

# **12 RANCHO SAN CARLOS (OCHO WEST) DRAFT LOW-EFFECT HABITAT CONSERVATION PLAN**

**PREPARED FOR:**

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# **12 Rancho San Carlos (Ocho West) Project**

Development and occupation of a residential lot and  
improvement of an existing driveway.

## **Low-Effect Habitat Conservation Plan**

### **Federal Lead Agency Contact**

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I certify that the information submitted in this application is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to suspension or revocation of this permit and to civil and criminal penalties under the laws of the State of California.

\_\_\_\_\_ Date: \_\_\_\_\_

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## EXECUTIVE SUMMARY

Andris Uptitis is seeking incidental take permits under Section 10(a)(1)(B) of the Federal Endangered Species Act and Section 2081 of the California Endangered Species Act, to cover take of the federally and state Threatened California Tiger Salamander (CTS, *Ambystoma californiense*) and the federally Threatened California red-legged frog (CRLF, *Rana draytonii*), resulting from development of a residential lot within the Santa Lucia Preserve (SLP). The Palo Corona Regional Park (PCRP) and SLP contain breeding ponds that support populations of these two Threatened amphibian species directly which are located adjacent to, but not within, the subject parcel. While no breeding resources are located within the parcel itself, individuals associated with metapopulations breeding in the off-site ponds are present. While the federally Threatened south-central California coast steelhead (*Oncorhynchus mykiss irideus*) and the federally Endangered Smith's blue butterfly (SBB, *Euphilotes enoptes smithi*) occur within adjacent portions of the SLP and PCRP, these species are not anticipated to be impacted by the project and are not included as covered species.

The project is located within the Coastal Zone at 12 Rancho San Carlos Road in Monterey County, California (Figures 1 and 2). A 10-year permit term is requested to address incidental impacts to the federally Threatened CTS and CRLF (covered species) associated with development of a single-family residential home, an accessory dwelling unit, and improvement of an existing driveway (Figure 3). Impacts resulting from this project would be fully mitigated through the proposed conservation of otherwise developable habitat, as well as implementation of an Invasive Plant Management Plan for a duration of 10 years within the proposed conservation easement. As such, a duration of 10 years is sufficient to assess the successful implementation of design and construction related avoidance, minimization and mitigation measures proposed. The residential development and most of the driveway improvements are located on assessor's parcel (APN) 157-131-002, or "Animus 1." Portions of the driveway improvements will occur on adjacent parcels (APN 157-131-010 and APN 239-021-004) within existing easements (Figure 2). Of the approximately 7.6 acres on the site that will be disturbed, less than one-third (2.8 acres<sup>1</sup>) will be permanently removed through construction of structures and associated hardscape elements; the remaining 4.8 acres would only be temporarily impacted and would be restored to native habitat.

Due to the project's small size and potential to enhance the long-term conservation of the covered species, the project is not anticipated to significantly impact the persistence of CTS and CRLF within the project area, or the persistence of these species as a whole.

This Habitat Conservation Plan's mitigation strategy includes the following measures designed to avoid and minimize the project's impacts on listed species:

1. Avoidance and reduction of impacts via design,
2. Construction-phase avoidance and minimization measures,
3. Construction-phase compliance and effectiveness monitoring and reporting,

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<sup>1</sup> Please note that although 2.8 acres will be permanently impacted by the project, 0.1 acre is developed (paved road) and is not considered habitat for CTS or CRLF. Therefore, this area is not included in the habitat impact analyses for these species.

4. Implementation of a post-construction Revegetation Plan that restores areas of CTS and CRLF upland habitat and CRLF dispersal habitat that would be temporarily impacted during construction,
5. Post-construction compliance and effectiveness monitoring and reporting,
6. Mitigation for permanent loss of habitat resulting from the construction of the project through conservation of otherwise developable land within the homeland at a 3:1 ratio for impacts on moderate to high quality CTS and CRLF upland habitat (i.e., undeveloped grassland), and at a 1:1 ratio for impacts to low quality CTS upland habitat and CRLF dispersal habitat (i.e., existing dirt, ranch road improvement), and
7. Implementation of an Invasive Plant Management Plan that improves and maintains habitat function and value for the covered species.

The applicant will fund all elements of the proposed mitigation through the establishment of an endowment that meets California Government Code Sections 65965-65968.

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## **SECTION 1. INTRODUCTION**

This low-effect Habitat Conservation Plan (HCP) for the 12 Rancho San Carlos Road (Ocho West) project (project), located in Monterey County, California, has been prepared pursuant to the requirements of the federal Endangered Species Act of 1973 (ESA) (16 United States Code [USC] §§ 1531–1544) as amended, and the California Endangered Species Act of 1984 (CESA) (California Fish and Game Code §§ 2050 et seq.), as amended.

The HCP is intended to provide the required information and serve as the basis for issuance of a Section 10(a)(1)(B) incidental take permit (ITP) from the U.S. Fish and Wildlife Service (Service) and a Section 2081 ITP from the California Department of Fish and Wildlife (CDFW). The applicant and parcel owner is Andris Uptis. To apply for the federal ITP, the applicant must submit an HCP along with their application (50 Code of Federal Regulation [CFR] 17.22[b]). An HCP is not required to apply for the state ITP; however, all of the information required in a Section 2081 ITP, as outlined in the California Code of Regulation (CCR) Title 14, §783.2, is intended to be included in this HCP.

This HCP provides an assessment of the existing habitat within and adjacent to the project and evaluates the effects of the proposed development. It also presents measures to avoid, minimize or reduce impacts and provides mitigation to offset habitat losses and/or direct impacts to these species that may result from development of the property.

### **1.1. Overview**

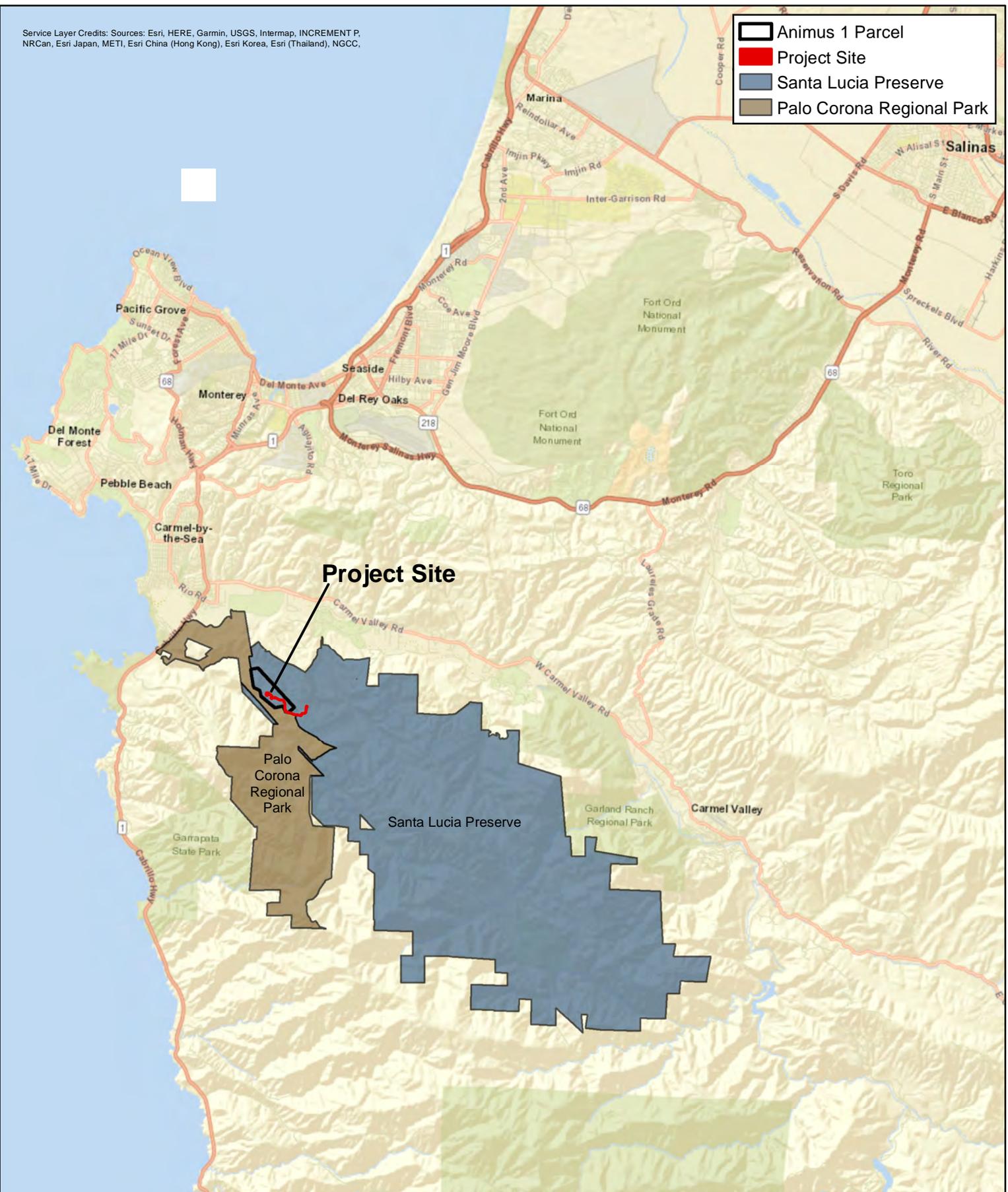
The applicant's property (APN 157-131-002) is part of the SLP, a 20,000-acre development previously known as Rancho San Carlos (RSC) (Figure 1). Portions of the driveway improvements will also occur on adjacent parcels not owned by the applicant via existing access easements (APN 157-131-010 and APN 239-021-004) (Figure 2).

