)
CATO	BUSH
HOFI	NUWO
CORA	Antelope g.s.
BTSP	cottontail
WCSP	coyote (trks)
REWR	CLS.
So. Pac. diamondback	
fence lizard	BTJR
GRRO	
MOD O	

1200	1600	4/19/2013
Ta 73	77	Jacumba
Tg 72	75	Area 1
0%cc	0	GCB
4-8 mph	4-8	

Juniper hairst. III
Lady Sp 1

BTSP CAAH
CORA CATO
CHSP RTHA
~~ATFL~~ HOLA (several randomly located)
~~BEWR~~

BTJR

Nectar – all dried up similar to area 2 on this date. Lasthenia dried or gone. Shrubs done flowering.
No host plant

14

0810	1200	4/19/2013
Ta 60	73	Jacumba
Tg 63	72	QCB
4-8 mph	4-8 w gusts to 11	Area 2
0% cc	0 cc	

CATO	BRSP	CATH
BUSH	CHSP	DEJU
BTJR-M	WCSP	BEWR
BTSP	HOLA	RTHA
Sideblotch-R	CORA	ATFL
And cottontail-M		SCOR
		COHU

Lasthenia dried up

Host plant: Not observed
Nectar source: very limited Lasth is dry and no other observed except agave. Shrub & ann. inflor are all or almost dried.

Lady Sp. 1
Desert Marble 11

0945 — 3/18

Jacumba 3

68 T_A

70 T_g → 1300

30% cc

0-1 wind — 84 T_A 86 T_g

Sara O'tip ||

Southern Blue || (I think)

Behr's metalmark |

Lady sp (fast flying) |

Anise (small) |||

Funeral duskwing ||

Thornes (pin) 2,1

Desert orange tip |||

BTSP DEJU

CORA WCSP

BUSH BGGN

fiddleneck - small very few just starting bloom

erodium in bloom

1300
84 TA 86 Tg
5% CC
0-5 MPH

Sara
Orang tip III
Desert O'tip IIII
Anise I
Lady Sp I

3/18
Jacumba 4

1700
2-6 gusts to 8
50 % CC
Ta 80 Tg 84

Red soil - Lasthenia blooming very open with large gravel / rock
Rest of soil granitic. lots of dead shrubs. Very open

DEJU
HOLA
CHSP
CORA
NOMO

Jacumba BCB Area 2 3/21/13

TLW

S: 0930 E: 1530

high clouds clear skies

winds 3-6mph winds 3-6mph

60°F 70°F

BTSP juniper nectar source

NOMO deerweed

CAQU buckwheat

juniper HS ephedra

Sara's OT

Behr's mm

chipmunk

CORA

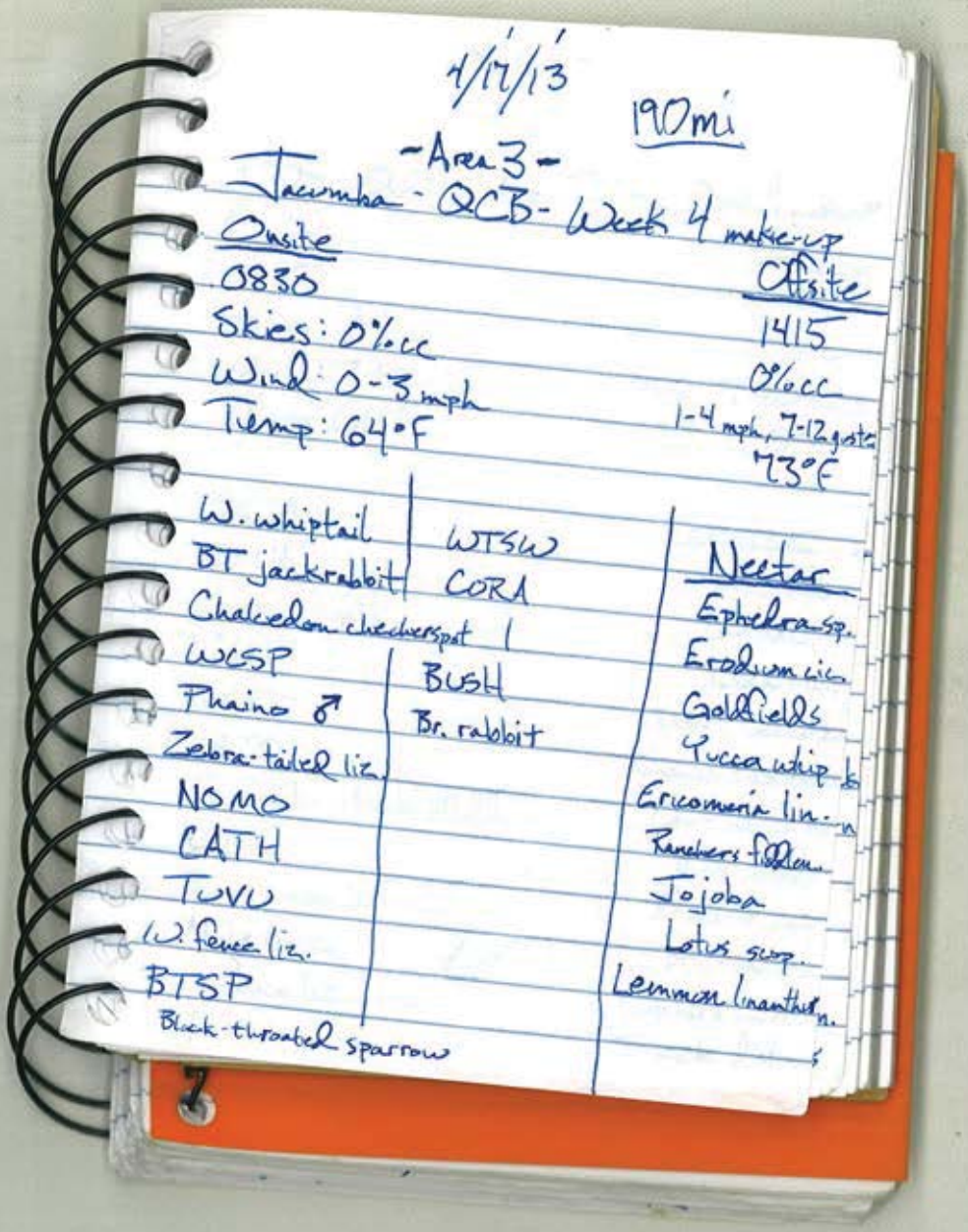
HOFI

TUVU

desert cottontail rabbit

black-tailed jackrabbit

BTGW (black-throated gray warbler)



4/12/13 190mi

-Area 3-

Jacumba - QCB - Week 4 make-up

Onsite
0830
Skies: 0% cc
Wind: 0-3 mph
Temp: 64°F

Offsite
1415
0% cc
1-4 mph, 7-12 gusts
73°F

W. whiptail WTSW
BT jackrabbit CORA
Chalcedon checkerspot
WCSP
Phaino ♂ BUSH
Zebra-tailed liz. Br. rabbit
NOMO
CATH
TUVU
W. fence liz.
BTSP
Black-throated sparrow

Nectar
Ephedra sp.
Erodium cic.
Goldfields
Yucca whip
Ericomeria lin.
Rancher's fireweed
Jojoba
Lotus scop.
Lemmon linanthus

Jacumba Solar- Area 2 [illegible]

TLW

S: 1100
clear
air 79°F, ground 76°F
5-8mph

E: 1700
clear
80°F ground, 84° air
< 2 mph

WCSP

SCJA
western tiger swallowtail
[illegible]
Swift
Sara's orangetip
Black-tailed jackrabbit
[illegible]
painted lady
anise swallowtail
CORA
green hairstreak
chalcedon checkerspot
NOMO
w. fence lizard
BTSP

Jacumba Solar Area 3 - QCB Surveys 3/25/13

S: 920
clear skies
winds < 2mph
60°F air, 64°F ground

Black-tailed jackrabbit
BTSP
Juniper "loki" hairstreak
pearly marble
PHAI
SCJA
Blue sp. unknown
Sara's orangetip
green hairstreak
anise swallowtail
br. rabbit
BUSH
TUVU
CATH
WCSP

1430
clear skies
winds 6-8mph
78°F air, 78°F ground

Nectar:
goldfields
ephedra sp.
yucca whip.
lot sco
amsinckia sp.
erodium cic.

Jacumba Solar BUB Area 1 3/21/13
TLW

S: 0930
10% cc
winds < 2mph
air temp 65°F; ground 66°F

1450
hazy
winds 4-6 mph
air temp 78°F; ground 80

CAQU
BTSP
anise swallowtail
black-tailed jackrabbit
brush rabbit
CAWR
chalcedon checkerspot
juniper "Loki" hairstreak
pearly marbles

Nectar sources:
yucca whip
goldfields
ero cic

Jacumba Solar Area 3 - Quinc 4/3/13

TLW

S: 0830
clear skies
winds < 2mph
65°F air; 70°F ground

BTSP
black-tailed jackrabbit
loki hairstreak
Sara's orangetip
Harford's sulfur
California dogface
HuFl
MoDo
CoRa
TLW

E: 1415
clear skies
winds 3-4mph
81°F air; 81°F ground

goldfields are in bloom
Other nectar sources are low.

