

# **MSCP Subarea Plan Amendment**

**Draft**

**Otay Ranch Proctor Valley  
MSCP Subarea Plan Amendment  
County of San Diego  
(PRT-840414)**

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and

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**MAY 2020**





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# 1 Acronyms and Abbreviations

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Acronym/Abbreviation	Definition
BMO	Biological Mitigation Ordinance
BRCA	Biological Resource Core Area
CDFW	California Department of Fish and Wildlife
CFD	Community Facilities District
County	County of San Diego
dBA	A-weighted decibel
EIR	Environmental Impact Report
GDP/SRP	General Development Plan/Subregional Plan
HCP	habitat conservation plan
$L_{eq}$	equivalent sound level
MSCP Subarea Plan	Multiple Species Conservation Program County of San Diego Subarea Plan
POM	Preserve Owner/Manager
RMP	Resource Management Plan
SWPPP	SWPPP
USFWS	U.S. Fish and Wildlife Service

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# 2 Otay Ranch Proctor Valley Amendment

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This proposed amendment to the County of San Diego's (County's) Multiple Species Conservation Program Subarea Plan (MSCP Subarea Plan) (herein referred to as the Otay Ranch Proctor Valley amendment) adds the following language to the end of the existing text in Section 3.3.3.7 of the County's MSCP Subarea Plan ("Otay Ranch"):

The owner of portions of Otay Ranch Village 14 and Planning Areas 16 and 19 (as designated in the Otay Ranch General Development Plan/Subregional Plan) has reached an agreement (the "Dispute Resolution Agreement") with the County, the U.S. Fish & Wildlife Service ("Service"), and the California Department of Fish & Wildlife ("Department") to process proposed modifications to the project approved by the County on June 26, 2019.<sup>1</sup>

The proposed action is the issuance of an amendment to the MSCP Subarea Plan extending incidental take authorization pursuant to the federal Incidental Take Permit (ITP) (PRT-840414) and the March 17, 1998, California Natural Community Conservation Plan Approval and Take Authorization for the Otay Ranch Village 14 and Planning Areas 16 and 19 Project, as the project is configured in the Dispute Resolution Agreement and reflected in Figure 1 hereto. The proposed action will:

- (1) Designate approximately 531.2 acres as "hardline preserve," which is the property identified as PV1, PV3 (excluding that portion identified as water basin and Proctor Valley Road right-of-way on Exhibit B of the Dispute Resolution Agreement), R14, R15, and R16<sup>2, 3</sup>;
- (2) Authorize take of Covered Species and reclassify approximately 44.5 acres of the MSCP Subarea Plan from "Otay Ranch areas where no 'take permits' will be authorized" to "take authorized area" to allow for future development, which is the property known as PV2 (38.4 acres) and that portion of PV3 (6.1 acres) where a water basin will be constructed and where the Proctor Valley Road right-of-way will be located;
- (3) Authorize take of Covered Species for approximately 2.2 acres for public facilities (a water transmission line/secondary access road known as Street I) located in "hardline preserve"; and
- (4) USFWS to authorize take of Quino checkerspot butterfly and San Diego fairy shrimp within the 1,543 acres project area and for mitigation and monitoring efforts on adjacent lands pursuant to Section 10a of the Federal Endangered Species Act. These actions are authorized by the Service only.

Figure 1A demonstrates the amended MSCP Subarea Plan under actions (1) to (3) above and supersedes Figures 1-1, 1-2, and 1-3 of the County's Subarea Plan (and any text related thereto) for areas mapped within the amendment area. Figures 1B and 1C are provided for reference only to demonstrate the changes from the original 1997 MSCP Subarea Plan maps. Figure 1D hereto provides further details at a more precise scale regarding action

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<sup>1</sup> Dispute Resolution Agreement, dated June 26, 2019 ("Agreement").

<sup>2</sup> In addition, the amendment to the Subarea Plan conserves all Limited Development Areas ("LDA"), as defined by the Otay Ranch General Development Plan/Subregional Plan (GDP/SRP), in neighborhoods R14, R15, and R16 so as to be designated "hardline preserve," rather than LDA, in Figure 1A.

<sup>3</sup> Further, the area immediately east of PV1 is shown as "Otay Ranch Management Preserve Area" in Figure 24, Approved Plan – Preserve Map of the Otay Ranch Phase 1 Resource Management Plan and has therefore been corrected in Figure 1A.

(3) above, which are not visible in Figures 1A through 1C. Figure 1E demonstrates the take authorized area under action (4) above.<sup>4</sup>

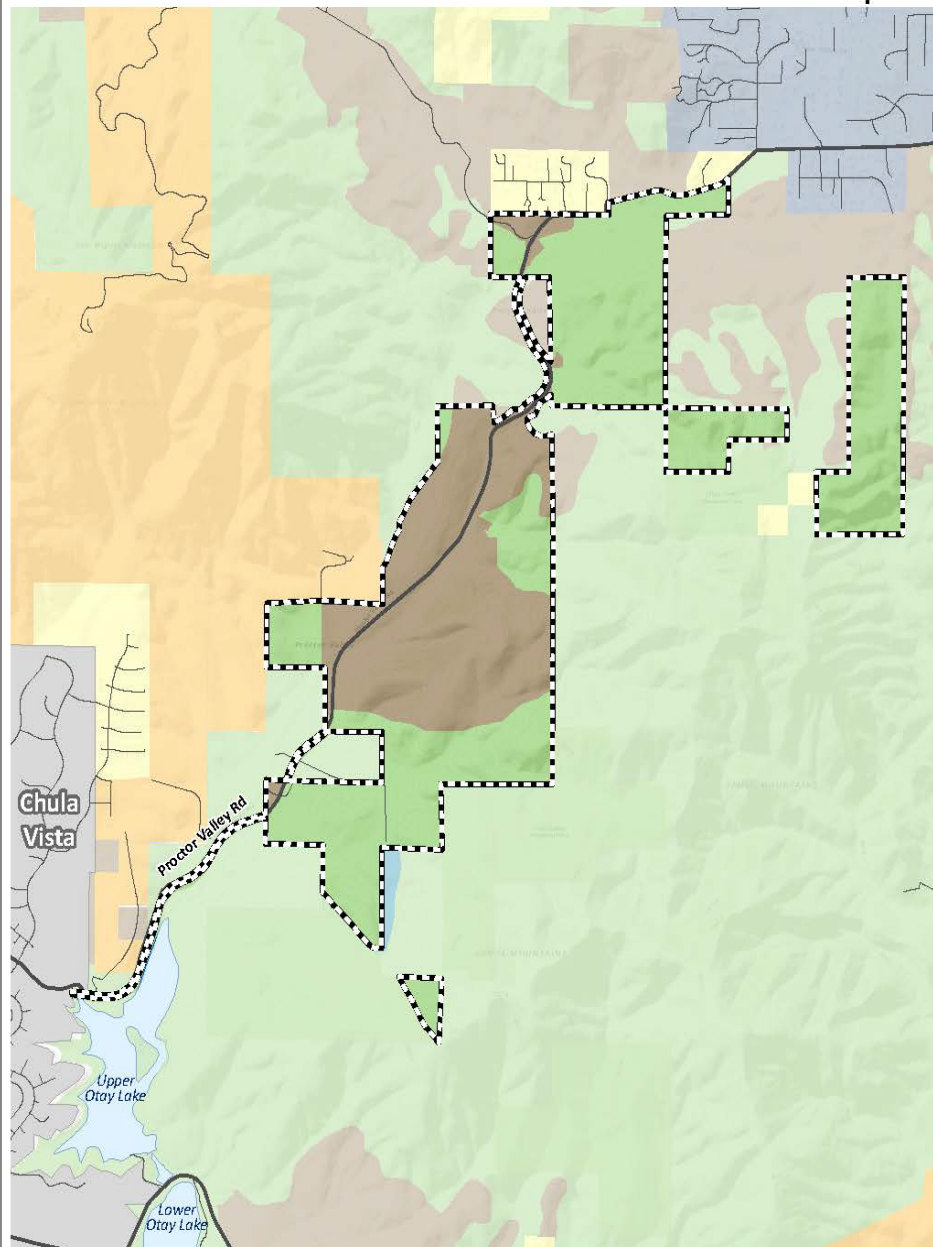
All other provisions of the MSCP and the County's MSCP Subarea Plan remain in effect. Impacts associated with the incidental take authorized by this amendment to the MSCP Subarea Plan must comply with the mitigation requirements of the MSCP, the MSCP Subarea Plan (including the Otay Ranch Resource Management Plan), and this amendment (including the March 3, 2020, Quino Checkerspot Butterfly Conservation Strategy attached as Appendix A hereto). If any conflict arises between this amendment to the MSCP Subarea Plan and the MSCP, the MSCP Subarea Plan, or the MSCP Implementing Agreement, the conflict shall be resolved in favor of this amendment to the MSCP Subarea Plan.

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<sup>4</sup> While an authorized public facility with take authorization under the MSCP Subarea Plan, Proctor Valley Road has been realigned to avoid impacts to vernal pools. Figures 1A to 1E show the new alignment of Proctor Valley Road in order to demonstrate where the road will be constructed and impacts will occur.



## South County Multiple Species Conservation Program Amendment Take Authorized Areas for MSCP Covered Species



### LEGEND

- MSCP Amendment Area
- Hardline Preserve
- Take Authorized Area
- Incorporated City

\* For areas outside the MSCP amendment area, please refer to the 1997 South County MSCP Take Authorized Areas map and Figures 1-1, 1-2, 1-3 in the MSCP Subarea Plan

The MSCP Amendment affects only those properties located within the MSCP amendment area.



Date: 5/15/2020

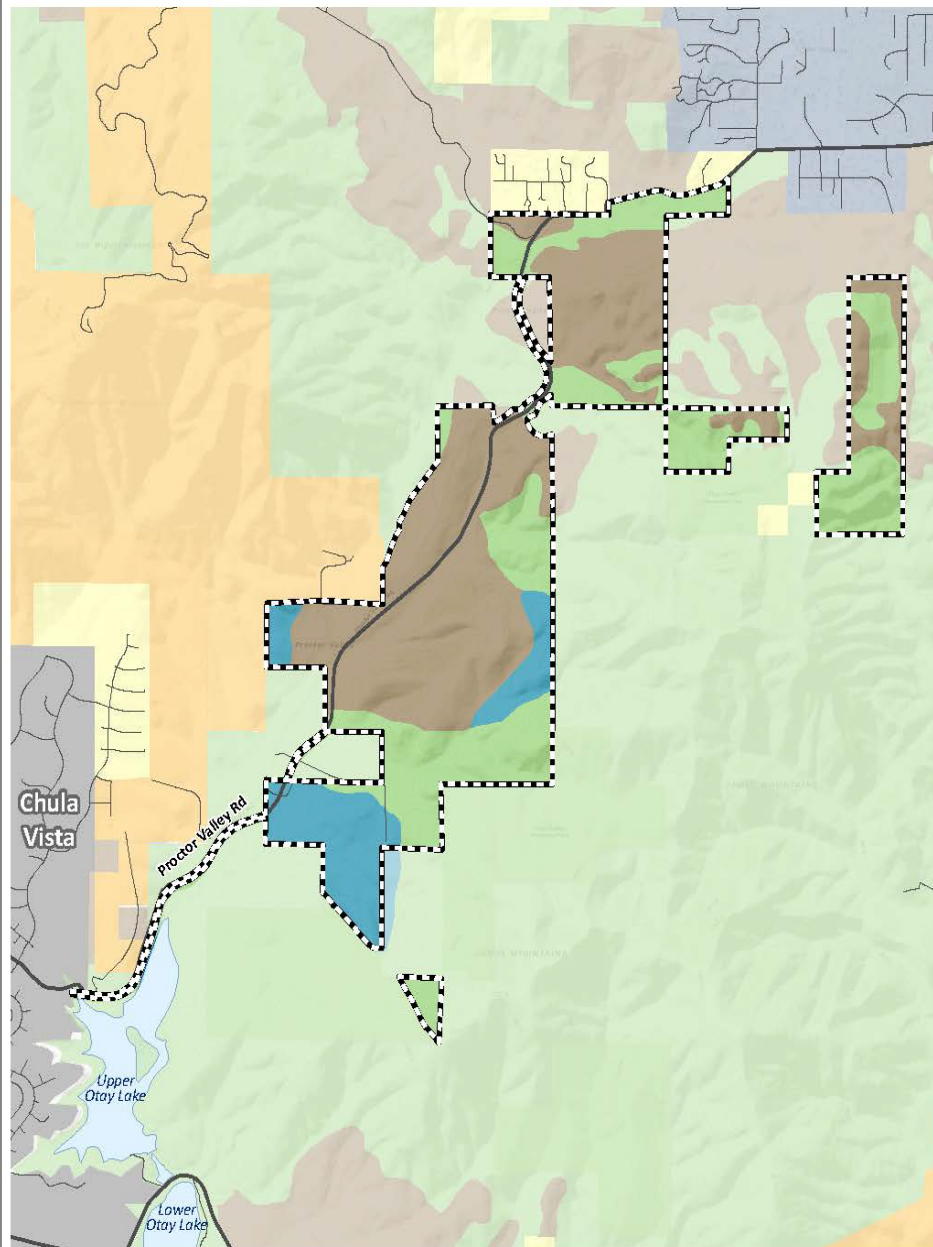
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# 1997 South County Multiple Species Conservation Program Take Authorized Areas



## LEGEND

- MSCP Amendment Area
- No Take Authorized
- Take Authorized Area
- Otay Ranch Where No Take Permits Will be Issued
- Major Amendment Area
- Minor Amendment Area
- Metro/Lakeside/Jamul Segment
- Incorporated City

The MSCP Amendment affects only those properties located within the MSCP amendment area.



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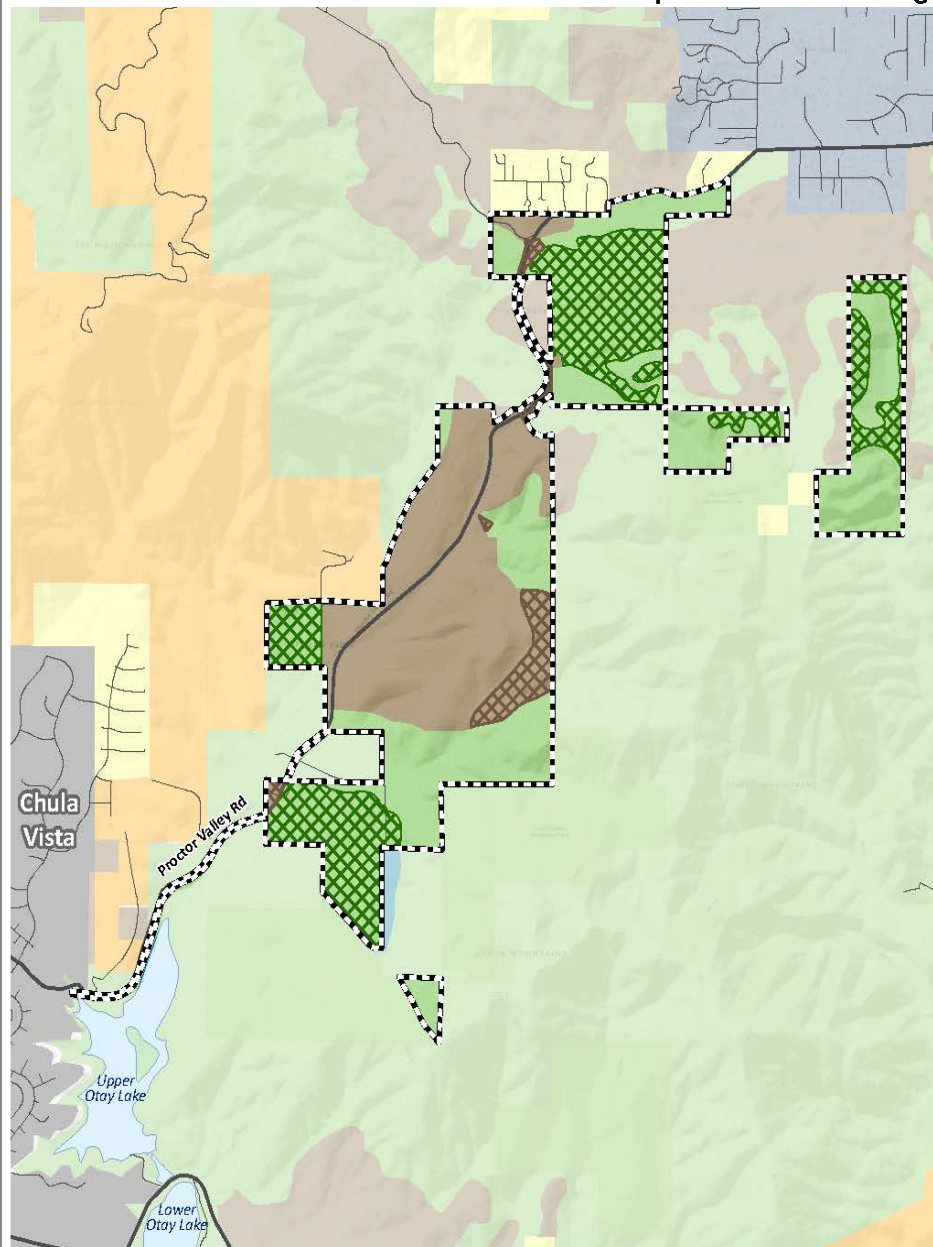
FIGURE 1B

Existing MSCP Subarea Plan Map (For Reference)

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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## South County Multiple Species Conservation Program Amendment Proposed Areas of Change



### LEGEND

- MSCP Amendment Area
- Areas Changed to Hardline Preserve
- Areas Changed to Take Authorized
- Incorporated City

\* For areas outside the MSCP amendment area, please refer to the 1997 South County MSCP Take Authorized Areas map and Figures 1-1, 1-2, 1-3 in the MSCP Subarea Plan

The MSCP Amendment affects only those properties located within the MSCP amendment area.



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SOURCE: County of San Diego 2020

**FIGURE 1C**

**Proposed Areas of Change to MSCP Subarea Plan Map (For Reference)**

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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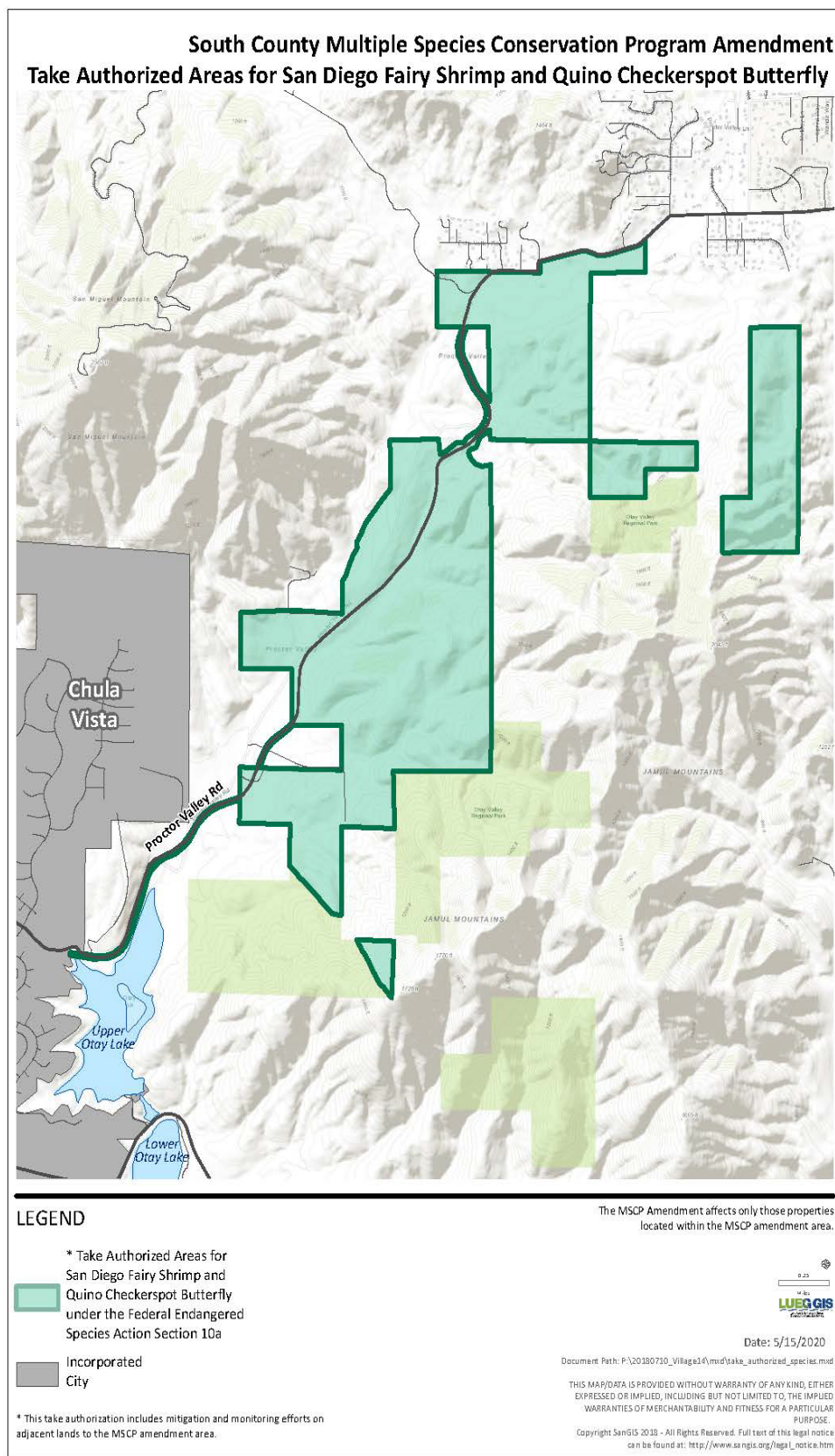






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SOURCE: County of San Diego 2020

**FIGURE 1E**

## Take Authorized Areas for San Diego Fairy Shrimp and Quino Checkerspot Butterfly

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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# 3 Purpose and Background

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## 3.1 Purpose

The purpose of the following sections are to provide a summary of the Proposed Project's (described in Section 2.5) environmental documentation for the U.S. Fish and Wildlife Service's (USFWS's) Section 10 Habitat Conservation Plan (HCP) take authorization determination. The proposed amendment would accomplish the following (see Figure 2 for amendment components)

- (1) Authorize take of Covered Species for approximately 44.5 acres within PV2 (38.4 acres) and within that portion of PV3 (6.1 acres) where a water basin will be constructed and where Proctor Valley Road right-of-way is located;
- (2) Authorize take of Covered Species for approximately 2.2 acres of Preserve where the water transmission line/secondary access road (Street I) in Village 14 will be constructed (see detailed Figure 1D); and
- (3) Authorize take of Quino checkerspot butterfly (*Euphydryas editha quino*) and San Diego fairy shrimp (*Branchinecta sandiegonensis*) throughout the Proposed Project and for mitigation and monitoring efforts on adjacent lands pursuant to Section 10a of the federal Endangered Species Act.
- (4) Designate approximately 531.2 acres in PV1, PV3 (excluding that portion identified as water basin and Proctor Valley Road right-of-way on Exhibit B of the Dispute Resolution Agreement), R14, R15, and R16 as hardline preserve.<sup>5</sup>

This document describes the existing biological conditions of the subject property and evaluates the environmental consequences associated with the proposed amendment.<sup>6</sup>

The proposed Subarea Plan amendment would affect (i) the County's Section 10a permit, issued under the federal Endangered Species Act, and (ii) the County's take authorization issued under the California Endangered Species Act and the Natural Community Conservation Planning Act (only with respect to amendment components 1,2 and 3 listed above). The Section 10a permit and the California Endangered Species Act/Natural Community Conservation Planning Act take authorizations were initially granted to the County pursuant to the 1997 County MSCP Subarea Plan, the 1998 Multiple Species Conservation Program, and the MSCP Implementing Agreement (March 17, 1998). The County (Permit Holder) proposes to amend incidental take permit PRT-840414 and extend take authorization to GDCl as a Third-Party Beneficiary for the duration of the existing Subarea Plan permit (which is in effect until March 17, 2048; USFWS et al. 1998). It is anticipated that all direct physical take of habitat shall have occurred within this timeframe.

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<sup>5</sup> Hardline Preserve refers to areas where landowners have negotiated with the Wildlife Agencies and the County to preserve land in perpetuity. The County Subarea Plan refers to these areas as "Public Lands and Dedicated Private Open Space" (Figures 1-1 and 1-3) (Subarea Plan page 1-2).

<sup>6</sup> The biological information provided in this document is derived from, and consistent with, the data and analyses set forth in the Final EIR (certified by the County on June 26, 2019), the Addendum to that Final EIR (approved June 3, 2020), and the technical appendices that support them. This document does not include new information or reflect changed circumstances such that additional California Environmental Quality Act (CEQA) review by the County would be required. (See Pub. Res. Code Section 21166.)

## 3.2 Multiple Species Conservation Program Subarea Plan

Pursuant to the Endangered Species Act of 1973, as amended (16 USC 1531 et seq.), the USFWS issued the County of San Diego (County) a Section 10(a)(1)(B) permit (PRT-840414) on March 17, 1998, for the MSCP Subarea Plan (County of San Diego 1997). The California Department of Fish and Wildlife (CDFW) also issued Natural Community Conservation Plan Approval and Take Authorization per Section 2800 et seq., of the California Fish and Game Code. The MSCP Subarea Plan is a comprehensive, 50-year HCP program that addresses urban development and the needs of 85 Covered Species and the preservation of natural vegetation communities in southwest San Diego County. The overall goal of the MSCP Subarea Plan is to maintain and enhance biological diversity in the region and conserve viable populations of endangered, threatened, and key sensitive species and their habitats, thereby preventing local extirpation and ultimate extinction. The Plan Area for the MSCP Subarea encompasses 252,132 of unincorporated County lands.

## 3.3 Otay Ranch

Otay Ranch encompasses approximately 22,845 acres in southwestern San Diego County, generally surrounding Lower Otay Reservoir. Otay Ranch is located within unincorporated San Diego County and the incorporated area of the City of Chula Vista (City), with a smaller portion located within the City of San Diego. Both the County and the City approved the Otay Ranch planned community on October 28, 1993. The Otay Ranch General Development Plan/Subregional Plan (GDP/SRP) was accompanied by certification of the Final Otay Ranch GDP/SRP Program EIR (Otay Ranch PEIR) and related technical addendum (SCH No. 89010154) (City of Chula Vista and County of San Diego 1993a).

The Otay Ranch GDP/SRP was incorporated into the County's MSCP Subarea Plan (County of San Diego 1997) and reaffirmed in the County General Plan Update, adopted in 2011 (General Plan 2020) (County of San Diego 2011a).

Otay Ranch consists of three distinct parcels: the Otay Valley Parcel, the Proctor Valley Parcel, and the San Ysidro Mountains Parcel. Together, the three parcels comprise the 23,000-acre Otay Ranch planned community and its associated Otay Ranch Resource Management Plan (RMP) Preserve. Pursuant to the Otay Ranch GDP/SRP and approved Otay Ranch RMP, Otay Ranch includes an 11,375-acre funded and managed natural conservation area known as the Otay Ranch RMP Preserve. The Otay Ranch RMP Preserve is part of the multi-jurisdictional MSCP Plan (adopted in 1998), which is a comprehensive long-term HCP for southwestern San Diego County. Local jurisdictions implement their respective portions through subarea plans, which includes the MSCP County Subarea Plan (adopted in 1997). The Otay Ranch RMP Preserve was established in conjunction with natural open space located in the Jamul and Dulzura planning areas.

At the time of approval, the Otay Ranch community was divided into 14 villages, five planning areas, and an Eastern Urban Center. Of the 14 villages, 11 were situated on the Otay Valley parcel (Villages 1–11), two on the Proctor Valley parcel (Villages 13 and 14), and one on the San Ysidro Mountains parcel (Village 15). When the Otay Ranch GDP/SRP was approved, all 14 villages; the Eastern Urban Center; and Planning Areas 16, 17, 18, and 19, were in the County of San Diego unincorporated area. With the approval of the first Section Planning Area Plan for Villages 1, 1 West, and 5, the Otay Valley Parcel, including Villages 1 through 11, was annexed into the City of Chula Vista, and the remaining Villages (13, 14, and 15) and Planning Areas remained within the unincorporated County.

The Proposed Project consists of portions of Village 14 and two planning areas (Planning Areas 16 and 19, referred to as Planning Areas 16/19) within the Proctor Valley. As part of its 1993 Otay Ranch approvals, the County approved 1,723 residential units in Village 14 and 410 residential units in Planning Areas 16/19, for a total of 2,123 residential units (City of Chula Vista and County of San Diego 1993a).

### 3.4 Dispute Resolution Agreement

On June 26, 2019, GDCI obtained approval from the County Board of Supervisors for a project proposed on property owned by GDCI in Village 14 and Planning Areas 16/19 (herein referred to as the “2019 Land Plan”<sup>7</sup>). Subsequent to the County’s action on the 2019 Land Plan, GDCI, USFWS, the County, and CDFW executed a Dispute Resolution Agreement to resolve their disputes regarding proposed development on PV1, PV2, and/or PV3 under the 1997 Subarea Plan, to consolidate development and reduce edge effects onto adjacent conserved lands in the County’s 1997 Subarea Plan area, to provide certainty in the land development process for GDCI, and to implement the Parties’ Dispute Resolution Project, which represents a reasonable solution to various disputes in relation to the 2019 Land Plan. The Dispute Resolution Agreement identifies three distinct but interconnected processes, which, if completed successfully, could lead to modifications of the 2019 Land Plan and increased protection/conservation of biological resources. The three processes outlined in the Dispute Resolution consist of the following:

1. GDCI and CDFW application to the California Wildlife Conservation Board requesting approval of a proposed land exchange between GDCI and CDFW. The proposed land exchange would modify the 2019 Land Plan’s development footprint to reduce biological impacts and increase the amount of land designated as Preserve or otherwise protected for conservation purposes.
2. County initiation of a proposed amendment to the County’s MSCP Subarea Plan. The proposed amendment would: (1) designate approximately 531.2 acres in PV1, PV3 (excluding that portion identified as water basin and Proctor Valley Road right-of-way on Exhibit B of the Dispute Resolution Agreement), R14, R15, and R16 as hardline preserve; (2) authorize take of Covered Species<sup>8</sup> for approximately 44.5 acres within PV2 (38.4 acres) and within that portion of PV3 6.1 acres) where a water basin will be constructed and where the Proctor Valley Road right-of-way is located; (3) authorize take of Covered Species for approximately 2.2 acres of Preserve where the water transmission line/secondary access road (Street I) in Village 14 will be constructed (see detailed Figure 1D); and (4) authorize take of Quino checkerspot butterfly and San Diego fairy shrimp throughout the Proposed Project pursuant to Section 10a of the federal Endangered Species Act. In order to become effective, the USFWS and CDFW must approve the amendment.
3. GDCI application to the County for a revised Vesting Tentative Tract Map and a Specific Plan Amendment reflecting the revised development footprint and the land exchange (provided it is approved by the Wildlife Conservation Board).