The SLP boundaries include portions of multiple planning areas: the Greater Monterey Peninsula Area Plan area (GMPAP), the Carmel Valley Master Plan area (CVMP) and the Coastal Zone (CZ). While development in the GMPAP was evaluated at a project level in the 1996 Santa Lucia Preserve Environmental Impact Report (SLP EIR) (Jones and Stokes, 1995), the CVMP and CZ parcels did not include delineated development envelopes and were only evaluated at a conceptual level. The SLP EIR identified the need for additional CEQA for these planning areas once development envelopes were delineated. To ensure compliance with the SLP EIR, the CZ parcels have been held under a conservation easement (the Animus Easement) until such time that a 10-acre development envelope is delineated, and additional CEQA is conducted and entitled through the County of Monterey (County). Per the Animus easement, once the County approves the development, the 10-acre envelope will be removed from the easement for the purpose of development<sup>2</sup>. Conservation easements on the SLP are held by the Santa Lucia Conservancy (SLC), an independently managed and funded land conservation organization whose mandate includes the management and conservation of the environmental resources within the SLP.

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<sup>2</sup> Please note that the development envelope has been approved and removed from the easement.

-  Animus 1 Parcel
-  Project Site
-  Santa Lucia Preserve
-  Palo Corona Regional Park



**Project Site**



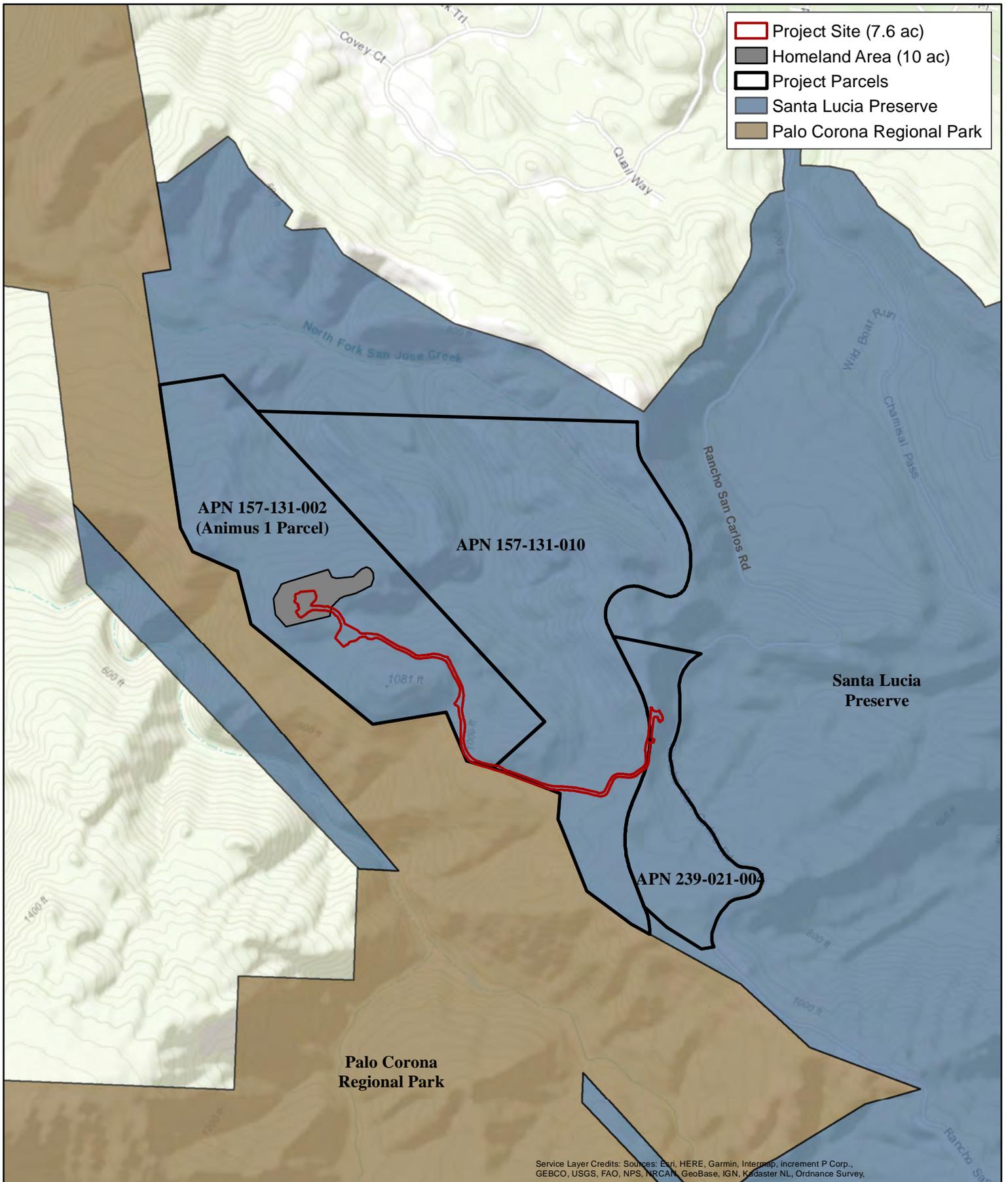
## Project Vicinity



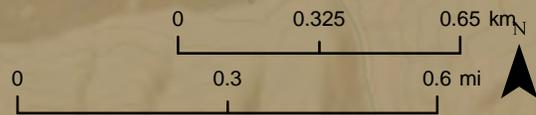
**Denise Duffy and Associates, Inc.**  
 Planning and Environmental Consulting

Date  
 10-29-18  
 Scale  
 1 in = 2 mi

Figure  
**1**



## Project Location



**Denise Duffy and Associates, Inc.**  
 Planning and Environmental Consulting

Date  
 10-29-18  
 Scale  
 1 in = 1,443 ft

Figure  
**2**

A 10-acre development envelope has been approved for the project parcel and a development application has been submitted to the County for a single-family residence within that envelope. Project impacts consist of 2.8 acres of permanent impacts and 4.8 acres of temporary impacts within the 7.6-acre area of disturbance. While the development being proposed is less than 10 acres, additional development is not precluded as part of subsequent applications within the designated envelope. Thus, the remainder of the envelope is otherwise developable habitat. The applicant is proposing to permanently reduce the size of the homeland via conservation easement such that it would preclude any additional development in the future and, with additional land management within the easement, would fully mitigate impacts to listed species and their habitat.

## **1.2. HCP Boundaries**

The project is located in the foothills on the southern side of Carmel Valley and consists of a proposed development within the designated 10-acre envelope of a 175.7-acre parcel and includes improvements to an existing driveway on adjacent parcels owned by Denise Malcom (APN 157-131-010) and the SLP (APN 239-021-004) (Figure 2). The project is bounded by the SLP to the east and PCRFP on the west (Figure 2). All project activities will occur within the 7.6-acre grading limits, including staging, access, and storage of construction materials. The permanent footprint of the homesite and driveway is 2.8 acres, and the remaining 4.8 acres within the grading limit would only be temporarily impacted.

## **1.3. Background**

### ***1.3.1. Rancho San Carlos History***

For more than two centuries RSC operated as a working cattle ranch and supported other human activities. The land changed hands several times until 1857 when the Sargent brothers, who came to California during the gold rush, purchased Rancho El Potrero de San Carlos. They eventually acquired the adjoining land, which included Rancho San Francisquito. After Sargent's death in 1893 his holdings passed to his widow. In 1923 the ranch was sold to entrepreneur George Gordon Moore, who named it Rancho San Carlos. In 1939 Arthur Oppenheimer, who had made a fortune in the dried fruit business, foreclosed on a loan he had made to Moore that was secured by RSC and became the third owner of the property. Under Oppenheimer's ownership, RSC returned to a working cattle ranch and became known for producing quality beef for 45 years. In 1990, Oppenheimer's heirs sold RSC completely intact to the Rancho San Carlos Partnership (RSCP).

### ***1.3.2. Document History***

In March 1993, the Monterey County Board of Supervisors (Board) adopted Resolution No. 93-115 amending the GMPAP to designate that portion of RSC included within the GMPAP area as a "Comprehensive Planned Use" area. To carry out that designation, the Board required that a Comprehensive Development Plan (CDP) be prepared for the entire RSC, which would include the GMPAP and those additional portions of land located outside of the GMPAP area within the CVMP and the CZ (the three Animus parcels).

In 1994, the RSCP submitted the CDP for the 20,000-acre RSC, creating the SLP. The CDP outlined resource protection principles and identified the location of development and conservation areas throughout

the SLP. The protection principles ascribed a specific nomenclature to the land categories. Development would only occur within a designated “*homeland*,” or development envelope. The homeland would be some small portion of the privately-owned parcel. The remainder of the parcel was designated as the “*openland*” and was under conservation easement. “*Wildlands*” are all areas within the SLP owned in fee by the SLC and are also under conservation easement.

The development and approval of the CDP designated 18,000 acres of the SLP’s most valuable environmental resources as open space (*openlands* and *wildlands* combined) to be protected in perpetuity. In 1994/1995, the County prepared and circulated a Draft SLP EIR for the entire SLP CDP (EIR No 94-005). In February 1996, the County certified the SLP EIR and approved the SLP CDP, subject to Conditions of Approval (Resolution 96-059 and 96-060 for PC94067, and Resolution 96-059 for PC94218). In August 1997, the County re-approved the SLP CDP (Resolution No. 97-360), including certification of an addendum to the SLP EIR.

Areas within the GMPAP were analyzed in full within the SLP EIR and final subdivision maps were recorded 1998-2000. However, areas within the CVMP and CZ were analyzed within the SLP EIR at a programmatic level. The SLP EIR acknowledged that these areas would require additional, site-specific environmental review as development plans were approved. The Animus parcels were sold to the Fish Ranch Trust in 2000, and then to Michael and Denise Malcolm in 2005. In 2018 the Malcolms sold the Animus 1 property to Andris Upitis (the Applicant).

### ***1.3.3. Existing Biological Documentation***

Resource documentation on the SLP between 1990 and 1994 included extensive inventories and mapping of sensitive species and habitats, and the development of a comprehensive GIS database that guided resource analysis, planning, and land management. This process defined the limits of development necessary to support the establishment and funding of the SLP. The SLC has been active in assisting the SLP landowners with management and planning efforts. As a result, biological analysis has continued on the SLP for almost three decades. During this time special-status plant and wildlife species occurrences have been documented and a comprehensive understanding of the biological resources present on the SLP has been developed. In addition, surveys and analysis have been conducted on the Animus specific to the original development application and CEQA analysis starting in 2005, and additional work has more recently been completed as baseline for the preparation of this HCP.