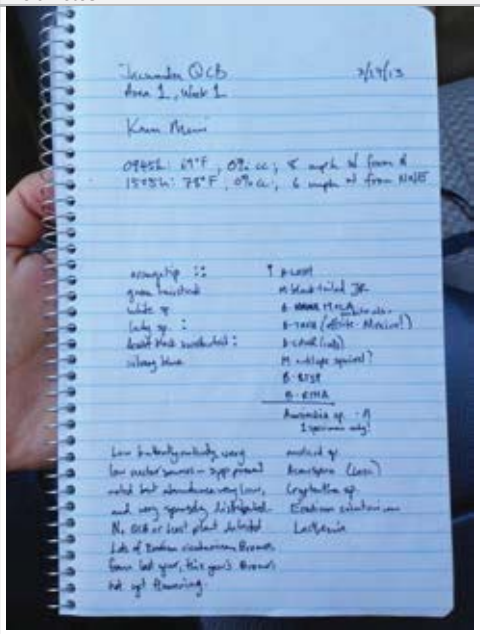
DUDEK Field Data Report

Dudek Survey Log

Record: 185	
Surveyor	*kmuri@dudek.com*
Surveyor(s)	*Kamarul Muri*
Surveyor (other)	*Kamarul Muri*
Survey Date	*2013-03-14*
Project Name Other	*Jacumba Solar*
Survey Area	*1*
Survey Type Other	*QCB*
iForm Survey Notes	*See field map for special status spp locations: B-LOSH, B-HOLA, M-BTJR.*
Additional Notes?	*Capture hand-written field notes, Capture hard-copy map data*

Start	
Start Time	*09:45:00*
Temperature	*69*
Cloud Cover	*0*
Wind Speed	*8*
Wind Direction	*N*

End	
End Time	*15:05:00*
Temperature	*78*
Cloud Cover	*0*
Wind Speed	*6*
Wind Direction	*N*

Hand-written Field Notes	
Description	*Field notes*
Capture Image	

Hard-copy Map Data	
Description	*Special staus spp locations*
Capture Image	

Hard-copy Map Data	
Description	*Special status spp locations*
Capture Image	

DUDEK Field Data Report

Dudek Survey Log

Record: 190	
Surveyor	*kmuri@dudek.com*
Surveyor(s)	*Kamarul Muri*
Surveyor (other)	*Kamarul Muri*
Survey Date	*2013-03-25*
Project Name Other	*Jacumba Solar Project*
Survey Area	*1*
Survey Type Other	*QCB*
Additional Notes?	*Capture hand-written field notes*

Start	
Start Time	*09:30:00*
Temperature	*68*
Cloud Cover	*0*
Wind Speed	*2*
Wind Direction	*N*
Notes	*Winds from N, kicked up to 8 mph by 10:00 am.*

End	
End Time	*14:55:00*
Temperature	*72*
Cloud Cover	*10%*
Wind Speed	*8*
Wind Direction	*N*

Hand-written Field Notes	
Description	*Page 1 of 1*
Capture Image	

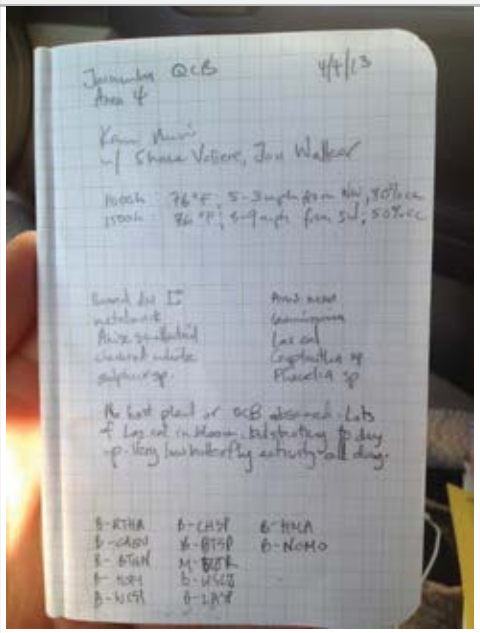
DUDEK Field Data Report

Dudek Survey Log

Record: 202	
Surveyor	*kmuri@dudek.com*
Surveyor(s)	*Kamarul Muri, Other*
Surveyor (other)	*Shane Valiere, Jon Walker*
Survey Date	*2013-04-04*
Project Name Other	*Jacumba Solar*
Survey Area	*Area 4*
Survey Type Other	*QCB*
Additional Notes?	*Capture hand-written field notes*

Start	
Start Time	*10:00:00*
Temperature	*76*
Cloud Cover	*80%*
Wind Speed	*5*
Wind Direction	*NW*

End	
End Time	*15:00:00*
Temperature	*76*
Cloud Cover	*50%*
Wind Speed	*9*
Wind Direction	*SW*

Hand-written Field Notes	
Description	
Capture Image	

2 Apr 13 Jacumba QCB Survey Area 4
Week 3

w/ Shane Valiere

1000	1600
0% clouds	0% clouds
2-4 mph winds	3-5 mph
64°	82°

Flowering plants + butterflies

Lus cal.
Ero cic.
Amsg men.
Cryp. sp.
Phacel. sp.

west coast lady - 1
sara's orangetip - III
Bramble hairstreak - III
lady sp. - 1
silvery blue - 1
skipper sp - black - 1

4/4/13 Jacumba QCB #2 (JDP)
0700 – 1600 (SKF) miles: ~~26~~ 6
@Site: 0830 – 1430
Env: 0830; 80% CC; W 0-1; Ground 70°F; Air 71°F
1100; W 3-8; 90% CC; Ground 80°F; Air 74°F.
1315; Ground 80°F; W 3-6, gusts to 10 mph; 90% CC
→ Air 74°F
1430; 90% CC; W 3-6 g to 10; 80°F. Ground; Air 74°F
- More flowers, butterflies, hilltops/ridges/topo features North of HWY than on South side.

Juniper HS
Com. W.
Bher's mm
Chalcedon ck.
Tiger Moth
Fun. Skip.
Sara OT
Blue (large sp.) fly-by

B-Com. night hawk
B-TUVU; B-HOFI
M-BTJR; R-S-b. liz
B-BTGW; B-CORA
Black-throated grey warbler
M-Chipmunk; M-B.p.sq (Black/white striped tail; 1 white later stripe/lat. view)
B-ROWR; B-MGDO
R-Gran. spiny liz.

Goldfields (f) scattered
Yucca (f)
Eriodictyon (f)
Eaton broom (b)
Overall flowers are sparse throughout South side
Juniper (some berries) (limited individuals)
Rattlesnake eggs (f)
Wishbone bush (f)
Buckwheat sp. (b)
Deerweed (b)
Indian p-b. (f)

Review collard liz. in region
(black collar; tail: cream/black banded body/head = tan overall + irregular brown bands. photos)

R-Banded Rock Lizard
Liz Boulders North of HWY
B-CAQU

M-Bobcat (v!) + (sc)
M-Coyote (sc)
M-Des. cottontail-sab.

4/11/13 Jacumba 4 QCB Survey (JDP)

miles: ~~15 9~~

0715-1615 (9hr)

0845-1445

Env: W2-6 ; 5%CC; Air 69°F; ground 75°F

1100; W3-8, gusts to 12; Air 74°F; 5%CC; ground 77°F
(highest ridge point in survey area on hill)

1300; W5-12, gusts to 18 mph; 0%CC; Air 78°F; Ground 83°F

1445; W8-12, gusts 12-20 mph; 0%CC; Air 78°F; Ground 82°F

Com W. ::	B-NOMO; B-HOFI	Goldfields (f - drying some)
Orange sulphur •	M-BTJR; B-CORA	Erodium (f) - drying (most)
Juniper HS :•	B-CAQU; B-PHAIN	Yucca (f)
	B-AMKE; B-CONH	Scale broom (f/fr)
	M-Coyote (sc); M-K-rat (sign - tds)	rattlesnake eyes (f)
	B-TUVU	
	B-Owl pellet (sp)	
	R-WWT; B-CATO	
	B-WREN; M-Neotoma sp. (middens)	

Quino - Jacumba Solar 4/2/13

start = 1000 end = 1600
wind = 2-4 mph cloud = 25%
Temp. = 64° F wind = 3-5 mph
Cloud = <25% cloud = <5%

Surveyors - Shane Valiere
- Vipul Joshi

Potential Nectaring plants
- Boundary Goldenbush (Ericameria brachylepis)
- Goldfields (Lasthenia spp.)