The information in this report is provided in support of process #2—amendment of the County’s MSCP Subarea Plan. The other two process—the proposed land exchange between GDCI and CDFW and the revised Vesting Tentative Tract Map—are related to, but separate from, the proposed Subarea Plan amendment process. The main purpose of the proposed land exchange is to increase the size of, and improve habitat connectivity within, the

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<sup>7</sup> Note that the “2019 Land Plan” is synonymous with the “Approved Project” as that term is used in the Final EIR Addendum and associated CEQA documents, and is synonymous with the “Current Land Plan” as that term is used in the Dispute Resolution Agreement. In addition, the term “Proposed Project” as used herein is synonymous with the “Proposed Project Amendment” as that term is used in the Final EIR Addendum and associated CEQA documents.

<sup>8</sup> Incidental take is authorized only for those species listed in the County’s MSCP Subarea Plan.

hardline preserve and thereby benefit Covered Species under the MSCP as well as Quino checkerspot butterfly, a non-Covered Species that is federally listed as endangered.

## 3.5 Proposed Project

The Proposed Project reflects those modifications to the 2019 Land Plan that would result should the Wildlife Conservation Board approve the proposed land exchange between GDCI and CDFW (i.e., process #1 of the Dispute Resolution Agreement described in Section 2.4). The total Project area encompasses 1,543 acres within Proctor Valley identified as Village 14 and Planning Areas 16/19 in the Otay Ranch GDP/SRP, including Proctor Valley Road, a two-lane County General Plan Mobility Element roadway that would be improved from the Chula Vista/County border, through City of San Diego Cornerstone Lands, and through Village 14 and Planning Areas 16/19. The Proposed Project would develop 1,266 homes; public and private parks; a mixed use, internal open space; a school site; a public safety site; and a water tank on an approximately 579-acre development footprint. Of those 1,266 units, 13 would be built in Planning Area 19, and 1,253 would be built in Village 14. The Proposed Project would reconfigure the 2019 Land Plan to consolidate development in Village 14 and open space in Planning Area 16. The Proposed Project, as compared to the 2019 Land Plan, would retain the amount of development previously contemplated at PV2. It would, however, transfer all of PV1 (18.9 acres) and 96% of PV3 (128 acres) to CDFW for conservation purposes. To reflect this transfer, the County's proposed amendment to the Subarea Plan would designate all of PV1 and 128 acres of PV3 as Preserve. The Proposed Project includes a secondary access road—known as “Street I”—from Proctor Valley Road to Neighborhood R5 (within Village 14). The access road is required for the Otay Water District water transmission line and access to the 980-Zone regional water reservoir facility. It also provides secondary fire/emergency vehicle access for Village 14. The Proposed Project initially included an alignment that encroached further into the Preserve, but at the request of the Wildlife Agencies, GDCI developed an alternative alignment, known as the “Access Road Realignment,” which would remove nearly all of the access road from the Preserve. The Access Road Realignment would reduce the road's permanent impacts to the Preserve from 7.1 acres to 2.2 acres.

The Proposed Project would have direct impacts on habitat for the Quino checkerspot butterfly, a federally listed endangered species that is not covered under the MSCP. The Proposed Project also has the potential, albeit remote, to have impacts on the federally listed San Diego fairy shrimp through indirect impacts to currently occupied features or if features within the development footprint become occupied in the future. Although San Diego fairy shrimp is technically an MSCP-Covered Species, the County does not treat it as such due to litigation that found the City of San Diego's MSCP inadequate as to the measures it imposed to protect the species. Because the County MSCP includes the same measures for San Diego fairy shrimp, the County considers MSCP coverage of that species suspended and inoperative. Therefore, take authorization for San Diego fairy shrimp is being secured independently through this amendment. In addition to providing take coverage for the MSCP-Covered Species within PV2, a portion of PV3, and the access road, the proposed Subarea Plan amendment, if approved by USFWS and CDFW, would amend the federal Section 10 HCP portion of the Subarea Plan to include take coverage for Quino checkerspot butterfly and San Diego fairy shrimp for this Proposed Project.

The Proposed Project would be subject to the same, or similar, mitigation measures outlined in the Final Environmental Impact Report (Final EIR) for the 2019 Land Plan. Note, however, that the Proposed Project, by virtue of its changes to the 2019 Land Plan, may require modifications to the mitigation measures set forth in the Final EIR, such as those relating to conveyance acreage and location. Such modifications to the mitigation measures can be found in the Addendum to the Final EIR.

## 4 Biological Mitigation Ordinance

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Under the MSCP Subarea Plan, most but not all of the Proposed Project is exempt from the County's Biological Mitigation Ordinance (BMO). Specifically, the BMO does apply to PV2 (38.4 acres) and a 6.1-acre portion of PV3, as these areas were not included in the original hardline development in the MSCP and thus not exempt from the County's BMO. The BMO does not apply to any other portion of the Proposed Project, including the proposed secondary access road and water tank. Consistent with the MSCP Subarea Plan and Implementing Agreement, the County must make findings demonstrating that the development activities contemplated on PV2 and the identified portion of PV3 conform to the County's BMO criteria.

Accordingly, a BMO consistency findings report was prepared to analyze the Proposed Project's contemplated development activities on PV2 and the identified portion of PV3, and it determines whether such activities are consistent with the requirements of the BMO. Section 86.505 of the County's BMO (County of San Diego 2010) describes five design criteria that should be applied to avoid and minimize impacts to the following resources: (1) critical populations of sensitive plant species within the MSCP Subarea (Attachment C of the BMO); (2) significant populations of rare, narrow endemic animal species within the MSCP Subarea (Attachment D of the BMO); (3) narrow endemic plant species within the MSCP Subarea (Attachment E of the BMO); (4) San Diego County sensitive plants, as defined in the County's BMO; and (5) land determined to be a Biological Resource Core Area (BRCA). These five design criteria as they apply to PV2 and PV3 are described in Sections 2.2.1 through 2.2.5 of the BMO consistency findings report (Dudek 2019) and include minimization of Proposed Project impacts, clustering of development, slope encroachment, road standards, and Preserve design. In addition, the BMO outlines the required mitigation for impacts to sensitive biological resources present within PV2 and PV3.

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# 5 Potential Biological Impacts/ Take Assessment

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## **PV2 and a Portion of PV3**

The Proposed Amendment will designate 38.4 acres of PV2 and a 6.1-acre portion of PV3 as “take authorized area” (i.e., development activities would be authorized under the proposed Subarea Plan amendment). The BMO consistency findings report quantifies the sensitive vegetation impacts anticipated with proposed development of PV2 and a portion of PV3, as well as impacts to special-status plant and wildlife species. It also describes the required mitigation for those impacts. The impacts related to the development of PV2 and a portion of PV3 are summarized in the sections below. By way of summary, the proposed development on PV2 and the portion of PV3 would permanently disturb approximately 44.5 acres.

## **Secondary Access Road**

The Approved Project included a secondary access road that connected Proctor Valley Road to a water tank in the R5 area of Village 14 (Figure 1D). Under its original alignment, the access road would have permanently disturbed approximately 7.1 acres of Preserve. To reduce these impacts, GDCI redesigned the road and changed its alignment. This modified alignment is referred to as the “Access Road Realignment.” The County is recommending this realignment be adopted as part of the Proposed Project and the proposed Subarea Plan amendment. As described below, the Access Road Realignment would permanently disturb 2.2 acres of Preserve. Therefore, as part of the amendment, this area would be changed to a “take authorized area.” These impacts are also described and analyzed in the Biological Resources Technical Memorandum for the Proposed Project Amendment (Appendix D of the Environmental Review Update Checklist Form; County of San Diego 2020) and the Optional Secondary Access Road Memo (Appendix Y of the Environmental Review Update Checklist Form; County of San Diego 2020).

## **Take Coverage for Quino Checkerspot Butterfly and San Diego Fairy Shrimp**

Finally, the proposed Subarea Plan amendment would authorize incidental take of Quino checkerspot butterfly and San Diego fairy shrimp within the 1,543-acre Proposed Project area or adjacent lands, which includes 500.2 acres of designated critical habitat for Quino checkerspot butterfly. Impacts to both species are analyzed in the Final EIR (County of San Diego 2019) and in the Biological Resources Technical Memorandum prepared for the Addendum to the Final EIR (Dudek 2020).

## **Preserve Designation**

Through the proposed Subarea Plan amendment, 531.1 acres of lands (PV1, PV3 [excluding that portion identified as water basin and Proctor Valley Road right-of-way on Exhibit B of the Dispute Resolution Agreement], R14, R15, and R16) would be designated as hardline preserve. No additional take will result from this action.

## 5.1 Direct Impacts

This section addresses the direct impacts of the three actions contemplated under the proposed Subarea Plan amendment: (1) development of PV2 and a portion of PV3, (2) construction and use of the secondary access road, and (3) Project-wide take authorization for Quino checkerspot butterfly and San Diego fairy shrimp. The first two actions involve discrete areas of the Proposed Project site, but they also affect a host of habitat types, plants, and wildlife species. By contrast, the third action involves the entire Project site or adjacent lands, but affects only two species, the Quino checkerspot butterfly and the San Diego fairy shrimp. In light of these distinctions between actions (1) and (2), on one hand, and action (3), on the other, the analysis to follow addresses the first two together and the third separately.

### 5.1.1 Direct Impacts to Habitat

#### Development of PV2 and a Portion of PV3

The Proposed Project contemplates development of 44.5 acres within PV2 and PV3. Such development would affect 42.8 acres of Tier II and III upland vegetation communities and 0.05 acres of waters/streambed regulated by the Resource Agencies (see Table 1 and Figure 3, Biological Resources).

Within PV2, the Proposed Project would preserve as Conserved Open Space<sup>9</sup> 6.2 acres of land currently designated for low-density residential development. The areas of Conserved Open Space would be protected by a biological open space easement or conveyed to the Otay Ranch RMP Preserve. Although protected by a conservation easement, the land identified as Conserved Open Space would not have its official land use designation changed from development to Otay Ranch RMP Preserve unless the owner-applicant decides to convey the land to the Otay Ranch Preserve Owner/Manager (POM) through the boundary adjustment process. The Conserved Open Space within PV2, which is designated for development under the GDP/SRP and County General Plan, is located along the eastern edge of development and the Preserve boundary. Under the Proposed Project, development in this area of PV2 would be eliminated to minimize impacts to Tier II Diegan coastal sage scrub immediately adjacent to MSCP Preserve owned by the Bureau of Land Management.

**Table 1. Vegetation Communities and Land Cover Types in PV2 and a Portion of PV3**

Habitat Types/Vegetation Communities (Code <sup>a</sup> )	PV2		PV3	Total Acres
	Development Footprint (acres)	Conserved Open Space (acres)	Development Footprint (acres)	
Diegan Coastal Sage Scrub (32500)	37.2	6.2	—	43.4
Diegan Coastal Sage Scrub; Disturbed (32500)	—	—	4.8	4.8
<i>Subtotal of Tier II Habitats</i>	37.2	6.2	4.8	48.2

<sup>9</sup> Conserved Open Space refers to 24.5 acres of land within the Proposed Project, which, while designated in the Otay Ranch GDP/SRP for residential uses within Village 14 and Planning Areas 16/19, would not be developed as part of the Proposed Project. Instead, the Conserved Open Space would be preserved on site and be (1) added to the Otay Ranch RMP Preserve (through a future RMP Amendment), (2) managed under a separate RMP, or (3) used to mitigate impacts to the City of San Diego MSCP Cornerstone Lands. The Conserved Open Space areas are located adjacent to Otay Ranch RMP Preserve and would be conserved by recording a biological open space easement over the land.

**Table 1. Vegetation Communities and Land Cover Types in PV2 and a Portion of PV3**

Habitat Types/Vegetation Communities (Code <sup>a</sup> )	PV2		PV3	Total Acres
	Development Footprint (acres)	Conserved Open Space (acres)	Development Footprint (acres)	
Non-Native Grassland (42200)	0.8	—	—	0.8
Subtotal of Tier III Habitats	0.8	—	—	0.8
Subtotal for Tier II and Tier III Habitats	38.0	6.2	4.8	49.0
Disturbed Habitat (11300)	0.4	<0.1	1.1	1.5
Urban/Developed (12000)	—	—	0.1	0.1
Subtotal of Tier IV Habitats	0.4	<0.1	1.2	1.6
Subtotal Habitats	38.4	6.2	6.1	50.7
<b>Totals<sup>b</sup></b>	<b>44.6</b>		<b>6.1</b>	<b>50.7</b>
Waters/Streambed	0.05	0.01	—	0.06
Subtotal of Jurisdictional Aquatic Resources <sup>c</sup>	0.05	0.01	—	0.06

**Notes:**<sup>a</sup> Oberbauer et al. 2008.<sup>b</sup> May not total due to rounding.<sup>c</sup> Unvegetated stream channel is an overlay within various vegetation communities and is therefore not counted in the total.**Development of Secondary Access Road**

At the request of the Wildlife Agencies, GDCI redesigned Street I and altered its alignment so that most of the road now lies outside the Preserve (the “Access Road Realignment”) (Figure 1D). The Proposed Project includes a secondary access road (known as “Street I”) between Proctor Valley Road and a water tank in the R5 portion of Village 14. Street I would allow for access to the water tank and provide the necessary trenching for underground water distribution lines. It would also provide secondary ingress and egress during fires or other emergencies. The Access Road Realignment would result in permanent impacts to 2.2 acres designated as Preserve and 2.2 acres of temporary impacts.

## 5.1.2 Direct Impacts to Covered Plant Species

There are no direct impacts to any covered plant species from development of PV2, a portion of PV3, and the access road.

## 5.1.3 Direct Impacts to Covered Wildlife Species

Neither PV2, nor the 6.1 acres portion of PV3, nor the secondary access road contain key regional populations of MSCP-covered wildlife species. However, there is a high potential for some covered wildlife species to occur in these areas (Table 2 of this report). Such wildlife species include orange-throated whiptail (*Aspidoscelis hyperythra*), Blainville’s horned lizard (*Phrynosoma blainvillii*), Cooper’s hawk (*Accipiter cooperii*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), coastal California gnatcatcher (*Polioptila californica californica*), western bluebird (*Sialia mexicana*), mule deer (*Odocoileus hemionus*), cougar (*Puma concolor*), and American badger (*Taxidea taxus*).

The proposed impacts to suitable habitat for MSCP-covered wildlife species associated with PV2, the 6.1 acres portion of PV3, and the access road, are provided in Table 2, Column 4. The secondary access road would permanently affect 2.2 acres of habitat for MSCP-covered wildlife within the Preserve (Table 2). The 2.2 acres of permanent impact is located along the edge of the Village 14 development footprint and would not have a substantial effect on MSCP-covered wildlife species. The Access Road Realignment also includes 2.2 acres of temporary impacts. The 2.2 acres of temporary impacts will be restored with native vegetation, which will continue to provide habitat for the MSCP-covered wildlife species following Project construction.

**Table 2. Permanent Impacts to Modeled Habitat for MSCP-Covered Wildlife Species with High Potential to Occur within PV2, a Portion of PV3, and the Access Road**

Species Common Name (Scientific Name)	Regulatory Status: Federal/State/ MSCP/County	Basis for Impact Evaluation	PV2, PV3 and Access Road Development Footprint
orange-throated whiptail ( <i>Aspidoscelis hyperythra</i> )	USFWS: None CDFW: WL MSCP: Covered County: Group 2	High potential to occur. There are 1,071.9 acres of modeled habitat within the Proposed Project area. Modeled habitat for this species includes chamise chaparral, disturbed chamise chaparral, coastal sage scrub, disturbed coastal sage scrub, disturbed habitat, eucalyptus woodland, mulefat scrub, oak riparian forest, and southern mixed chaparral.	PV2 and PV3: 43.5 acres Access road: 2.2 acres
Blainville's horned lizard ( <i>Phrynosoma blainvillii</i> )	USFWS: None CDFW: SSC MSCP: Covered County: Group 2	Observed within the Biological Study Area <sup>10</sup> but not specifically within PV2 or PV3. There are 1,185.3 acres of modeled habitat within the Proposed Project area. Modeled habitat for this species includes chamise chaparral, disturbed chamise chaparral, coastal sage scrub, disturbed coastal sage scrub, disturbed habitat, eucalyptus woodland, mulefat scrub, oak riparian forest, non-native grassland, and southern mixed chaparral.	PV2 and PV3: 44.3 acres Access road: 2.2 acres
Cooper's hawk ( <i>Accipiter cooperii</i> ) (nesting)	USFWS: None CDFW: WL MSCP: Covered County: Group 1	Observed within the Biological Study Area but not specifically within PV2 or PV3. There are 6.5 acres of modeled nesting habitat and 1,169.0 acres of modeled foraging habitat within the Proposed Project area. Nesting modeled habitat for this species includes eucalyptus woodland and oak riparian forest. Foraging modeled habitat for this species includes chamise chaparral, cismontane alkali marsh, coastal sage scrub, disturbed chamise chaparral, disturbed coastal sage scrub, eucalyptus woodland, mulefat scrub, oak riparian forest, non-native grassland, and southern mixed chaparral.	PV2 and PV3: 42.8 acres of foraging habitat only Access road: 2.2 acres
Southern California rufous-crowned sparrow ( <i>Aimophila ruficeps canescens</i> )	USFWS: None CDFW: WL MSCP: Covered County: Group 1	Observed within the Biological Study Area but not specifically within PV2 or PV3. There are 1,154.6 acres of modeled nesting/foraging habitat within the Proposed Project area. Nesting and foraging modeled habitat for this species includes chamise chaparral, disturbed chamise chaparral, coastal sage scrub, disturbed coastal sage scrub, mulefat scrub, non-native grassland, and southern mixed chaparral.	PV2 and PV3: 42.8 acre Access road: 2.2 acres

<sup>10</sup> The Biological Study Area combines the extent of the "Project Area" defined for the 2019 Land Plan and the "Project Area" for the EIR Land Exchange Alternative. Therefore, the Biological Study Area is larger than the Proposed Project area and covers approximately 2,900 acres. The Biological Study Area includes land owned by the Project owner/applicant as well as land owned by the CDFW. The full extent of biological resources mapped during the evaluation of the 2019 Land Plan and the EIR Land Exchange Alternative can be found within the technical reports prepared for the 2019 Land Plan and the alternative.

**Table 2. Permanent Impacts to Modeled Habitat for MSCP-Covered Wildlife Species with High Potential to Occur within PV2, a Portion of PV3, and the Access Road**

Species Common Name (Scientific Name)	Regulatory Status: Federal/State/ MSCP/County	Basis for Impact Evaluation	PV2, PV3 and Access Road Development Footprint
golden eagle ( <i>Aquila chrysaetos</i> ) (nesting and wintering)	USFWS: BCC CDFW: FP, WL MSCP: Covered County: Group 1	Observed within the Biological Study Area but not specifically within PV2 or PV3. There are 1,155.0 acres of modeled foraging habitat within the Proposed Project area. Foraging modeled habitat for this species includes coastal sage scrub (including disturbed and Baccharis-dominated), chamise chaparral (including disturbed), southern mixed chaparral, and non-native grassland. These vegetation communities are based on the MSCP definition of foraging habitat and the crosswalk with Proposed Project specific data.	PV2 and PV3: 42.8 acres Access road: 2.2 acres
burrowing owl ( <i>Athene cunicularia</i> ) (burrow sites and some wintering sites)	USFWS: BCC CDFW: SSC MSCP: Covered County: Group 1	Direct observations of these species did not occur during focused surveys. Incidental sighting of white wash, feathers, and pellets were observed at one location in the central portion of the Biological Study Area during rare plant surveys (not within PV2). There are 115.3 acres of burrowing owl survey areas mapped within the Proposed Project area based on the burrowing owl habitat assessment conducted for the entire Biological Study Area.	PV2 and PV3: 0 Access road: 0
coastal California gnatcatcher ( <i>Polioptila californica californica</i> )	USFWS: FT CDFW: SSC MSCP: Covered County: Group 1	Observed within the Biological Study Area but not within PV2 or PV3. There are 1,041.2 acres of modeled nesting/foraging habitat within the Proposed Project area. Nesting and foraging modeled habitat for this species includes chamise chaparral, disturbed chamise chaparral, coastal sage scrub, disturbed coastal sage scrub, mulefat scrub, and southern mixed chaparral.	PV2 and PV3: 42.0 acres Access road: 2.2 acres
western bluebird ( <i>Sialia mexicana</i> )	USFWS: None CDFW: None MSCP: Covered County: Group 2	Observed within the Biological Study Area but not within PV2 or PV3. There are 707.3 acres of modeled foraging habitat within the Proposed Project area. Nesting and foraging modeled habitat for this species includes coastal sage scrub, disturbed coastal sage scrub, disturbed habitat, eucalyptus woodland, mulefat scrub, oak riparian forest, and non-native grassland.	PV2 and PV3: 44.3 acres Access road: 2.2 acres
mule deer ( <i>Odocoileus hemionus</i> )	USFWS: None CDFW: None MSCP: Covered County: Group 2	Observed within the Biological Study Area. There are 1,201.7 acres of modeled habitat within the Proposed Project area. Modeled habitat for this species includes chamise chaparral, cismontane alkali marsh, coastal sage scrub, developed, disturbed chamise chaparral, disturbed coastal sage scrub, disturbed habitat, eucalyptus woodland, mulefat scrub, oak riparian forest, non-native grassland, and southern mixed chaparral.	PV2 and PV3: 44.4 acres Access road: 2.2 acres

**Table 2. Permanent Impacts to Modeled Habitat for MSCP-Covered Wildlife Species with High Potential to Occur within PV2, a Portion of PV3, and the Access Road**

Species Common Name (Scientific Name)	Regulatory Status: Federal/State/ MSCP/County	Basis for Impact Evaluation	PV2, PV3 and Access Road Development Footprint
cougar ( <i>Puma concolor</i> )	USFWS: None CDFW: None MSCP: Covered County: Group 2	Observed within the Biological Study Area (indirect observation of scat) but not within PV2 or PV3. There are 1,185.3 acres of modeled habitat within the Proposed Project area. Modeled habitat for this species includes chamise chaparral, disturbed chamise chaparral, coastal sage scrub, disturbed coastal sage scrub, disturbed habitat, eucalyptus woodland, mulefat scrub, oak riparian forest, non-native grassland, and southern mixed chaparral.	PV2 and PV3: 44.3 acres Access road: 2.2 acres
American badger ( <i>Taxidea taxus</i> )	USFWS: None CDFW: SSC MSCP: Covered County: Group 2	Observed within the Biological Study Area by sign only but not within PV2 or PV3. There are 1,119.5 acres of modeled habitat within the Proposed Project area. Modeled habitat for this species includes coastal sage scrub, chamise, disturbed chamise chaparral, disturbed coastal sage scrub, disturbed habitat, mulefat scrub, and non-native grassland.	PV2 and PV3: 44.3 acres Access road: 2.2 acres

**Status Legend**

**Federal**

BCC: Bird of Conservation Concern

FT: Federally Threatened

**State**

SSC: Species of Special Concern

WL: Watch List

FP: Fully Protected

**MSCP**

Covered: Covered Species under the MSCP Plan

**County of San Diego**

Group 1

Group 2

## 5.1.4 Direct Impacts to Quino Checkerspot Butterfly

The Proposed Project was designed in large part to reduce the impacts on biological habitat. Specifically, the Proposed Project would reduce habitat impacts from 809 acres to 579 acres, a difference of approximately 230 acres from the 2019 Land Plan and 1,188.2 acres from the “take authorized” footprint in the MSCP Subarea Plan. As to Quino checkerspot butterfly, the Proposed Project would disturb 527.1 acres<sup>11</sup> of potential Quino checkerspot butterfly habitat, approximately 262.3 acres less than what the 2019 Land Plan proposed to impact.<sup>12</sup> For purposes of this document, all 527.1 acres are considered “occupied,” based on the USFWS definition of “occurrence complex,” as set forth in the Recovery Plan for the Quino Checkerspot Butterfly (USFWS 2003) and the 5-Year Review for Quino Checkerspot Butterfly (USFWS 2009).<sup>13</sup> As noted above, the Proposed Project would disturb 527.1 acres of occupied Quino checkerspot butterfly habitat, including approximately 4.21 acres of Quino checkerspot butterfly host plant and 3 locations (based on USFWS database) where Quino checkerspot butterfly adults were observed. A detailed analysis of the Proposed Project’s impacts to Quino checkerspot butterfly host plants is presented on the Figure 4 series, 2016 Quino Host Plant Mapping and Recent Sightings. A Quino Checkerspot Butterfly Conservation Strategy, which includes a Framework Management Plan, has been developed by HELIX Environmental Planning Inc. (HELIX 2020) in coordination with the applicant, the Wildlife Agencies, and the County (Appendix A). It outlines enhancement, restoration, management, and monitoring activities that are included as part of the mitigation for the Quino checkerspot butterfly. Some take may occur from implementation of this plan as Quino checkerspot butterfly eggs, larvae and pupae are difficult to see and may be inadvertently impacted during surveys, weeding, and other management activities.

## 4.1.5 Direct Impacts to San Diego Fairy Shrimp

The Proposed Project has been designed to avoid impacts to features<sup>14</sup> occupied by San Diego fairy shrimp. However, seasonal variability in ponding as a result of varying rainfall amounts and patterns can also affect shrimp occupancy in vernal pools from year to year (Bauder 2005; Simovich and Riley 2008). This variability can result in substantial differences in fairy shrimp occupancy data at a site between years. Therefore, it is possible that additional features with San Diego fairy shrimp may be impacted than are currently estimated.

Through the habitat assessment and 2 years of protocol surveys (both wet and dry seasons), Dudek biologists mapped 52 features<sup>15</sup> within the biological study area that met the ponding requirements set forth in the USFWS survey guidelines (Figure 5). Of the 52 features recorded, 38 are unvegetated road ruts, and 14 are ephemeral basins. Four features within the Proposed Project area contained federally endangered San Diego fairy shrimp: D4, A22, A23, and A27 (Figure 6). Four additional occupied features (B2, D9, C14, and C21) are located adjacent to the Proposed Project area as shown on Figures 7 and 8. One pool within the CDFW lands surveyed was determined to be occupied (A12); however, this pool is located well outside of the Proposed Project area (see Figure 5) and is therefore not included in this analysis. Only one of these features, B2, would be considered a vernal pool since it is the only feature that supported vernal pool plant species as assessed during the 2 years of protocol surveys. In

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<sup>11</sup> Note that this acreage does not reflect the reduction of impacts from the proposed Access Road Realignment.

<sup>12</sup> Note that the 2019 Land Plan does not have any take authorization for Quino checkerspot butterfly.

<sup>13</sup> These documents define “occurrence complex” to include those areas within “a 0.6 (1 km) movement radius from each butterfly observation....” (See, e.g., Recovery Plan for Quino Checkerspot Butterfly, USFWS 2003, p. 35.)

<sup>14</sup> The features detected on site identified as potential suitable habitat for branchiopods were either: (1) road ruts: depressions that are typically formed by vehicular traffic within or immediately adjacent to roadways, generally lack aquatic vegetation, and are heavily disturbed by vehicular traffic; or (2) ephemeral basins: surface depressions that retain sufficient water level, support aquatic vegetation, and generally lack vehicle disturbance.

<sup>15</sup> A full discussion of the focused surveys and results can be found in Section 2.4.1.6 of the Final EIR. Note that the survey area for vernal pool branchiopods encompasses a larger area than the Biological Study Area since these surveys focused on areas adjacent to the Proposed Project. Therefore, the 52 features are a subset of the overall features identified during focused surveys.



addition, five vernal pools were recently detected within City of San Diego Cornerstone Lands (see Appendix D of County of San Diego 2020 for a detailed discussion of these features). These features were not included in the 2 years of protocol surveys due to lack of sufficient ponding, but it is assumed that these features are occupied.

The Proposed Project has been designed to avoid impacts on features known to be occupied by San Diego fairy shrimp and on the five vernal pools located within the City of San Diego that are assumed to be occupied. The Proposed Project will result in impacts to 10 features categorized as ephemeral basins (0.098 acres) and 34 features (0.099 acres) categorized as road ruts. Based on 2 years of protocol surveys, none of these features are currently occupied by San Diego fairy shrimp, but they could become occupied in the future. Avoidance for each of the pools that are occupied, or assumed to be occupied, is described in detail as follows.

Features D4, A22, A23, and A27 are located within Planning Area 19. Features D4, A22, and A23 are considered road ruts, while A27 is an ephemeral basin located within the Otay Ranch RMP Preserve. As shown on Figure 6, development within Planning Area 19 has been revised to avoid features D4, A22, and A23 and their supporting watersheds. Due to the disturbed nature of the road ruts and the lack of vernal pool plant species, the Proposed Project avoids the watershed of this area and includes a varying buffer between the watershed and the development limits from 5 to 40 feet. The development includes an approximate 35-foot slope along the southern edge. This slope is not included in the Fire Management Zone and will be revegetated with native habitat to further increase the buffer for the features and their watersheds (37, 69, and 115 feet respectively). These features will be within an area designated as Conserved Open Space and would be protected through either a Project-specific RMP or added to the Preserve. Feature A27 is located within the Preserve and connects to an existing stream channel that has been created by culverting the flow from wetlands east of Proctor Valley Road. This channel and the existing culvert are the primary source of water for the feature. Although the road will be widened and a replacement culvert installed, water will continue to flow within the culvert and the channel, and supporting hydrology for the feature will be maintained.

Currently Features B2 and D9 are located immediately adjacent to Proctor Valley Road and are subject to indirect impacts such as dust from cars travelling along the road (Figure 7). Proctor Valley Road was specifically realigned at this location to protect the vernal pool (B2) and the ephemeral basin (D9) from direct impacts and provide a buffer for the features and their watersheds. The watershed will be located approximately 300 feet from the realigned Proctor Valley Road and more distant from the edge of development in Village 14.