Biological work pertinent to the project also includes several studies and documents prepared for the adjacent PCRFP, including aquatic amphibian surveys, grassland studies, and Smith’s blue butterfly (SBB) habitat surveys. Management documents prepared for the PCRFP include an Amphibian Management and Monitoring Report (Hemingway and D’Amore, 2006), a Fire Management Plan (Larson and Lunder, 2007), a Grassland Management Plan (McGraw, 2007), and a Safe Harbors Agreement (MPRPD and Service, 2011).

In addition to the extensive studies described above, DD&A conducted several surveys to provide updated baseline documentation of the currently existing conditions on the property. These studies included updated habitat mapping; updated SBB habitat mapping; one season of drift-fence studies for CTS at the Salamander and Roadrunner Ponds (located on the adjacent PCRCP), including a metamorph dispersal study; one season of drift-fence studies for CTS within upland areas on the property; and two seasons of aquatic sampling at the Salamander and Roadrunner Ponds (Appendices A, C, and D).

Table 1 below outlines the numerous studies conducted within and adjacent to the property that are relevant and applicable, and identifies the documentation associated with each of these studies.

**Table 1. Biological Analyses and Surveys Conducted Within and Adjacent to the Property**

<b>Survey Type</b>	<b>Location</b>	<b>Year</b>	<b>Surveyors</b>	<b>Document Prepared</b>
Buckwheat and Smith's Blue Butterfly Population Surveys	SLP (including the project site)	1991	D. Arnold	<i>Habitat and Status Surveys for the Endangered Smith's Blue Butterfly at Rancho San Carlos in Carmel Valley, California.</i> Unpublished draft report prepared for the RSCP
Bat Surveys	SLP (including the project site)	1991	Dr. E. Pierson	<i>Rancho San Carlos Special-Status Biological Resources Report</i>
Habitat/Vegetation Characterization and Mapping	SLP (including the project site)	1990-1991	BioSystems Analysis Inc. and Habitat Restoration Group	<i>The Santa Lucia Preserve Comprehensive Development Plan – Technical Appendices 6.1 and 6.2</i>
Special-status Plant Species and Sensitive Plant Communities Surveys	SLP (including the project site)	1990-1991	BioSystems Analysis Inc. and Habitat Restoration Group	<i>Rancho San Carlos Special-Status Biological Resources Report</i>
Baseline Wildlife Survey	SLP (including the project site)	1990-1994	BioSystems Analysis Inc.	<i>The Santa Lucia Preserve Comprehensive Development Plan – Technical Appendices 6.1 and 6.3</i>
Special-Status Plant Species, Sensitive Plant Communities, and Dune Buckwheat Population Surveys	GMPAP within SLP	1992-1993	BioSystems Analysis Inc. and Habitat Restoration Group	<i>Rancho San Carlos Special-Status Biological Resources Report</i>
CRLF Stream Habitat Assessment	SLP	2001	Wetlands Research Associates, Inc.	<i>California Red-Legged Frog Stream Habitat Assessment, Santa Lucia Preserve, Monterey County, California</i>
CRLF Upland Habitat Impact Assessment	SLP	2002	Wetlands Research Associates, Inc.	<i>California Red-Legged Frog Associated Uplands Impact Analysis, Santa Lucia Preserve, Monterey County, California</i>
Biological Resources Assessment	PAS	2003	DD&A	<i>Biological Assessment for the Potrero Area Subdivision Santa Lucia Preserve, Monterey County, California</i>
Aquatic and Upland Amphibian Surveys	SLP	2003-2008, 2009, 2011-2013	DD&A	<i>2008 Protocol-Level California Tiger Salamander Survey Report for the Santa Lucia Preserve, Monterey County, California;</i> <i>2009, 2011, &amp; 2012 Data reported directly to SLC;</i> <i>2013 Stock-Pond Survey Report for the Santa Lucia Preserve, Monterey County, California</i>
Buckwheat and Smith's Blue Butterfly Population Surveys	SLP (including the project site)	2003 & 2004	D. Arnold	<i>Surveys for the Endangered Smith's Blue Butterfly and Habitat Characteristics of its Actual and Potential Buckwheat Food Plants at Rancho San Carlos in the Northern Santa Lucia Mountains of Monterey County, California;</i> <i>2004 Monitoring Report for the Endangered Smith's Blue Butterfly and its Habitat at Rancho San Carlos</i>
Aquatic Amphibian Surveys	PCRP	2004-2006	V. Hemingway & A. D'Amore	<i>Final Report for Amphibian Management and Monitoring at Palo Corona Regional Park, Monterey County, California</i>

Survey Type	Location	Year	Surveyors	Document Prepared
Aquatic Amphibian Surveys	PCRP	2004, 2008, 2011-2013	DD&A	Data reported directly to Monterey Peninsula Regional Park District
Biological Resources Assessment	Animus parcels (including the project site)	2005	DD&A	Letter report to Maureen Wruck 6-8-05
Grassland Monitoring Study	PCRP	2008	J. Cushman	<i>Assessing the Influence of Cattle Grazing on Vegetation at Palo Corona Regional Park</i>
Biological Resources Assessment	Animus parcels (including the project site)	2008, 2009, 2014	DD&A	<i>Malcolm Property Biological Assessment (2008); Addendum to the Malcolm Property Biological Assessment (Letter to Denise Malcolm 5-22-09); Malcolm Property Biological Assessment (2014)</i>
Grassland Mapping	Animus parcels (including the project site)	2009	DD&A	<i>Addendum to the Malcolm Property Biological Assessment (Letter to Denise Malcolm 5-22-09)</i>
CTS Drift Fence/Pitfall Trap Study	Salamander and Roadrunner Ponds on PCRP	2011-2012	DD&A	<i>California Tiger Salamander Survey Results for Two Ponds at the Palo Corona Regional Park – 2011/2012 Season</i>
Grassland Monitoring Study	PCRP	2012	DD&A	<i>2012 Grassland Monitoring Report Palo Corona Regional Park</i>
Smith's Blue Butterfly Habitat (Buckwheat) Surveys	Animus parcels (including the project site)	2012	DD&A	<i>Smith's Blue Butterfly Habitat Survey Results for the Malcolm Property Project (Letter to Denise Malcolm 9-21-12)</i>
Vegetation Type Mapping	SLP (including the project site)	2012	Aerial Information Systems	GIS dataset prepared for SLC using 2010 aerials
CTS Drift Fence/Pitfall Trap Study	Selected Upland Areas of the Animus parcels (including the project site)	2012-2013	DD&A	<i>California Tiger Salamander Survey Results at the Malcolm Property and Adjacent Palo Corona Regional Park – 2011-2013</i>
Aquatic Amphibian Surveys	PCRP	2013-2017	Rachel Anderson	<i>Report for Amphibian Management and Monitoring at Palo Corona Regional Park, Garland Ranch Regional Park, and Frog Pond Wetland Preserve Monterey County, CA, 2013</i> <i>Report for Monterey Peninsula Regional Park District, Amphibian Management and Monitoring at Palo Corona Regional Park, Garland Ranch Regional Park, and Frog Pond Wetland Preserve Monterey County, CA, 2014</i> Data reported directly to Monterey Peninsula Regional Park District
Aquatic Amphibian Surveys	SLP (select ponds)	2017 & 2018	DD&A and SLC	Data reported directly to SLC

## 1.4. Species Covered by Permit

The following species are referred to as "covered species" related to the ITPs if they are issued.

Covered Species	Federal Status/State Status
California tiger salamander ( <i>Ambystoma californiense</i> )	Threatened/Threatened
California Red-legged frog ( <i>Rana draytonii</i> )	Threatened/Species of Special Concern

The following species are discussed within the HCP but will not be covered under the ITPs.

Species Not Covered	Federal Status/State Status
Smith's blue butterfly ( <i>Euphilotes enoptes smithi</i> )	Endangered/NA
South Central California Coast steelhead ( <i>Oncorhynchus mykiss irideus</i> )	Threatened/NA

The potential for other federal and state listed species to occur within the project site was evaluated in the *Animus 1 Biological Resources Report* (DD&A, 2018, Appendix A). The report included a review of CDFW's California Natural Diversity Database (CNDDDB) occurrence reports (CDFW, 2018), the Service's IPaC Resource List (USFWS, 2018), and numerous biological reports prepared for the SLP and project site (as identified in Table 2). The evaluation determined that no additional federal or state listed species would be affected by the project.

## 1.5. Permit Issuance

In response to the recommendations by the Service and CDFW, and in order to benefit from direct authorizations from both agencies, separate ITP applications will be submitted to the Service and the CDFW; however, this HCP will accompany both applications.

The HCP identifies ITP-required activities. ITP-required activities will be implemented and funded by the Applicant to maintain permit compliance. It is intended that the state and federal ITPs will run with the land; meaning that if the applicant sells the property, the new owners would be responsible for the implementation and monitoring of the HCP. While the Service will consider issuance of a permit for all species covered in this HCP, the CDFW can only issue permits for state-listed or candidate species.

## 1.6. Permit Holder and Permit Duration

The permit holder will be the current landowner: Andris Upitis. The ITPs are requested for and will be in effect, unless terminated sooner in accordance with governing law and regulations, for 10 years. Permit renewal beyond the 10-year term will be governed by the laws and regulations then in effect.

## **1.7. Regulatory Framework - Federal**

### ***1.7.1. Federal Endangered Species Act***

Provisions of the ESA of 1973 (16 USC 1532 et seq., as amended) protects federally listed Threatened or Endangered species and their habitats from unlawful take. Listed species include those for which proposed and final rules have been published in the Federal Register. The ESA is administered by the Service or National Oceanic and Atmospheric Administration Marine Fisheries Service (NMFS). In general, NMFS is responsible for the protection of ESA-listed marine species and anadromous fish, whereas other listed species are under the Service's jurisdiction.

Section 9 of the ESA and federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and certain threatened species. Take, as defined by ESA, is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Harm is defined as "any act that kills or injures the species, including significant habitat modification." If there is the potential for incidental take of a federally listed fish or wildlife species, take can be authorized through either the Section 7 consultation process for federal agency actions or a Section 10 incidental take permit process for non-federal agency actions. Federal agency actions include activities that are on federal land, conducted by a federal agency, funded by a federal agency, or authorized by a federal agency (including issuance of federal permits).