Butterflies

11 Sara's Orangetip
111 Green Hairstreak
1 Anise or Desert Swallowtail
1 Loki Hairstreak
1 Unidentified Blue - Potentially Silvery Blue

APPENDIX I

Jacumba Solar
Biological Open Space Memorandum

DUDEK

MAIN OFFICE
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 760.942.5147 T 800.450.1818 F 760.632.0164

MEMORANDUM

To: Ashley Gungle, San Diego County Planning and Land Use
From: David Hochart, Brock Ortega, Dudek
Subject: Jacumba Solar Biological Open Space Memorandum
Date: June 21, 2013
Attachment(s): Figures 1–6

INTRODUCTION

Aries Solar Holding, LLC is in the process of evaluating the environmental effects related to development of a 108-acre solar development project within a 305-acre ownership in southeastern San Diego County (Figures 1 and 2). This includes development of the solar farm and the associated gen-tie line, and all construction related disturbances as seen in Figure 3. To satisfy habitat loss mitigation requirements for the development of solar facilities on this Project, Aries Solar Holding, LLC is proposing to balance development with on-site preservation of habitat – providing a contiguous block of habitat. In order to locate and characterize natural communities, including habitats for special-status species within the biological open space (BOS), Dudek conducted vegetation mapping in accordance with the County of San Diego Report Format and Content Requirements (County of San Diego 2010a). This memo provides the results of the vegetation mapping and outlines the potential for special-status plant and wildlife species to occur within the BOS. The memo also includes an overall assessment of habitat function and value within the BOS.

ENVIRONMENTAL SETTING (EXISTING CONDITIONS)

The BOS is undeveloped and on-site elevation ranges from approximately 3,010–3,160 feet above mean sea level (amsl). The site is located 3.5 miles east of the community of Jacumba, south of Old Highway 80 (the highway traverses the northern portion of the site), and north of the international border (see Figure 2). The site is generally flat except for a low hill near its southwest corner, and several unvegetated channels generally flow to the northwest across the site. The project will include an interconnection to San Diego Gas & Electric's (SDG&E's) ECO Substation located approximately 1,000 feet to the east of the project site (see Figure 3). Land use on site, and in the surrounding areas, consists of open space in both private and federal lands holdings (Figure 3). BLM lands are adjacent to the project limits and a 500 kV substation is currently under construction to the east. A portion of BOS borders Mexico and is

separated by the International Border Fence (fence). There are breaks in the fence about 1,300 feet west of the Project within BLM lands, and approximately 3,000 feet to the east that allow for north/south wildlife movement. The mitigation site is generally within the Peninsular Range in a transitional area between the coast and the desert. It is in a dry climate with average temperatures near the community of Jacumba ranging from approximately 34–94°F. This community generally receives an average rainfall of less than 15 inches per year (Western Regional Climate Center 2012).

VEGETATION COMMUNITIES

On-Site Vegetation Communities

Vegetation communities and land uses on and within 100 feet of the site were mapped in the field directly onto a 200-foot-scale (1 inch = 200 feet), aerial photograph–based field map of the mitigation site. Following completion of the fieldwork, all vegetation polygons were transferred to a topographic base and digitized using ArcGIS and a geographic information system (GIS) coverage was created. Once in ArcGIS, the acreage of each vegetation community and land cover present on site was determined.

Consistent with the latest County of San Diego *Report Format and Content Requirements: Biological Resources* (County of San Diego 2010a), vegetation community classifications used in this report follow Holland (1986) and Oberbauer et al. (2008), where feasible, with modifications to accommodate the lack of conformity of the observed communities to those of Holland (1986) or Oberbauer et al. (2008). Biologists conducted vegetation mapping using the *Draft Vegetation Communities of San Diego County* (Oberbauer et al 2008), which is a local (i.e., San Diego County) refinement of the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). The *Manual of California Vegetation* (2nd edition) (MCV2; Sawyer et al. 2009) was utilized as an additional reference to help determine characteristics (such as percentage species cover) of various classifications.

Biologists mapped 22 1-acre plots within the project boundary in order to determine the percent cover of California juniper (*Juniperus californica*). Each California juniper was mapped using a Trimble GeoXH GPS unit and the diameter of each tree was recorded. In addition, other shrubs were GPS'd in 2 of the plots in order to provide a comparison of the California junipers and other shrubs on site. The data recorded was then used to calculate the percent cover of California junipers within each 1-acre plot. The purpose of this exercise was to provide guidance for updating the vegetation map, specifically regarding Peninsular Juniper Woodland and Scrub. Following this, Dudek met with the County of San Diego in order to determine the best approach to mapping the Peninsular Juniper Woodland and Scrub. The County agreed that areas with ≥4%

cover of California juniper will be mapped as Peninsular Juniper Woodland and Scrub. The additional data collected provided enough information to determine which areas met these mapping requirements for areas considered Peninsular Juniper Woodland and Scrub and other vegetation communities.

Five plant communities and land cover types were mapped by Dudek within the Project area and BOS, including: disturbed land, Peninsular juniper woodland and scrub, semi-desert chaparral, Sonoran mixed woody scrub, and upper Sonoran subshrub scrub. The acreages of each community type within the project site are shown in Table 1. Descriptions of each vegetation community (with Holland numeric codes) are provided following Table 1. Their spatial distributions are presented on Figure 4.

Table 1
Vegetation Communities and Land Cover Types

Habitat Types/Vegetation Communities	Code[1]	Existing Acreage
Upland Scrub and Chaparral		
Sonoran Mixed Woody Scrub*	33210	3.2
Semi-Desert Chaparral*	37400	179.4
Upper Sonoran Subshrub Scrub*	39000	3.6
Upland Woodland and Savannah		
Peninsular Juniper Woodland and Scrub*	72320	103.3
Non-Native Communities and Land Covers		
Disturbed Land	11300	13.2

Note: The above acreages do not include the gen-tie alignment.
[1] Holland (1986) as modified by Oberbauer et al. (2008)
* Considered special-status by the County (2010b).

Disturbed Land (11300)

Disturbed land refers to areas that have been permanently altered by previous human activity that has eliminated all future biological value of the land for most species. The native or naturalized vegetation is no longer present and the land lacks habitat value for sensitive wildlife, including potential raptor foraging.

Disturbed land found throughout the study area consists primarily of unpaved roads (Figure 4). These roads have been graded and contain little native vegetation. Disturbed land is scattered in various locations throughout the study area.

Peninsular Juniper Woodland and Scrub (72320)

Peninsular juniper woodland and scrub consists of relatively dense pinon woodland dominated by Parry pinyon (*Pinus quadrifolia*), with California juniper (*Juniperus californica*) occurring within xeric sites below the trees dripline. This community occurs in alluvial fans and desert slopes that are slightly lower and more xeric than the peninsular pinon woodland community (72310), with which it intergrades (Holland 1986). Other dominant species include: Parry's beargrass (*Nolina parryi*), Sonoran scrub oak (*Quercus turbinella*), Mojave yucca (*Yucca schidigera*), and sagebrush (*Artemisia tridentata*).

Peninsular juniper woodland and scrub observed on site contains California juniper at greater than 4% absolute cover and lacks pines (*Pinus* sp.). Other commonly occurring species include creosote bush, jointfir (*Ephedra* sp.), goldenbush (*Ericameria* spp.), and snakeweed (*Gutierrezia* sp.). Peninsular juniper woodland and scrub occurs in large patches throughout the study area (Figure 4).

Semi-Desert Chaparral (37400)

According to Holland (1986), semi-desert chaparral is similar to northern mixed chaparral (37710), but it is typically not quite as tall (1.5–3 m) (4.9–10 feet) and more open. Dominant taxa within this community include *Juniperus* sp., *Eriogonum* sp., and *Opuntia* sp. Characteristic species include chamise, *Arctostaphylos* sp., *Ceanothus* sp. *Quercus* sp. and a variety of other shrubs and subshrubs. This community is found on the high desert plateaus and escarpment of the Peninsular Range in San Diego County, associated with drier, cooler winters (Holland 1986).

On site, semi-desert chaparral is found within areas where California juniper is less prominent (less than 4% absolute cover), including areas where California junipers have burned in the past and have not yet recovered. The semi-desert chaparral on site includes creosote bush, jointfir, goldenbush, cholla, Eastern Mojave buckwheat, and deerweed (*Acmispon glaber*). Semi-desert chaparral is the dominant vegetation community on site (Figure 4).

Sonoran Mixed Woody Scrub (33210)

According to Holland (1986), Sonoran mixed woody scrub is similar to Sonoran mixed woody and succulent scrub (33220), but with additional woody species. Characteristic species include creosote bush, burrobush (*Ambrosia dumosa*), ocotillo, *Opuntia* sp., brittlebush (*Encelia farinosa*), and *Krameria* sp. In San Diego County, this community is associated with lower alluvial fans, above the desert floor and below the coarse mountain substrates (Holland 1986).

Sonoran mixed woody scrub on site lack California juniper and are dominated by creosote bush, in addition to other shrub and succulent cover. Other commonly occurring species include jointfir, cholla, goldenbush, snakeweed, and strawberry cactus (*Mammillaria dioica*). Sonoran mixed woody scrub occurs in one small patch toward the central portion of the study area (Figure 4).

Upper Sonoran Subshrub Scrub (39000)

Upper Sonoran subshrub scrub is comprised of low, fairly penetrable scrub of soft-wooded, summer-dormant, drought-tolerant shrubs (Holland 1986). It is usually associated with well drained soils derived from sandstone, shale, or sterile white diatomaceous deposits. In San Diego County, it intergrades with some chaparrals at higher elevations. Dominant vegetation found on site varies, but usually includes narrowleaf goldenbush (*Ericameria linearifolia*), Eastern Mojave buckwheat (*Eriogonum fasciculatum* var. *polifolium*), bladderpod spiderflower (*Isomeris arborea arborea*), or California jointfur (*Ephedra californica*) (Holland 1986).