Feature C14 is a road rut located within City of San Diego Cornerstone Lands (Figure 9). Under the Proposed Project, the watershed of this pool and a 100-foot buffer will be avoided by development of the Proposed Project. Feature C21 is an ephemeral basin and is also located within the City of San Diego Cornerstone Lands (Figure 8). This feature is currently located approximately 25 feet from Proctor Valley Road and is subject to the same indirect impacts as Feature B2. After Proctor Valley Road is realigned, C21 will be located approximately 430 feet from the edge of the development footprint.

The five vernal pools located within the City of San Diego Cornerstone Lands had been previously identified as floodplain scour pools<sup>16</sup> in the City of San Diego's Vernal Pool Habitat Conservation Plan source data (AECOM and Hogan 2012). Re-evaluation of the pools in late 2019 determined that these pools should be classified as vernal pools (see Appendix D of County of San Diego 2020 for a detailed discussion of these features). The current and approved design for Proctor Valley Road includes a bridge with a proposed span of approximately 282 lineal feet but would still result in impacts to these features. In order to avoid permanent direct impact to the five pools

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<sup>16</sup> "[S]cour channels in the Lower Proctor Valley Creek floodplain where incision of the nearby existing creek bed may have lowered typical water tables below the bottom of the floodplain scour pools" (AECOM and Hogan 2012, p. 13).

described above (and their watersheds), the proposed bridge for Proctor Valley Road would be increased in span from 282 lineal feet to approximately 702 lineal feet. This increase in span length would allow the bridge to avoid the drainage, including the vernal pools and their watershed (Figure 9). In addition, the bridge pylons would be placed outside of the vernal pools and associated watershed. With this bridge design, the landscape in which these pools occur would be maintained, and the watershed input to the pools, as well as their outflow elevations, would not be altered. The bridge will not be directly over any of the pools, and direct impacts to the pools will be avoided during Project construction. Since the bridge will be situated to south of the pools at an east-to-west alignment, it will result in minimal shading impacts. Based on these facts, the proposed bridge at Proctor Valley Road, and the Proposed Project, would avoid impacts to vernal pools and the species that rely on them. For this reason, the Proposed Project is likewise consistent with the City of San Diego's Vernal Pool Habitat Conservation Plan. There is one road rut, C9, within City of San Diego lands that is currently unoccupied and falls within the future road alignment. This feature is included in the 34 features (0.099 acres) of road ruts that will be impacted by the Proposed Project. Note, however, that the Project applicant must obtain from the City a site development permit, and the City, as part of that permitting process, might require additional measures to ensure continued compliance with the Vernal Pool Habitat Conservation Plan. Should the City require such additional measures, the Project applicant would implement them, along with any other measures the City might impose as conditions of the site development permit. The temporary impacts associated with bridge construction would be restored to pre-project conditions as required by the City's Land Development Code, leaving both the pools and watersheds in place.

## 5.2 Indirect Impacts

Indirect impacts (and potential incidental take) are those that will occur later in time with reasonable certainty. Indirect impacts can be detrimental to vernal pool habitat, and covered species indirect impacts are much more difficult to track and quantify.

### **PV2 and a Portion of PV3 and the Access Road Realignment**

Indirect impacts associated with development of the Proposed Project, including development of PV2, a portion of PV3, and the Access Road Realignment, would be the same as those described fully in Section 2.4 of the Final EIR for the 2019 Land Plan (County of San Diego 2019). In summary, indirect impacts result from adverse "edge effects," either short-term indirect impacts related to construction, or long-term, chronic indirect impacts associated with the location of urban development in proximity to biological resources within natural open space. During construction, short-term indirect impacts may include dust and noise, which could temporarily disrupt habitat and species vitality; changes in hydrology; disruption of wildlife activity due to increased human activity; and construction-related chemical pollutants. However, grading would be subject to restrictions and requirements that address erosion and runoff, including the federal Clean Water Act and the National Pollution Discharge Elimination System, and preparation of a Storm Water Pollution Protection Plan (SWPPP) and standard urban stormwater management plan. These programs are required project conditions, and they are expected to minimize impacts with respect to erosion/runoff and the potential impacts from chemical pollutants.

Long-term indirect impacts to adjacent open space may include generation of fugitive dust, intrusions by humans and domestic pets, noise, lighting, invasion by exotic plant and wildlife species, effects of toxic chemicals (fertilizers, pesticides, herbicides, and other hazardous materials), urban runoff from developed areas, litter, fire, habitat fragmentation, and hydrologic changes. These impacts are anticipated to be limited because of the 100-foot buffer along the development/Preserve edge (described in Section 5.1)

### **Quino Checkerspot Butterfly**

Potential indirect impacts to Quino checkerspot butterfly habitat and individuals could occur as a result of adverse “edge effects,” either short-term indirect impacts related to construction, or long-term, chronic indirect impacts associated with the location of urban development in proximity to Quino checkerspot butterfly resources within natural open space. During construction, short-term indirect impacts may include dust, which could impact both larvae and host plant vitality immediately adjacent to grading activities; and disruption of adult Quino checkerspot butterfly activity due to increased human activity immediately adjacent to construction activities. However, dust generated during grading would be subject to restrictions and requirements of the Project’s fugitive dust control plan that limit dust generation during construction. These programs are required Project conditions, and they are expected to minimize impacts with respect to dust. Disruption of adult Quino checkerspot butterfly activity could occur if significant construction activities were to coincide with Quino checkerspot butterfly emergence. These impacts are anticipated to be limited because of the 100-foot buffer along the development/Preserve edge (described in Section 5.1).

Long-term indirect impacts to adjacent open space may include increased human and domestic pet access, lighting, invasion by exotic plant and wildlife species, effects of toxic chemicals (fertilizers, pesticides, herbicides, and other hazardous materials), urban runoff from developed areas, litter, and fire. Development of the site will result in the potential for increased human and pet access to natural open space, which could lead to inadvertent trampling of Quino checkerspot host plants, eggs, larvae, and pupae. Increased ambient light levels could alter bird behavior and increase the effectiveness of visually aided nocturnal predators (e.g., Rich and Longcore 2006), although Quino checkerspot butterflies are not known to be active at night so these impacts are expected to be minimal. Additionally, Project lighting restrictions required by the Preserve Edge Plan (i.e., use of low-pressure sodium fixtures and shielding/directing light away from the Preserve) and the proposed 100-foot buffer will minimize light impacts into the Preserve. Non-native plants could colonize areas disturbed by construction and could potentially spread into adjacent native habitats, especially following a disturbance such as fire in the native habitats. Many of these non-native plants are highly invasive and can displace native vegetation, including Quino checkerspot butterfly host plant and nectaring resources, reduce native species diversity, potentially increase flammability and fire frequency, and change ground and surface water levels. Fertilizers, pesticides, herbicides, and other hazardous materials have the potential to be introduced into the Preserve, although with implementation of the 100-foot buffer along the development/Preserve edge, these impacts are anticipated to be minimal. The frequency of fires often increases with increased human access to areas adjacent to open space, resulting in shorter fire return intervals. These shorter fire return intervals could result in increases in non-native plant species and type conversion of habitats.

### **San Diego Fairy Shrimp**

Indirect impacts to San Diego fairy shrimp habitat (identified for the Proposed Project as ephemeral basins and road ruts and termed “features”) may occur as a result of changes to hydrology, fragmentation, and edge effects. Changes in the natural micro-topography surrounding features which support the species can alter natural hydrological regimes and may result in increased runoff, erosion, sedimentation, and contamination into the features. The complex hydrology of these features is supported by both surface flows within a feature’s topographic watershed (e.g., the surface area in which water drains into a feature) and subsurface flows that may extend beyond the surface watershed (Rains et al. 2006). Surface and subsurface lateral flows between features and the surrounding uplands influence the onset and level of inundation and the seasonal drying of these features (Hanes and Stromberg 1998). Therefore, modifications to the uplands surrounding a feature can negatively affect the pool’s hydrology, even if such modifications occur outside the pool’s surface watershed. These changes can then also impact San Diego fairy shrimp (e.g., by reducing the ponding capacity of the features).

These indirect impacts will be avoided and minimized to the extent feasible through best management practices that will be implemented to address erosion, sedimentation, and contaminants during construction (see M-BI-1, M-BI-2, M-BI-14, M-BI-15 and M-BI-16 in Section 5.2 and the Preserve Edge Plan). Temporary fencing (with silt barriers) will be installed at the limits of Project impacts (including construction staging areas and access routes) to prevent the spread of silt from the construction zone into adjacent habitats to be avoided (M-BI-2 and M-BI-14). No non-native plant species that may be invasive to native habitats will be used in the landscaping adjacent to any conserved areas (M-BI-16 and Preserve Edge Plan). Adjacent slopes will be designed to ensure there is no change in hydrology following construction of the adjacent houses and roadways (M-BI-15). In addition, to ensure that these measures are implemented, biological monitors will be on site during construction (M-BI-1).

## 5.3 Anticipated Take

### 5.3.1 Anticipated Take of MSCP-Covered Wildlife

Incidental take of covered wildlife species could occur in the form of harassment, harm, injury, or mortality. Direct impacts that could result in incidental take of Covered Species would occur through the permanent removal of habitat. Development of PV2, a portion of PV3, and the Access Road Realignment would disturb habitat for 11 County MSCP Subarea Plan-covered wildlife species as described in Section 4.1.3 and shown in Table 2. While there is suitable habitat for coastal California gnatcatcher (*Poliophtila californica californica*), a federally listed species, within PV2, PV3, and the Access Road Realignment, this species was not observed in these areas during protocol surveys. In addition, neither PV2 PV3, nor the Access Road Realignment contain suitable nesting habitat for golden eagle (*Aquila chrysaetos*), which is also an MSCP Covered Species. Take of each of the Covered Species with a potential to occur within PV2, PV3, and the Access Road Realignment would be in the form of impacts to potential nesting and/or foraging habitat. The impacts associated with PV2 and PV3 are quantified for each species in Table 2. Conservation goals for each of the covered wildlife species listed in Table 2, as outlined in Table 3-5 of the MSCP Plan (MSCP 1998), were reviewed to ensure that development within PV2 and PV3 would not impede these conservation goals. This discussion can be found within Section 2.2.5.1 of the BMO Findings (Dudek 2019). Permanent impacts to 2.2 acres along the edge of the development and Preserve interface is not expected to result in significant loss of habitat for covered wildlife species. Incidental take of covered wildlife species also has the potential to occur from the indirect impacts as discussed in Section 4.2.

Implementation of the avoidance and minimization measures outlined in the Final EIR (County of San Diego 2019) and revised for the Proposed Project (see Section 5 of this report for the revised mitigation measures) would reduce the potential for direct harassment, harm, injury, or mortality for the Covered Species described in Table 2.

### 5.3.2 Anticipated Take of Non-MSCP-Covered Federally Listed Wildlife

Incidental take of Quino could occur in the form of harassment, harm, injury, or mortality. Direct impacts that could result in incidental take of Quino would occur through the permanent removal of habitat. Development of the Proposed Project would result in the direct impacts to 3 locations and the loss of 527.1 acres of occupied habitat for Quino checkerspot butterfly and host plants as shown on the Figure 4 series. There is also the potential that some inadvertent take of small numbers of Quino could occur during habitat management activities as a result of trampling of Quino eggs, larvae, pupae and/or host plants. Several mitigation measures will be implemented to reduce Project-related impacts to the species to the maximum extent practicable (see Sections 4.1.4 and 5.2).

As discussed in Section 4.1.5, all features known to be occupied by San Diego fairy shrimp and their watersheds have been avoided through project design. Indirect impacts stemming from project development, discussed in Section 4.2, have been identified and mitigated to the maximum extent practicable. However, it is possible that additional features within the Project footprint could become occupied by San Diego fairy shrimp. Therefore, assuming the worst-case scenario, all 44 features (34 road ruts [0.099 acres] and 10 ephemeral basins [0.098 acres]) within the development footprint could support San Diego fairy shrimp that may be harmed during construction of the Project. In addition, an unquantified number of San Diego fairy shrimp may be harmed during restoration, management, and monitoring activities. Temporary habitat disturbance during management, monitoring, restoration, and enhancement activities will be minimal, and these activities will ultimately improve ecological function of the site from conditions prior to ground disturbance. Therefore, no permanent impacts from restoration, long-term management, or monitoring are anticipated.

## 5.4 Effects on Designated Critical Habitat

Development of the entire Proposed Project, including PV2, PV3 and the access road, would result in the permanent loss of 500.2 acres of designated critical habitat considered suitable for the Quino checkerspot butterfly (Figure 10). The amount of critical habitat reported does not include areas of habitat deemed unsuitable for Quino checkerspot butterfly (i.e., no physical or biological features for the species), and thus was not included as a part of protocol surveys. Although there is a loss of designated critical habitat, this loss will be offset by implementation of the Quino Checkerspot Butterfly Conservation Strategy, which includes a Framework Management Plan. This plan was developed by HELIX in coordination with the applicant, the Wildlife Agencies, and the County (HELIX 2020; Appendix A). It includes enhancement and restoration of habitat (e.g., host plants, nectar resources) for Quino checkerspot butterfly, as well as management and monitoring to ensure that this unit of critical habitat continues to provide the physical and biological features that are essential to the conservation of the Quino checkerspot butterfly.

The Proposed Project would result in permanent impacts to 8 acres of critical habitat for Otay tarplant (*Deinandra conjugens*) (Figure 10). Approximately 2.4 acres has already been addressed by USFWS in a conference opinion for Rolling Hills Ranch (1-6-02-F-1071.4) and then formally as part of the permitting for the City of Chula Vista's Subarea Plan. The remaining acreage includes 1.5 acres on the City of San Diego Cornerstone Lands and 4.1 acres located within the northwestern portion of the Project Area within the Village 14 Development Footprint. USFWS describes Otay tarplant as found on clay soils in grasslands, open coastal sage scrub, and maritime succulent scrub. The critical habitat within the Village 14 Development Footprint portion of the Project Area lacks clay soils and these vegetation communities; therefore, there are no physical or biological features within this area of designated critical habitat for Otay tarplant. In addition, this area is on the very edge of the designation, and its inclusion is a result of the scale of the mapping rather than the presence of Otay tarplant. Therefore, no impacts to the physical and biological features for Otay Tarplant that have not already been addressed would occur.

The Proposed Project would result in permanent impacts to 8.2 acres of spreading navarretia (*Navarretia fossalis*) designated critical habitat (Figure 10) along the southwestern edge of Village 14 and improvements to Proctor Valley Road within the City of San Diego. This species was not observed during the focused rare plant surveys conducted within the Proposed Project area, nor was it observed during habitat assessments or focused surveys for vernal pool branchiopods. The critical habitat for spreading navarretia covers PV1, the vernal pool restoration site within the City of San Diego, and portion of the existing Proctor Valley Road within the City of San Diego. The physical and biological features for spreading navarretia include ephemeral wetland habitat, intermixed wetland and upland habitats that act as the local watershed, and soils that support ponding during winter and spring. None of these features are located within the lands to be impacted. There are features located within the City of San Diego lands that could support this species; however, none of those features occur within the development footprint of the Proposed Project.

The Proposed Project would result in permanent impacts to 4.2 acres of designated critical habitat for coastal California gnatcatcher (Figure 10). The majority of this impact, 4.1 acres, is located within the northwestern portion of the Project Area within the Village 14 Development Footprint. The remaining 0.1 acres of impact is located within the City of San Diego Cornerstone Lands. The habitat associated with the 4.1 acres of critical habitat is dominated by chamise chaparral. As stated in the final rule for Revised Designation of Critical Habitat for the Coastal California Gnatcatcher, this species is likely restricted to coastal sage scrub vegetation; however, availability of non-sage scrub areas (including chaparral) is essential during certain times of the year, particularly during drought conditions, for dispersal, foraging, or nesting (50 CFR Part 17). The 0.1 acres of impact within the City of San Diego Cornerstone Lands is known to support coastal California gnatcatcher as determined by the focused surveys conducted within the Proposed Project area. Impacts to 4.2 acres of designated critical habitat would be offset by providing 114.8 acres beyond what was anticipated under the MSCP for this Project.

## 5.5 National Environmental Policy Act Cumulative Impacts

The National Environmental Policy Act analysis of cumulative impacts accounts for incremental impacts of the action on the environment when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. The incremental impacts of this amendment have been identified in Section 4.1. The geographic area for analysis may be defined by the manifestation of direct or indirect impacts as a result of Covered Activities. USFWS will be preparing an Environmental Assessment in which cumulative impacts will be addressed.

## 5.6 Anticipated Impacts of the Taking

The impacts to habitat for Covered Species associated with the development of portions of PV2, PV3 and the access road are provided in Table 2 in Section 4.1.3. Conservation goals for each of the covered wildlife species listed in Table 2, as outlined in Table 3-5 of the MSCP Plan (MSCP 1998), were reviewed to ensure that development within PV2, PV3, and the access road would not impede the conservation goals for each of these species. The discussion relative to development within PV2 and PV3 were obtained from the analysis provided in the BMO analysis as discussed in Section 3. The analysis has been updated to include the impacts associated with the access road, which results in less impacts to the Preserve.

### **Orange-Throated Whiptail (*Aspidoscelis hyperythra*)**

There were no direct observations of orange-throated whiptail within the Proposed Project area; however, there is high potential for this species to occur within the entire Proposed Project area, including PV2, P3, and the Access Road Alignment. A total of 45.7 acres of modeled habitat for orange-throated whiptail would be impacted by development in PV2, a portion of PV3, and the access road. An additional 163 acres of modeled habitat designated as take-authorized within Planning Area 16 would be added to the Preserve; thus, there will be a net gain of 117.3 acres from what was anticipated under MSCP for this Project. Indirect impacts and edge effects on suitable habitat for orange-throated whiptail are described in Section 4.2 and will be minimized through the implementation of the Preserve Edge Plan. The Proposed Project would convey 387.8 acres of on-site suitable habitat for orange-throated whiptail to the Otay Ranch RMP Preserve and contribute to a large block of existing conservation to the north and east where significant amounts of suitable habitat are also conserved. The RMP will provide for management and

funding in perpetuity that will allow for preservation and enhancement of these resources. Combined, these measures will maintain the function of the MSCP Preserve and assist in recovery of the orange-throated whiptail.

#### **Blainville's Horned Lizard (*Phrynosoma blainvillii*)**

Blainville's horned lizard was observed throughout the Biological Study Area and has a high potential to occur in PV2, PV3, and the Access Road Alignment. A total of 46.5 acres of modeled habitat for Blainville's horned lizard would be impacted by development in PV2, a portion of PV3, and the access road. An additional 191.2 acres of modeled habitat designated as take-authorized within Planning Area 16 would be added to the Preserve; thus, there will be a net gain of 144.7 acres from what was anticipated under MSCP for this Project. Indirect impacts and edge effects on suitable habitat for Blainville's horned lizard are described in Section 4.2 and will be minimized through the implementation of the Preserve Edge Plan.

Area-specific management directives must include specific measures to maintain native ant species, discourage the Argentine ant (*Linepithema humile*), and protect against detrimental edge effects to this species. Altered hydrology can allow for the establishment of non-native plants and/or invasion by Argentine ants, which can compete with native ant species that could be seed dispersers or plant pollinators. Potential impacts would be reduced by design features, including biofiltration basins that have been integrated into the Proposed Project design, along with additional low-impact development and source control features such as preservation of existing vegetation wherever possible, smart irrigation systems, and providing information and awareness of Integrated Pest Management to owners. In addition, as described in the Preserve Edge Plan, all new and proposed parking lots and developed areas in and adjacent to the Otay Ranch RMP Preserve must not drain directly into the Preserve. These design features will help prevent hydromodification of open space areas that could facilitate colonization by invasive plants and animals (e.g., Argentine ants).

The Proposed Project would convey 420.1 acres of on-site suitable habitat for Blainville's horned lizard to the Otay Ranch RMP Preserve and contribute to a large block of existing conservation to the north and east where significant amounts of suitable habitat are also conserved. The RMP will provide for management and funding in perpetuity that will allow for preservation and enhancement of these resources (City of Chula Vista and County of San Diego 1993b). Combined, these measures will maintain the function of the MSCP Preserve and assist in recovery of the Blainville's horned lizard.

#### **Cooper's Hawk (*Accipiter cooperii*)**

A Cooper's hawk was observed flying overhead during biological surveys in 2014, but since much of the Proposed Project area is likely used by this species, the observations were not mapped. This species has a high potential to forage within PV2 and PV3; however, these areas do not contain suitable nesting habitat. A total of 45 acres of modeled habitat for Cooper's hawk would be impacted by development in PV2, a portion of PV3, and the access road. An additional 187.4 acres of modeled habitat designated as take-authorized within Planning Area 16 would be added to the Preserve; thus, there will be a net gain of 142.4 acres from what was anticipated under MSCP for this Project. Indirect impacts and edge effects on suitable habitat for Cooper's hawk are described in Section 4.2 and will be minimized through the implementation of the Preserve Edge Plan.

Area-specific management directives must include 300-foot impact avoidance areas around the active nests, and minimization of disturbance in oak woodlands and oak riparian forests. This avoidance will be achieved through implementation of mitigation measures M-BI-6 and M-BI-18.

The Proposed Project would convey 423 acres of on-site foraging habitat and 3.4 acres of suitable nesting habitat for Cooper's hawk that will be added to a large block of existing conservation to the north and east where significant amounts of suitable habitat are also conserved. The RMP will provide for management and funding in perpetuity that will allow for preservation and enhancement of these resources. Combined, these measures will maintain the function of the MSCP Preserve and assist in recovery of the Cooper's hawk.

#### **Southern California Rufous-Crowned Sparrow (*Aimophila ruficeps canescens*)**

Southern California rufous-crowned sparrow was not observed in PV2, PV3 or the access road development footprint. Five individual southern California rufous-crowned sparrows were observed/detected in various locations on the Proposed Project site. All locations were observed within Planning Area 16 either within the Preserve and R14 conservation easement. None of the recorded individuals would be directly impacted by the Proposed Project. Based on observations in coastal sage scrub habitat elsewhere in the Proposed Project area, there is a high potential for this species to occur in these parcels. A total of 42.8 acres of modeled habitat for this species would be impacted by development in PV2 and a portion of PV3 while the access road would impact 2.2 acres. . An additional 187.2 acres of modeled habitat designated as take authorized within Planning Area 16 would be added to the Preserve, thus there will be a net gain of 142.2 acres from what was anticipated under MSCP for this Project. Indirect impacts and edge effects on suitable habitat for southern California rufous-crowned sparrows are described in Section 4.2 and will be minimized through the implementation of the Preserve Edge Plan.

Indirect noise impacts to Diegan coastal sage scrub may render the habitat undesirable to the southern California rufous-crowned sparrow and adversely affect its breeding. To prevent those impacts, the Proposed Project is required to provide a 100-foot Preserve edge between the Preserve and the development as discussed in Section 4.2. Invasive plants and fugitive dust could indirectly impact the southern California rufous-crowned sparrow as described in Section 4.2 but the effects are expected to be minimal as described in that section.

The Preserve contains 412.8 acres of this species' preferred habitat and will be adding to the large block of existing conservation to the north and east where significant amounts of suitable habitat are also conserved. In addition, all known locations will be conserved. The RMP will provide for management and funding in perpetuity that will allow for preservation and enhancement of these resources. Combined, these measures will maintain the function of the MSCP Preserve and assist in recovery of the southern California rufous-crowned sparrow.

#### **Golden Eagle (*Aquila chrysaetos*)**

Golden eagle was not observed within PV2, PV3, or the access road development footprint. There is a high potential for this species to forage in these areas. A total of 42.8 acres of modeled foraging habitat for this species would be impacted by development in PV2 and a portion of PV3, while the access road would impact 2.2 acres. An additional 187.2 acres of foraging habitat designated as take-authorized within Planning Area 16 would be added to the Preserve; thus, there will be a net gain of 142.2 acres from what was anticipated under the MSCP for this Project.

Table 3-5 of the MSCP Plan (MSCP 1998) and the County's Section 10 permit require that approved development avoid lethal take of any golden eagles and avoid human disturbance of any active golden eagle nest. In addition, approved development projects must maintain a 4,000-foot disturbance avoidance buffer around any active golden eagle nest within Preserve lands. PV2, PV3, and the access road are not within 4,000 feet of an active golden eagle nest. A full analysis regarding golden eagle habitat is provided in the Final EIR for the 2019 Land Plan (County of San Diego 2019). Importantly, several of the take-authorized areas (identified for future development in the MSCP Plan and MSCP County Subarea Plan) located within the County's Subarea have been converted entirely to MSCP



Preserve. These areas include Hidden Valley Estates, Las Montanas, Otay Ranch Village 15, and Daley Ranch, and each include suitable golden eagle foraging habitat that was expected to be developed but would now be preserved.

Development of PV2, a portion of PV3, and the access road would not have a significant impact on golden eagle because such development (1) would not cause lethal take of the species, (2) would not disturb any active golden eagle nest, and (3) would not place human activity within 4,000 feet of any active golden eagle nest located inside the MSCP Preserve.

#### **Burrowing Owl (*Athene cunicularia*)**

In 2014, a habitat assessment and focused surveys for burrowing owl were conducted within the Proposed Project area as required in Table 3-5 of the MSCP Plan. During these surveys, no burrowing owl or sign were observed in PV2, PV3, or the access road footprint. Development of these three areas would not result in impacts to mapped burrowing owl habitat. The conservation goals within the MSCP Plan outline preservation of known locations and preservation of both known and potential habitat. Because PV2, PV3, and the access road do not support any known habitat for burrowing owl, development of these two areas would not impede the conservation goals for this species, as outlined in Table 3-5 of the MSCP Plan (MSCP 1998).

The Proposed Project would convey 29.6 acres of habitat for the species. In addition, the Proposed Project is conditioned with conducting a preconstruction survey for burrowing owl (see M-BI-13 in Section 5.2) to ensure there are no impacts to individuals during construction. The RMP will provide for management and funding in perpetuity that will allow for preservation and enhancement of these resources. Combined, these measures will maintain the function of the MSCP Preserve and assist in recovery of the burrowing owl.

#### **Coastal California Gnatcatcher (*Polioptila californica californica*)**

Within PV2, 37.2 acres of modeled habitat for this species would be impacted by development, and 6.2 acres of modeled habitat would be preserved as Conserved Open Space. Within PV3, 4.8 acres of suitable habitat for coastal California gnatcatcher would be impacted and 2.2 acres would be impacted by the access road. An additional 159 acres of modeled habitat designated as take-authorized within Planning Area 16 would be added to the Preserve; thus, there will be a net gain of 114.8 acres from what was anticipated under MSCP for this Project. Conservation provided through implementation and conformance with the Otay Ranch RMP and BMO habitat mitigation requirement would provide mitigation for direct impacts to covered sensitive species, including coastal California gnatcatcher, to minimize impacts appropriately. Indirect impacts and edge effects on suitable habitat for coastal California gnatcatcher are described in Section 4.2 and will be minimized through the implementation of the Preserve Edge Plan.

The conservation goals within the MSCP County Subarea Plan outline preservation of both known and potential habitat, as well as core areas where the species occurs at known locations. As a condition of coverage, Table 3-5 of the MSCP Plan states, "No clearing [sic] of occupied habitat within the cities' MHPAs [Multiple Habitat Planning Areas] and within the County's BRCAs may occur between March 1 and August 15" (County of San Diego 1997). The Proposed Project includes mitigation measures that would reduce impacts to any special-status bird species occurring within the Development Footprint. Those measures include biological monitoring to prevent disturbance outside of the limits of grading, temporary construction fencing, and noise-reduction measures during the nesting season. Specific to coastal California gnatcatcher, no clearing, grading, or grubbing activities may occur within habitat identified by a qualified biologist as being occupied by coastal California gnatcatcher during the nesting season for the species (February 15 through August 15 annually). If construction occurs during the nesting season,

a nesting survey for coastal California gnatcatcher must be conducted prior to the onset of construction. Construction may occur if active breeding territories can be avoided, and construction activities can be managed to limit noise levels in occupied habitat within 500 feet of the Proposed Project area, or if noise attenuation measures, such as temporary sound walls, would be implemented to reduce noise levels to below 60 A-weighted decibels (dBA) equivalent sound level ( $L_{eq}$ ) or below existing ambient noise levels (whichever is greater).

The Proposed Project would provide for the preservation of habitat surrounding three pairs of coastal California gnatcatchers. Specifically, within the Proposed Project boundaries, approximately 380.5 acres of coastal sage scrub and other suitable habitat would be conveyed to the Otay Ranch RMP Preserve, which will contribute to the large block of existing conservation to the north and east where significant amounts of suitable habitat are also conserved. The RMP will provide for management and funding in perpetuity that will allow for preservation and enhancement of these resources. Combined, these measures will maintain the function of the MSCP Preserve and assist in recovery of coastal California gnatcatcher.

#### **Western Bluebird (*Sialia mexicana*)**

Western bluebird was not observed within PV2, PV3, or the development footprint of the access road during surveys conducted within the Proposed Project area. There is a high potential for this species to occur in these parcels. A total of 46.5 acres of modeled habitat for this species would be impacted by development in PV2, a portion of PV3, and the access road. An additional 191.2 acres of modeled habitat designated as take-authorized within Planning Area 16 would be added to the Preserve; thus, there will be a net gain of 144.7 acres from what was anticipated under the MSCP for this Project. Indirect impacts and edge effects on suitable habitat for western bluebird are described in Section 4.2 and will be minimized through the implementation of the Preserve Edge Plan.

The Proposed Project would convey 380.5 acres of on-site suitable habitat for western bluebird to the Otay Ranch RMP Preserve, which will contribute to the large block of existing conservation to the north and east where significant amounts of suitable habitat are also conserved. The RMP will provide for management and funding in perpetuity that will allow for preservation and enhancement of these resources. Combined, these measures will maintain the function of the MSCP Preserve and assist in recovery of western bluebird.