Incidental take is defined by the ESA as take that is incidental to, and not the purpose of, carrying out of an otherwise lawful activity. Under Section 10 of the ESA, incidental take is authorized through a variety of voluntary agreements to conserve or minimize and mitigate impacts to federally listed fish and wildlife, including HCPs. The Section 10 process is an opportunity to provide species protection and habitat conservation within the context of non-federal development and land and water use activities. It provides a mechanism for allowing economic development that will not significantly reduce the likelihood of the survival and recovery of federally listed species in the wild. Section 10 of the ESA requires that an applicant for an ITP submit an HCP that specifies the impacts that are likely to result from take of federally listed species and the measures the applicant will undertake to minimize and mitigate for such impacts. The regulatory standard under Section 10 of the ESA is that the effects of authorized incidental take must be minimized and mitigated to the maximum extent practicable, a proposed project must not appreciably reduce the likelihood of the survival and recovery of the species in the wild, and adequate funding must be ensured.

Section 7 of the ESA requires federal agencies to ensure that their actions, including issuing permits, do not jeopardize the continued existence of listed species or destroy or adversely modify listed species' critical habitat. "Jeopardize the continued existence of..." pursuant to 50 CFR 402.2, means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species. Issuance of an ITP under Section 10 by the Service is a federal action subject to Section 7 of the ESA. As a federal agency issuing a discretionary permit, the Service is required to consult with itself (i.e., conduct an internal consultation). Delivery of the HCP and a Section 10 permit application initiates the Section 7 consultation process within the Service.

The requirements of Section 7 and Section 10 substantially overlap. In Section 7 analysis the Service must evaluate the effects of the action and cumulative effects on the listed species or critical habitat. Cumulative effects are effects of future state, tribal, local, or private actions that are reasonably certain to occur in the action area, pursuant to section 7(a)(2) of the ESA. The action area is defined by the area that encompasses all consequences of the action. The action area may or may not be solely contained within the HCP boundary. These additional analyses are included in this HCP to meet the requirements of Section 7 and to assist the Service with its internal consultation.

### ***1.7.2. Section 10 Incidental Take Permit Process – HCP Requirements***

The Section 10 process for obtaining an ITP consists of three primary phases:

- ◆ The HCP development phase,
- ◆ The formal permit processing phase, and
- ◆ The post-issuance phase.

During the HCP development phase, the applicant prepares a plan that integrates the proposed project or activity with the protection of the listed species. The HCP must include the following information:

- ◆ Impacts likely to result from the proposed taking of the species for which permit coverage is requested.
- ◆ Measures the applicant will undertake to monitor, minimize, and mitigate such impacts; the funding that will be made available to undertake such measures; and the procedures to deal with unforeseen circumstances.
- ◆ Alternative actions that the applicant considered that would not result in take, and the reasons why such alternatives are not being utilized.
- ◆ Additional measures the Service or NMFS may require as necessary or appropriate for purposes of the plan.

The HCP development phase is concluded when the applicant submits a complete application package, which includes the completed HCP, a permit application form, a fee, and, if required, a draft National Environmental Policy Act (NEPA) document and an Implementing Agreement (not required for a low-effect HCP).

The permit processing phase involves review of the application package by the appropriate Regional Office, announcement in the Federal Register of the receipt of the permit application and availability of the NEPA analysis for public review and comment, intra-Service consultation under Section 7 of the ESA, and determination whether the HCP meets ESA statutory issuance criteria. Once the Service or NMFS determines the HCP is complete and that permit issuance criteria have been satisfied, an ITP is issued if it is determined that:

- ◆ The taking will be incidental,
- ◆ The impacts of incidental take will be minimized and mitigated to the maximum extent practicable,
- ◆ Adequate funding of the HCP and procedures to handle unforeseen circumstances will be provided,
- ◆ The taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild,

- ◆ The applicant will provide additional measures that the Service requires as being necessary or appropriate, and
- ◆ The Service has received assurances, as may be required, that the HCP will be implemented.

The post-issuance phase is the period during which the permittee and other responsible entities implement the HCP and its monitoring and funding programs. The Service monitors the permittee's compliance with the conservation program and other terms and conditions of the permit, and the HCP's long-term progress and success. The public is notified of permit issuance by means of the Federal Register.

### **Low-Effect HCP**

In order to streamline the process, the Service and NMFS have developed several processes for expediting the permitting process. One of these processes was the establishment of "low-effect HCPs," which have substantially simplified permit processing requirements and are expedited to the maximum extent possible, consistent with federal law. Low-effect ITPs are those that, despite their authorization of some small level of incidental take, individually and cumulatively have a minor or negligible effect on the species covered in the HCP. Low-effect HCPs often involve a single small area of land and relatively few acres of species habitat. However, the geographic size of a project may not always reflect the severity of the impacts; i.e. a project may be large in size, but still be categorized as low-effect if it is expected to result in minor or negligible impacts. The determination of whether an HCP qualifies for the low-effect category must be based on anticipated impacts prior to implementation of the mitigation plan. Low-effect HCPs are intended for projects with inherently low impacts, not for projects with significant potential impacts that are subsequently reduced through mitigation programs.

### ***1.7.3. National Environmental Policy Act***

The NEPA was signed into law in 1970 and established an environmental review process that applies to federal agencies. Under NEPA, federal agencies are authorized and directed, to the fullest extent possible, to carry out their regulations, policies, and programs in accordance with NEPA's policies of environmental protection. NEPA applies to all federal agencies and to most of the activities they manage, regulate, or fund that affect the environment.

Issuance of an ITP is a federal action subject to NEPA compliance. The NEPA analysis covers the direct, indirect, and cumulative effects of the proposed incidental take and the mitigation and minimization measures proposed from the implementation of the HCP. The scope of the NEPA analysis varies depending on the nature of the activities described in the HCP. In some cases, the anticipated environmental effects in the NEPA analysis may be confined to effects on Listed species and other wildlife and plants, simply because there are no other important effects. In other cases, the minimization and mitigation activities proposed in the HCP may affect a wider range of resources analyzed under NEPA, such as cultural resources or water use. Depending on the scope of the impact of the HCP, NEPA requirements can be satisfied by one of the following documents or actions:

- ◆ Preparation of an Environmental Impact Statement (EIS),
- ◆ Preparation of an Environmental Assessment (EA), or
- ◆ A Categorical Exclusion – allowed for low-effect HCPs.

## **1.8. Regulatory Framework - State**

### ***1.8.1. California Endangered Species Act***

The CESA was enacted in 1984. The California Code of Regulations (Title 14, §670.5) lists animal species considered Endangered or Threatened by the State. Section 2090 of CESA requires state agencies to comply with endangered species protection and recovery, and to promote conservation of these species. Section 2080 of the California Fish and Game Code prohibits "take" of any species that the California Fish and Game Commission determines to be an Endangered species or a Threatened species. "Take" is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." A Section 2081 ITP from CDFW may be obtained to authorize "take" of any state listed species.

### ***1.8.2. Section 2081 Incidental Take Permit Process***

The requirements for an application for an ITP under the CESA are described in Section 2081 of the California Fish and Game Code and in final adopted regulations for implementing Sections 2080 and 2081. Sections 2081(b) and (c) of the CESA allow CDFW to issue an ITP for a State listed Threatened and Endangered species if specific criteria are met. These criteria are reiterated in Title 14 CCR, Sections 783.4(a) and (b)<sup>3</sup>:

- ◆ The authorized take is incidental to an otherwise lawful activity,
- ◆ The impacts of the authorized take are minimized and fully mitigated,
- ◆ The measures required to minimize and fully mitigate the impacts of the authorized take: (a) are roughly proportional in extent to the impact of the taking on the species, (b) maintain the applicant's objectives to the greatest extent possible, and (c) are capable of successful implementation,
- ◆ Adequate funding is provided to implement the required minimization and mitigation measures and to monitor compliance with and the effectiveness of the measures, and
- ◆ Issuance of the permit will not jeopardize the continued existence of a state-listed species.

The Permit Applicant will be applying for a Section 2081 permit for those state-listed and candidate species for which CDFW may authorize take; the HCP provides a vehicle for describing and analyzing project effects as they pertain to such a permit. Under Section 2081, CDFW can also authorize the take of species identified as candidates for listing. The application will be submitted to the Regional Manager and will include a copy of the draft HCP, draft Implementing Agreement (if required), and will include the following components<sup>4</sup>:

1. The appropriate application fee.
2. Applicant's full name, mailing address, and telephone number(s). If the applicant is a corporation, firm, partnership, association, institution, or public or private agency, the name and address of the person responsible for the project or activity requiring the permit, the president or principal officer, and the registered agent for the service of process.

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<sup>3</sup> Bulleted text taken directly from <[http://www.dfg.ca.gov/habcon/cesa/incidental/incid\\_perm\\_proced.html](http://www.dfg.ca.gov/habcon/cesa/incidental/incid_perm_proced.html)> accessed December 13, 2013.

<sup>4</sup> Bulleted text taken directly from <<https://www.wildlife.ca.gov/Conservation/CESA/Incidental-Take-Permits>> accessed November 2, 2018

3. The common and scientific names of the species to be covered by the permit and the species' status under CESA, including whether the species is the subject of rules and guidelines pursuant to section 2112 and section 2114 of the Fish and Game Code. (NOTE: Sections 2112 and 2114 of the Fish and Game Code have been repealed by the terms of section 2115.5 pursuant to Stats. 2013, Ch. 387, Sec.12. (SB 749), operative January 1, 2017. Applications are no longer required to include a reference to sections 2112 and 2114.)
4. A complete description of the project or activity for which the permit is sought.
5. The location where the project or activity is to occur or to be conducted.
6. An analysis of whether and to what extent the project or activity for which the permit is sought could result in the taking of species to be covered by the permit.
7. An analysis of the impacts of the proposed taking on the species.
8. An analysis of whether issuance of the incidental take permit would jeopardize the continued existence of a species. A complete, responsive jeopardy analysis shall include consideration of the species' capability to survive and reproduce, and any adverse impacts of the taking on those abilities in light of:
  - i. Known population trends;
  - ii. Known threats to the species; and
  - iii. Reasonably foreseeable impacts on the species from other related projects and activities.
9. Proposed measures to minimize and fully mitigate the impacts of the proposed taking.
10. A proposed plan to monitor compliance with the minimization and mitigation measures and the effectiveness of the measures.
11. A description of the funding source and the level of funding available for implementation of the minimization and mitigation measures.
12. Certification in the following language: *I certify that the information submitted in this application is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to suspension or revocation of this permit and to civil and criminal penalties under the laws of the State of California.*
13. Documentation of CEQA compliance.