Areas mapped as upper Sonoran subshrub scrub are dominated by Eastern Mojave buckwheat, goldenbush, jointfir, cholla, and deerweed. This area contains native shrub cover, but lacks California juniper and creosote bush. Sonoran subshrub scrub occurs in one patch located along the southern portion of the study area (Figure 4).

Gen-Tie Vegetation Communities

The alignment and configuration (i.e., overhead vs. underground), has not been determined at this time. For purposes of disclosing all potential ground disturbances associated with the project, the preliminary gen-tie study area has been provided on Figure 3. The gen-tie study are consists of peninsular juniper woodland and scrub (see Figure 3 and vegetation description include above).

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES

In addition to the compensation for impacts to special-status vegetation communities, the BOS are being proposed to compensate for impacts to special-status plant species and habitat for special-status wildlife species associated with the project.

Special-Status Plant Species

Table 2 provides a list of special-status plant species with potential to occur within the study area. This list was developed by Dudek by reviewing the physical characteristics of the site and other projects near the project area, the County of San Diego Sensitive Plant List (County of San Diego 2010c), and special-status plants that occur within the California Natural Diversity Database

(CNDDB) 5-mile search (CDFG 2012) or which have been identified within the California Native Plant Society (CNPS) in the Jacumba 7.5-minute USGS quadrangle and surrounding eight quadrangles (CNPS 2012). This table is organized by the County's listing status (i.e., List A-D) and also includes the status of the species, its primary habitat associations, its life form, and the known elevation ranges for which the species is known to occur. Protocol special-status plant species surveys for the project will be completed at later date.

Table 2
Special-Status Plant Species and Potential To Occur Within the Study Area

Scientific Name	Status[1] (Federal/ State/Rare Plant Rank List)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation
List A (Rare, Threatened, or Endangered in California and Elsewhere)		
Acmispon [=*Lotus*] *haydonii* Pygmy lotus	None/None/1B.3	Pinyon and juniper woodland, Sonoran desert scrub; rocky/ perennial herb/Jan.–June/1,706 to 3,937 feet
Astragalus douglasii var. *perstrictus* Jacumba milk-vetch	None/None/1B.2	Chaparral, cismontane woodland, pinyon and juniper woodland, riparian scrub, valley and foothill grassland/ rocky/ perennial herb/ Apr.–Jun./ 2,953–4,495 feet
Deinandra floribunda Tecate tarplant	None/None/1B.2	Chaparral, coastal scrub/ annual herb/Aug.–Oct./230–4,003 feet
Ericameria cuneata var. *macrocephala* Laguna Mountains goldenbush	None/None/1B.3	Chaparral; granitic/shrub/ Sept.–Dec./3,921–6,070 feet
Eryngium aristulatum var. *parishii* San Diego button-celery	FE/SE/1B.1	Coastal scrub, valley and foothill grassland, vernal pools, mesic areas/annual-perennial herb/Apr.–June/ 65–2,034 feet
Galium angustifolium ssp. *jacinticum* San Jacinto Mountains bedstraw	None/None/ 1B.3	Lower montane coniferous forest/perennial herb/June–August/4,429–6,890 feet
Heuchera brevistaminea Mt. Laguna alumroot	None/None/1B.3	Broadleafed upland forest, chaparral, cismontane woodland, riparian forest; rocky/rhizomatous herb/Apr.–July/4,495–6,562 feet
Hulsea californica San Diego sunflower	None/None/1B.3	Chaparral, lower montane coniferous forest, upper montane coniferous forest/openings and burned areas/perennial herb/Apr.–June/3,002–9,564 feet
Lupinus excubitus var. medius Mountain Springs bush lupine	None/None/1B.3	Pinyon and juniper woodland, Sonoran desert scrub/shrub/ Mar.–May/1,394–4,495 feet
Streptanthus campestris Southern jewel-flower	None/None/1B.3	Chaparral, lower montane coniferous forest, pinyon and juniper woodland/rocky/ perennial herb/ May–July/ 2,953–7,546 feet
Tetracoccus dioicus Parry's tetracoccus	None/None/1B.2	Chaparral, coastal scrub/ perennial deciduous shrub/ Apr.–May/ 541–3,281 ft.
Xylorhiza orcuttii Orcutt's woody aster	None/None/1B.2	Sonoran desert scrub/perennial herb/Mar.–Apr./0–1,197.5 feet
List B (Rare, Threatened, or Endangered In California But More Common Elsewhere)		
Astragalus insularis var. *harwoodii* Harwood's milkvetch	None/None/2.2	Desert dunes, Mojavean desert scrub; sandy or gravelly/annual herb/Jan.–May/0 to 2,329 feet
Ayenia compacta California ayenia	None/None/2.3	Mojavean desert scrub, Sonoran desert scrub; rocky/perennial herb/Mar.–Apr./492 to 3,593 feet

Table 2
Special-Status Plant Species and Potential To Occur Within the Study Area

Scientific Name	Status[1] (Federal/ State/Rare Plant Rank List)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation
Bursera microphylla Little-leaf elephant tree	None/None/2.3	Sonoran desert scrub; rocky/deciduous tree/June–July/656–2,297 feet
Calliandra eriophylla Pink fairy duster	None/None/2.3	Sonoran desert scrub; sandy or rocky/ deciduous shrub/ Jan.—Mar./393–4,291 feet
Chamaesyce arizonica Arizona spurge	None/None/2.3	Sonoran desert scrub; sandy/ perennial herb/Mar.—Apr./ 164–984 feet
Dieteria asteroides var. *lagunensis* Mount Laguna aster	None/ SR/2.1	Cismontane woodland, lower montane coniferous forest/ perennial herb/ Jul.–Aug./ 2,625–7,874 feet
Eucnide rupestris Rock nettle	None/None/2.2	Sonoran desert scrub/annual herb/Dec.–Apr./1,640–1,969 feet
Geraea viscida Sticky geraea	None/None/2.3	Chaparral (often in disturbed areas)/perennial herb/May–June/ 1,476–5,577 feet
Herissantia crispa Curly herissantia	None/None/2.3	Sonoran desert scrub/annual-perennial herb/Aug.—Sept./ 2,296–2,378 feet
Hulsea mexicana Mexican hulsea	None/None/2.3	Chaparral (volcanic, often on burns or disturbed areas)/annual-perennial herb/Apr.–June/approximately 3,937 feet
Ipomopsis tenuifolia Slender-leaved ipomopsis	None/None/2.3	Chaparral, pinyon and juniper woodland, Sonoran desert scrub/ gravelly or rocky/ perennial herb/ Mar.–May/ 328–3,937 feet
Linanthus bellus Desert beauty	None/None/2.3	Chaparral (sandy)/annual herb/Apr.–May/3,281–4,593 feet
Lycium parishii Parish's desert-thorn	None/None/2.3	Coastal scrub, Sonoran desert scrub/perennial shrub/Mar.–Apr./1,001–3,281 feet
Malperia tenuis Brown turbans	None/None/2.3	Sonoran desert scrub; sandy, gravelly/annual herb/Mar.–Apr./49 to 1,099 feet
Matelea parvifolia Climbing spearleaf	None/None/2.3	Mojavean desert scrub, Sonoran desert scrub; rocky/ perennial herb/ Mar.–May/ 1,443–3,592 feet
Mentzelia hirsutissima Hairy stickleaf	None/None/2.3	Sonoran desert scrub; rocky/annual herb/March–May/ 0–2,297 feet
Nemacaulis denudata var. *gracilis* Slender woolly-heads	None/None/2.2	Coastal dunes, desert dunes, Sonoran desert scrub/annual herb/Apr.–May/164–1,312 feet
Selaginella eremophila Desert spike-moss	None/None/2.2	Chaparral, Sonoran desert scrub; gravelly or rocky/rhizomatous herb/June/656–2,953 feet
Senecio aphanactis Rayless ragwort	None/None/2.2	Chaparral, cismontane woodland, coastal scrub; sometimes alkaline/annual herb/Jan.–Apr./49–262 feet
List C (Plants Which May Be Rare, But Need More Information To Determine Their True Rarity Status)		
Berberis fremontii Fremont barberry	None/None/3	Chaparral, Joshua tree woodland, pinyon and juniper woodland/rocky/ perennial evergreen shrub/ Apr.–June/ 2,756–6,070 feet

Table 2
Special-Status Plant Species and Potential To Occur Within the Study Area