#### **Mule Deer (*Odocoileus hemionus*)**

Mule deer was not observed within PV2, PV3, or the development footprint of the access road during surveys conducted within the Proposed Project area. There is a high potential for this species to occur in these areas. A total of 44.4 acres of modeled habitat for this species would be impacted by development in PV2 and a portion of PV3, and 2.2 acres would be impacted by the access road. An additional 191.4 acres of modeled habitat designated as take authorized within Planning Area 16 would be added to the Preserve, thus there will be a net gain of 144.9 acres from what was anticipated under MSCP for this Project. The conservation goals within the MSCP Plan outline preservation of BRCAs and associated linkages. PV2, PV3, and the access road are located adjacent to the approved development footprint for Village 14 and thus will have minimal impact to the linkages identified in MSCP. In addition, the Proposed Project would include three wildlife crossings outside the boundaries of PV2 and PV3, which would help ensure that this species can continue to move throughout the BRCAs and associated linkages. Indirect impacts and edge effects on suitable habitat for mule deer are described in Section 4.2 and will be minimized through the implementation of the Preserve Edge Plan.

The Proposed Project would convey 427.3 acres of on-site suitable habitat for mule deer to the Otay Ranch RMP Preserve, which will be added to the large block of existing conservation to the north and east where significant

amounts of suitable habitat are also conserved. The RMP will provide for management and funding in perpetuity that will allow for preservation and enhancement of these resources. Combined, these measures will maintain the function of the MSCP Preserve and assist in recovery of mule deer.

#### **Cougar (*Puma concolor*)**

Cougar sign was not observed within PV2, PV3, or the proposed access road alignment during surveys conducted within the Proposed Project area. There is a high potential for this species to occur in these areas. A total of 44.3 acres of modeled habitat for this species would be impacted by development in PV2 and a portion of PV3, and 2.2 acres would be impacted by the access road. An additional 191.2 acres of modeled habitat designated as take-authorized within Planning Area 16 would be added to the Preserve; thus, there will be a net gain of 144.7 acres from what was anticipated under MSCP for this Project. Similar to mule deer, the conservation goals within the MSCP Plan outline preservation of BRCAs and associated linkages. PV2, PV3, and the access road are located adjacent to the approved development footprint for Village 14 and thus will have minimal impact to the linkages identified in MSCP. In addition, the Proposed Project would include three wildlife crossings outside the boundaries of PV2 and PV3, which would help to ensure that this species can continue to move throughout the BRCAs and associated linkages. Indirect impacts and edge effects on suitable habitat for cougar are described in Section 4.2 and will be minimized through the implementation of the Preserve Edge Plan.

The Proposed Project would convey 420.1 acres of on-site suitable habitat for cougar to the Otay Ranch RMP Preserve, which will add to the large block of existing conservation to the north and east where significant amounts of suitable habitat are also conserved. The RMP will provide for management and funding in perpetuity that will allow for preservation and enhancement of these resources. Combined, these measures will maintain the function of the MSCP Preserve and assist in recovery of cougar.

#### **American Badger (*Taxidea taxus*)**

American badger was not mapped specifically within PV2, PV3, or the proposed access road alignment. There is a high potential for this species to occur in suitable habitat associated with these areas. A total of 44.3 acres of modeled habitat for this species would be impacted by development in PV2 and a portion of PV3, and 2.2 acres would be impacted by the access road. An additional 191.2 acres of modeled habitat designated as take-authorized within Planning Area 16 would be added to the Preserve; thus, there will be a net gain of 144.7 acres from what was anticipated under MSCP for this Project. Indirect impacts and edge effects on suitable habitat for badgers are described in Section 4.2 and will be minimized through the implementation of the Preserve Edge Plan.

The Proposed Project would convey 360.6 acres of on-site suitable habitat for American badger to the Otay Ranch RMP Preserve and will add to the large block of existing conservation to the north and east where significant amounts of suitable habitat are also conserved. The RMP will provide for management and funding in perpetuity that will allow for preservation and enhancement of these resources. Combined, these measures will maintain the function of the MSCP Preserve and assist in recovery of American badger.

#### **Quino Checkerspot Butterfly**

The Proposed Project is located in the Southwest San Diego Recovery Unit identified by the USFWS in the Recovery Plan for the Quino checkerspot butterfly. The Project site is within and provides connectivity to core areas to the north and south of the Project. Protocol-level Quino checkerspot butterfly surveys were conducted in 2015 and 2016, and no Quino checkerspot butterfly were documented on or adjacent to the Proposed Project. The USFWS

database includes documented occurrences of Quino in portions of Proctor Valley in 2017, 2018, and 2019, which were collected during non-protocol surveys by others, including areas directly adjacent to the Project site. Comprehensive surveys of the Proposed Project site were not conducted in 2017, 2018, or 2019. Based on the non-protocol sightings in 2017, 2018, and 2019, the Proposed Project would result in impacts to three locations where Quino checkerspot butterfly adults were observed on the Project site. The Project would preserve three locations where Quino adults/larvae were observed on the Project site in the Preserve.

Adult Quino are often observed in areas beyond the limits of their host plant locations, especially hilltops and ridgelines. In assessing Quino checkerspot butterfly use of a site, both the breeding habitat (host plant locations) as well as hilltops and ridgelines should be considered. Detailed larval host plant mapping of the entire Project site was conducted in 2016. Isolated plants and populations smaller than 250 square feet in size were recorded as points, while populations larger than 250 square feet in size were recorded as polygons. Polygons were visually estimated rather than counting each individual plant. The Project would impact 29 clustered areas of dwarf plantain (defined as “high host plant locations” of more than 1,000 individuals), with the largest occurring in the central portion of the impact footprint and the two smaller clusters occurring in the southern portion of the impact footprint. All of the Quino observations occurred in the southern two clusters. Using the mid-point of the estimated host plant populations, the Project would impact approximately 59% of the Quino checkerspot butterfly larval host plants on the Project site. The Project would preserve 40 clustered areas of dwarf plantain mapped as “high host plant locations.”

Impacts to habitat for Quino checkerspot butterfly and host plants will be mitigated through the implementation of the Quino checkerspot butterfly management/enhancement plan, which will incorporate and shall be informed by the Quino Checkerspot Butterfly Conservation Strategy, which includes a Framework Management Plan (Appendix A). The Conservation Strategy includes four imperatives: (1) reduce the amount of potential Quino checkerspot butterfly habitat proposed for development; (2) maintain and enhance potential Quino checkerspot butterfly habitat connectivity, thereby protecting Quino checkerspot butterfly movement and “live in” habitat within and throughout Otay Ranch; (3) create “functional uplift” within conserved potential Quino checkerspot butterfly habitat; and (4) commit to assessment, adaptation, and management of Quino checkerspot butterfly habitat within the Project area to ensure perpetual conservation of Quino checkerspot butterfly, leading to improved recovery status. Further, implementation of the Quino Checkerspot Butterfly Conservation Strategy addresses impacts to Quino checkerspot butterfly habitat that will be mitigated through implementation of a 2-acre habitat restoration program. This mitigation would result in no-net-loss of host plants and provide for a 1.16 to 1 mitigation to impact ratio of potential habitat. Therefore, although the Proposed Project would result in loss of overall acreage of habitat for the species, this loss would be mitigated by enhancing and maintaining the overall function and value within the remaining habitat in the Preserve and thus contributing to the recovery goals for the species. Inclusion of most of PV3 within the land exchange eliminates development of a large block of habitat, which would substantially enhance the existing approved R1 corridor configuration (Figure 11). Inclusion of this portion of PV3 in the land exchange widens the connectivity between occupied Quino checkerspot butterfly habitat to the south (in Otay Ranch Village 13) and to the north in the San Miguel Mountain area. Preservation of PV3 would maximize movement along a lower elevation route to upper Otay Reservoir as well as a broader connection to the more rugged ridgeline north of Lower Otay Reservoir. Likewise, inclusion of PV1 in the MSCP Preserve further enhances this unrestricted movement, while eliminating road crossings within L4 by removing an MSCP Plan approved road across corridor L4 between PV1 and the approved development footprint in the central portion of Village 14. The only development within R1 corridor would be Proctor Valley Road. Improvements to the road will include a wildlife crossing to facilitate movement of species such as mule deer and cougar under the road while other species, such as Quino checkerspot butterfly and coastal California gnatcatcher, will continue to fly over the road.

Taking into consideration the locations of the Quino checkerspot butterfly sightings, the extent of potential Quino checkerspot butterfly habitat around and near those locations, as well as locations of Quino larval host plants, 91% of the Proposed Project is considered occupied by the Quino checkerspot butterfly (527.1 acres of the 578.6-acre footprint). As a result, implementation of the Proposed Project would directly impact 527.1 acres of occupied Quino checkerspot butterfly habitat, and a total of 500.2 acres of Quino checkerspot butterfly critical habitat that contains physical and biological elements would be directly impacted. The Proposed Project includes preservation of 619.6 acres of Quino checkerspot butterfly-occupied habitat and 307.6 acres of Quino checkerspot butterfly Designated Critical Habitat (containing Quino checkerspot butterfly physical and biological elements) in the Preserve prior to commencement of habitat clearing. The Preserve supports 50% of the currently (i.e., 2012 to 2019) recorded Quino checkerspot butterfly locations, 40 out of 69 high host plant locations, and approximately 41% of all Quino checkerspot butterfly host plants mapped on the Project site. The Quino Checkerspot Butterfly Conservation Strategy and Framework Management Plan (Appendix A) will be implemented as mitigation, providing management for Quino checkerspot butterfly habitat within the Preserve. The Quino Conservation Strategy and Framework Management Plan also commits to implementing an additional 2 acres of Quino checkerspot butterfly habitat restoration in the Preserve.

The Preserve would be managed by the Otay Ranch preserve manager responsible for implementing the Otay Ranch RMP, CDFW, or other entity depending on final management obligations consistent with the Quino Checkerspot Butterfly Conservation Strategy and Framework Management Plan (Appendix A). The Otay Ranch RMP includes management goals and objectives for the existing habitats and associated species in the Otay Ranch Preserve in order to sustain the biological values of the open space in perpetuity. The Otay Ranch RMP includes management and monitoring of biological resources to protect and, where appropriate, enhance them. It outlines stewardship measures including, but not limited to, invasive plant species removal, fencing and signs upkeep, trespass restriction, and debris removal. There is potential for such stewardship measures to inadvertently impact the Quino checkerspot butterfly (or other present endangered, threatened, or key sensitive species) through trampling during surveys, weeding, and other management activities. However, the Quino Conservation Strategy includes measures to avoid and/or minimize take of the species.

### **San Diego Fairy Shrimp**

The Proposed Project has been designed to avoid all features that support San Diego fairy shrimp, including, at a minimum, their watersheds. Therefore, development is not expected to result in direct impacts to known occurrences of San Diego fairy shrimp. Nevertheless, as a precaution, the applicant is seeking take authorization for San Diego fairy shrimp in the event the species is encountered within the Development Footprint of the Proposed Project. As discussed above, assuming the worst-case scenario, all 44 features (34 road ruts [0.099 acres] and 10 ephemeral basins [0.098 acres]) within the development footprint could support San Diego fairy shrimp that may be harmed during construction of the Project. These are all highly degraded features, and the likelihood of them all becoming occupied is low; therefore, this is an overestimate of take. In addition, an unquantified number of San Diego fairy shrimp may be harmed during restoration, management, and monitoring activities. Consistent with the Vernal Pool Recovery Plan, impacts to San Diego fairy shrimp will be mitigated through restoration, enhancement, preservation, and long-term management and monitoring of vernal pools within the Preserve. Based on consultation with the USFWS, impacts to 0.099 acres of road ruts and 0.098 acres of ephemeral basins will be offset at 1:1 and 2:1 ratios respectively for a total restoration of 0.3 acre basin area. A San Diego Fairy Shrimp Restoration/Enhancement/Management Plan shall be submitted to and receive approval from the USFWS, the Director of the Department of Planning & Development Services (or her/his designee) and the Director of Parks and Recreation. Therefore, a minimum of 0.3 acres of pools will be restored within the Preserve, thus ensuring no-net-loss of habitat and supporting the recovery of the San Diego fairy shrimp. Vernal pool restoration and enhancement is expected to re-establish the physical and

biotic characteristics of vernal pool habitat such that critical functions are restored and will support populations of San Diego fairy shrimp in a configuration that has long-term conservation value similar to the restoration work that has occurred on the adjacent Cornerstone Lands.

### **Conclusion Regarding Anticipated Take**

The incremental impacts of the action for development of PV2, a portion of PV3, and the Access Road Realignment are 44.9 acres of Tier II and III upland vegetation communities and 0.05 acres of impacts to waters/streambed regulated by the Resource Agencies (see Table 1 and Figure 3, Biological Resources). The additional area for which take authority for Covered Species is requested is small when compared to the overall MSCP Subarea Plan and will be offset by the addition of 193 acres within Planning Area 16 to the Preserve, resulting in a net gain of acreage in the Preserve.

It should be noted that the Proposed Project involves a land exchange with CDFW that will result in a net gain of 311.6 acres of habitat to the MSCP Preserve. Since the CDFW-owned land exchange parcels were not included in the 101,268 acres of MSCP Preserve, all 531.1 acres owned by GDCI are an addition to the MSCP Preserve. Approximately 219.5 acres within the CDFW-owned land exchange Parcels A, B, C, D, E, and Proctor Valley Road North will be transferred to GDCI, of which 7.5 acres, or 3%, is MSCP Tier II habitat and 199.9 acres or 91% is MSCP Tier III habitat. Of the 531.1 acres of the GDCI-owned land exchange Parcels PV-1, PV-3, R-14, R-15, and R-16 to be transferred to CDFW, 391 acres (or 74%) are MSCP Tier II habitat, and 132.5 acres (or 25%) are MSCP Tier III habitat. Not only does the land exchange create an overall net increase to the MSCP Preserve of 311.6 acres, but that increase predominantly consists of higher tiered habitat that is live-in and foraging habitat for numerous special-status wildlife species, including coastal California gnatcatcher, potentially Quino checkerspot butterfly, and golden eagle. The land exchange will also result in the preservation of several populations of special-status plant species that would have otherwise been impacted by the 2019 Land Plan as described in the certified Final EIR. Therefore, the land exchange provides benefits to the MSCP Preserve in terms of both quantity and quality of habitat.

Further, the land exchange will improve the overall Preserve design and wildlife movement, particularly in a regional context. The land exchange would result in the following benefits to wildlife movement and preserve design:

- Reduction of approximately 13.1 miles of edge effect as compared to the 2019 Land Plan by consolidating development to central Proctor Valley.
- Protection of multiple habitats types, varying topography, and sensitive resources (including known populations of plant and wildlife species).
- The plan resulting from the land exchange would have the added benefit to the MSCP Preserve of eliminating development in PV-1, PV-3, portions of Village 14 north, and all of GDCI's approved development in Planning Area 16.
- Elimination of 311.6 acres of proposed residential development from Village 14 and Planning Area 16, a 36% reduction in the approved Otay GDP/SRP development area, and permanent conservation of these areas, much of which is located adjacent to additional existing CDFW-owned land located in Planning Area 16.
- Consolidation of development onto lands currently owned by CDFW in Village 14, in areas that were originally designated for development in the Otay GDP/SRP and that were granted take authorization by the MSCP Plan (Parcels A, B, C, and E). These areas are of lower overall biological value than the land that will be exchanged to the CDFW for inclusion in the MSCP Preserve.
- Increase in overall acreage of MSCP Preserve from 704.7 acres to 1,012.2 acres, which enlarges a "core" biological area due to adjacency and connectivity of adjacent Preserve lands and open space. This enlarged core is located between the Jamul Mountains to the southeast and San Miguel Mountain to the northwest.

After the land exchange, the elimination of approved development will increase the size of the blocks of land connecting these two core areas while reducing the fragmentation of approved development.

- Preservation and improvement of the regional corridor (R1), which links the Jamul Mountains and San Miguel Mountain by eliminating development in PV-1 and PV-3. The additional preserve lands given as part of the land exchange will supplement the function of the R1 corridor by providing a wider and more northern route. This corridor allows for species to travel throughout the Preserve while minimizing the potential for development obstructions or edge effects.
- Preservation of the local L4 corridor within the Proctor Valley drainage by removing development of PV-1 and the associated access road. Enhances local L4 corridor by removing approved development within Planning Area 16.
- Reduction of net impacts to the Jamul BRCA by 130.9 acres with an overall reduction of impacts to BRCAs of 121 acres.
- Elimination of connector roads within the MSCP Preserve and Rancho Jamul Ecological Reserve by placing PV1, R-15, and R-16 into MSCP Preserve instead of hardline development.

These benefits of the Proposed Project operate to partially offset the impacts of extending take coverage as requested under the proposed Subarea Plan amendment.

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# 6 Avoidance, Minimization, and Mitigation Measures

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## 6.1 Avoidance and Minimization

The proposed land exchange between GDCI and CDFW would eliminate the current fragmented configuration of CDFW and GDCI ownership and improve the MSCP Preserve design by concentrating development within the center of Village 14 and eliminating development from GDCI's ownership in Planning Area 16. Thus, the land exchange would result in a more logical, practical, and efficient land use and Preserve pattern.

Specifically, with respect to the MSCP Preserve design, the land exchange would do the following:

- Enhance Preserve design by designating developable lands as hardline MSCP Preserve lands in Planning Area 16 and PV1 and PV3 in Village 14.
- Eliminate close to 13.2 miles of Preserve edge effects associated with the 2019 Land Plan.
- Reduce the overall Otay Ranch GDP/SRP development footprint by approximately 311.6 acres and designate that acreage to the MSCP Preserve system, thereby increasing the hardline MSCP Preserve by 311.6 acres.
- Preserve a large contiguous block of connected MSCP Preserve lands, which will supplement and preserve a “core” biological area within the Proctor Valley area. This contiguous block of Preserve would add to the adjacent off-site CDFW land, National Wildlife Refuge land, Bureau of Land Management lands, and Otay Ranch RMP Preserve lands owned by others.
- Eliminate approximately 18 acres of impacts associated with three roads within MSCP Preserve and the Jamul Ecological Reserve. One road would have crossed MSCP Preserve lands to connect Village 14 to PV1. The other two connector roads were to be located within hardline development footprint in Planning Area 16, but were also within the Jamul Ecological Reserve. Per Sections 1.9.3.2 and 1.9.3.3 of the MSCP County of San Diego Subarea Plan (County of San Diego 1997), these roads would have been an allowable use within the Preserve. By designating PV1, R-15, and R-16 as hardline MSCP Preserve pursuant to the Dispute Resolution Agreement, these roads will no longer be necessary.

As required by the Otay Ranch RMP, the Proposed Project includes a 100-foot Preserve edge buffer, which is detailed in the Preserve Edge Plan (RH Consulting Group et al. 2020). The Preserve edge is a 100-foot buffer between the Preserve and development and is not located within the Otay Ranch RMP Preserve. The 100-foot buffer is intended to lessen the edge effects of development on the Otay Ranch RMP Preserve. The Preserve Edge Plan details the uses allowed within the 100-foot-wide Preserve edge and provides a list of plant species that are appropriate adjacent to the Otay Ranch RMP Preserve. The Preserve Edge Plan addresses drainage, toxic substances, lighting, noise, fuel modification, fencing, and invasive species (RH Consulting Group et al. 2020).

Specific to San Diego fairy shrimp, as discussed in Section 4.1.5, direct impacts to features known to be occupied by this species have been avoided not only through avoidance of the features themselves, but also avoidance of all watersheds that support those features. Currently Proctor Valley Road bisects a vernal pool complex being restored by The Chaparral Lands Conservancy. The Proposed Project would realign approximately 0.3 miles of Proctor Valley Road, between South Village 14 and Central Village 14, to the east of the restoration site to provide a 100-foot

buffer from the watershed of all features that are located in the City of San Diego Cornerstone Lands, thus removing impacts from the road on the restoration site.

A full comparison of the Proposed Project and the 2019 Land Plan as they relate to Quino checkerspot butterfly habitat assessments and protocol surveys is provided in Attachment D of County of San Diego 2020. In summary, as compared to the 2019 Land Plan, the Proposed Project reduces impacts to potential Quino checkerspot butterfly habitat by 262.3 acres of impacts to habitat but increases impacts to critical habitat by 11.8 acres. The Proposed Project also minimizes impacts to key movement corridors and linkages for Quino checkerspot butterfly populations. For these reasons and those discussed in detail in Section 4.5, the Proposed Project provides for a better preserve design than the 2019 Land Plan.

## 6.2 Mitigation Measures

The mitigation measures required for the Proposed Project as they relate to the biological impacts presented in this document are provided below. Note that there have been edits to these mitigation measures from the Final EIR for the 2019 Land Plan to the address the Proposed Project. These edits have been documented in the Addendum (County of San Diego 2020) and the clean version of each measure (no strike-out/underline) is provided in this document.

**M-BI-1 Biological Monitoring.** To prevent disturbance to areas outside the limits of grading, all grading shall be monitored by a biologist. Prior to issuance of land development permits, including clearing, grubbing, grading, and/or construction permits for any areas adjacent to the Otay Ranch Resource Management Plan (RMP) Preserve and the off-site areas, the Proposed Project applicant or its designee shall provide written confirmation that a biological monitor approved by the County of San Diego has been retained and shall be present during clearing, grubbing, and/or grading activities within sensitive resources.

Biological monitoring shall include the following:

- a. Attend the preconstruction meeting with the contractor and other key construction personnel prior to clearing, grubbing, or grading to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds).
- b. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas prior to clearing, grubbing, or grading. Perform weekly inspection of fencing and erosion control measures (daily during rain events) near proposed preservation areas.
- c. Discuss procedures/training for minimizing harm to or harassment of wildlife encountered during construction with the contractor and other key construction personnel prior to clearing, grubbing, or grading.
- d. Supervise and monitor vegetation clearing, grubbing, and grading to ensure against direct and indirect impacts to biological resources that are intended to be protected and preserved.
- e. Flush species (i.e., avian or other mobile species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities.

- f. Verify that the construction site is implementing the stormwater pollution prevention plan (SWPPP) best management practices. The SWPPP is described in further detail in M-BI-14.
- g. Periodically monitor the construction site in accordance with the Proposed Project's fugitive dust control plan. Periodically monitor the construction site to see that dust is minimized according to the fugitive dust control plan and that manufactured slopes are revegetated as soon as possible.
- h. Periodically monitor the construction site to verify that artificial security light fixtures are directed away from open space and are shielded.
- i. Oversee the construction site so that cover and/or escape routes for wildlife from excavated areas are provided on a daily basis. All steep trenches, holes, and excavations during construction shall be covered at night with backfill, plywood, metal plates, or other means, and the edges covered with soils and plastic sheeting such that small wildlife cannot access them. Soil piles shall be covered at night to prevent wildlife from burrowing in. The edges of the sheeting shall be weighed down by sandbags. These areas may also be fenced to prevent wildlife from gaining access. Exposed trenches, holes, and excavations shall be inspected twice daily (i.e., each morning and prior to sealing the exposed area) by a qualified biologist to monitor for wildlife entrapment. Excavations shall provide an earthen ramp to allow for a wildlife escape route.

**M-BI-2 Temporary Construction Fencing.** Prior to issuance of land development permits, including clearing, grubbing, grading, and/or construction permits, the Proposed Project applicant or its designee shall install prominently colored fencing and signage wherever the limits of grading are adjacent to sensitive vegetation communities or other biological resources, as identified by the qualified monitoring biologist. Fencing shall remain in place during all construction activities. All temporary fencing shall be shown on grading plans for areas adjacent to the Preserve and for all off-site facilities constructed within the Preserve. Prior to release of grading and/or improvement bonds, a qualified biologist shall provide evidence to the satisfaction of the Director of Planning & Development Services (or his/her designee) and the Director of Parks and Recreation that work was conducted as authorized under the approved land development permit and associated plans.

**M-BI-3 Habitat Conveyance and Preservation.** Prior to the approval of the first Final Map for the Proposed Project, the Proposed Project applicant or its designee shall coordinate with the County of San Diego (County) to establish and/or annex the Project Area into a County-administered Community Facilities District to fund the ongoing management and maintenance of the Otay Ranch Resource Management Plan (RMP) Preserve. Prior to the recordation of the first Final Map within each development phase, the Proposed Project applicant shall convey land within the Otay Ranch RMP Preserve to the Otay Ranch Preserve Owner/Manager or its designee at 1.188 acres for each "developable acre" impacted, as defined by the Otay Ranch RMP. Based on the analysis in the Addendum to the Final EIR, it is anticipated that the Proposed Project Amendment would be required to convey a total of 556.6 acres, 377 acres of which is anticipated to be conveyed on site. The actual conveyance will be based on the 1.188 mitigation ratio as determined at Final Map. The remaining acres of required conveyance would be met through off-site conveyances to the Otay Ranch RMP Preserve in Planning Area 16 (58.3 acres) and a conservation easement over land designated for development in Planning Area 16 (191.6 acres). The total habitat preservation (626.7 acres) would exceed the acreage required by the mitigation ratio, as defined

in the Otay Ranch RMP. In addition, the BMO Findings determined mitigation requirements for areas subject to the BMO (PV2 and a 6.1-acre portion of PV3) are more stringent for certain types of habitat than the Otay Ranch RMP Preserve Conveyance Obligation. Accordingly, the BMO Findings identified an additional 11.4 acres of mitigation, beyond the 52.4 acres required by the Otay Ranch RMP Preserve Conveyance Obligation, for impacts in PV2 and a portion of PV3, for a total of 63.8 acres. The mitigation provided for impacts to PV2 and a portion of PV3 would be like-kind or up-tiered habitat.

**M-BI-4**

**Biological Open Space Easement.** Areas of Conserved Open Space shall be preserved on site and shall either be added to the Otay Ranch Resource Management Plan (RMP) Preserve (see M-BI-3), given to the City of San Diego to mitigate for impacts to Cornerstone Lands, or managed under a County of San Diego (County) approved RMP through the County biological open space easement to satisfy the additional mitigation requirements as a result of the BMO Findings. This easement shall be for the protection of biological resources, and all of the following shall be prohibited on any portion of the land subject to said easement: grading; excavating; placing soil, sand, rock, gravel, or other material; clearing vegetation; constructing, erecting, or placing any building or structure; vehicular activities; dumping trash; or using the area for any purpose other than as open space. Granting this biological open space shall authorize the County and its agents to periodically access the land to perform management and monitoring activities for species and habitat conservation. The only exceptions to this prohibition are the following:

1. Selective clearing of vegetation by hand to the extent required by written order of the fire authorities for the express purpose of reducing an identified fire hazard. Although clearing for fire management is not anticipated with the creation of this easement, such clearing may be deemed necessary in the future for the safety of lives and property. All fire clearing shall be pursuant to the applicable fire code of the fire authority having jurisdiction, and the Memorandum of Understanding dated February 26, 1997, between the wildlife agencies and the fire districts and any subsequent amendments thereto.
2. Activities conducted pursuant to a revegetation or habitat management plan approved by the Director of Department of Planning & Development Services.
3. Vegetation removal or application of chemicals for vector control purposes where expressly required by written order of the County of San Diego Department of Environmental Health.
4. Construction, use, and maintenance of multi-use, non-motorized trails.

The applicant shall show the on-site biological open space easement on the Final Map and biological open space easement exhibit with the appropriate granting language on the title sheet concurrent with Final Map Review, then submit them for preparation and recordation with the Department of General Services, and pay all applicable fees associated with preparation of the documents.

If areas of Conserved Open Space are managed through the County to provide for the long-term management of the proposed Conserved Open Space, an RMP shall be prepared and implemented prior to the approval of the Final Map. The RMP shall be submitted to the County and agencies for approval as required.

The final RMP cannot be approved until the following has been completed to the satisfaction of the Director of Department of Planning & Development Services, and, in cases where the Director of the Department of Parks and Recreation has agreed to be the owner/manager, to the satisfaction of the Director of the Department of Parks and Recreation:

- The RMP shall be prepared and approved pursuant to the most current version of the County of San Diego Biological Report Format and Content Requirements.
- The biological open space easements shall be dedicated to ensure that the land is protected in perpetuity.
- A resource manager shall be selected and evidence provided by the applicant as to the acceptance of this responsibility by the proposed resource manager.
- The RMP funding costs, including a PAR (Property Assessment Record) or other equally adequate forecast, shall be identified. The funding mechanism (endowment or other equally adequate mechanism) to fund annual costs for the RMP and the holder of the security shall be identified and approved by the County.
- A contract between the applicant and County shall be executed for the implementation of the RMP.
- Annual reports shall include an accounting of all required tasks and details of tasks addressed during the reporting period, and an accounting of all expenditures and demonstration that the funding source remains adequate.

**M-BI-5**

**Permanent Fencing and Signage.** To protect the Otay Ranch Resource Management Plan Preserve and areas of Conserved Open Space from entry upon occupancy of any housing units, an open space fence or wall shall be installed along all open space edges where open space is adjacent to residential uses, along internal streets, and as indicated in the Proctor Valley Village 14 and Planning Areas 16/19 Preserve Edge Plan and Proposed Fencing, Preserve Signage, and Fuel Modification Zones. The barrier shall be a minimum construction of vertical metal fencing, but may be other suitable construction material, as approved by Department of Planning & Development Services and the Director of Parks and Recreation. To protect the Preserve from entry, informational signs shall be installed, where appropriate, along all open space edges where open space is adjacent to residential uses, along internal streets, and as indicated in the Proctor Valley Village 14 and Planning Areas 16/19 Preserve Edge Plan. The signs must be corrosion resistant, a minimum of 6 inches by 9 inches, on posts not less than 3 feet in height from the ground surface, and state, "Sensitive Environmental Resources Protected by Easement. Entry without express written permission from the County of San Diego is prohibited."

**M-BI-6**

**Nesting Bird Survey.** To avoid any direct impacts to raptors and/or any migratory birds protected under the Migratory Bird Treaty Act, removal of habitat that supports active nests on the proposed area of disturbance shall occur outside of the nesting season for these species (January 15 through August 15, annually). If, however, removal of habitat on the proposed area of disturbance must occur during the nesting season, the Proposed Project applicant or its designee shall retain a biologist approved by the County of San Diego (County) to conduct a preconstruction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The preconstruction survey must be conducted within 72 hours prior to the start of construction, and the results must be submitted to the Director of Planning & Development Services for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan, as deemed appropriate by the County, shall be prepared and include proposed

measures to be implemented to ensure that disturbance of nesting activities are avoided. The report or mitigation plan shall be submitted to the County for review and approval and implemented to the satisfaction of the Director of Planning & Development Services (or her/his designee). The County's mitigation monitor shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

**M-BI-9 Quino Checkerspot Butterfly Habitat Preservation.** The Proposed Project shall convey 350.7 acres of potential habitat for Quino checkerspot butterfly on site. In addition, per M-BI-4, a biological open space easement shall be placed over 24.5 acres of potential habitat within Conserved Open Space. Additional preservation of suitable habitat is provided by off-site Otay Ranch RMP Preserve in Planning Area 16 (58.3 acres) and a conservation easement over land designated for development in Planning Area 16 (191.5 acres). Therefore, 619.6 acres of potential habitat for Quino checkerspot butterfly shall be conveyed to the Otay Ranch Resource Management Plan Preserve or not be impacted by the Proposed Project. Thus, the Proposed Project shall provide mitigation acreage at a ratio in excess of 1:1 (preservation of 1 acre for every 1 acre of impact) and shall adequately mitigate impacts to potential Quino checkerspot butterfly habitat. This mitigation measure also satisfies the mitigation requirements for those portions of the Project Area subject to the Biological Mitigation Ordinance. These areas shall be managed under a Quino Checkerspot Butterfly Management/Enhancement Plan, as discussed further in M-BI-10.