CDFW will review the application for consistency with the requirements of CESA, including compliance with CEQA. There is no required public noticing associated with Section 2081 permits apart from CEQA review. CDFW will make a determination on the permit application, prepare a findings document, and issue a take authorization upon completion of CEQA review. The ITP issued by CDFW shall be effective for a period of 20 years from issuance unless earlier suspended, revoked, or relinquished.

Incidental take of state-listed species can also be authorized under the Natural Community Conservation Planning Act (Sections 2800–2835). Although this HCP includes many of the components and considerations of an NCCP, this document is not an NCCP. A NCCP must be larger in geographic scale than the proposed project site and, typically, an NCCP implements broad-based, regional planning over multiple jurisdictions.

### ***1.8.3. California Environmental Quality Act Compliance***

CDFW’s approval of the HCP and issuance of a Section 2081 ITP are actions subject to CEQA. CEQA applies to all California projects and requires the systematic identification of a project’s environmental impacts, mitigation (if feasible) of significant impacts, and the documentation of findings based on that evaluation prior to project approval. For purposes of HCP-approval and permit issuance, Monterey County, acting as lead agency, has determined that an Initial Study/Mitigated Negative Declaration (IS/MND) will be necessary to comply with CEQA. Compliance with CEQA is a requirement of permit issuance and should be addressed pursuant to CCR Title 14 §783.3. CDFW will act as a CEQA Responsible Agency (pursuant to CCR Title 14 §15096) with the County acting as the CEQA Lead Agency.

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## SECTION 2. PROJECT DESCRIPTION/COVERED ACTIVITIES

The proposed development consists of a two-story single-family residence with an attached garage, a single-story accessory dwelling unit, patios, walkways, retaining walls, planters, terraces, and a vegetated guest parking area (Table 2; Figure 3). The proposed main residence will be situated on the flattest portion of a knoll, which generally has an east-west orientation; the main floor will be above grade, while the ground floor will be built into the hillside below grade. The main floor includes a great room, office, gym, a master bedroom, four bathrooms, and an entryway with an elevator. The ground floor includes a three-car garage, various utility and storage rooms and closets, a theater, and a hallway with an elevator. The proposed accessory dwelling unit will be located on the same knoll, approximately 100 feet to the south of the main residence and approximately 20 feet lower in elevation; the accessory dwelling unit will also be built into the hillside. The accessory dwelling unit includes one bedroom, one bathroom, a kitchenette, living space, storage, and an outdoor shower. A portion of the main house and the accessory dwelling unit will include a living roof, and landscaping will be installed immediately surrounding the living areas. These areas are collectively referred to as the homesite. Additional grassland areas will be restored around the landscaped area to blend into the surrounding openlands. Please refer to the Project Plans in Appendix B for more detail.

*Table 2. Homesite Components*

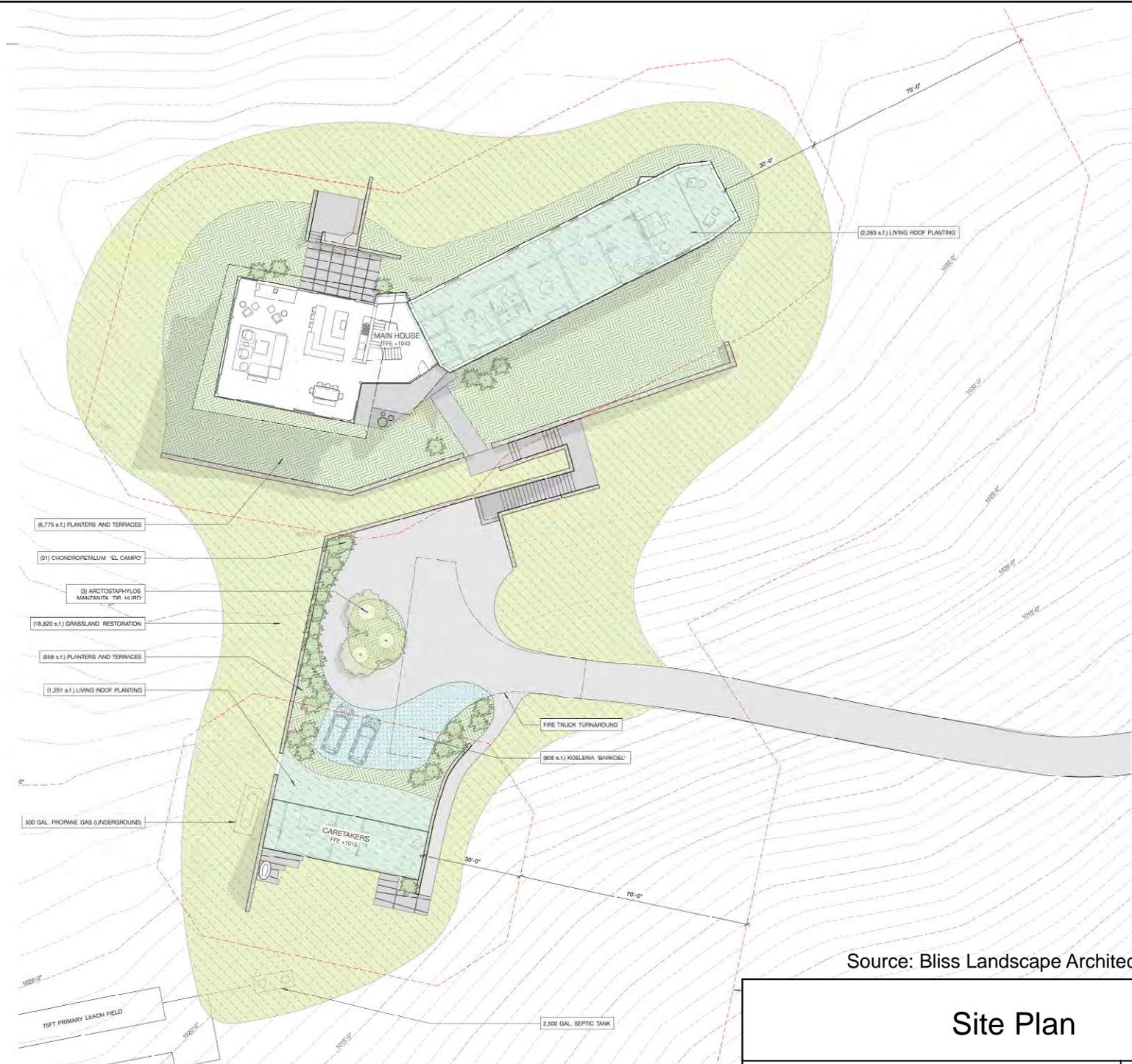
Homesite Component	Area (Square Feet)
Two-story, single-family residence	6,800
<i>Ground floor</i>	2,276
<i>Main floor</i>	4,524
Accessory dwelling unit	800
Patios, walkways, and retaining walls	2,920
Planters, terraces, vegetated guest parking area	8,880

### 2.1. Infrastructure

An approximately 6,100 linear-foot paved driveway (approximately 98,900 square feet [2.3 acres] including turnarounds) will provide access from Rancho San Carlos Road to the homeland (Appendix B). The driveway would follow an existing ranch road for the majority of the alignment; however, the driveway would deviate somewhat from the current alignment near the homeland in order to improve the turns. Additionally, the driveway would be widened from the existing width of approximately eight to nine feet to 12 feet wide with required pull-out for the fire department. The project will also include installation of a 2,500-gallon septic tank, which will drain to two 75-foot leach fields, and a 500-gallon underground propane tank.

### 2.2. Grading

A Preliminary Grading Plan (Appendix B) has been developed by Bestor Engineers, Inc. showing areas to be graded and approximately cut and fill volumes. The grading area is 7.6 acres and will consist of 3,100 cubic yards of cut and 4,400 cubic yards of fill. Topsoil within the grading area will be harvested, stored on site and redistributed as part of the final grading and landscaping. The majority of grading will be for improvements to the existing ranch road for the driveway. Grading will be balanced on site except for the



- 8,775 s.f. PLANTERS AND TERRACES
- (81) CHONDROPETALUM 'EL CAMPO'
- (3) ARCTOSTAPHYLOS MANTANITA 'TIR HIRSH'
- 13,820 s.f. GRASSLAND RESTORATION
- 868 s.f. PLANTERS AND TERRACES
- 11,281 s.f. LIVING ROOF PLANTING

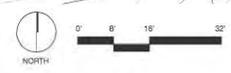
- 500 GAL. PROPANE GAS (UNDERGROUND)

- FIRE TRUCK TURNAROUND
- 805 s.f. KOEHLERIA 'BARROEL'

2,800 GAL. SEPTIC TANK

Source: Bliss Landscape Architecture, July 2018

# Site Plan



**Denise Duffy and Associates, Inc.**  
 Planning and Environmental Consulting

Date  
08-13-2018  
 Scale  
1 in=0.1 mi

Figure  
**3**

import of base rock used for the driveway improvement and paving. The base rock and base materials will be sourced from a construction materials supplier. The grading limits include all areas that will be disturbed, including staging and materials storage.

### **2.3. Openlands**

Residential development is not allowed within the openlands of the property; however, the easement over the openlands (Animus easement) allows for improvements to utility and sanitary systems, and access.