Scientific Name	Status[1] (Federal/ State/Rare Plant Rank List)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation
List D (Plants Of Limited Distribution And Are Uncommon, But Not Presently Rare Or Endangered)		
Caulanthus simulans Payson's jewel-flower	None/None/4.2	Chaparral, coastal scrub/sandy, granitic/ annual herb/ (Feb.) Mar.–May (June)/ 295–7,218 feet
Horsfordia newberryi Newberry's velvet-mallow	None/None/4.3	Sonoran desert scrub; rocky/ shrub/Feb.—Dec./9–2,624 feet
Pilostyles thurberi Thurber's pilostyles	None/None/4.3	Sonoran desert scrub/perennial herb parasitic/Jan./0–1,198 feet
Not on the County's Sensitive Plant List But Otherwise Designated As Special-Status		
Cylindropuntia (=*Opuntia*) *x fosbergii* Pink cholla	None/None/3	Sonoran desert scrub/stem succulent/Mar.–May/279 to 2,789 feet
Linanthus maculatus Little San Bernardino Mountains linanthus	None/None/1B.2	Desert dunes, Joshua tree woodland, Mojavean desert scrub, Sonoran desert scrub (sandy)/Mar.–May/639 – 6,807 feet
Mentzelia tricupsis Spiny-hair blazing star	None/None/2.1	Mojavean desert scrub (sandy, gravelly, slopes, and washes)/ Mar.–May/492–4,199 feet
Mentzelia tridentata Creamy blazing star	None/None/1B.3	Mojavean desert scrub (rocky, gravelly, sandy)/Mar.–May/2,296 –3,805 feet
Mimulus diffusus Palomar monkeyflower	None/None/4.3	Chaparral, lower montane coniferous forest (sandy or gravelly)/Apr.–June/4,002–6,003 feet
Pickeriginia montana var. *tomentosa* Woolly chaparral-pea	None/None/4.3	Chaparral (gabbroic, granitic, clay)/May–Aug./0–5,577 feet
Pholistoma auritum var. *arizonicum* Arizona pholistoma	None/None/2.3	Mojavean desert scrub/annual herb/March/902–2,740 feet
Pseudorontium cyathiferum Deep Canyon snapdragon	None/None/2.3	Sonoran desert scrub/Feb.–Apr./0–2,624 feet
Symphyotrichum defoliatum San Bernardino aster	None/None/1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic)/near ditches, streams, springs/perennial rhizomatous herb/July–Nov./ 7–6,693 feet

[1]Status

Federal and state status:

- FE: Federally listed as Endangered
- FT: Federally listed as Threatened
- SE: State listed as Endangered
- ST: State listed as Threatened
- SR: State listed as Rare

California Rare Plant Rank (CRPR):

- 1A: Plants presumed Extinct in California
- 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
- 2: Plants Rare, Threatened, or Endangered in California but more Common Elsewhere
- 3: Plants About Which More Information Is Needed – A Review List
- 4: Plants of Limited Distribution – A Watch List

Threat Ranks

1. Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
2. Fairly endangered in California (20% to 80% of occurrences threatened)
3. Not very endangered in California (less than 20% of occurrences threatened or no current threats known).

Special-Status Wildlife Species

Table 3 provides a list of special-status animal species with potential to occur within the study area. The list of special-status animal species with potential to occur was developed by Dudek and is based on our familiarity with the study area as a result of the recent site visit, past projects completed, and a review of available data described above (i.e., soils maps, CNDDB records, (U.S. Fish and Wildlife Survey) USFWS data; publicly available technical studies, etc.).

Focused surveys for Quino Checkerspot Butterfly were conducted in 2013 per the USFWS survey requirements. Survey results were negative and have been provided to the USFWS.

Known occurrences of special status species are depicted on Figure 5.

Table 3
Special-Status Animal Species and Potential to Occur Within the Study Area

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Potential to Occur on Site?
Reptiles and Amphibians			
Anaxyrus californicus Arroyo toad	FE/CSC/ Group 1, MSCP	Stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Unlikely—not known from area, and habitat is unsuitable.
Ensatina eschscholtzii klauberi Large-blotched salamander	None/CSC/ Group 1	Oak woodland, chaparral, coastal sage scrub, coastal dunes, conifer forest	Very low—not known from the area and marginal habitat quality.
Rana aurora draytoni California red-legged frog	FT/CSC/ Group 1, MSCP	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	Unlikely—not known from area, and habitat is unsuitable.
Spea [=*Scaphiopus*] *hammondi* Western spadefoot	None/CSC/ Group 2	Most common in grasslands, coastal sage scrub near rain pools or vernal pools; riparian habitat and road rut pools	Marginal—no suitable habitat is present in the study area.
Taricha torosa torosa Coast Range newt (Monterey County south only)	None/CSC/ Group 2	Coastal drainages from Mendocino County to San Diego County; lives in terrestrial habitats and will migrate over 1 kilometer to breed in ponds, reservoirs, and slow moving streams	Very low—no suitable habitat is present in the study area.
Anniella pulchra pulchra Silvery legless lizard	None/CSC/ Group 2	Loose soils (sand, loam, humus) in coastal dune, coastal sage scrub, woodlands, and riparian habitats	Yes, suitable habitat is present within most of the study area.

Table 3
Special-Status Animal Species and Potential to Occur Within the Study Area

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Potential to Occur on Site?
Aspidoscelis hyperythra beldingi Belding's orange-throated whiptail	None/CSC/ Group 2, MSCP	Coastal sage scrub, chaparral, grassland, juniper and oak woodland; sandy soils, washes	Yes, suitable habitat is present within the study area. Observed in the past during surveys on the ECO site
Aspidoscelis tigris stejnegeri Coastal western whiptail	None/None/ Group 2	Coastal sage scrub, chaparral; sandy areas, gravelly arroyos, or washes	Yes, suitable habitat is present within the study area.
Charina trivirgata Rosy boa	None/None/ Group 2	Rocky chaparral, coastal sage scrub, oak woodlands, desert and semi-desert scrub	Yes, suitable habitat is present within the study area. Observed in the past during surveys on the Tule Project site.
Coleonyx switaki Barefoot banded gecko	None/ST/ Group 2	Rocky, bouldery areas at the heads of canyons; elevation range is approximately sea level to 2,100 feet; range is near Borrego Springs and to the south	Very low—marginal suitable habitat is present; however, the study area elevation is above the known range for the species.
Coleonyx variegatus abbotti San Diego banded gecko	None/None/ Group 1	Cismontane chaparral, coastal sage scrub, desert scrub; granite outcrops	Yes, suitable habitat is present within the study area.
Crotalus ruber ruber Northern red-diamond rattlesnake	None/CSC/ Group 2	Variety of shrub habitats where there is heavy brush, large rocks, or boulders	Yes, suitable habitat is present within the study area.
Diadophis punctatus similis San Diego ringneck snake	None/None/ Group 2	Open, rocky areas in moist habitats near intermittent streams: marsh, riparian woodland, sage scrub	Very low—lack of suitable habitat within the study area. No records of the species in the area.
Actinemys marmorata Western pond turtle	None/CSC/ Group 1, MSCP	Slow-moving permanent or intermittent streams, ponds, small lakes, reservoirs with emergent basking sites; adjacent uplands used during winter	Very low—lack of suitable habitat within the study area. No records of the species in the area.
Eumeces skiltonianus interparietalis Coronado skink	None/CSC/ Group 2	Grassland, riparian and oak woodland; found in litter, rotting logs, under flat stones	Very low—lack of suitable habitat within the study area. No records of the species in the area.
Lampropeltis zonata (pulchra) (San Diego population) California (San Diego) mountain kingsnake	None/CSC/ Group 2	Valley-foothill hardwood, hardwood-conifer, chaparral, coniferous forest, wet meadow	Very low—lack of suitable habitat within the study area. No records of the species in the area.
Phrynosoma coronatum (blainvillei population) Coast (San Diego) horned lizard	None/CSC/ Group 2, MSCP	Coastal sage scrub, annual grassland, chaparral, oak and riparian woodland, coniferous forest, sandy areas, washes, flood plains	Yes, suitable habitat is present within the study area.

Table 3
Special-Status Animal Species and Potential to Occur Within the Study Area

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Potential to Occur on Site?
Salvadora hexalepis virgultea Coast patch-nosed snake	None/CSC/ Group 2	Chaparral, washes, sandy flats, rocky areas	Yes, suitable habitat is present within the study area.
Sceloporus graciosus vanderburgianus Southern sagebrush lizard	None/None/ Group 2	Higher elevation, montane chaparral, hardwood and conifer forest, juniper, coastal sage scrub	Yes, suitable habitat is present within the study area.
Thamnophis hammondii Two-striped garter snake	None/CSC/ Group 1	Marshes, meadows, sloughs, ponds, slow-moving water courses	Very low. Lack of suitable habitat within the study area. No records of the species in the area.
Thamnophis sirtalis ssp. South coast garter snake	None/CSC/ Group 2	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Very low—lack of suitable habitat within the study area. No records of the species in the area.
Birds			
Accipiter cooperii Cooper's hawk (nesting)	None/WL, CSC/Group 1, MSCP	Riparian and oak woodlands, montane canyons	Low—lack of suitable nesting habitat within the study area. However, there are records of the species in the area.
Agelaius tricolor Tricolored blackbird	BCC, USBC/CSC/ Group 1, MSCP	Nests near fresh water, emergent wetland with cattails or tules; forages in grasslands, woodland, agriculture	Unlikely—lack of suitable nesting habitat within the study area. However, foraging habitat is present on site, and there are records of the species in the area.
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	None/WL/ Group 1	Grass-covered hillsides, coastal sage scrub, chaparral with boulders and outcrops	Low to Moderate. However, lack of suitable habitat within the study area, and no records of the species in the area.
Anas strepera Gadwall	None/None/ Group 2	Interior valleys, wetlands, ponds, and streams; feeds and rests in freshwater lacustrine and emergent habitats, and to a lesser extent, estuarine and saline emergent habitats, and nests in nearby herbaceous and cropland habitats	Very low—lack of suitable habitat within the study area, and no records of the species in the area.
Amphispiza belli belli Bell's sage sparrow	BCC/WL/ Group 1	Coastal sage scrub and dry chaparral along coastal lowlands and inland valleys	Moderate, however, marginal suitable habitat within the study area, and no records of the species in the area.
Ammodramus savannarum Grasshopper sparrow	None/CSC/ Group 1	Native and non-native grasslands and pastures	Very low—lack of suitable habitat within the study area. No records of the species in the area.