**M-BI-10 Quino Checkerspot Butterfly Management/Enhancement Plan.** Prior to the issuance of the first grading permit that impacts habitat identified as suitable for Quino checkerspot butterfly, the Proposed Project shall prepare a long-term Quino Checkerspot Butterfly Management/Enhancement Plan ("Quino Checkerspot Butterfly Management Plan"). The Quino Checkerspot Butterfly Management Plan shall be based on, and incorporate the performance criteria/standards set forth in, the March 2020 "Quino Checkerspot Conservation Strategy" and "Framework Management Plan", which HELIX Environmental prepared in cooperation with the applicant, the County, the United States Fish and Wildlife Service, and the California Department of Fish and Wildlife. The Quino Checkerspot Butterfly Management Plan shall be submitted to and receive approval from the Director of the Department of Planning & Development Services (or her/his designee) and the Director of Parks and Recreation. Note, however, that should the applicant rely on a future County Multiple Species Conservation Program Subarea Plan Quino Checkerspot Butterfly Addition for take authorization, the Quino Checkerspot Butterfly Management Plan may either be superseded by or rendered unnecessary upon completion and adoption of such future County Multiple Species Conservation Program Subarea Plan Quino Checkerspot Butterfly Addition. Adaptive management techniques shall be included in the plan, with contingency methods for changed circumstances. These measures shall ensure that the loss of habitat for the species related to the proposed development are adequately offset by measures that will enhance the potential for Quino checkerspot butterfly to occupy the Preserve, and shall provide data that will help the species recover throughout its range.

**M-BI-13 Burrowing Owl Preconstruction Survey.** Prior to issuance of any land development permits, including clearing, grubbing, and grading permits, the Proposed Project applicant or its designee shall retain a County of San Diego (County)-approved biologist to conduct focused preconstruction surveys for burrowing owl. The surveys shall be performed no earlier than 30 days prior to the commencement of any clearing, grubbing, or grading activities. If occupied burrows are detected, the County-approved biologist shall prepare a passive relocation mitigation plan subject to review and approval by the Wildlife Agencies (i.e., California Department of Fish and Wildlife and U.S. Fish

and Wildlife Service) and the County, including any subsequent burrowing owl relocation plans to avoid impacts from construction-related activities.

**M-BI-14**

**SWPPP.** Prior to issuance of grading permits in portions of the Development Footprint that are adjacent to the Preserve, the Proposed Project applicant or its designee shall develop a stormwater pollution prevention plan (SWPPP). The SWPPP shall be developed, approved, and implemented during construction to control stormwater runoff such that erosion, sedimentation, pollution, and other adverse effects are minimized. The following performance measures contained in the Proctor Valley Preserve Edge Plan shall be implemented to avoid the release of toxic substances associated with construction runoff:

- Sediment shall be retained within the Development Footprint by a system of sediment basins, traps, or other appropriate measures.
- Permanent energy dissipaters shall be included for drainage outlets.
- The best management practices contained in the SWPPP shall include silt fences, fiber rolls, gravel bags, and soil stabilization measures such as erosion control mats and hydroseeding.

The Project Area drainage basins shall be designed to provide effective water quality control measures, as outlined in the SWPPP. Design and operational features of the drainage basins shall include design features to provide maximum infiltration; maximum detention time for settling of fine particles; maximum distance between basin inlets and outlets to reduce velocities; and maintenance schedules for periodic removal of sedimentation, excessive vegetation, and debris.

**M-BI-15**

**Erosion and Runoff Control.** During construction, material stockpiles shall be placed such that they cause minimal interference with on-site drainage patterns. This shall protect sensitive vegetation from being inundated with sediment-laden runoff.

Dewatering shall be conducted in accordance with standard regulations of the Regional Water Quality Control Board (RWQCBRWQCB). A National Pollutant Discharge Elimination System permit, issued by RWQCB to discharge water from dewatering activities, shall be required prior to start of construction. This shall minimize erosion, siltation, and pollution within sensitive communities.

Design of drainage facilities shall incorporate long-term control of pollutants and stormwater flow to minimize pollution and hydrologic changes. An Urban Runoff Plan and operational best management practices shall be approved by the San Diego County Department of Planning & Development Services prior to construction.

**M-BI-16**

**Prevention of Invasive Plant Species.** A County of San Diego (County)-approved plant list, as described in the Preserve Edge Plan, shall be used for areas immediately adjacent to the Preserve. All slopes immediately adjacent to the Preserve shall be planted with native species that reflect the adjacent native habitat. A hydroseed mix that incorporates native species, is appropriate to the area, and is without invasive species shall be used for slope stabilization in transitional areas. Per the Preserve Edge Plan, only County-approved vegetation shall be planted in streetscapes or within the 100-foot “edge” between development and the Otay Ranch Resource Management Plan Preserve.

The Planning and Development Services Landscape Architect shall require that all final landscape plans comply with the following: no invasive plant species as included on the most recent version

of the California Invasive Plant Council's California Invasive Plant Inventory for the Proposed Project region shall be included, and the plant palette shall be composed of native species that do not require high irrigation rates. The Proposed Project biologist shall periodically check landscape products for compliance with these requirements.

**M-BI-17**      **Prevention of Chemical Pollutants.** Weed control treatments shall include all legally permitted chemical, manual, and mechanical methods applied with the authorization of the County of San Diego (County) agriculture commissioner. The application of herbicides shall be in compliance with all state and federal laws and regulations under the prescription of a Pest Control Adviser and implemented by a licensed applicator. Where manual and/or mechanical methods are used, disposal of the plant debris shall follow the regulations set by the County agriculture commissioner. The timing of the weed control treatment shall be determined for each plant species in consultation with the Pest Control Adviser, the County agriculture commissioner, and the California Invasive Plant Council, with the goal of controlling populations before they start producing seeds. A manual weeding program shall be implemented on the manufactured slope adjacent to the Preserve to control weeds that are likely to be encouraged by irrigation within the 100-foot Preserve edge/fuel modification zone. Weed control efforts shall occur quarterly or as needed to prevent weeds on the manufactured slopes from moving into the adjacent Preserve. Either the homeowner's association or County's landscape monitoring firm shall be responsible to check the irrigated slopes during plant establishment to verify that excessive runoff does not occur and that any weed infestations are controlled.

During Proposed Project operation, all recreational areas that use chemicals or animal by-products, such as manure, that are potentially toxic or impactful to sensitive habitats or plants shall incorporate best management practices on site to reduce impacts caused by the application and/or drainage of such materials into the Otay Ranch Resource Management Plan Preserve. In addition, use of rodenticides will not be allowed within the 100-foot Preserve edge.

**M-BI-18**      **Noise.** Uses in or adjacent to the Otay Ranch Resource Management Plan (RMP) Preserve with impacts that are not reduced through implementation of the Preserve Edge Plan shall be designed to minimize potential noise impacts to surrounding wildlife species by constructing berms or walls adjacent to commercial areas and any other uses, such as community parks, that may introduce noises that could impact or interfere with wildlife use of the Otay Ranch RMP Preserve.

Construction-related activities that are excessively noisy (e.g., clearing, grading, grubbing, or blasting) adjacent to breeding/nesting areas shall incorporate noise-reduction measures (described below) or be curtailed during the breeding/nesting season of sensitive bird species.

There shall be no construction-related activities allowed during the breeding season of migratory birds or raptors (January 15 through August 31) or coastal California gnatcatcher (February 15 through August 31). The Director of Planning & Development Services may waive this condition, through written concurrence from the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife (i.e., Wildlife Agencies), provided that no nesting or breeding birds are present within 300 feet of the construction activities (500 feet for raptors) based on a preconstruction survey.

If construction-related activities that are excessively noisy (e.g., clearing, grading, grubbing, or blasting) occur during the period of February 15 through August 31, a County of San Diego (County)-



approved biologist shall conduct preconstruction surveys in suitable nesting habitat adjacent to the construction area to determine the location of any active nests in the area. If the habitat is suitable for raptors, the survey area shall extend to 500 feet from the impact area, and if the habitat is suitable only for nesting by non-listed and non-raptor avifauna, the survey area shall extend 50 to 300 feet from the impact area, depending on the habitat type. The survey shall begin not more than 3 days prior to the beginning of construction activities. If nesting birds are detected by the biologist, the following buffers shall be established: (1) no work within 50 feet of a non-listed and non-raptor avifauna nest; (2) no work within 300 feet of a federally or state-listed species, such as coastal California gnatcatcher; and (3) no work within 500 feet of a raptor nest. The buffer shall be flagged in the field and mapped on the construction plans. To the extent possible, the non-construction buffer zones shall be avoided until the nesting cycle is complete. However, it may be reasonable for the County to reduce these buffer widths depending on site conditions (e.g., the width and type of screening vegetation) or the existing ambient level of activity (e.g., existing level of human activity within the buffer distance). If construction-related activities must take place within these buffer widths, the Proposed Project applicant or its designee shall contact the County to determine how to best minimize impacts to nesting birds.

Specific to coastal California gnatcatcher and nesting raptors, construction-related noise levels in coastal California gnatcatcher-occupied habitat within 500 feet of construction activity shall not exceed 60 A-weighted decibels equivalent continuous sound level (dBA  $L_{eq}$ ) or preconstruction ambient noise levels, whichever is greater. Proposed Project construction within 500 feet of occupied habitat shall occur outside of the breeding season, if possible. If necessary, construction activities during the breeding season shall be managed to limit noise levels in occupied habitat within 500 feet of the site, or noise attenuation measures, such as temporary sound walls, shall be implemented to reduce noise levels below 60 dBA  $L_{eq}$  or below existing ambient noise levels, whichever is greater.

**M-BI-19**      **Fire Protection.** To minimize the potential exposure of the Project Area to fire hazards, all features of the Fire Protection Plan for Otay Ranch Village 14 and Planning Areas 16/19 and the Fire Protection Plan Technical Memorandum for the Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment shall be implemented in conjunction with development of the Proposed Project Amendment.

**M-BI-20**      **Lighting.** Lighting of all developed areas adjacent to the Otay Ranch Resource Management Plan Preserve shall be directed away from the Preserve, wherever feasible and consistent with public safety. Where necessary, development shall provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the Preserve and sensitive species from night lighting. Consideration shall be given to the use of low-pressure sodium lighting.

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# 7 Quino Conservation Program

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Section 10(a)(2)(A) of the federal Endangered Species Act requires that an HCP specify the measures that the permittee will take to minimize and mitigate to the maximum extent practicable the impacts of the taking of any federally listed animal species as a result of activities addressed by the HCP.

As part of the “Five Point” Policy adopted by the USFWS and National Marine Fisheries Service in 2000, HCPs must establish biological goals and objectives (65 FR 35242, June 1, 2000). The purpose of the biological goals is to ensure that the operating conservation program in the HCP is consistent with the conservation and recovery goals established for the species. The goals are also intended to provide an understanding of why these actions are necessary. These goals are developed based upon the species’ biology, threats to the species, the potential effects of the Covered Activities, and the scope of the HCP.

The MSCP was developed to conserve both the diversity and function of the ecosystem of southwestern San Diego County through the preservation and adaptive management of large blocks of interconnected habitat and smaller areas that support rare vegetation communities. The MSCP was also designed to conserve specific species (MSCP Covered Species) at levels that meet the take authorization issuance standards of the federal Endangered Species Act and the Natural Community Conservation Planning Act. Maintaining ecosystem functions and persistence of extant populations of Covered Species is the biological goal of the MSCP.

The Natural Community Conservation Planning Conservation Guidelines, the MSCP, and biological information from the MSCP’s Multi-Habitat Planning Area Preserve alternative were used to establish conservation goals and criteria for habitat and individual species for each segment of the San Diego County MSCP Subarea Plan. These goals and criteria are based on the needs of the 85 Covered Species and an analysis of their habitats in the MSCP area.

Any project approved by the County within the County Subarea Plan of the MSCP must be in conformance with the MSCP Plan and the County Subarea Plan. The Project is located within the South County Segment of the County Subarea Plan and, therefore, must demonstrate such conformance. The conservation strategy for the Quino checkerspot butterfly as developed is consistent with the goals and objectives of the MSCP and complements the existing conservation efforts within the County Subarea Plan.

Quino checkerspot butterfly was not covered under the original MSCP or the Subarea Plan; therefore, biological goals and objectives have been identified with regard to Quino checkerspot butterfly and are included in the March 3, 2020, Quino Checkerspot Butterfly Conservation Strategy and Framework Management Plan (Appendix A). This plan also includes monitoring and an adaptive management strategy.

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# 8 Plan Implementation

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## 8.1 Plan Implementation

The Board of Supervisors entered into an Implementing Agreement with the Wildlife Agencies for the MSCP County Subarea Plan on March 17, 1998. The Implementing Agreement is an agreement between the County and Wildlife Agencies that outlines their individual and collective roles in implementing the County MSCP Subarea Plan. The Implementing Agreement ensures that the County MSCP Subarea Plan will be implemented over the next 50 years and that state and federal take authorizations will be in effect for the same period of time. This amendment to the MSCP will be valid through the remainder the 50-year permit (until March 16, 2048). Any subsequent extensions of the MSCP would include take authorization for the Proposed Project, provided the Proposed Project is in compliance.

## 8.2 Unforeseen and Changed Circumstances

Section 10 regulations (69 FR 71723, December 10, 2004, as codified in 50 CFR, Sections 17.22(b)(2) and 17.32(b)(2)) require that an HCP specify the procedures to be used for dealing with changed and unforeseen circumstances that may arise during the implementation of the HCP. In addition, the HCP No Surprises Rule (50 CFR 17.22 (b)(5) and 17.32 (b)(5)) describes the obligations of the permittee and the USFWS. The purpose of the No Surprises Rule is to provide assurance to the non-federal landowners participating in habitat conservation planning under the Endangered Species Act that no additional land restrictions or financial compensation will be required for species adequately covered by a properly implemented HCP, in light of unforeseen circumstances, without the consent of the permittee.

“Changed circumstances” is defined under the No Surprises Rule as changes in circumstances affecting a species or geographic area covered by a conservation plan that can reasonably be anticipated by plan developers and the USFWS and that can be planned for.

“Unforeseen circumstances” is defined under the No Surprises Rule as changes in circumstances affecting a species or geographic area covered by a conservation plan that could not reasonably have been anticipated by the HCP developer and the USFWS at that time of the conservation plan’s negotiation and development and that result in a substantial and adverse change in the status of a Proposed Covered Species. Under the No Surprises Rule, the USFWS will not require the commitment of additional land, water, or financial compensation, or additional restrictions on the use of land, water, or other natural resources beyond the level otherwise agreed to for species covered by the HCP without consent of the County. Under the rule, the USFWS will honor these assurances as long as the County is properly implementing the terms and conditions of the MSCP, permit, and other associated documents. As indicated in the Final No Surprises Rule at 50 CFR 17.22(b)(6) and 17.32(b)(6): “Nothing in this rule will be construed to limit or constrain the Director, any Federal, State, local or Tribal government agency, or a private entity, from taking additional actions at its own expense to protect or conserve a species included in a conservation plan.”

### 8.2.1 Unforeseen Circumstances

Pursuant to the No Surprises Rule at 50 CFR Section 17.22(b)(5)(iii)(C), the USFWS has the burden of demonstrating that unforeseen circumstances exist, using the best scientific and commercial data available. Per the No Surprises Rule:

These findings must be clearly documented and based upon reliable technical information regarding the status and habitat requirements of the affected species. The Director will consider, but not be limited to, the following factors:

- Size of the current range of the affected species.
- Percentage of range adversely affected by the amendment.
- Percentage of the range conserved by the conservation plan.
- Ecological significance of that portion of the range affected by the conservation plan.
- Level of knowledge about the affected Covered Species and the degree of specificity of the species' conservation program under the conservation plan; and
- Whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the affected species in the wild.

If either of the Wildlife Agencies or the County becomes aware of the existence of a potential Unforeseen Circumstance, they will immediately notify the other Agencies of the existence of the potential Unforeseen Circumstance. Except where there is substantial threat of imminent, significant, adverse impacts to a Proposed Covered Species, USFWS will provide the County and CDFW written notice within 30 calendar days of a finding of Unforeseen Circumstances, during which time the Wildlife Agencies will meet with the County to discuss the proposed finding, provide the County an opportunity to submit information to rebut the proposed finding, and consider any proposed changes to the conservation strategies for the Preserve. During the time necessary to determine the nature and extent of any additional or modified mitigation, the County will avoid contributing to appreciably reducing the likelihood of the survival and recovery of Quino checkerspot butterfly in the wild.

Pursuant to the provisions of the No Surprises Rule, USFWS may impose additional mitigation or other measures on the County without its consent only to the extent allowed by and in conformance with the No Surprises Rule currently codified at 50 CFR 17.22(b)(5) (iii)(A) and 17.32(b)(5)(iii)(A).

#### **Effects of Unforeseen Circumstances or Jeopardy on Take Authorization**

Notwithstanding the limits on conservation and mitigation measures identified above, the Permit for this amendment may be revoked for cause under 50 CFR 13.28(a)(1) through (a)(4), or if USFWS determines that continuation of the Covered Activities would be inconsistent with the criterion set forth in 16 USC 1539(a)(2)(B)(iv). See 50 CFR 17.22(b)(8).

## 8.2.2 Changed Circumstances

Changed Circumstances addressed by this amendment are limited to the following:

1. Fire
2. Climate change
3. Vandalism
4. Invasive species and diseases

Each of the defined Changed Circumstances includes an assessment of risk, a description of preventative measures (where feasible), and a summary of Planned Responses (measures to be undertaken in the case of Changed Circumstances), as provided below. Preventative measures are those measures that are, or will be, undertaken by the County to reduce the potential for occurrence of the Changed Circumstance, and/or that reduce the potential for damage to the Preserve resulting from a Changed Circumstance. Planned Responses are the specific responses that will be undertaken in the event of a Changed Circumstance.

### **Relationship of Changed Circumstances to Adaptive Management**

Responses to Changed Circumstances are generally addressed through the adaptive management element of the Otay Ranch RMP<sup>17</sup> and associated Biota Monitoring Program for Otay Ranch (RECON 2018). The adaptive management program requires monitoring of species and habitat conditions, with a management response to observed threats. In anticipating and reacting to Changed Circumstances, adaptive management allows for revisions to the operating conservation program, thereby enhancing future strategies for the conservation of species and their habitat. Changed Circumstances allow specific triggers and management actions to be applied to foreseeable threats. The ability to carry out the Planned Responses (i.e., adaptive management actions) for Changed Circumstances, described below, is included in the funding calculations for the Otay Ranch RMP and Quino Checkerspot Butterfly Conservation Strategy and Framework Management Plan (Appendix A) to be revised as new information on the life history or ecology of Proposed Covered Species is gained through continuing research and/or as data regarding the effectiveness of mitigation measures (gained through the monitoring programs) is generated. As a result, revisions may be made to the land management and monitoring of Proposed Covered Species.

#### **8.2.2.1 Fire**

##### **Risk Assessment**

Fires are natural phenomena in the Mediterranean climate of Southern California. Frequent and intense fires can modify the natural landscape and pose a threat to public safety. Fire frequency and intensity influence community regeneration, composition, and extent. For the purposes of this amendment, it is assumed that a catastrophic fire could burn portions of the Preserve once every 10 years (based on average fire cycle for Southern California)

Impacts from fire can occur to Quino checkerspot butterfly and/or San Diego fairy shrimp from the fire itself, as well as from the fire suppression activities. If not controlled, increased erosion and weed invasion may occur following a fire due to loss of vegetation. In addition, the vegetation and species may be damaged by emergency response vehicles and personnel during the fire suppression. Increased fire risk associated with climate change is addressed in Section 7.2.2.2.

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<sup>17</sup> Otay Ranch RMP includes two documents (Phase 1 and Phase 2), both of which have been updated several times. The Phase 2 RMP is a requirement of the GDP/SRP and Phase 1 RMP, with the purpose of establishing an implementation framework for the resource protection objectives of both documents. The Phase 2 RMP Update, finalized September 2018, provides updated management and monitoring standards for resource protection and conservation within Otay Ranch consistent with regional practices and standards (RECON 2018).

## **Preventative Measures**

Preventative measures to reduce the likelihood of and harm from a single fire in the Preserve are included in the adaptive management provisions in the Otay Ranch RMP and Quino Checkerspot Butterfly Conservation Strategy and Framework Management Plan (Appendix A). The RMP includes a comprehensive strategy for reducing risks of negative effects of wildfire, including preventative actions and planning for fire suppression activities in advance.

## **Planned Response**

The RMP includes fire management and protection measures that will minimize the risk of damage to habitats and natural communities from fire outside the normal range of wildfires (City of Chula Vista and County of San Diego 1993b). Preventative measures include the following actions:

- Create or redesign fuel breaks to limit fire spread.
- Work with local fire agencies to improve fire suppression preparedness and strategies to protect habitat during fire response.
- Construction of an on-site public safety site including a fire station and sheriff substation.

Should a fire take place, the preserve manager will follow protocols established in the RMP and will work closely with local fire response crews to ensure that impacts on sensitive communities and Covered Species are minimized within safety limits. In addition, landscape-level monitoring will assess changes to land cover type, and natural community-level monitoring will assess the response of exotic plants. In the event of habitat loss, land management and habitat restoration measures will be implemented within the Preserve to ensure the reestablishment of native vegetation through active or passive management, as appropriate.

Within 30 days of a fire, County staff and/or the preserve manager will make a preliminary assessment of the effects of the fire within the Preserve areas. Based on the extent and severity of fire damage, as determined by County staff and/or the Resource Manager with concurrence of the Wildlife Agencies, the preserve manager will develop and implement specific adaptive management tasks in accordance with the Otay Ranch RMP and Quino Checkerspot Butterfly Conservation Strategy and Framework Management Plan (Appendix A). The preserve manager(s) will address monitoring of natural regrowth within the damaged area for a period of 5 years and implement measures to minimize the invasion by exotic species and excessive soil erosion. Qualitative and quantitative monitoring will be required to evaluate post-fire restoration success (based on pre fire conditions). As data are gathered, adaptive management actions will be initiated and modified as needed to reduce potential threats and their adverse impacts.

### 8.2.2.2 Climate Change

#### **Risk Assessment**

Risk to the Proposed Covered Species associated with climate change include, (but are not limited to, (1) drought and (2) increased fire (frequency and/or area burned).

#### ***Drought***

The Proposed Project site is characterized by a Mediterranean climate, with cool, wet winters and warm, dry summers. El Niño and La Niña climatic events typically cause large annual fluctuations in precipitation levels



(Reever-Morghen et al. 2007). A large majority of annual rainfall occurs between October and March. Drought is a natural part of Mediterranean climates, it is a phenomenon to which vernal pool habitats and vernal pool species including San Diego fairy shrimp have, of necessity, adapted over time through development of seed and cyst banks. Quino checkerspot butterfly has also developed mechanisms to survive drought (e.g., multiple year diapause). However, drought conditions experienced over the term of the Project could result in the stress of native habitats and the associated species, especially if they are prolonged. Drought conditions will be considered to exist at the time drought conditions are declared to exist at the Proposed Project site by appropriate state agency or County Agricultural Commissioner. For the purposes of this amendment, a drought consisting of 7 consecutive dry years is considered a Changed Circumstance. A drought lasting longer than 7 years is not foreseeable and would be considered an Unforeseen Circumstance.

The climate change model simulations indicate that San Diego will retain its strong Mediterranean climate with relatively wetter winters and dry summers. Projections of future precipitation have mixed results: three of the simulations become drier (12% to 35% drier than historical annual average) and three are wetter (12% to 17% wetter than historical annual average) overall. This reflects the reality that precipitation cannot yet be modeled with the same degree of consistency as other climate change parameters. The models vary in their projections of storminess, but none show a significant change from past patterns. One important aspect of all of the climate model projected simulations is that the high degree of variability of annual precipitation that the region has historically experienced will prevail during the next five decades.

### ***Increases in Fire Frequency***

Climate change can also influence fire frequency within the Preserve. Fire occurrence in California has been correlated with drought, moisture availability, and biomass (fuel) accumulation (Lenihan et al. 2003). Although climate change models predict different climate scenarios, many predict a dryer and warmer climate, which would result in more frequent or longer drought periods. An increase in drought frequency or longevity has the potential to increase fire frequency.

Fire is defined as any fire on conservation lands not prescribed by the preserve manager that removes a sufficient extent of vegetation such that the intended habitat functions of the conservation land for Proposed Covered Species are substantially reduced and would not naturally recover habitat functions within a sufficient time to meet goals and objectives, as determined by the County and Wildlife Agencies jointly. For purposes of this amendment, increases in fire frequency shall be considered a changed circumstance if two fire events occur within the same 25% of the site within any given 10-year period. If more than 156 acres of the Preserve (i.e., 25% of the 625-acre Preserve) burns three times or more within a 10-year period, it would be considered “unforeseen.”

### **Preventative Measures**

Conservation measures in the amendment are not sufficient and comprehensive enough on their own to prevent the effects of climate change on Proposed Covered Species. However, certain risks associated with climate change can be minimized with preventative measures. Preventative measures are provided for fire in Section 7.2.2.1 and in the Otay Ranch RMP. There are no preventative measures identified for drought.

## **Planned Response**

### ***Drought***

Drought conditions may affect the development and maintenance of species restoration sites. In the event of drought conditions, the Project Proponent will evaluate habitat restoration sites to assess the degree of effect on habitat development and functions. Following the evaluation, the County will prepare a report that documents the effects of drought on restoration sites and identify management actions that will be implemented through the adaptive management process to alleviate the effects of drought.

### ***Increased Fire frequency***

Planned Responses for fire are provided in Section 7.2.2.1. It is assumed that the frequency and/or duration of Planned Responses for fire would increase as a result of climate change.

## 8.2.2.3 Vandalism

### **Risk Assessment**

While access control is required under the Otay Ranch RMP, vandalism is still possible. Structures in the Preserve such as gates, fences, or signs could be vandalized during the permit term. Such damage is considered reasonably likely to occur during the permit term and is therefore considered a changed circumstance. Remedial measures funded in the Otay Ranch RMP include the repair or replacement of structures or facilities damaged by vandalism. In addition, the habitat may be impacted from intentionally damaging, destroying, or removing Proposed Covered Species. Examples include (but are not limited to) unpermitted grading, construction and use of new trails by mountain bikers, and off-road vehicle use. Vandalism can result in permanent impacts to Proposed Covered Species and reduce ecological functions of the Preserve.

### **Preventative Measures**

Measures to prevent vandalism include access control (installing and/or maintaining fencing and/or signage) and patrolling, which are activities that will be implemented by the Resource Manager as discussed in Otay Ranch RMP.

### **Planned Response**

If vandalism does occur, enhancement and/or restoration activities will be promptly implemented by the Resource Manager to restore impacted areas to pre-impact conditions. For example, seeding and/or installation of container plants may be necessary to restore impacted covered plant species. The time frame to complete enhancement and/or restoration of habitat and Proposed Covered Species populations will depend on the severity of impact from vandalism and will be determined by the County with the concurrence of the Wildlife Agencies.

## 8.2.2.4 Invasive Species and Diseases

For the purpose of defining Changed Circumstance, invasion of invasive exotic species or disease is defined as an introduction of a species or disease within the Preserve that has either (1) not previously been known to occur in the vicinity of the Preserve and has been noxious elsewhere; or (2) is a particularly noxious variety of nonnative species or disease that is resistant to typical control measures. Unforeseen Circumstances (which are not covered

under this amendment) are defined as invasion within the Preserve of a species or disease not currently known to be noxious elsewhere, but that becomes so upon introduction to the Preserve.

### **Risk Assessment**

Invasive plant species are considered the greatest risk to Quino checkerspot butterfly and San Diego fairy shrimp. Although invasive, exotic, or pest species of plants may currently exist within the Preserve, they will be controlled in high priority Quino checkerspot butterfly habitat areas and the vernal pool restoration site through funding providing in the Quino Checkerspot Butterfly Conservation Strategy and Framework Management Plan (Appendix A), and the adaptive management process in the Otay Ranch RMP. An unexpected and/or sudden increase in new invasive species may create the potential for a significant adverse effect on Quino checkerspot butterfly and/or San Diego fairy shrimp. Invasive species could increase as urban development expands and/or recreational use increases around the Preserve.

### **Preventative Measures**

The Otay Ranch RMP contains preventative actions to monitor and manage invasive species within the Preserve, including use of native landscaping on restored slopes adjacent to the Preserve, an Early Detection Rapid Response method to ensure early detection of new invasions, and invasive plant removal within the Preserve.

### **Planned Response**

The preserve manager will take steps to minimize or eliminate invasion of non-native species through implementation of the Otay Ranch RMP, which includes measures to detect, through the monitoring program, new infestations or a substantial increase in existing infestations of non-native animal, plant, or disease in the conservation area. If an infestation of a non-native animal, plant, or disease is discovered, the preserve manager in coordination with Wildlife Agencies and County will conduct an assessment to determine the possible threats of the species or disease to Quino checkerspot butterfly and San Diego fairy shrimp. The preserve manager, in coordination with the County and the Wildlife Agencies, will identify and implement measures to reduce and/or control the adverse effects of the species or disease on the functions provided by habitat restored and protected under this HCP (e.g., control of invasive non-native plant species). If the preserve manager, with concurrence from the County and Wildlife Agencies, determines that methods to adequately reduce and/or control the species or disease are not available or practicable, the preserve manager will identify alternative design, implementation, and management approaches to future habitat restoration and management actions to avoid or minimize potential adverse effects of the weed infestation or disease on Quino and San Diego fairy shrimp. If the preserve manager, with concurrence from the County and Wildlife Agencies, determines that such modifications are not practicable, the preserve manager, through the adaptive management process, will identify and implement alternative conservation measures, if practicable, that provide equivalent levels of benefit to Quino and San Diego fairy shrimp.