### **2.4. Activities Covered by Permit**

ITPs are requested to cover impacts to CTS and CRLF that could result from the following aspects of the project:

#### ***2.4.1 Equipment***

Vegetation removal is a component of grading and will be completed by scraping with a bulldozer and scraper. Equipment used for grading will include bulldozer, excavator, compactor/roller, dump truck, and bobcat with sweep, bucket, and drill attachments. Equipment used for landscaping and mowing will include those listed above in addition to a small crane, forklift, and large ride-along mower. Equipment used for paving will include the equipment identified above in addition to a grader and an asphalt paver. Equipment used during construction include those listed above as well as medium to large passenger trucks and equipment delivery trucks. All the equipment identified above will be diesel- and/or gas-powered.

#### ***2.4.2 Repair and Maintenance***

Repair and maintenance will include any ground disturbing activity that occurs subsequent to the construction of the project shown on the site plans (Appendix B). Repair activities are unpredictable and may be one-time events, while maintenance is regular and ongoing.

Repair activities include the unexpected modification or replacement of infrastructure, such as:

- ◆ Resurfacing the driveway using trucks and asphalt equipment within the footprint of the driveway.
- ◆ Repairing retaining walls in the unlikely event they fail or suffer from erosion. This work would be completed from the driveway with an excavator and adjacent to the wall with a bobcat and hand crews.
- ◆ Repairs to the utility infrastructure, leach fields, building footings, or other hard structures are unlikely during the term of the HCP. However, if necessary, these events would be limited and may consist of excavation and grading using the equipment identified in the section above. The work would be limited to that necessary to repair the defect.
- ◆ Temporary additional traffic may result from trips associated with repair events but these would be limited to daylight hours.

Maintenance will include gardening and work within horticultural planting areas, including the following<sup>5</sup>:

- ◆ Removal and installation of irrigation, plants, bedding materials and outdoor lighting. These activities will be performed with hand tools, wheelbarrows and light materials movers such as a bobcat and attachments.
- ◆ Mowing will occur annually in the dry season and will be conducted with a large, ride-along, gas powered mower and weed trimmers.

#### ***2.4.2 Mitigation Activities***

Measures to mitigate for unavoidable impacts, as detailed in Section 5.7, include implementation of an Invasive Plant Management Plan within a conservation easement that will be placed over a portion of the homeland. Management activities identified in the Invasive Plant Management Plan, include manual, mechanical, and chemical removal of invasive plant species (Appendix F).

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<sup>5</sup> Please note that maintenance of structures that do not result in vegetation removal or ground disturbance are not included as they are not reasonably expected to result in take of covered species.

## **SECTION 3. ENVIRONMENTAL SETTING/HCP SPECIES**

### **3.1. Environmental Setting**

The SLP was part of the historic RSC, which operated as a working cattle ranch and supported other human activities for more than two centuries. What is now the Animus 1 parcel is a network of rolling hills of grasslands and coastal scrub with small areas of coast live oak woodland. The headwaters of two ephemeral streams are the only surface water resources present within the property; however, a single seasonal stream and several stock ponds are located near the property on the adjacent PCR, SLP, and other Animus parcels. Despite the substantial habitat modification associated with intense historic grazing, the resultant landscape supports a diversity of plant and animal communities which are dependent on management in absence of a natural fire regime and are being invaded by non-native, invasive shrub species in the absence of that management.

#### ***3.1.1. Climate***

The property has a typical coastal California wet-dry seasonal pattern. Mean annual rainfall within the vicinity varies from about 14 inches to over 40 inches in the upper Santa Lucia Mountain areas, with an average of about 17 inches/year. More than 90% of the annual rainfall occurs during the six-month period between November and April. Located within the coastal zone, the project site is also highly influenced by coastal fog, especially in the summer months.

#### ***3.1.2. Topology and Geology***

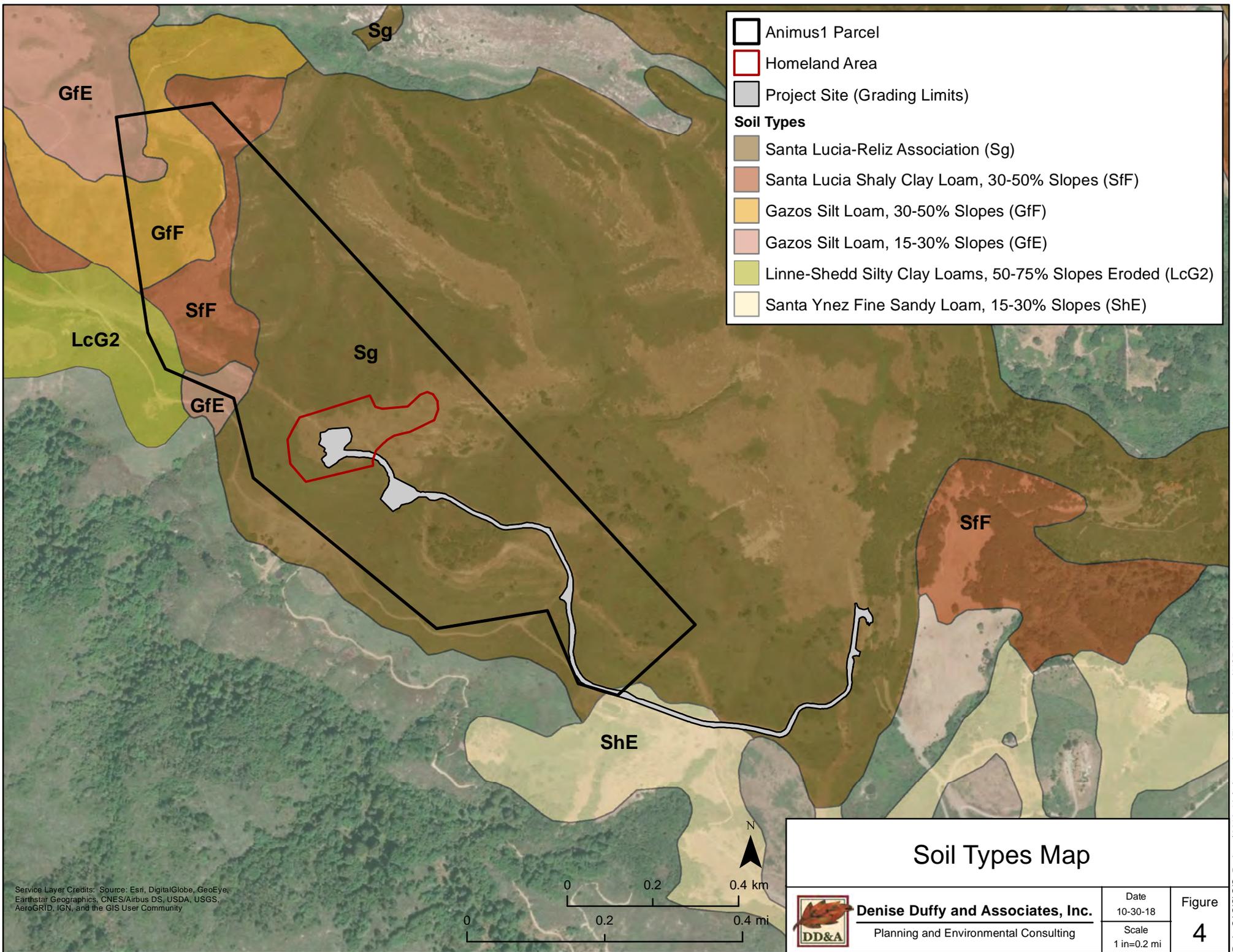
The property is located at the northern tip of the Santa Lucia Mountains, a 150-mile long, north-west trending range, extending along the California Coast from Monterey to San Luis Obispo. These mountains consist of granitic and metamorphic base rocks overlain by younger sedimentary rocks, all of which have been folded and uplifted. The base rock of the Monterey region is known as the Salinian Block (Cleary Consultants, Inc., 1994).

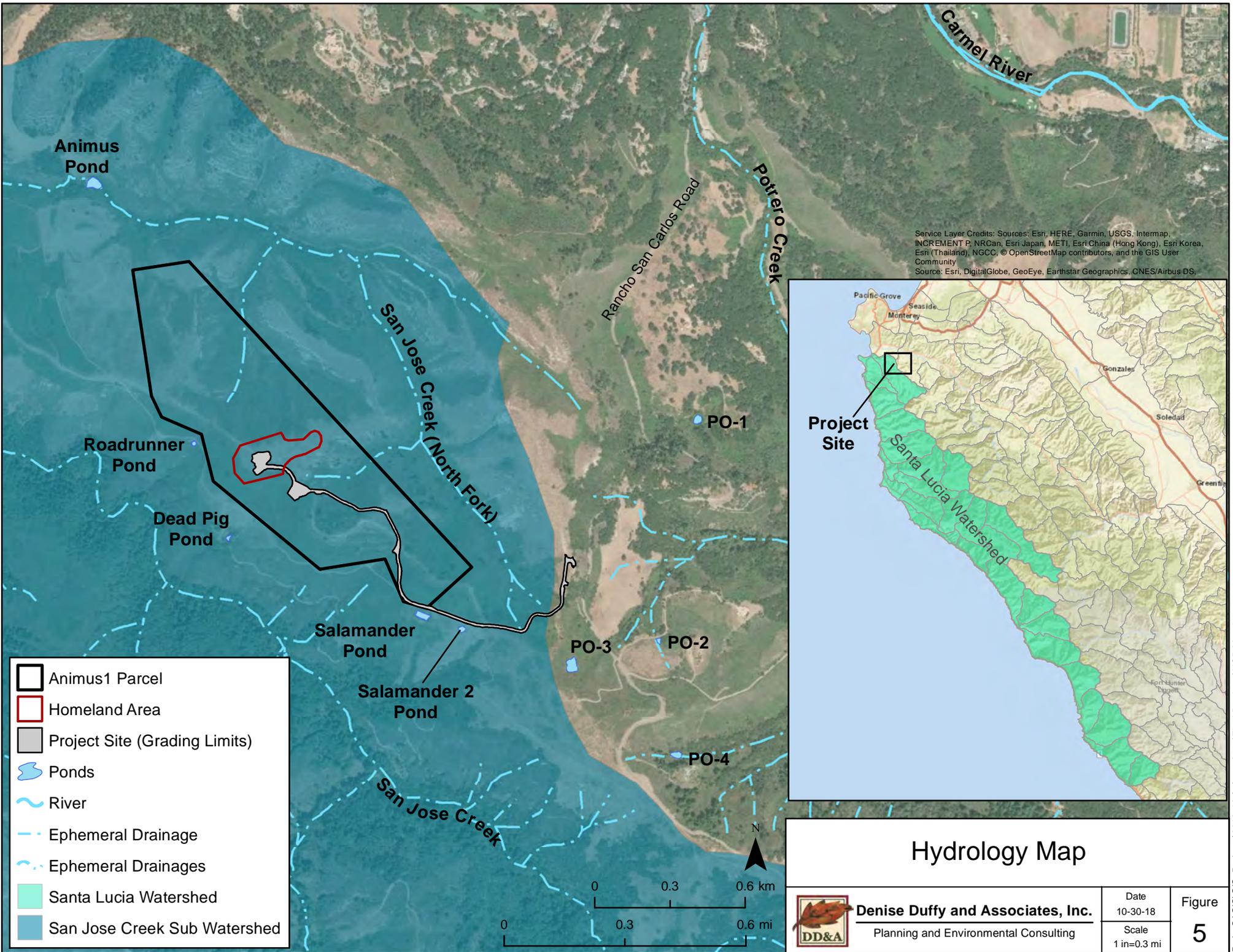
The SSURGO Database (USDA-NRCS, 2003) identifies six soil types within the property and driveway (Figure 4): Santa Lucia-Reliz Association; Gazos Silt Loam, 15-30% and 30-50% Slopes; Santa Ynez Fine Sandy Loam, 15-30% Slopes; Santa Lucia Shaly Clay Loam, 30-50% Slopes; and Linne-Shedd Silty Clay Loams, 50-75% Slopes. The majority of the soils within the site are of the Santa Lucia-Reliz Association.