Table 3
Special-Status Animal Species and Potential to Occur Within the Study Area

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Potential to Occur on Site?
Aquila chrysaetos Golden eagle (nesting and wintering)	BCC/P, WL/Group 1, MSCP	Open country, especially hilly and mountainous regions; grassland, coastal sage scrub, chaparral, oak savannas, open coniferous forest	Yes—suitable foraging habitat is present within the study area; however, very low potential for nesting (recorded nesting sites are located in the region, but off site).
Ardea herodias Great blue heron	None/Group 2, CDF	Variety of habitats, but primarily wetlands; lakes, rivers, marshes, mudflats, estuaries, saltmarsh, riparian habitats	Very low—lack of suitable habitat within the study area. No records of the species in the area.
Asio flammeus Short-eared owl	USBC/CSC/ Group 2	Grassland, prairies, dunes, meadows, irrigated lands, saline and freshwater emergent wetlands	Very low—lack of suitable habitat within the study area. No records of the species in the area.
Asio otus Long-eared owl	None/CSC/ Group 1	Riparian, live oak thickets, other dense stands of trees, edges of coniferous forest	Very low—lack of suitable habitat within the study area. No records of the species in the area.
Athene cunicularia Burrowing owl	BCC/CSC/ Group 1, MSCP	Grassland, lowland scrub, agriculture, coastal dunes and other artificial open areas	Yes—may nest and/or winter within the study area (no records for this species in the study areas; however, it was observed on the nearby ECO site).
Aythya americana Redhead	None/CSC/ Group 2	Lacustrine waters, foothills and coastal lowlands, and along the coast and Colorado river; nests in fresh emergent wetland bordering open water	Very low—lack of suitable habitat in the study area.
Branta Canadensis Canada goose	None/None/ Group 2, MSCP	Lakes, fresh emergent wetlands, moist grasslands, croplands, pastures, and meadows	Very low—lack of suitable habitat in the study area.
Buteo lineatus Red-shouldered hawk	None/None/ Group 1	Riparian and woodland habitats, eucalyptus	Very low—lack of suitable habitat in the study area.
Buteo regalis Ferruginous hawk	BCC/WL/ Group 1, MSCP	Open, dry country, grasslands, open fields, agriculture	Unlikely—no suitable habitat present within the study area (may use the study area to forage during the winter, however, study area is outside the recorded breeding range for this species).
Buteo swainsoni Swainson's hawk	BCC, USBC/ST/ Group 1, MSCP	Open grassland, shrublands, croplands	Unlikely—no suitable habitat present within the study area (may use the study area to forage during the winter, however, study area is outside the recorded breeding range for this species).
Butorides virescens Green heron	None/None/ Group 2	Lakes, marshes, streams	Very low—lack of suitable habitat within the study area. No records of the species in the area.

Table 3
Special-Status Animal Species and Potential to Occur Within the Study Area

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Potential to Occur on Site?
Cathartes aura Turkey vulture	SBNF/None/ Group 1	Rangeland, agriculture, grassland; uses cliffs and large trees for roosting, nesting, and resting	Yes—suitable foraging habitat is present the study area; however, very low potential for nesting (species has been observed in the region, but off site).
Chlidonias niger Black tern	None/CSC/ Group 2, MSCP	Freshwater lakes, marshes, ponds, coastal lagoons	Very low—no nesting habitat and lack of suitable habitat within the study area.
Circus cyaneus Northern harrier	None/CSC/ Group 1, MSCP	Open wetlands (nesting), pasture, old fields, dry uplands, grasslands, rangelands, coastal sage scrub	Somewhat likely to occur. No suitable nesting habitat on site, however, marginal suitable foraging habitat is present within the study area.
Dendroica petechia brewsteri Yellow warbler	None/CSC/ Group 2	Nests in lowland and foothill riparian woodlands dominated by cottonwoods, alders and willows; winters in a variety of habitats	Low—marginal suitable habitat is present within the study area.
Elanus leucurus (caeruleus) White-tailed kite	None/P/Group 1	Open grasslands, savanna-like habitats, agriculture, wetlands, oak woodlands, riparian	Somewhat likely to forage within the study area; however, no suitable nesting habitat on site.
Eremophila alpestris actia California horned lark	None/WL/ Group 2	Open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, fallow grain fields	Moderate potential to forage within the study area; however, no suitable nesting habitat on site (observed in the past on the Tule Project and ECO Project sites).
Falco columbarius Merlin	None/CSC/ Group 2	Nests in open country, open coniferous forest, prairie; winters in open woodlands, grasslands, cultivated fields, marshes, estuaries and sea coasts	Yes, suitable foraging habitat is present within the study area. However, the study areas are outside the breeding range for this species (i.e., does not nest in California).
Falco mexicanus Prairie falcon	BCC/CSC/ Group 1	Grassland, savannas, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Yes, suitable foraging habitat is present within the study area. However, there is no suitable nesting habitat present in the study area. Known to occur in the area.
Falco peregrinus anatum American peregrine falcon	BCC, (FD)/ SE, P/Group 1, MSCP	Nests on cliffs, buildings, bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	Unlikely—no suitable foraging habitat within the study area. No suitable nesting cliffs present in the study area.
Icteria virens Yellow-breasted chat	None/CSC/ Group 1	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Very low—lack of suitable habitat within the study area. No records of the species in the area.

Table 3
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Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Potential to Occur on Site?
Ixobrychius exilis Least bittern	None/CSC/ Group 2	Dense emergent wetland vegetation, sometimes interspersed with woody vegetation and open water	Very low—lack of suitable habitat within the study area. No records of the species in the area.
Lanius ludovicianus Loggerhead shrike	BCC/CSC/ Group 1	Open ground including grassland, coastal sage scrub, broken chaparral, agriculture, riparian, open woodland	Yes, observed on site. Suitable habitat is present within the study area.
Melanerpes lewis Lewis' woodpecker	BCC/None/ Group 1	Open oak savannahs, broken deciduous, and coniferous habitats	Very low—lack of suitable habitat within the study area. No records of the species in the area.
Oreotyx pictus Eremophila Mountain quail	None/None/ Group 2	Dense montane chaparral and brushy areas within coniferous forest, pinyon-juniper-yucca associations; uses shrubs, brush stands, and trees on steep slopes for cover	Moderate—suitable habitat is present within all of the study areas, but not known from the area.
Piranga rubra (nesting) Summer tanager	None/CSC/ Group 2	Nests in riparian woodland; winter habitats include parks and residential areas	Very low—lack of suitable habitat within the study area and out of the recorded breeding range for this species.
Progne subis (nesting) Purple martin	None/CSC/ Group 1	Nests in tall sycamores, pines, oak woodlands, coniferous forest; forages over riparian, forest, and woodland	Low—no nesting habitat. Marginal foraging habitat present within the study area.
Siala mexicana Western bluebird	None/None/ Group 2, MSCP	Open forests of deciduous, coniferous, or mixed trees, savanna, edges of riparian woodland	Very low—lack of suitable habitat within the study area. No records of the species in the area.
Tyto alba Common barn-owl	None/None/ Group 2	Open habitats including grassland, chaparral, riparian, and other wetlands	Low—marginal habitat present within the study area.
Vireo vicinior Gray vireo	BCC, BLM, USBC/CSC/ Group 1	Summer resident in arid pinyon-juniper, juniper, and chamise-redshank chaparral habitats	Yes, suitable nesting habitat is present within all of the study area and may nest on site.
Mammals			
Antrozous pallidus Pallid bat	None/CSC/ Group 2	Rocky outcrops, cliffs, and crevices with access to open habitats for foraging	Yes, suitable foraging habitat is present within the study area. No suitable roosting habitat on site.
Bassariscus astulus Ringtail	None/P/Group 2	Mixed forests and shrublands near rocky areas or riparian habitats	Low—no suitable habitat present within the study area.
Chaetodipus californicus femoralis Dulzura (California) pocket mouse	None/CSC/ Group 2	Coastal sage scrub, chaparral, riparian-scrub ecotone; more mesic areas	Yes, suitable habitat is present within the study area.
Chaetodipus fallax fallax Northwestern San Diego pocket mouse	None/CSC/ Group 2	Coastal sage scrub, grassland, sage scrub-grassland ecotones, sparse chaparral; rocky substrates, loams and sandy loams	Yes, suitable habitat is present within the study area.