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## 9 Funding

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GDCI is responsible for establishment of a funding mechanism for the Quino Checkerspot Butterfly Conservation Strategy and Framework Management Plan (Appendix A). Funding of the Otay Ranch RMP is provided through a long-term funding mechanism for management and monitoring, such as a Community Facilities District (CFD) (City of Chula Vista and County of San Diego 1993b). Both the County and City of Chula Vista are responsible for management of resources, restoration of habitat, and enforcement of open space restrictions for all conveyed lands under POM management. Long-term tasks involve monitoring, adaptive management, and maintenance of the biological resources within the Preserve in perpetuity, including habitat and species monitoring and mapping, exotic species control, access control, and reporting.

Separately, GDCI shall provide funding for re-establishment of 2 acres of Quino checkerspot butterfly host plant patches within the context of the larger long-term management strategy outlined in the Quino Checkerspot Butterfly Conservation Strategy and Framework Management Plan and 0.3 acres of restoration of habitat for the San Diego fairy shrimp. Funding shall include 5 years of maintenance and monitoring to ensure the successful establishment of these 2.3 acres of habitat.

### 9.1 Cost of HCP Implementation

The Quino Checkerspot Butterfly Conservation Strategy and Framework Management Plan (Appendix A) includes focused Quino checkerspot butterfly habitat management through weeding and seeding of high and moderate Quino checkerspot butterfly host plant areas, host plant mapping, monitoring and reporting, as well as funds for contingencies. The annual cost for these measures is estimated at \$79,668. The cost of the 2 acres of Quino checkerspot butterfly habitat restoration is anticipated to not exceed \$250,000. The estimated cost for restoration of 0.3 acre of San Diego fairy shrimp \$125,000-300,000. Long-term management and monitoring of vernal pool habitat and San Diego fairy shrimp are included in the CFD funding for preserve management and monitoring.

### 9.2 Funding Source(s)

According the Phase 2 Resources Management Plan Update, prior to the approval of the first Final Map within the County's jurisdiction of Otay Ranch, a CFD or similar funding mechanism will be established to fund management and monitoring of Preserve conveyances associated with the County village developments. The annual operating budget is determined in an annual work plan approved by the POM and then incorporated into the CFD budget (RECON 2018).

Funding of the Quino Checkerspot Butterfly Conservation Strategy and Framework Management Plan (Appendix A) shall be accomplished through a CFD. As a prerequisite of CFD funding, the County, the applicant, CDFW and/or USFWS must enter into a joint community facilities agreement or similar arrangement for management activities that would occur on state lands (the joint community facilities agreement would not apply to POM-managed lands). The timing of the CFD funding will occur upon issuance of the grading permit for the Proposed Project.

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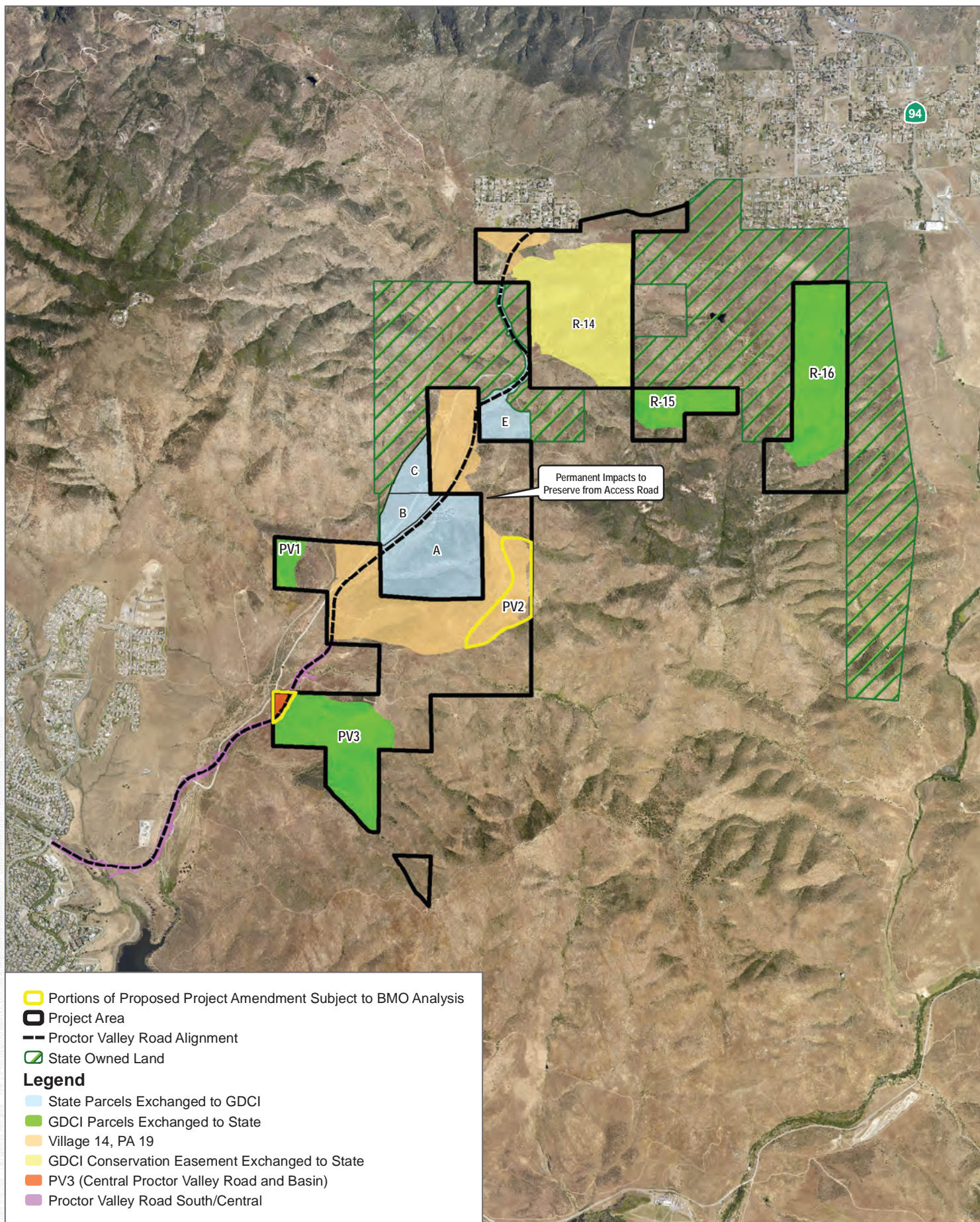
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SOURCE: SANGIS 2017; Hunsaker 2019

FIGURE 2



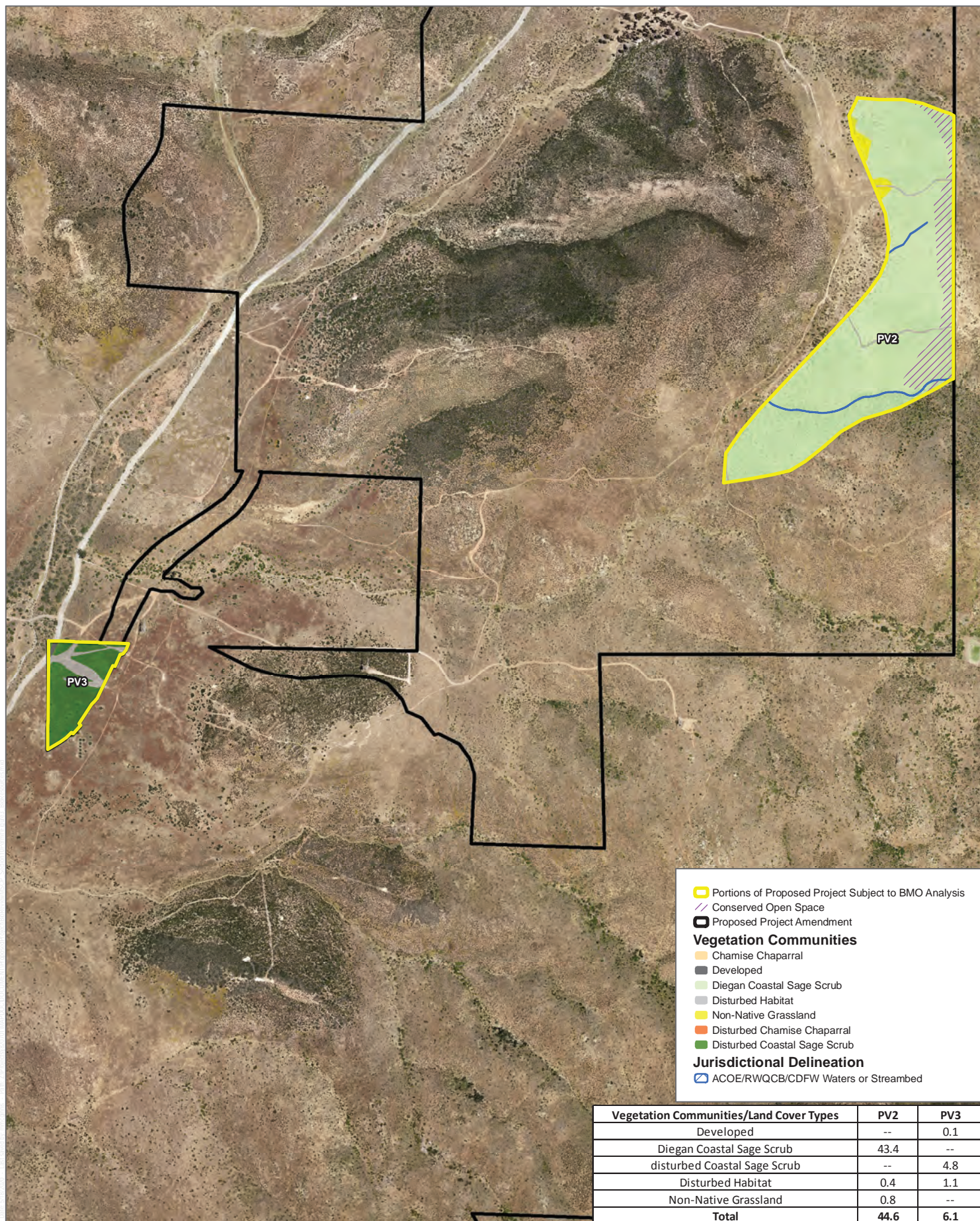
Dispute Resolution Agreement Components

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)



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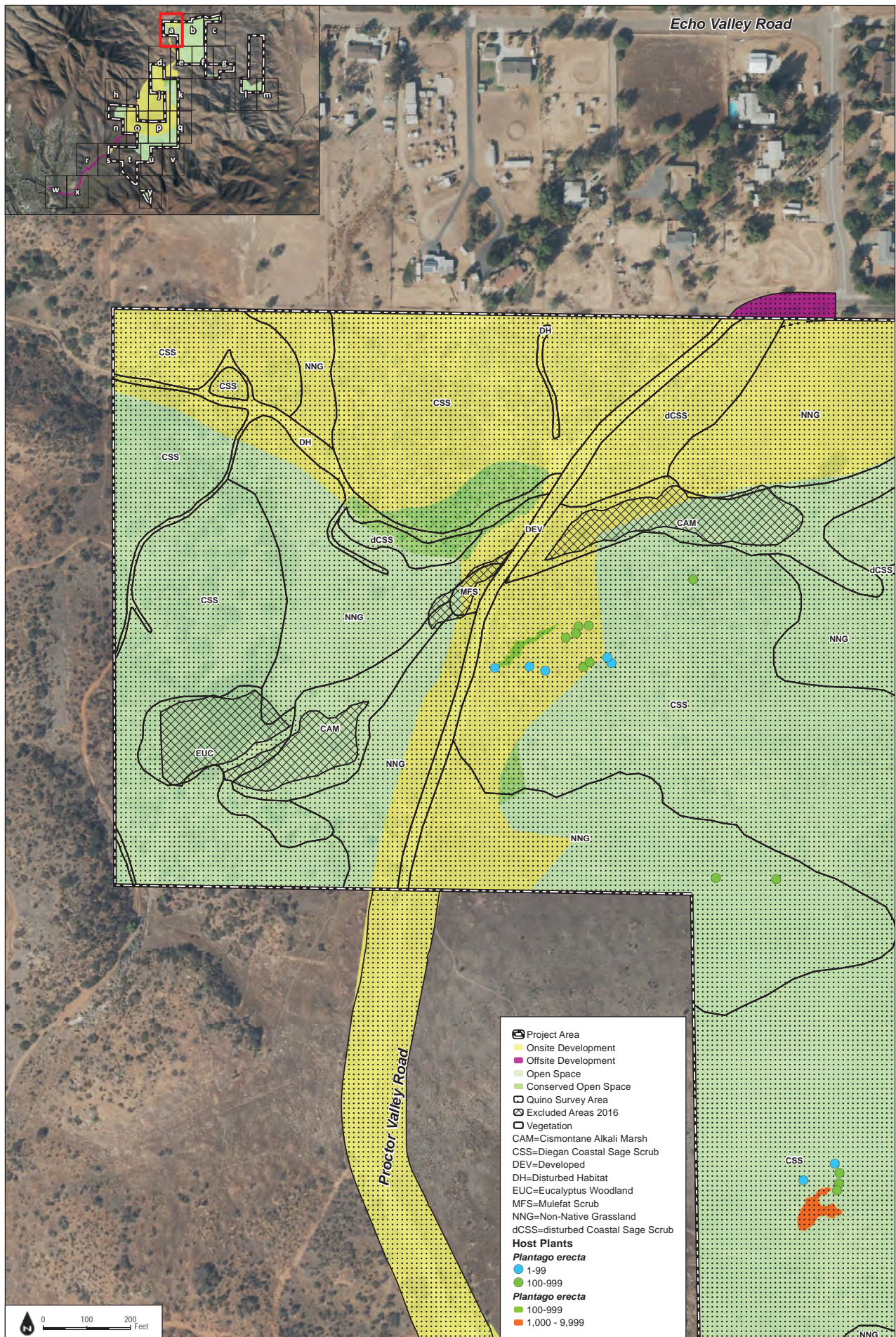
SOURCE: SANGIS 2017; Hunsaker 2019



**FIGURE 3**  
 Biological Resources within PV2 and a Portion of PV3  
 Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)



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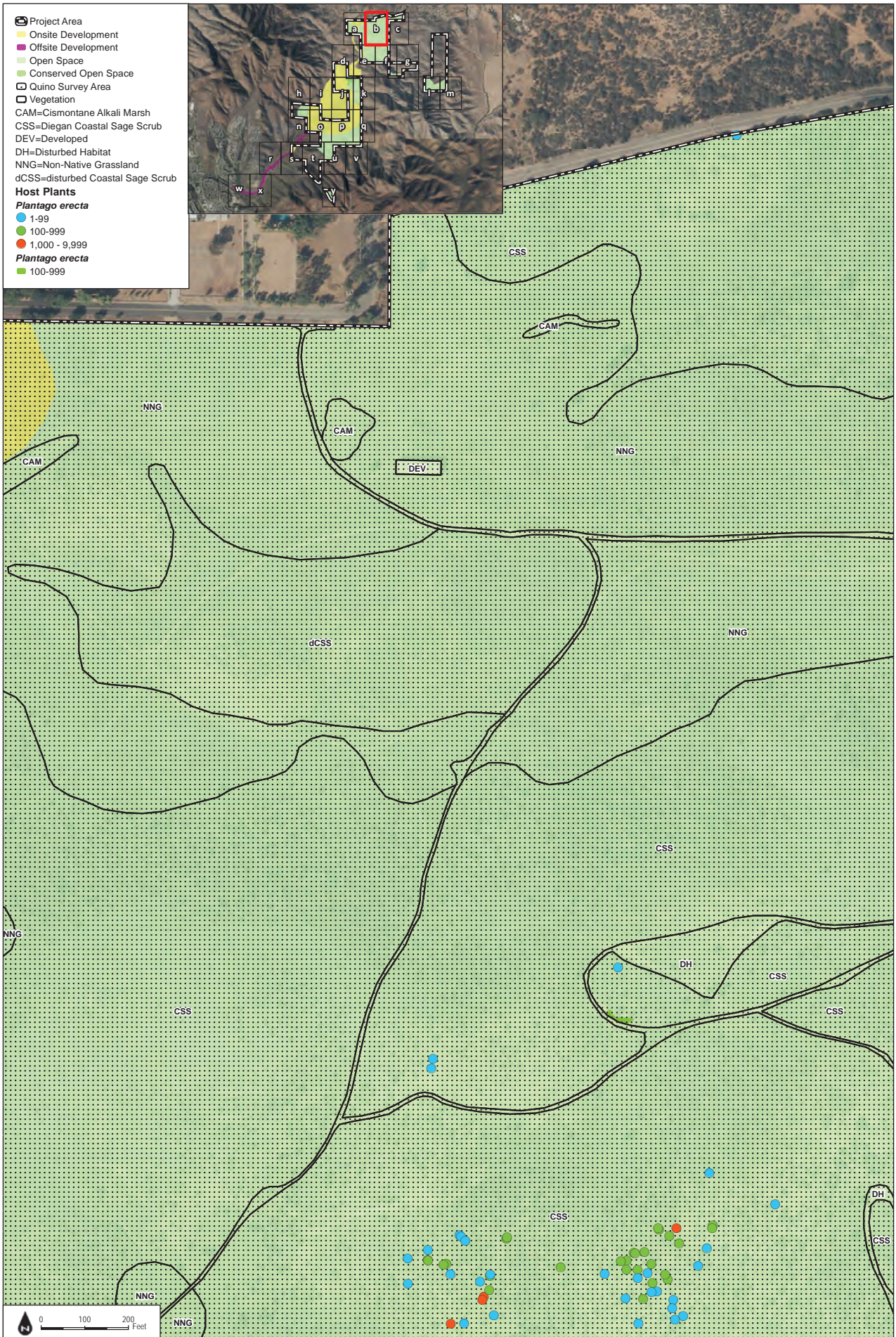


SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

**Figure 4a**  
2016 Quino Host Plant Mapping and Recent Sightings

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SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

**Figure 4b**  
2016 Quino Host Plant Mapping and Recent Sightings

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SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

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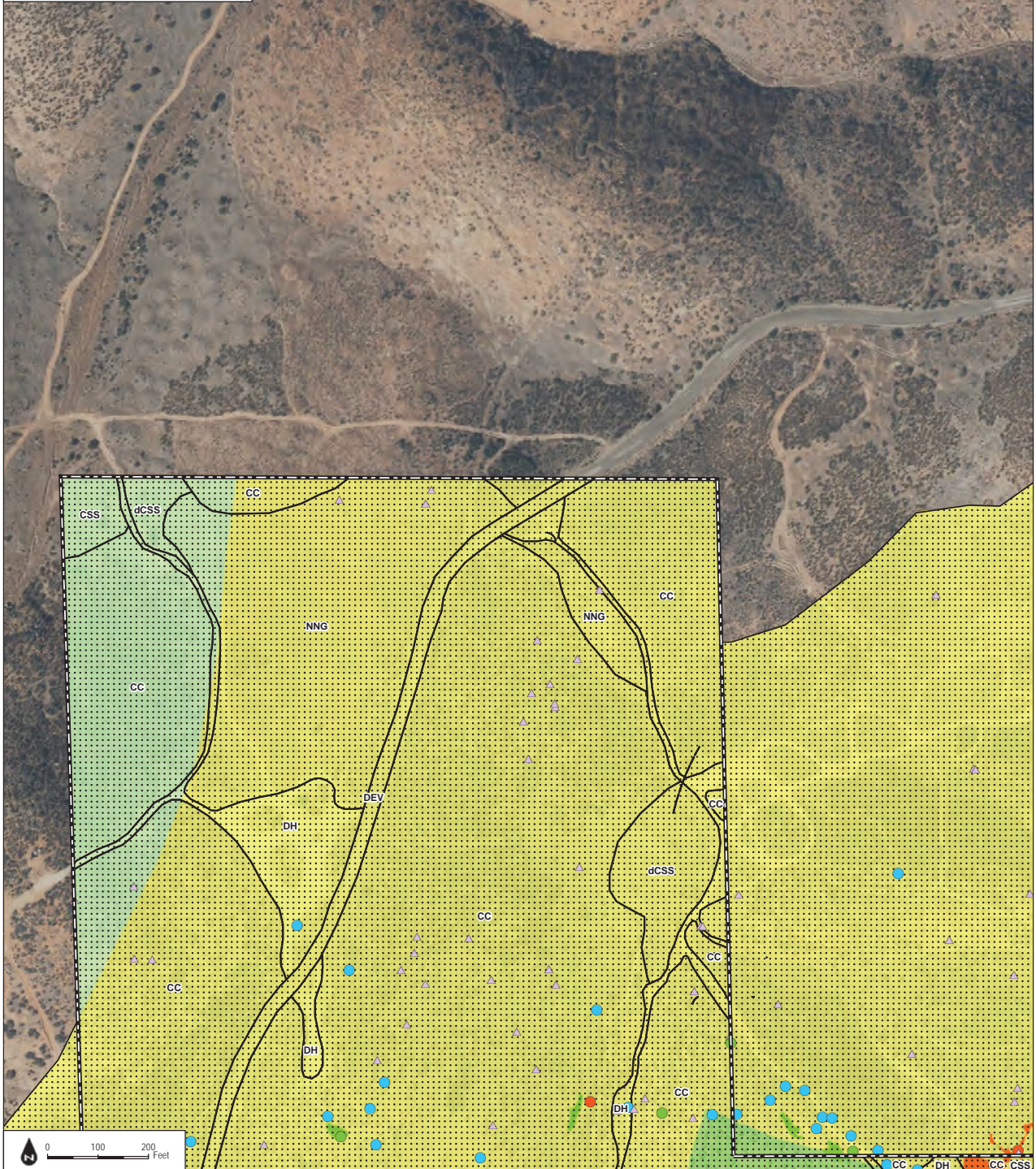
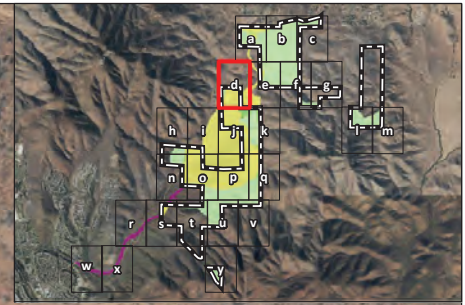
**Figure 4c**  
2016 Quino Host Plant Mapping and Recent Sightings

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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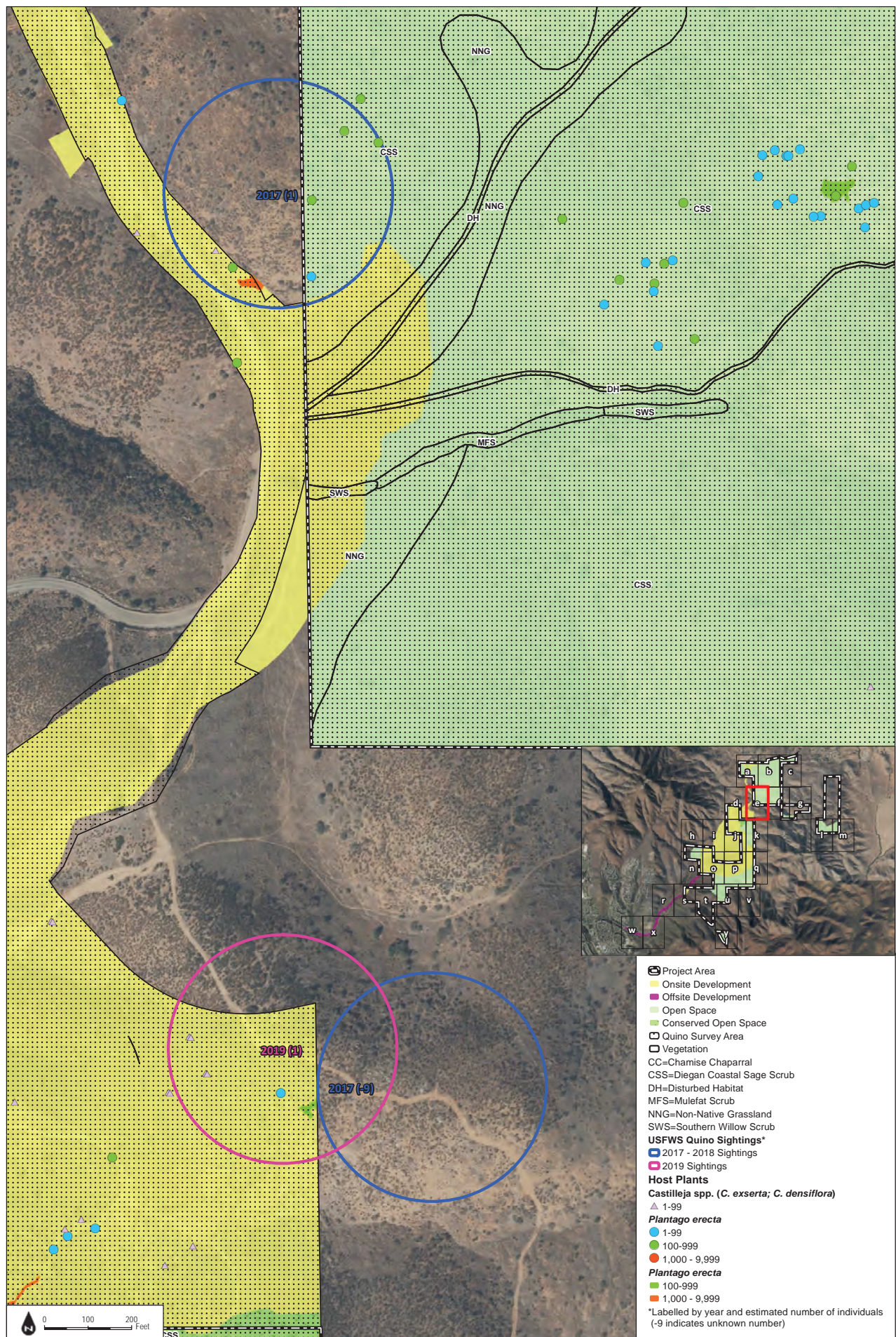


- Project Area
- Onsite Development
- Offsite Development
- Open Space
- Conserved Open Space
- Quino Survey Area
- Vegetation
- CC=Chamise Chaparral
- CSS=Diegan Coastal Sage Scrub
- DEV=Developed
- DH=Disturbed Habitat
- NNG=Non-Native Grassland
- dCSS=disturbed Coastal Sage Scrub
- Host Plants**
- Castilleja spp. (*C. exserta*; *C. densiflora*)**
- 1-99
- Plantago erecta***
- 1-99
- 100-999
- 1,000 - 9,999
- Plantago erecta***
- 100-999
- 1,000 - 9,999



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SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

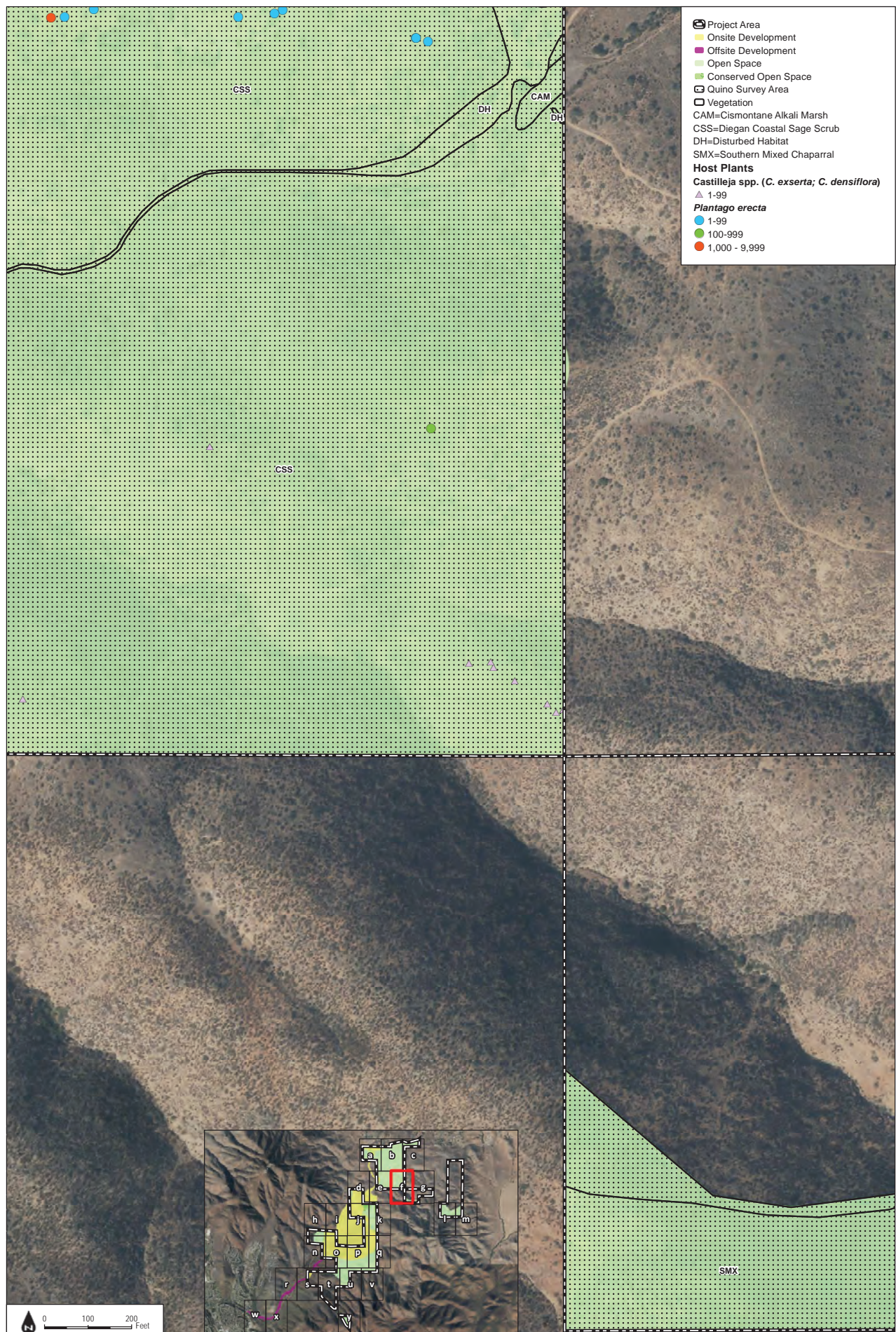
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**Figure 4e**  
2016 Quino Host Plant Mapping and Recent Sightings