The property includes steep rolling hills with large areas of greater than 30% slopes. Elevation ranges between 600 near the San Jose Creek North Branch drainage channel and 1,100 feet at the hilltops. The proposed homeland is located on the flattest hilltop within the property, at an elevation of approximately 1,000 feet.

#### ***3.1.3. Hydrology***

The project site is located within the Santa Lucia Watershed, within the San Jose Creek sub-watershed (Figure 5). Surface water resources present within the property include the headwaters of two ephemeral drainages that run north and east into the north fork of San Jose Creek, which is also ephemeral.





# Hydrology Map

 <b>Denise Duffy and Associates, Inc.</b> Planning and Environmental Consulting	Date 10-30-18	Figure <b>5</b>
	Scale 1 in=0.3 mi	

Additionally, the main stem of San Jose Creek is located southwest of the project site on the adjacent PCRP and several man-made stock ponds are located to the south, east, and west of the project site on the PCRP and SLP. The nearest of these ponds are Roadrunner, Salamander, Salamander 2, and Dead Pig Ponds on the PCRP. Additionally, Potrero Creek is located to the west of the project site on the adjacent SLP.

**3.1.4. Vegetation Types**

The project will impact four vegetation types (Table 3; Figure 6). Additionally, a small portion of the project site is ruderal (dirt road) and developed (paved road). The homeland and associated driveway are dominated by coyote brush scrub and native grassland. Additionally, coast live oak woodland and non-native grassland are present within driveway. All of these vegetation types are also present within the openlands on the property; however, these areas will not be impacted. Please refer to the *Animus I Biological Resources Report* (DD&A, 2018; Appendix A) for descriptions of each of these vegetation types.

*Table 3. Area of Vegetation Types within the Project Site*

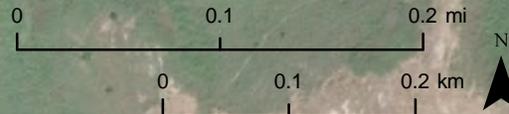
Vegetation Type within Project Site	Permanent Impact	Temporary Impact	Total
Native Grassland	0.8 ac	1.6 ac	2.4 ac
Non-native Grassland	0.1 ac	0.1 ac	0.2 ac
Coyote Brush Scrub	0.7 ac	2.8 ac	3.5 ac
Coast Live Oak Woodland	0 ac	0.2 ac	0.2 ac
Ruderal (Dirt Road)	1.1 ac	0.1 ac	1.2 ac
Developed (Paved Road)	0.1 ac	0 ac	0.1 ac
<b>Total</b>	<b>2.8 ac</b>	<b>4.8 ac</b>	<b>7.6 ac</b>

**3.1.5. Existing Land Use**

The property is currently undeveloped openland. Grazing was removed from the property in the early 1990’s and management on the property since that time has included only infrequent mowing. Grassland portions of the property are in the process of type conversion to native coyote brush scrub and, to a greater extent, non-native scrub dominated by French broom (*Genista monspessulana*) (Figure 6).

The PCRP is located to the south and west of the property (Figure 2). The PCRP is owned by the Monterey Peninsula Regional Park District (MPRPD) and includes 4,300 acres of undeveloped land. Habitats within PCRP adjacent to the property are consistent with those described above for the project site. In particular, the areas adjacent to the property are dominated by native and non-native grasslands and coyote brush scrub habitats. Additionally, four man-made stock ponds are located on PCRP within 500 feet of the property border. The MPRPD has engaged in active grazing, mowing, and invasive plant removal programs at PCRP to specifically manage for CTS, CRLF, and SBB. A federal Safe Harbors Agreement has been approved for the PCRP and is currently being implemented (MPRPD and Service, 2011).

The SLP (including the other two Animus parcels owned by Denise Malcolm) is located to the north and east of the property (Figure 2). As described above, the SLP is a 20,000-acre low-density development.

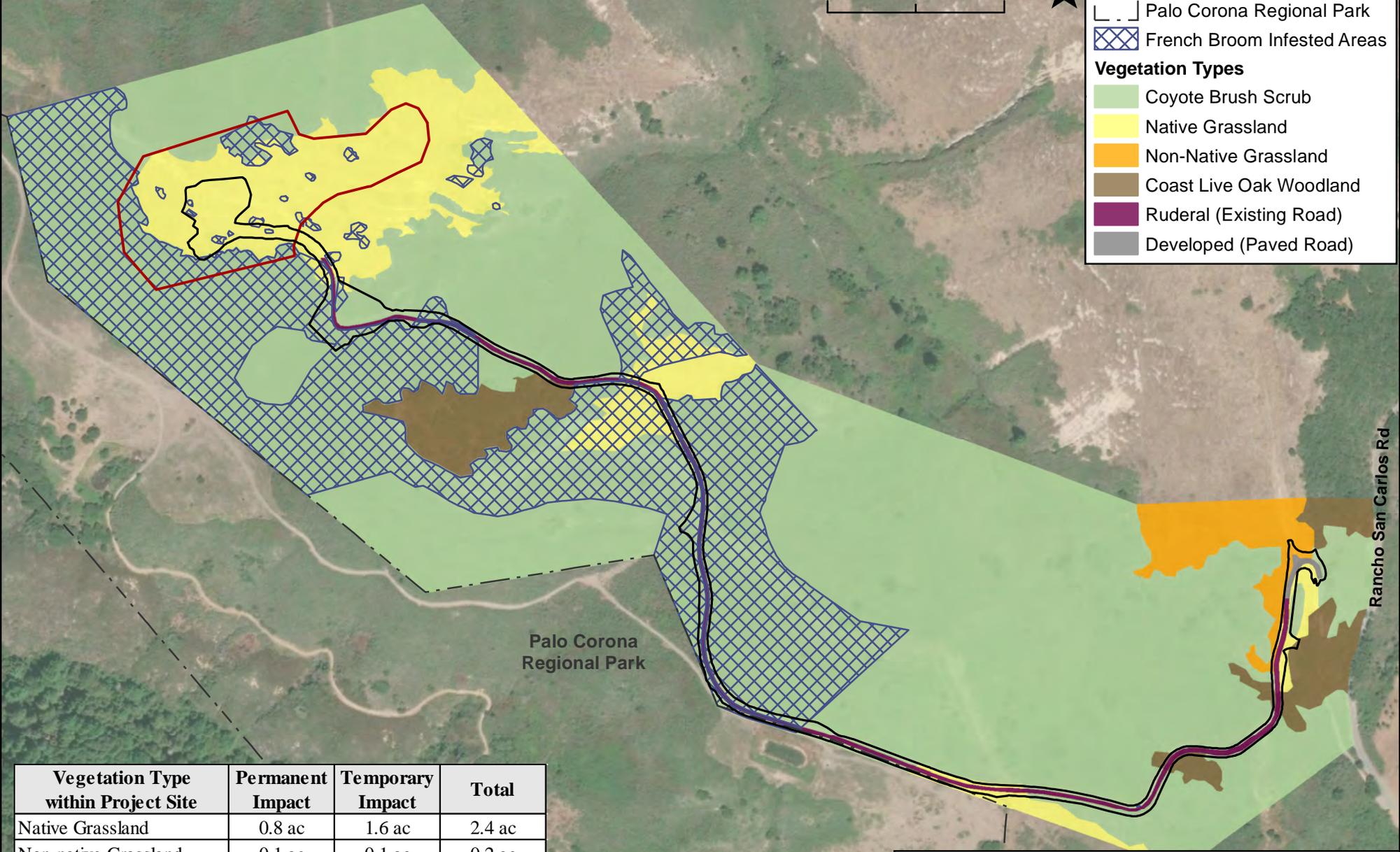


**Legend**

- Project Site (Grading Limits)
- Homeland Area
- Palo Corona Regional Park
- French Broom Infested Areas

**Vegetation Types**

- Coyote Brush Scrub
- Native Grassland
- Non-Native Grassland
- Coast Live Oak Woodland
- Ruderal (Existing Road)
- Developed (Paved Road)



Vegetation Type within Project Site	Permanent Impact	Temporary Impact	Total
Native Grassland	0.8 ac	1.6 ac	2.4 ac
Non-native Grassland	0.1 ac	0.1 ac	0.2 ac
Coyote Brush Scrub	0.7 ac	2.8 ac	3.5 ac
Coast Live Oak Woodland	0 ac	0.2 ac	0.2 ac
Ruderal (Dirt Road)	1.1 ac	0.1 ac	1.2 ac
Developed (Paved Road)	0.1 ac	0 ac	0.1 ac
<b>Total</b>	<b>2.8 ac</b>	<b>4.8 ac</b>	<b>7.6 ac</b>

**Vegetation Types Map**

	<b>Denise Duffy and Associates, Inc.</b>		Date 10-30-18	Figure <b>6</b>
	Planning and Environmental Consulting		Scale 1 in=0.1 mi	

Approximately 18,000 acres of the SLP's most valuable environmental resources are retained permanently as "Preserve Lands" for grazing, recreation, and resource conservation. Four homeland sites are located within 2,500 feet of the property border. The remaining area within the vicinity is Preserve Lands with habitats consistent with those described above for the project site, particularly coast live oak woodland, coyote brush scrub, and ruderal grassland.