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Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Potential to Occur on Site?
Chaetodipus fallax pallidus Pallid San Diego pocket mouse	None/CSC/ Group 2	Coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland	Yes, suitable habitat is present within the study area and species is known to occur in this region.
Choeronycteris mexicana Mexican long-tongued bat	None/CSC/ Group 2	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland. Roosts in caves, mines, and buildings.	Yes, suitable foraging habitat is present within the study areas. Potential roosting areas are within the mountains east of the study area.
Coryorhinus townsendii Townsend's big-eared bat	None/CSC/ Group 2, MSCP	Mesic habitats, gleans from brush or trees or feeds along habitat edges	Yes, suitable foraging habitat is present within the study areas. Potential roosting areas are within the mountains east of the study area.
Euderma maculatum Spotted bat	None/CSC/ Group 2	Rock crevices, riparian forest, woodland and scrub, ponds, lakes, grasslands	Yes, suitable foraging habitat is present within the study areas. Potential roosting areas are within the mountains east of the study area.
Eumops perotis californicus Greater western mastiff bat	None/CSC/ Group 2, MSCP	Roosts in small colonies in cracks and small holes, seeming to prefer man-made structures	Unlikely—marginally suitable foraging habitat present within the study area. No suitable roosting habitat on site.
Lasiurus blossevillii Western red bat	None/None/ Group 2	Prefers edges with trees for roosting and open areas for foraging. Roosts in woodlands and forests. Forages over grasslands, shrublands, woodlands, forests, and croplands.	Unlikely—marginally suitable foraging and roosting habitat present within the study area.
Lepus californicus bennettii San Diego black-tailed jackrabbit	None/CSC/ Group 2	Arid habitats with open ground; grasslands, coastal sage scrub, agriculture, disturbed areas, rangelands	Yes, observed on site. Suitable habitat is present within the study area.
Macrotus californicus California leaf-nosed bat	BLM:S/DFG:SSC/ USFS:S/CSC/ Group 2	Desert riparian, desert wash, desert scrub, desert succulent shrub, alkali desert scrub, and palm oasis	Yes, suitable foraging habitat is present within the study areas.
Myotis ciliolabrum Small-footed myotis	None/None/ Group 2	Caves, old mines, abandoned buildings	Low—no suitable habitat present within the study area.
Myotis evotis Long-eared myotis	None/None/ Group 2	Roosts in buildings, crevices, under bark, and snags. Caves used as night roosts. Feeds along habitat edges, in open habitats, and over water.	Yes,.suitable foraging habitat is present within the study area. Potential roosting areas are within the mountains east of the study area.

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Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Potential to Occur on Site?
Myotis thysanodes Fringed myotis	None/None/ Group 2	Maternity colonies in caves, mines, buildings, or crevices. Forges over open habitats, early successional stages, streams, lakes, and ponds.	Yes, suitable foraging habitat is present within the study area. Potential roosting areas are within the mountains east of the study area.
Myotis volans Long-legged myotis	None/None/ Group 2	Feeds over open water and over open habitats, using denser woodlands and forests for cover and reproduction	Unlikely, suitable foraging habitat is present within the study area. However, limited roosting sites in the area.
Myotis yumanensis Yuma myotis	None/None/ Group 2	Closely tied to open water which is used for foraging; open forests and woodlands are optimal habitat	Unlikely—suitable foraging habitat is present within the study area. However, there is no known open water in the area.
Neotoma lepida intermedia San Diego desert woodrat	None/CSC/ Group 2	Coastal sage scrub, chaparral, pinyon-juniper woodland with rock outcrops, cactus thickets, dense undergrowth	Yes, middens observed within the study area.
Nyctinomops femorosaccus Pocketed free-tailed bat	None/CSC/ Group 2	Rocky desert areas with high cliffs or rock outcrops	Yes, suitable foraging habitat is present within the study area. Potential roosting areas are within the mountains east of the study area.
Nyctinomops macrotis Pocketed free-tailed bat	None/CSC/ Group 2	Rugged, rocky canyons	Unlikely—suitable foraging habitat is present within the study area. However, there are no known rugged, rocky canyons in the area.
Odocoileus hemionus Mule deer	None/None/ Group 2, MSCP	Coastal sage scrub, chaparral, riparian, woodlands, forest; often browses in open areas adjacent to cover	Yes, suitable habitat is present within the study area.
Onychomys torridus Ramona Southern grasshopper mouse	None/CSC/ Group 2	Grassland, sparse coastal sage scrub	Low—no suitable habitat present within the study area.
Perognathus longimembris internationalis Jacumba pocket mouse	None/CSC/ Group 2	Desert riparian, desert scrub, desert wash, coastal scrub, and sagebrush.	Yes, suitable habitat is present within the study area.
Puma [=*Felis*] *concolor* Mountain lion	None/None/ Group 2, MSCP	Coastal sage scrub, chaparral, riparian, woodlands, forest; rests in rocky areas, and on cliffs and ledges that provide cover	Yes, suitable habitat is present within the study area.

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Special-Status Animal Species and Potential to Occur Within the Study Area

Scientific Name/ Common Name	Status (Federal/State/ County)[1]	Habitat Preferences/Requirements	Potential to Occur on Site?
Taxidea taxus American badger	None/CSC/ Group 2, MSCP	Dry, open treeless areas, grasslands, coastal sage scrub	Yes, suitable habitat is present within the study area.
		Invertebrates	
Branchinecta sandiegonensis San Diego fairy shrimp	FE/None/Group 1	Small, shallow vernal pools, occasionally ditches and road ruts	Very low potential to occur due to marginal road ruts within the study area.
Danaus plexippus Monarch butterfly (wintering sites)	None/None/ Group 2	Overwinters in eucalyptus groves	No—no eucalyptus trees occur on site. Large winter colonies are not recorded from the region.
Euphydryas editha quino Quino checkerspot butterfly	FE/None/Group 1	Sparsely vegetated hilltops, ridgelines, occasionally rocky outcrops; host plant Plantago erecta and nectar plants must be present	Yes, suitable habitat is present within the study area, but dependent on presence of host plants. Also, observed during surveys for the Tule Wind project. However, focused surveys in 2013 were negative and no host plants were observed.
Lycaena hermes Hermes copper butterfly	None/None/ Group 1	Coastal sage scrub, southern mixed chaparral supporting at least 5% cover of host plant Rhamnus crocea	Low potential based on location and lack of host plants.
Papilio multiculdata Two-tailed swallowtail	None/None/ Group 1	Foothill slopes and canyons, moist valleys, streamsides, woodlands, parks, roadsides, suburbs, and cities	Unlikely—marginally suitable habitat is present within the study area.
Streptocephalus woottoni Riverside fairy shrimp	FE/None/Group 1	Deep, long-lived vernal pools, vernal pool-like seasonal ponds, stock ponds; warm water pools that have low to moderate dissolved solids	Low potential due to marginal road ruts.

1 Designations

Federal Designations:

BCC	USFWS: Birds of Conservation Concern
FC	Candidate for federal listing as Threatened or Endangered
(FD)	Federally delisted; monitored for 5 years
BLM:S	Bureau of Land Management – Sensitive
FE	Federally listed Endangered
FT	Federally listed as Threatened
PT	Proposed Threatened

State Designations:

CSC	California Special Concern Species
WL	Watch List
CDF:S	California Department of Forestry, Sensitive Species
P	CDFG Protected
FP	CDFG Fully Protected Species
SE	State-listed as Endangered
ST	State-listed as Threatened
DFG:SSC	CDFG Species of Special Concern

County Designations:

Group 1:	Animals of high sensitivity (listed or specific natural history requirements)
Group 2:	Animals declining, but not in immediate threat of extinction or extirpation

WILDLIFE MOVEMENT

Wildlife currently is able to traverse the site in an unencumbered manner until they arrive at the International Border Fence south of the site. The project site is located near two breaks in the International Border Fence. Two are located approximately 1,400 feet to the west and the other is located approximately 3,000 feet to the east (Figure 6). These breaks are due to the terrain and associated difficulties in building a fence in those areas. This topography does not pose difficulties for wildlife use however. Mule deer, coyotes, mountain lion, bobcat, and other species are readily able to scale slopes of this angle. As shown on Figure 3, the project has been designed to be built adjacent to the border fence in the southeastern corner of the site. This allows for a large contiguous block of habitat to be left in open space for wildlife to use and move through. The BOS is configured to compliment the adjacent BLM lands to the north and east. The project has been designed to be built in a single contiguous block that would allow for the provision of a large single contiguous block of open space habitat for common and special-status species to utilize, adjacent to existing public open space. Finally, the configuration of the open space allows for continued utilization of the breaks in the border fence by wildlife. It is expected that the configuration of the open space will allow for viable preservation of species and movement in the vicinity and region.

CONCLUSION

As seen in Table 4, overall, the project has an excess of 44.5 acres of natural communities within the planned open space. While specific Sonoran mixed woody scrub and upper Sonoran subshrub scrub mitigation is in deficit (-4.4 acres), the excess 44.5 acres of natural communities consisting of Semi-desert Chaparral (36 acres) and Peninsular Juniper Woodland and Scrub (8.5 acres) would provide equal if not better habitat value and function. Semi-desert chaparral supports the same suite of wildlife species and is very similar in form and function to the scrub communities. Based upon vegetation mapping, elevation ranges, soils, and location of the BOS, the BOS contains suitable habitat to compensate for the loss of special-status plant and wildlife species that will be, or could potentially be impacted by the project. Further, the location and configuration would mitigate potential impacts to wildlife movement.