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

2016 Quino Host Plant Mapping and Recent Sightings

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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





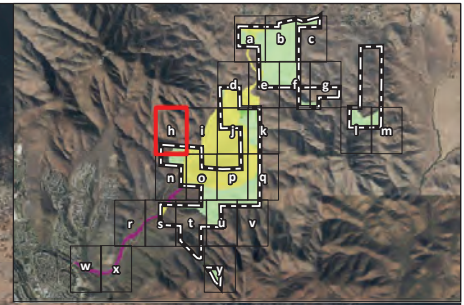
- Project Area
- Onsite Development
- Offsite Development
- Open Space
- Conserved Open Space
- Quino Survey Area
- Vegetation
- CSS=Diegan Coastal Sage Scrub
- SMX=Southern Mixed Chaparral



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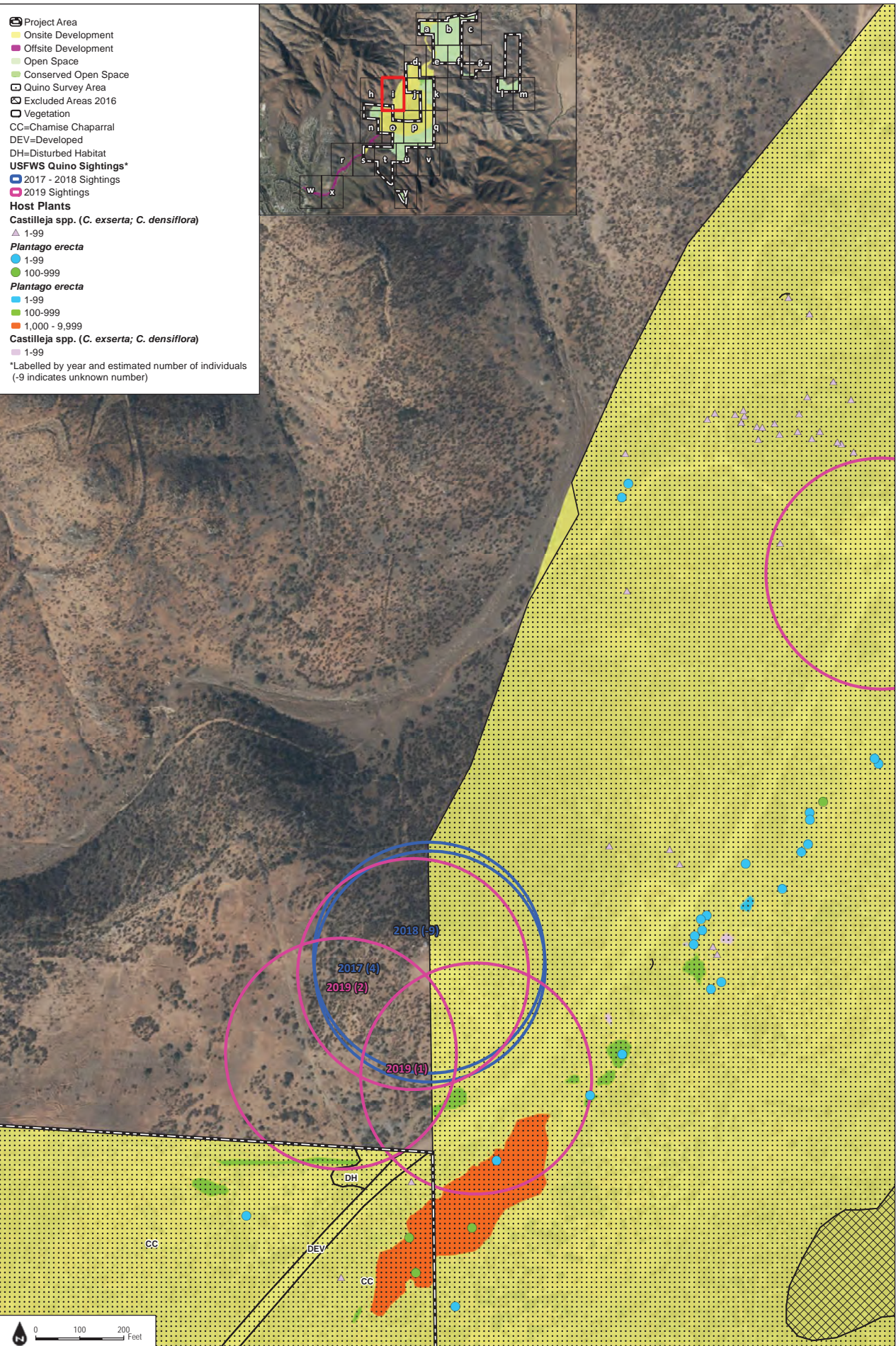


 Project Area  
 Onsite Development  
 Offsite Development  
 Open Space  
 Conserved Open Space  
 Quino Survey Area  
 Vegetation  
 CAM=Cismontane Alkali Marsh  
 CC=Chamise Chaparral  
**USFWS Quino Sightings\***  
 2017 - 2018 Sightings  
 2019 Sightings  
**Host Plants**  
*Castilleja* spp. (*C. exserta*; *C. densiflora*)  
 1-99  
 \*Labelled by year and estimated number of individuals  
 (-9 indicates unknown number)



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SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

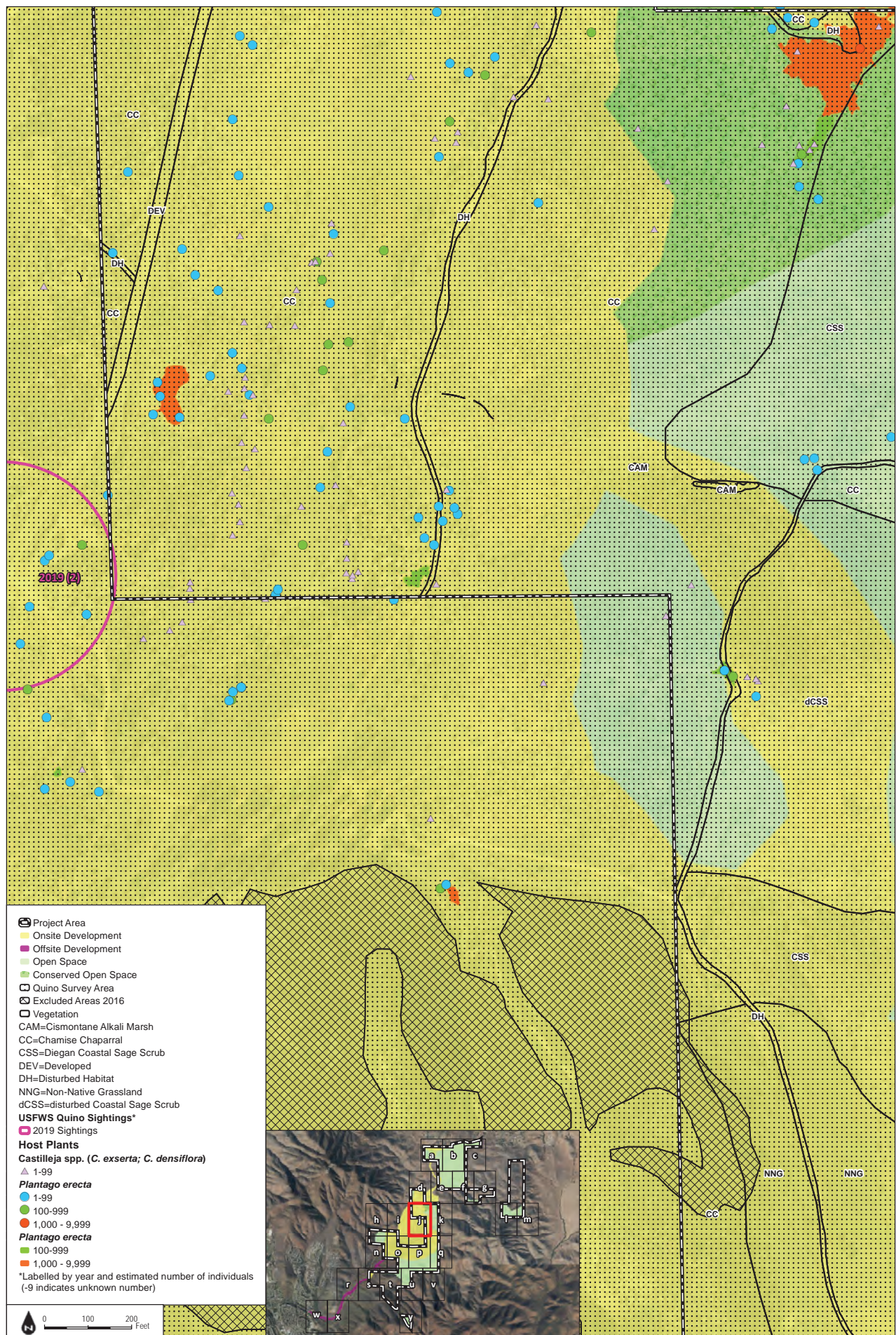
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**Figure 4i**  
2016 Quino Host Plant Mapping and Recent Sightings

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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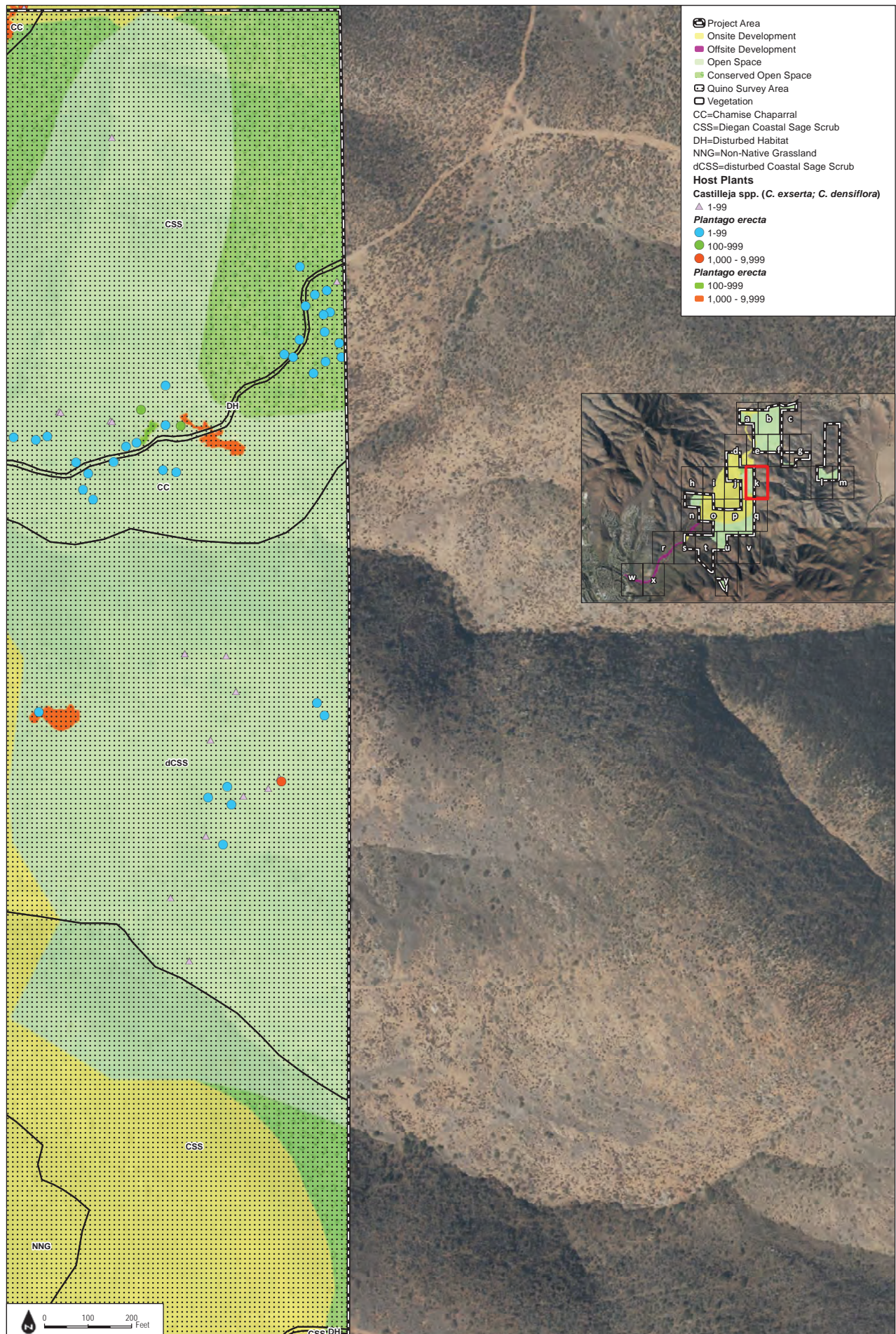
SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

Figure 4j  
2016 Quino Host Plant Mapping and Recent Sightings

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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**Figure 4k**  
 2016 Quino Host Plant Mapping and Recent Sightings

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SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

**DUDEK**

**Figure 41**  
2016 Quino Host Plant Mapping and Recent Sightings

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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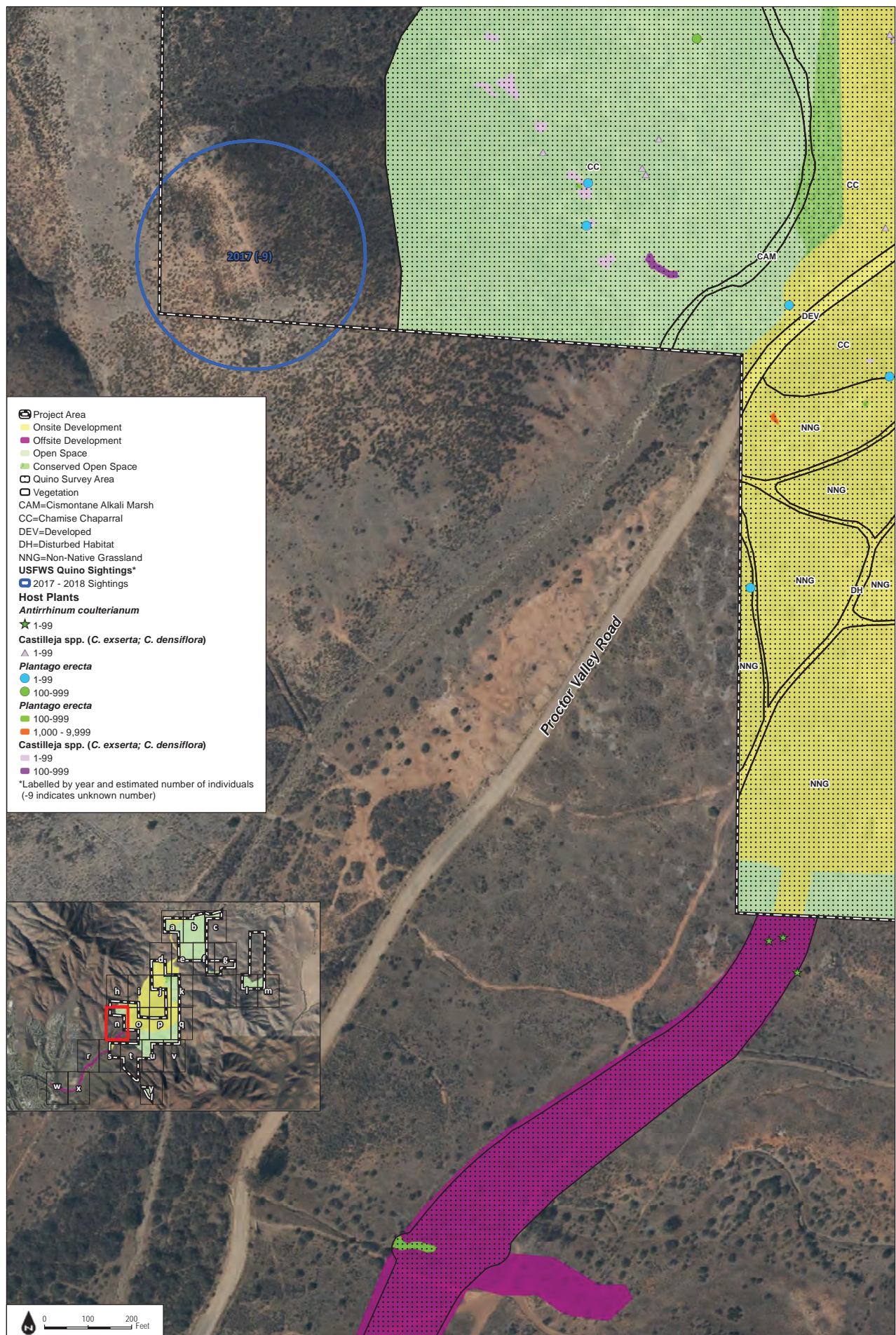
SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

2016 Quino Host Plant Mapping and Recent Sightings

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

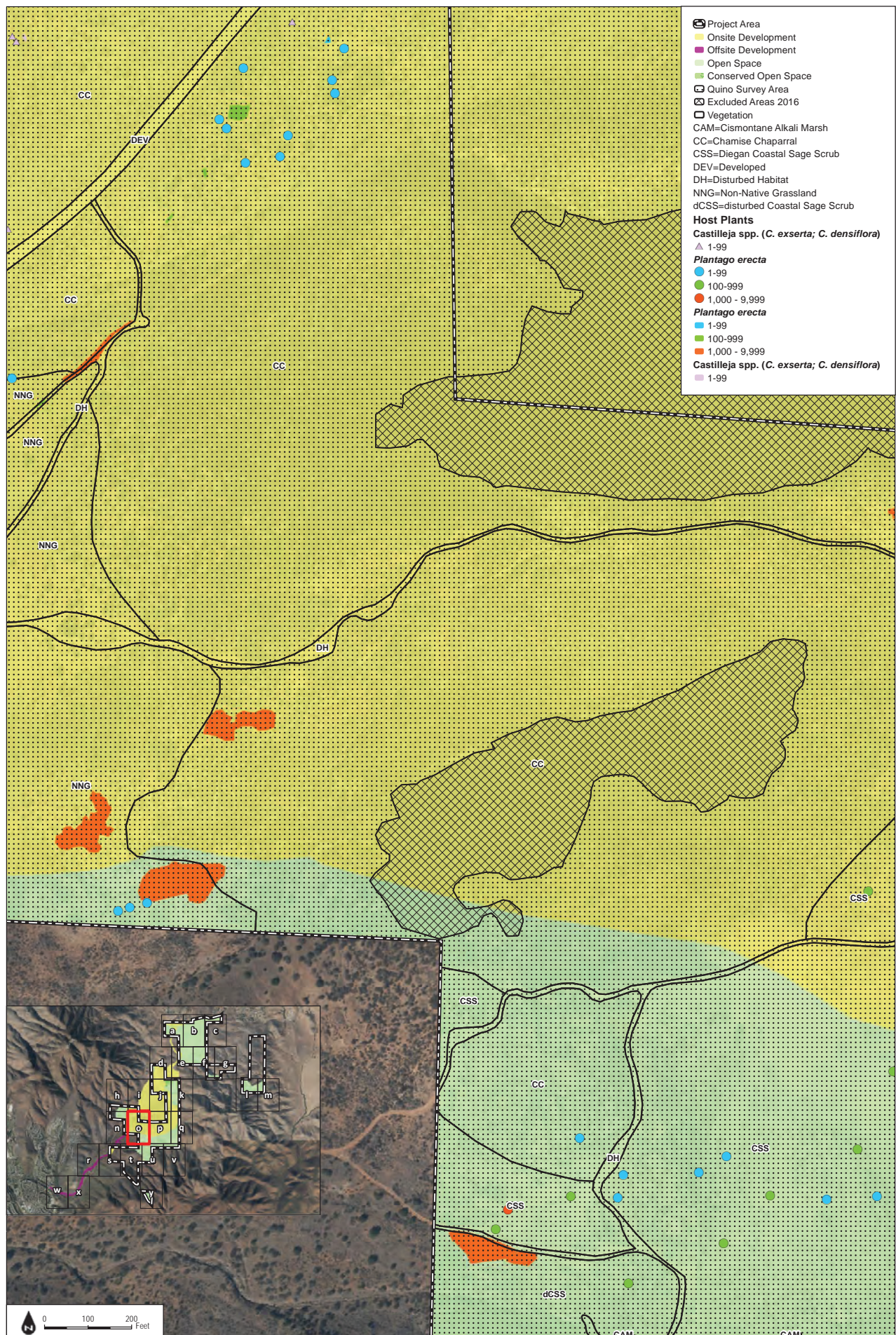
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**Figure 4n**  
2016 Quino Host Plant Mapping and Recent Sightings

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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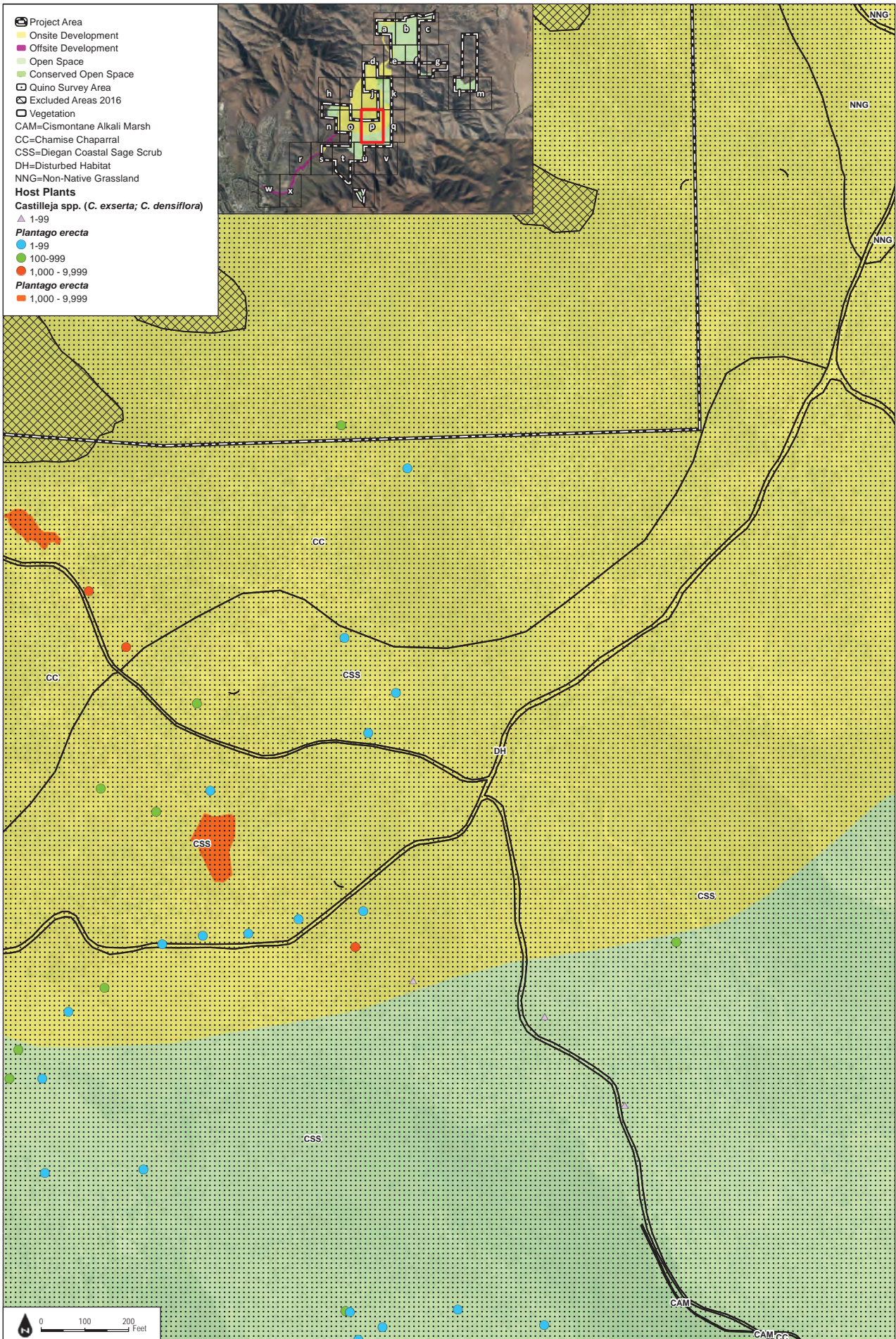


SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

**Figure 4o**  
2016 Quino Host Plant Mapping and Recent Sightings

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SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

**Figure 4p**  
2016 Quino Host Plant Mapping and Recent Sightings

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

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2016 Quino Host Plant Mapping and Recent Sightings

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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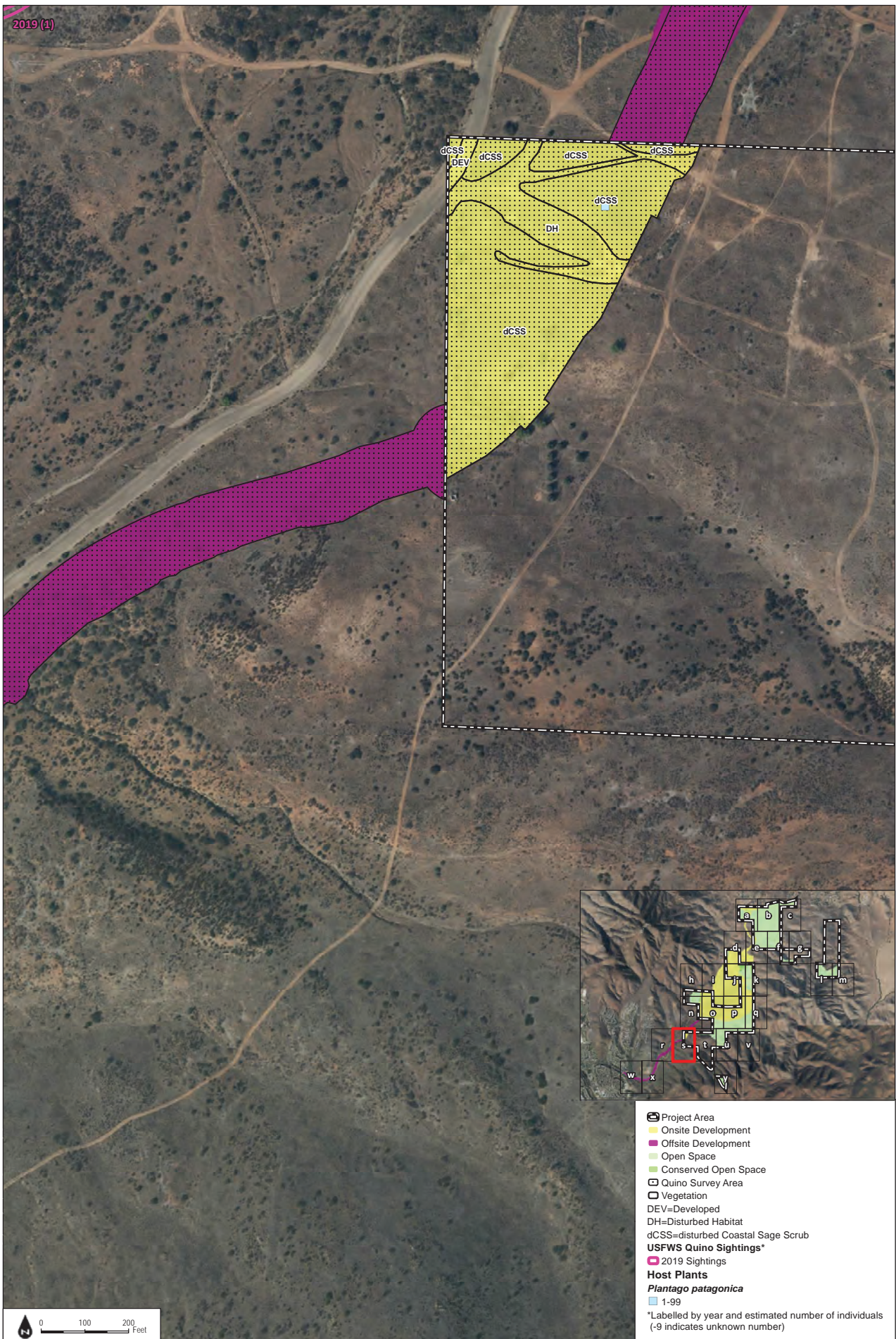
SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

2016 Quino Host Plant Mapping and Recent Sightings

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

**Figure 4s**  
 2016 Quino Host Plant Mapping and Recent Sightings

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

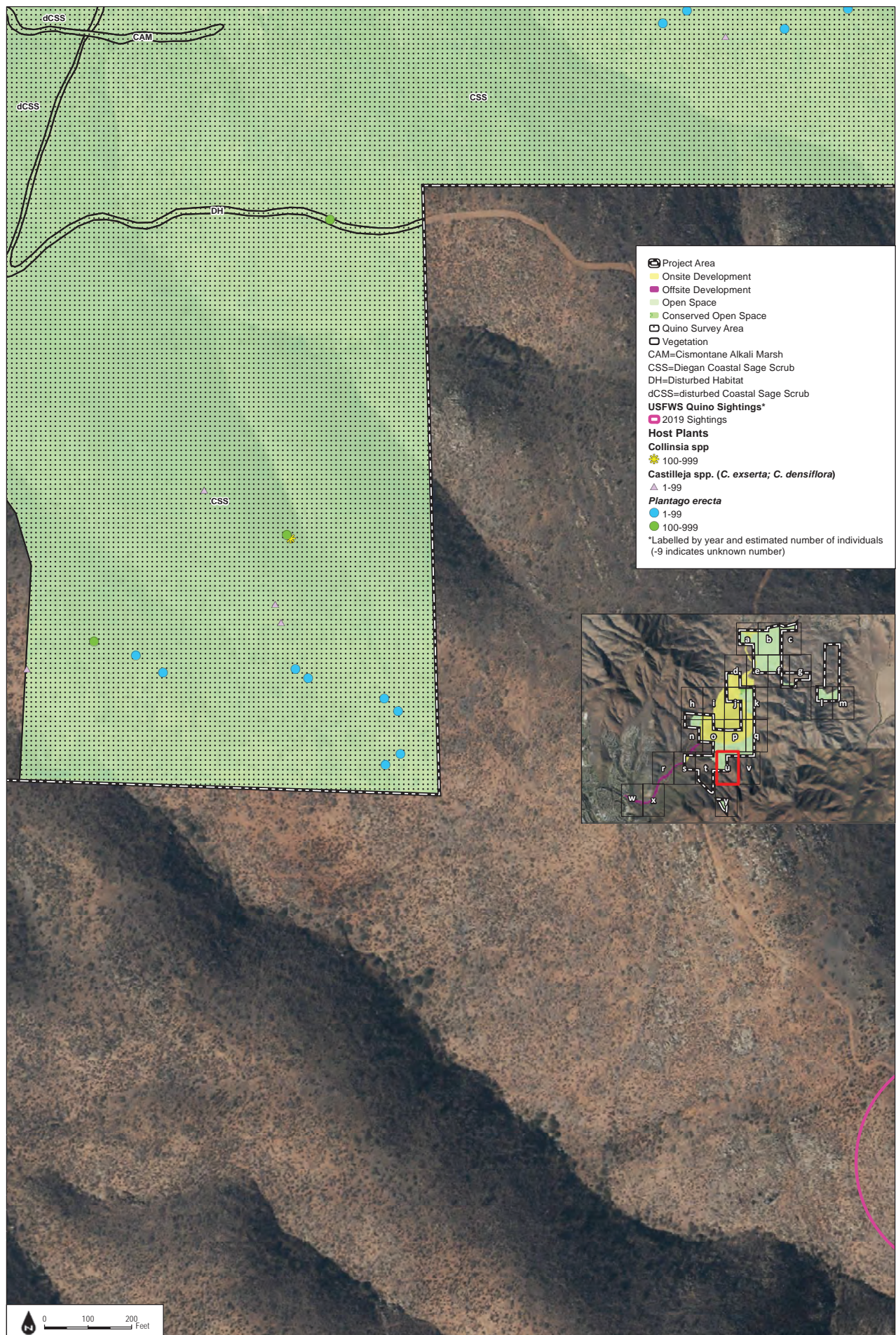
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**Figure 4t**  
2016 Quino Host Plant Mapping and Recent Sightings

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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Figure 4v

2016 Quino Host Plant Mapping and Recent Sightings

SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

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Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

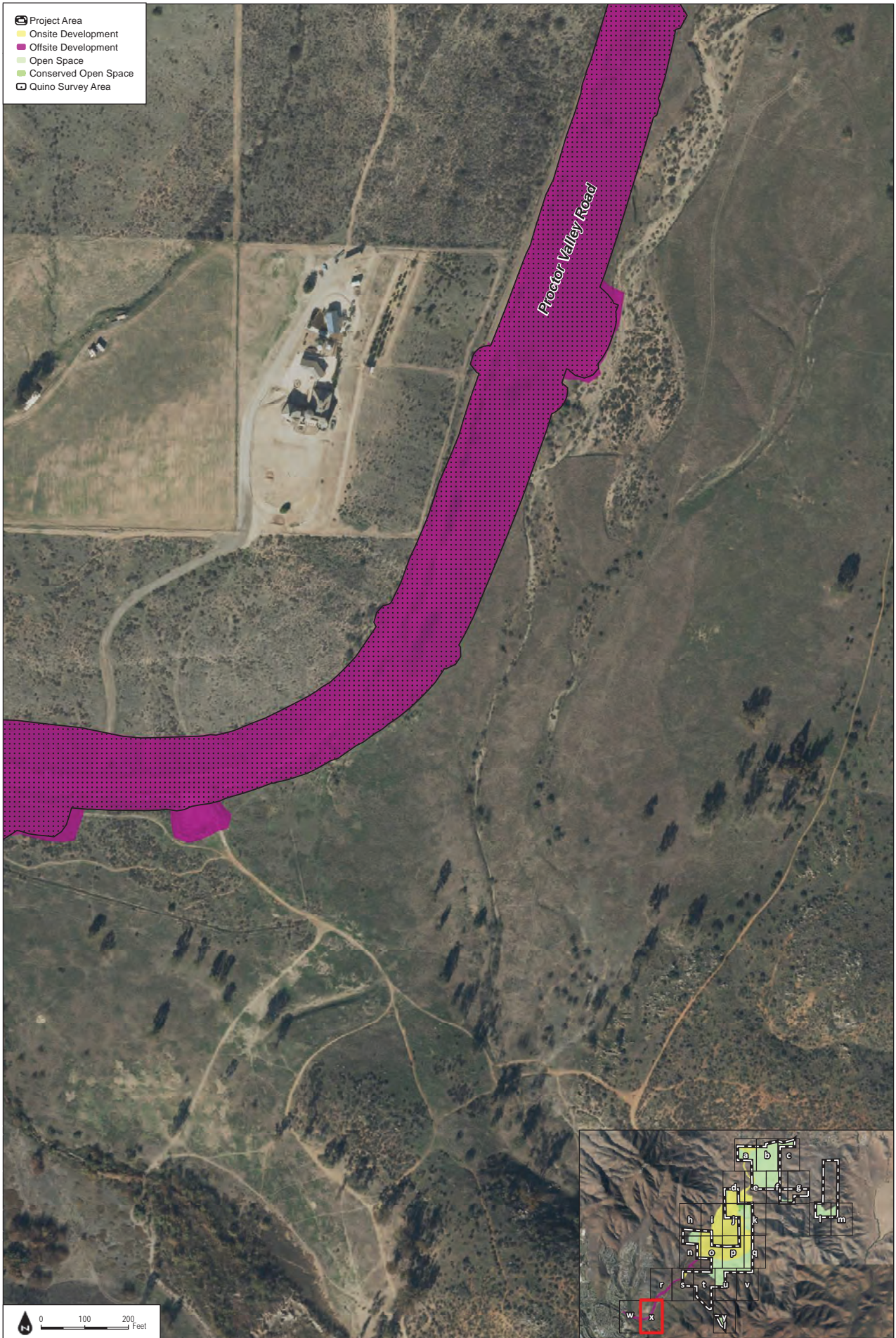
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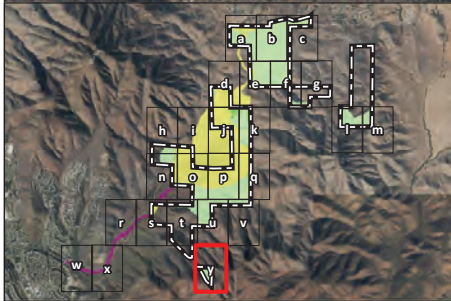




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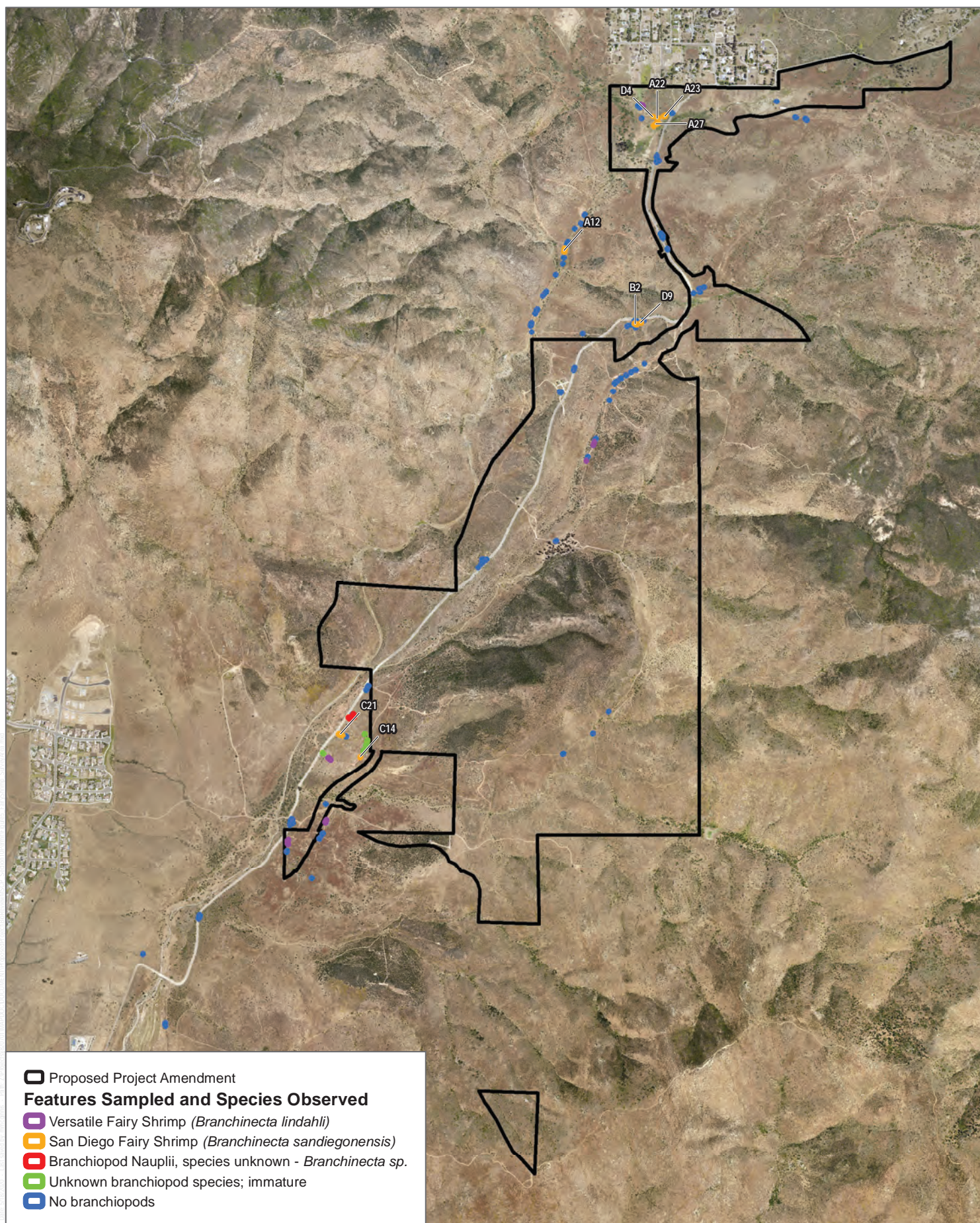


Project Area  
 Onsite Development  
 Offsite Development  
 Open Space  
 Conserved Open Space  
 Quino Survey Area  
 Vegetation  
 CC=Chamise Chaparral  
 CSS=Diegan Coastal Sage Scrub  
 DH=Disturbed Habitat  
**Host Plants**  
 Castilleja spp. (*C. exserta*; *C. densiflora*)  
 ▲ 1-99



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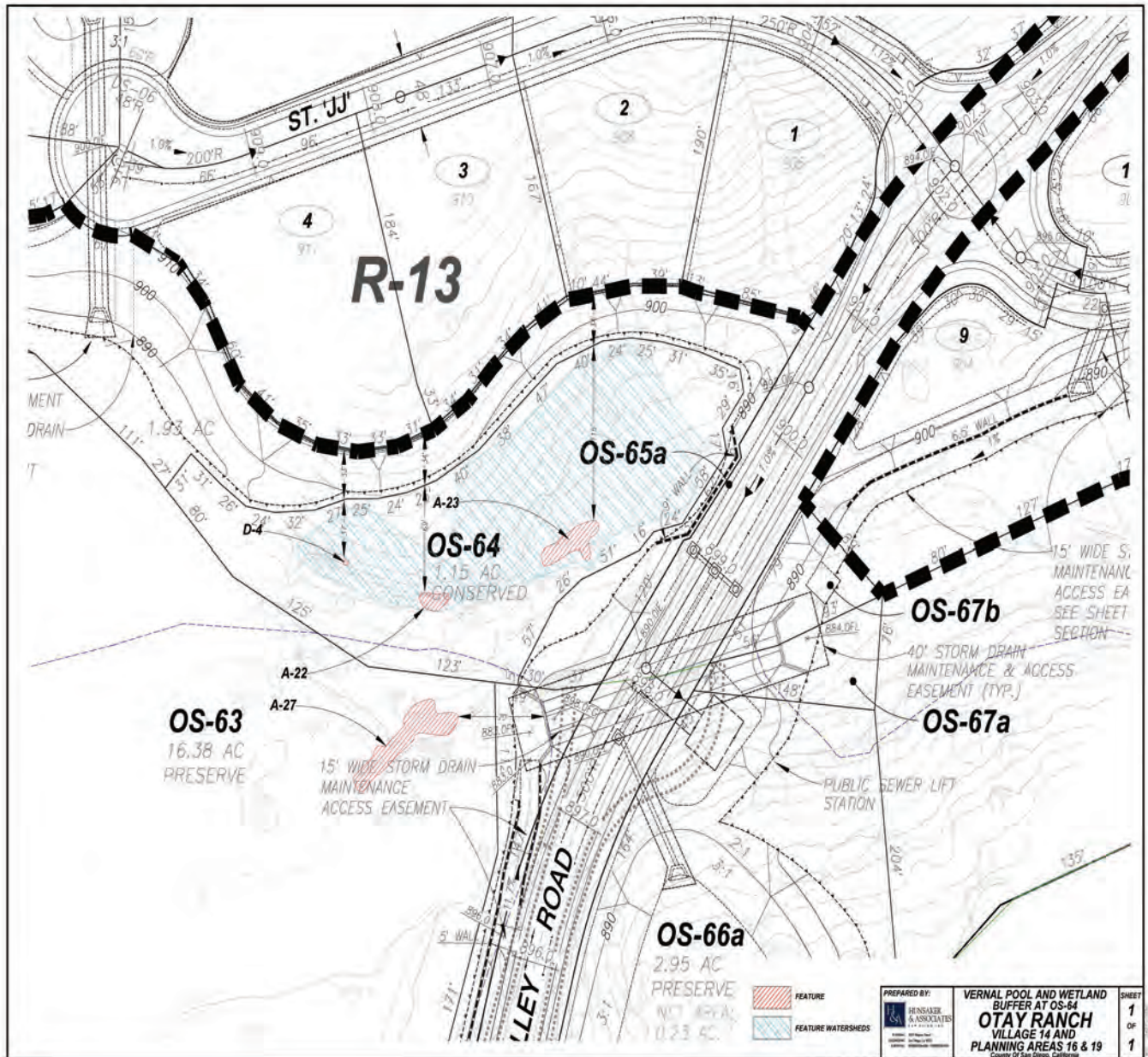
SOURCE: SANGIS 2017; Hunsaker 2019



**FIGURE 5**  
**Overview of San Diego Fairy Shrimp Survey Areas**  
 Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)



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SOURCE: Hunsaker 2020

FIGURE 6

Features Occupied by San Diego Fairy Shrimp

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

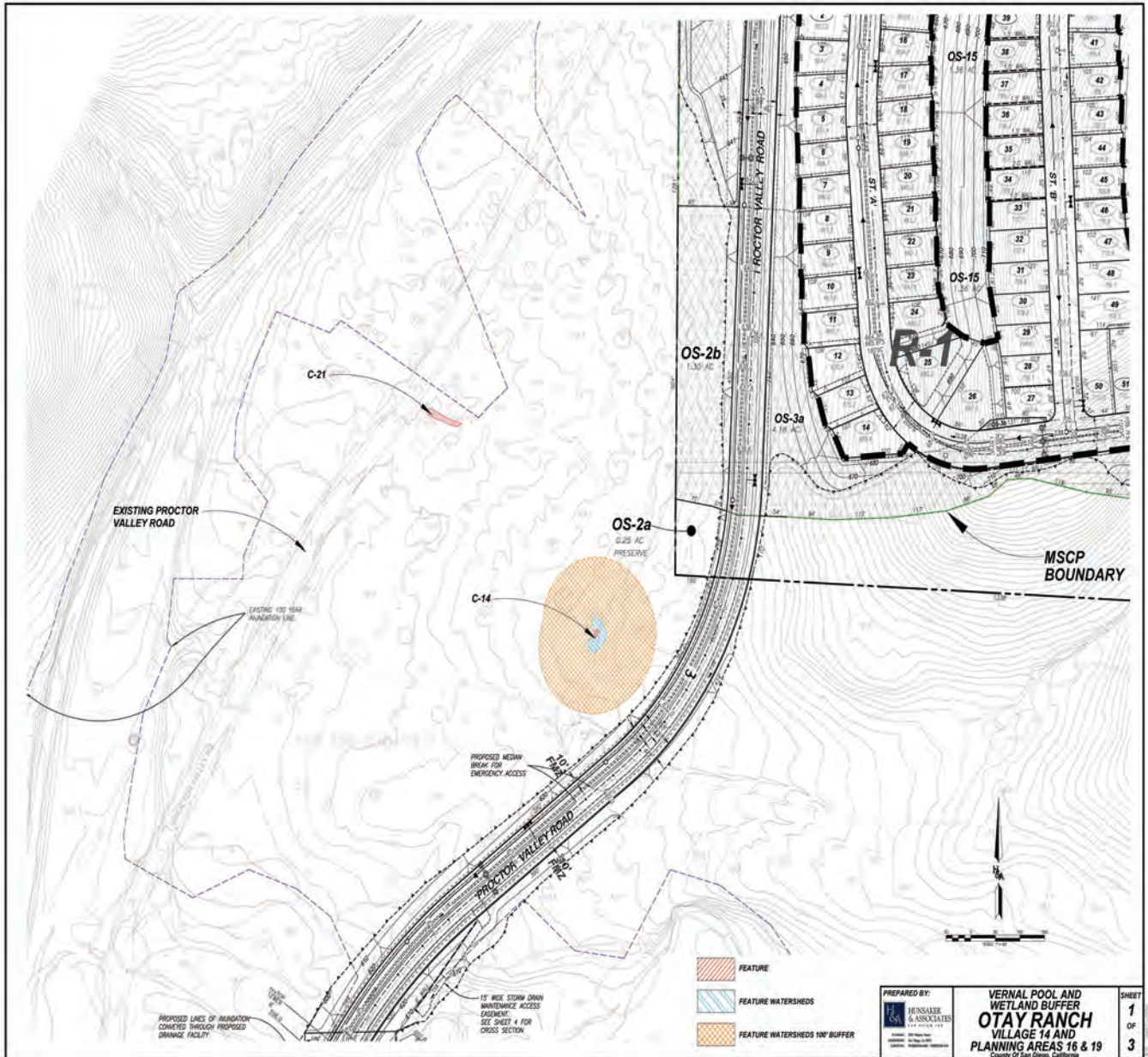
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Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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SOURCE: Hunsaker 2020

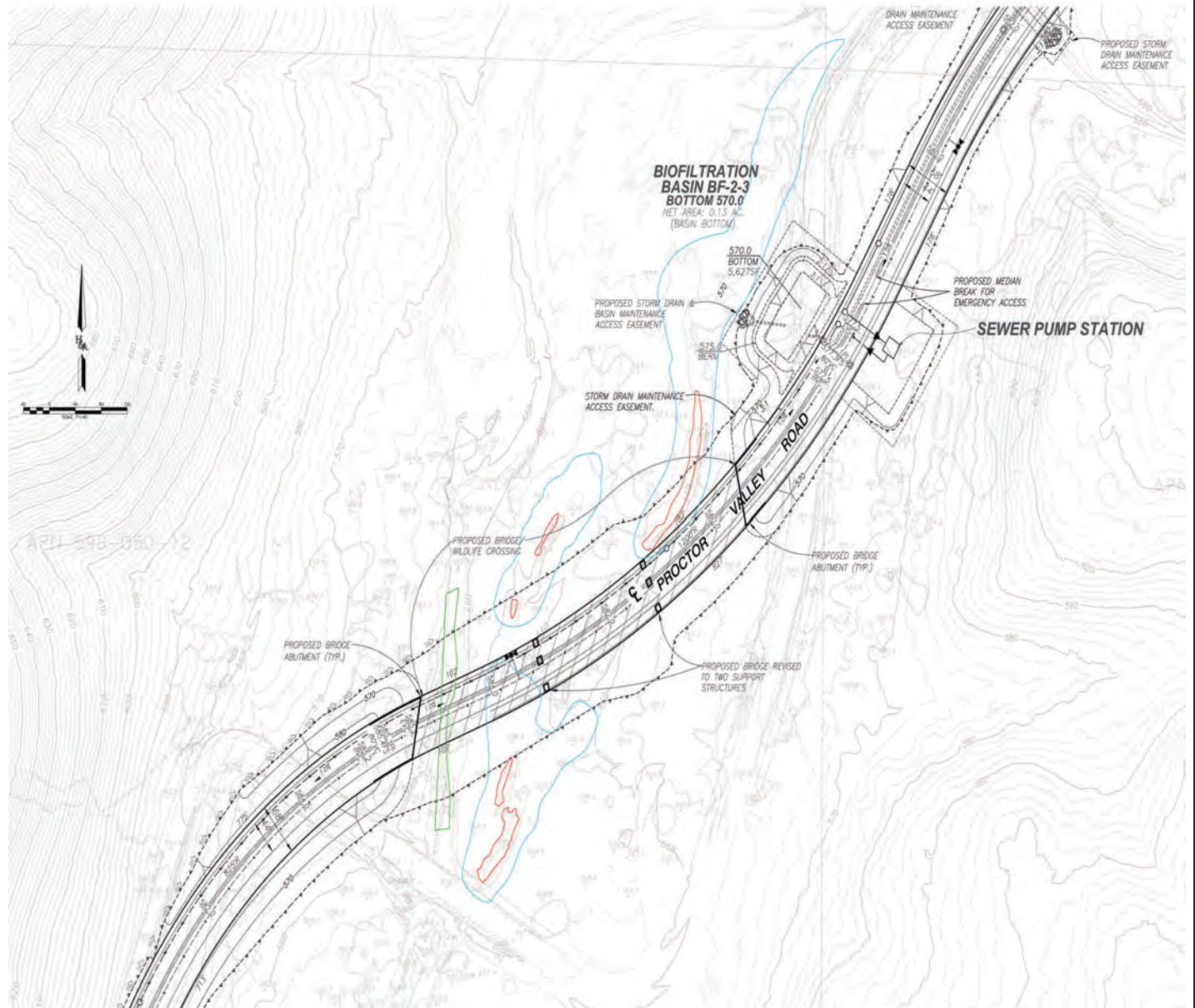
FIGURE 8

## Features Occupied by San Diego Fairy Shrimp

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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SOURCE: Hunsaker 2019

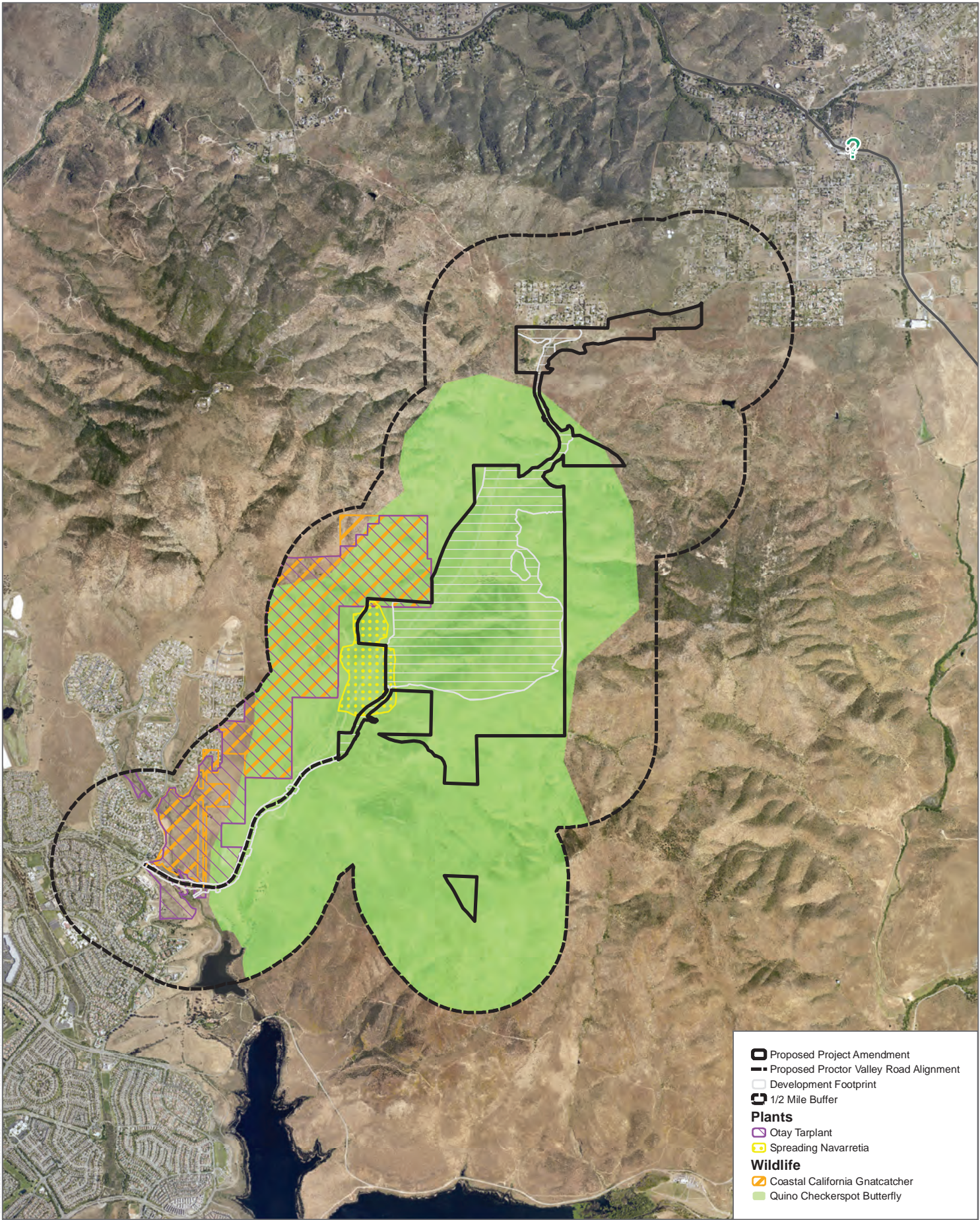
FIGURE 9

## Vernal Pools within City of San Diego Cornerstone Lands

Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-840414)

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SOURCE: SANGIS 2017; Hunsaker 2019; USFWS 2019

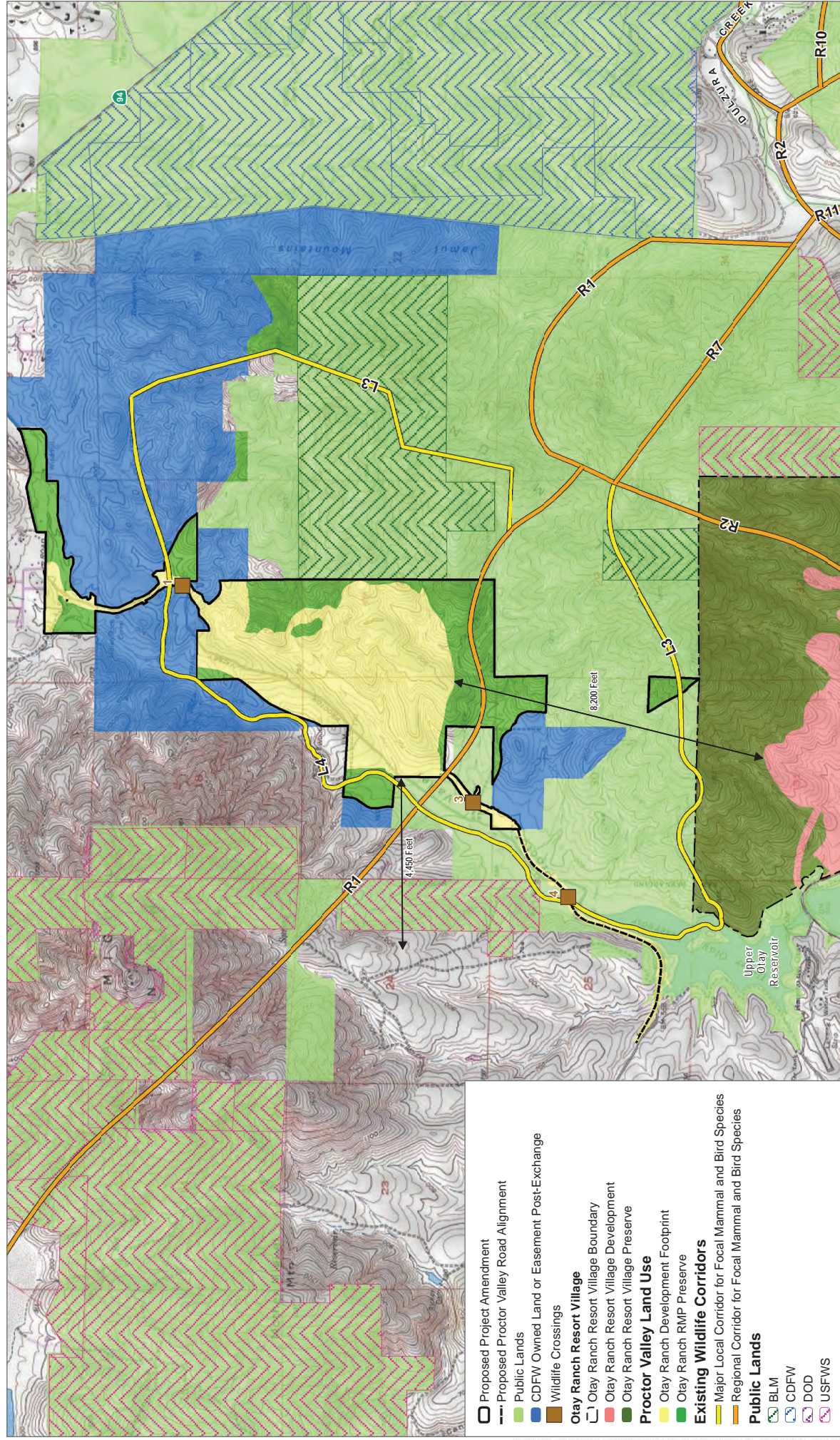
**FIGURE 10**  
**Critical Habitat**





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**FIGURE 11**  
**Wildlife Corridor and Habitat Linkages**  
 Otay Ranch Proctor Valley Amendment to the MSCP County of San Diego Subarea Plan (PRT-800414)



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