The location of the open space block provides direct and adjacent connection to public open space and allows for unencumbered movement of wildlife across the site and through adjacent open space to two of the few breaks in the International Border Fence. This allows for north/south and east/west movement across the site and vicinity. Utilization of topographically, vegetatively, and governmentally diverse areas is a long-term benefit to wildlife and natural resources in the area. The BOS in surrounding areas contain many species which would be supported by the proposed preservation of these lands.

Table 4
Vegetation Communities, Impact Acreage and Mitigation Credit

Habitat Types/ Vegetation Communities	Code1	Impact Acreage	Mitigation Ratio	On-site BOS Mitigation Credit	Mitigation Outstanding
Upland Scrub and Chaparral					
Sonoran Mixed Woody Scrub*	33210	2.8	1:1	0.4	-2.4
Semi-Desert Chaparral*	37400	71.7	1:1	107.7	+36
Upper Sonoran Subshrub Scrub*	39000	2.8	1:1	0.8	-2.0
Upland Woodland and Savannah					
Peninsular Juniper Woodland and Scrub*	72320	23.7	3:1	79.6	+8.5
Non-Native Communities and Land Covers					
Disturbed Land	11300	7.4	0:0	0	N/A
RWQCB/CDFG/USACOE Waters		0.1	3:1	0.3	TBD

Note: The above acreages do not include the gen-tie alignment.
1 Holland (1986) as modified by Oberbauer et al. (2008)
* Considered special-status by the County (2010b).

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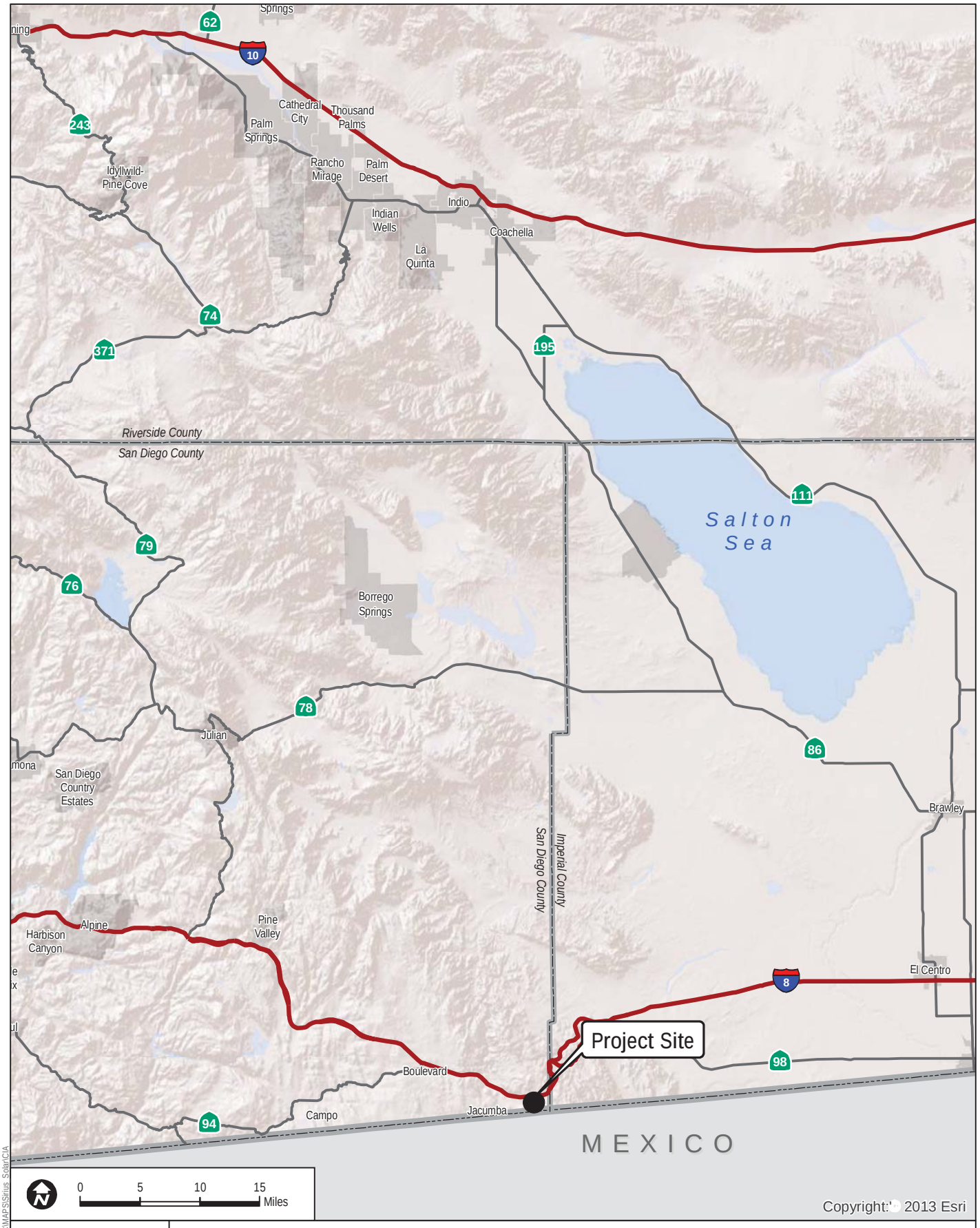

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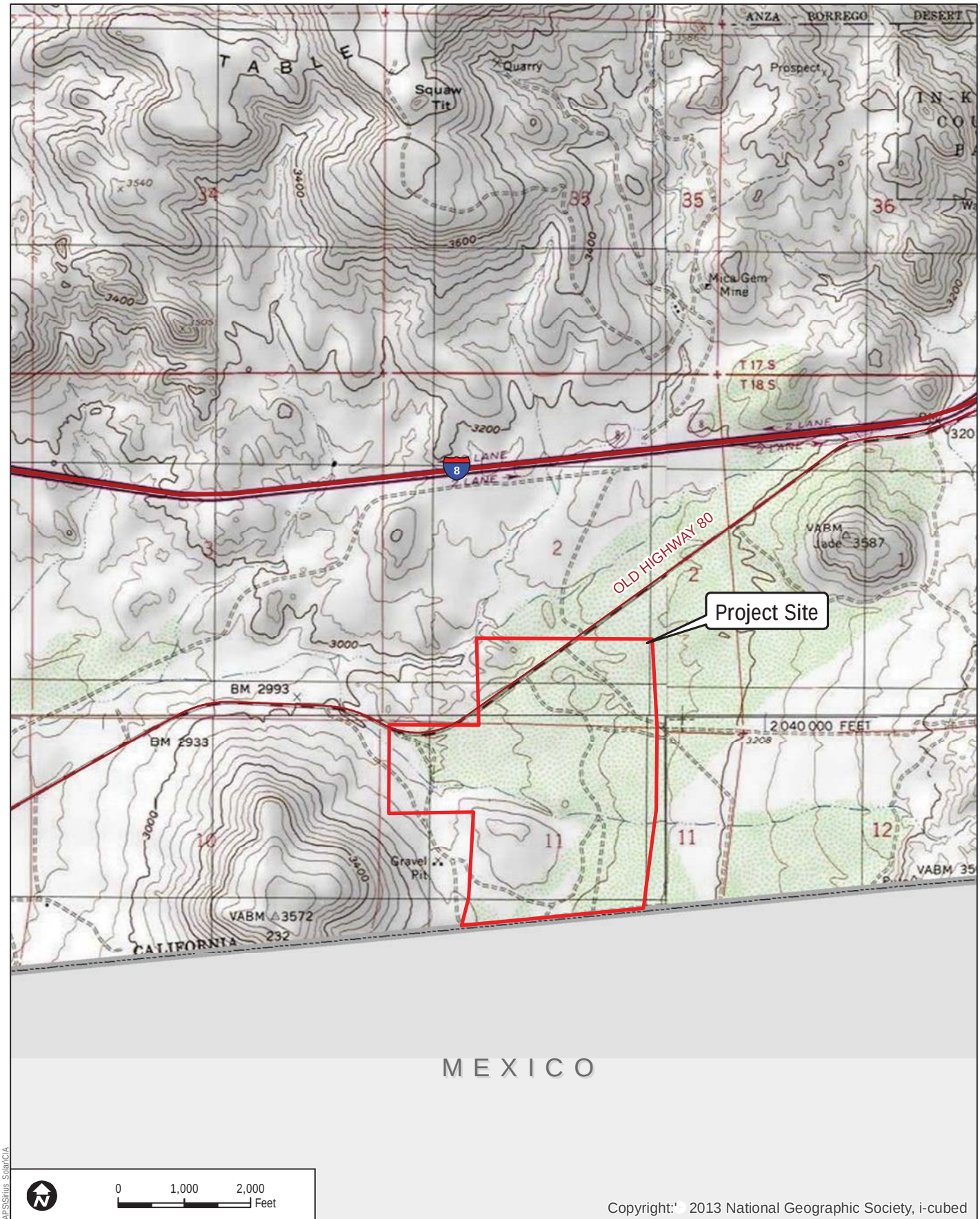
FIGURE 1

Regional Map

Jacumba Solar - Biological Open Space Memorandum



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SOURCE: Bing 2012

FIGURE 2
Vicinity Map

Jacumba Solar - Biological Open Space Memorandum

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