The Quail Meadows subdivision is also located to the north of the property (Figure 2). Approximately 10% of this 616-acre subdivision is developed land, which includes 56 lots. The remaining area is open space dominated by dense coast live oak woodland and scrub habitats.

## **3.2. Covered Species**

Two federally listed species are known or are assumed present within the property based on observation during surveys, known occurrences within the immediate vicinity, and the presence of suitable habitat types. These species are CTS and CRLF.

### ***3.2.1. California Tiger Salamander***

The CTS was listed as a federally Threatened species on August 4, 2004 (69 FR 47211-47248). Critical habitat was designated for CTS on August 23, 2005 (70 FR 49379-49458) and went into effect on September 22, 2005. Additionally, CTS was listed as a state Threatened species on March 3, 2010.

The CTS is a large, stocky salamander most commonly found in annual grassland habitat, but also occurring in the grassy understory of valley-foothill hardwood and chaparral habitats, and uncommonly along stream courses in valley-foothill riparian habitats (Service, 2004a). Adults spend most of their lives underground, typically in burrows of ground squirrels and other animals (Service, 2004a). The CTS has been eliminated from an estimated 55% of its documented historic breeding sites. Currently, about 150 known populations of CTS remain. The CTS persists in disjunct remnant vernal pool complexes in Sonoma County and Santa Barbara County; in vernal pool complexes and isolated stockponds scattered along a narrow strip of rangeland on the fringes of the Central Valley, from southern Colusa County south to northern Kern County; and in sag ponds and human-maintained stockponds in the coast ranges from the San Francisco Bay Area south to the Temblor Range.

Above-ground migratory and breeding activity may occur under suitable environmental conditions from mid-October through May. Adults may travel long distances between upland and breeding sites; adults have been found more than two kilometers (1.24 miles) from breeding sites (Service, 2004a). Breeding occurs from November to February, following relatively warm rains (Stebbins, 2003). The CTS breeds and lays eggs primarily in vernal pools and other temporary rainwater ponds. Permanent human-made ponds are sometimes utilized if predatory fishes are absent; streams are rarely used for reproduction. Eggs are laid singly or in clumps on both submerged and emergent vegetation and on submerged debris in shallow water (Stebbins, 1972; Jennings and Hayes, 1994). Males typically spend six to eight weeks at breeding ponds, while females typically spend only one to two weeks (Loredo et al., 1996). Eggs hatch within 10-14 days (Service, 2004a) and a minimum of 10 weeks is required to complete development through metamorphosis (Jennings and Hayes, 1994), although the larval stage may last up to six months and some larvae in Contra Costa and Alameda Counties may remain in their breeding sites over the summer (Service, 2004a).

**CTS Occurrence Information**

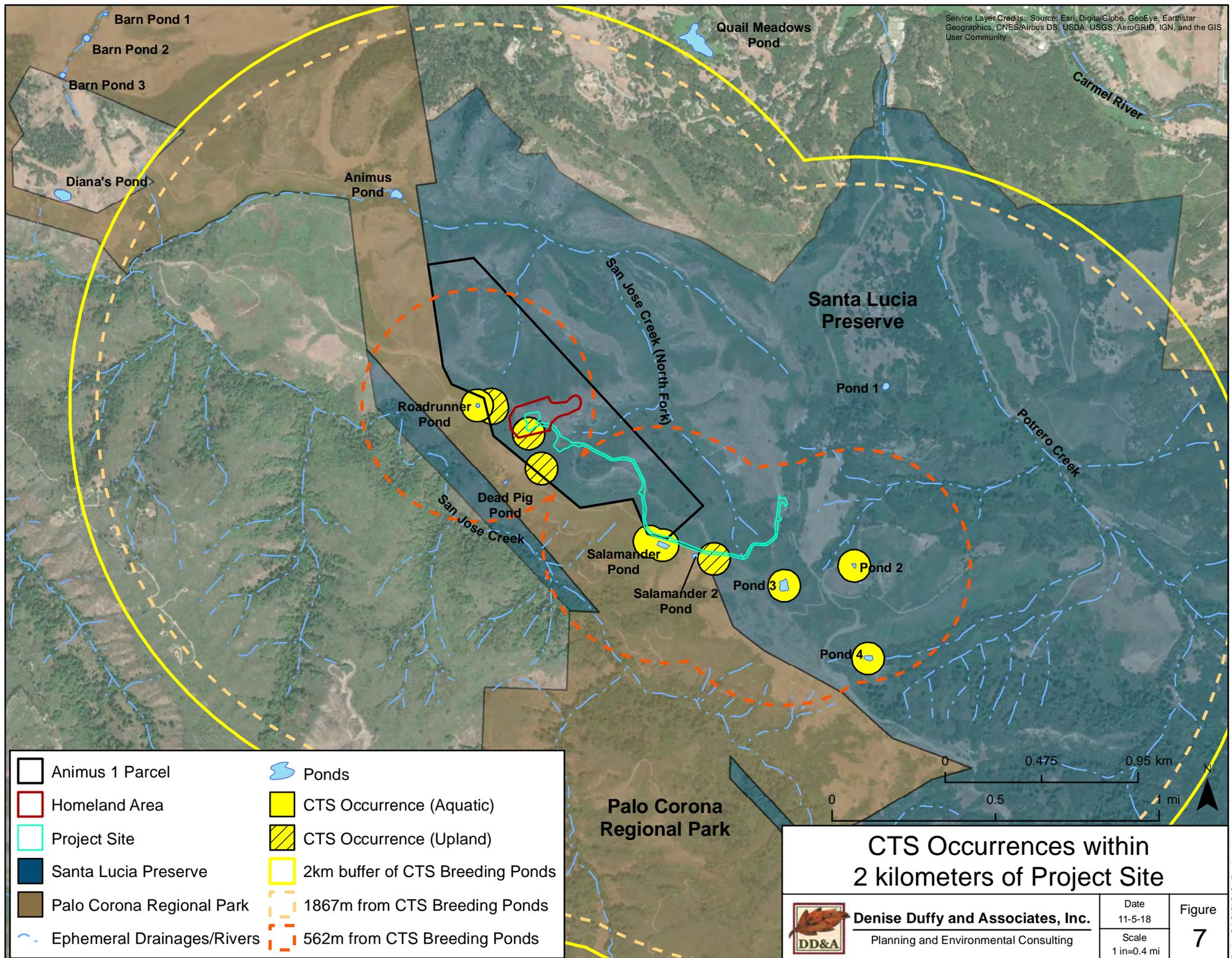
The CNDDDB reports eight occurrences of CTS within five miles of the property (Figure 7; CDFW, 2018), including occurrences on the property that were observed during protocol-level aquatic and upland drift-fence studies conducted from 2011 to 2013 (DD&A, 2013a, Appendix C). Aquatic and upland data has been collected on the SLP and PCRP on and off over the last decade (Table 2), resulting in a data set that identifies ponds that are known to support CTS breeding activity now, or have in the past. The result of this data confirms that a localized metapopulation of CTS currently occupy an area associated with a cluster of nine ponds adjacent to the property. Within this cluster area there are ponds that likely never have supported CTS; ponds which likely did in the past, but do not now; two ponds that are currently being used as breeding resources by CTS; and a new pond that may provide breeding habitat in the future (Table 4).

*Table 4. CTS Detections at Ponds Surrounding Animus 1*

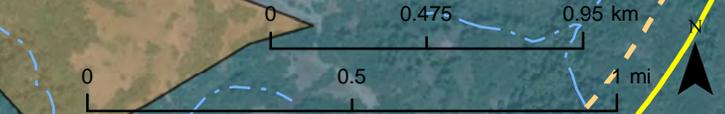
Survey Year	Pond								
	Roadrunner	Salamander	Salamander 2*	Dead Pig	Animus	PO-1	PO-2	PO-3	PO-4
2003	NS	NS	N/A	NS	NS	0	L	0	0
2004	NS	NS	N/A	NS	NS	0	L	0	0
2005	L	L	N/A	0	0	0	0	L	0
2006	L	0	N/A	0	NS	0	0	L & E	E
2007	NS	NS	N/A	NS	NS	0	0	0	0
2008	L	L	N/A	0	0	NS	0	L	0
2009	NS	L	N/A	NS	NS	NS	0	0	0
2010	NS	NS	N/A	NS	NS	NS	NS	NS	NS
2011	L & A	0	N/A	0	0	NS	0	0	NS
2012	L & A	A	N/A	NS	NS	NS	0	0	NS
2013	L	0	N/A	NS	NS	0	0	0	0
2014	0	0	N/A	0	0	NS	0	0	0
2015	L	L	N/A	0	0	NS	0	0	0
2016	L	L	N/A	0	0	0	0	0	0
2017	L	L	N/A	0	0	0	0	0	0
2018	L	0	0	NS	NS	0	0	0	0

NS = No Survey, 0 = None Detected, L = Larvae, A = Adult (includes juvenile and metamorphs), E = Eggs.  
 \*Please note that Salamander 2 Pond was created in 2017

All nine of the ponds within the cluster are man-made and, with the exception of Salamander 2 Pond, were constructed to facilitate grazing over the last two centuries. It is likely that CTS have never bred in three of the ponds, Dead Pig Pond, Pond PO-4 and Animus Pond, due to historic conditions which preclude their presence, such as excessive vegetation cover, competition, and/or predation from an existing suite of aquatic species that flourish in deep, perennial ponds and riparian conditions. One pond, PO-1 may have supported CTS breeding historically, but when consistent surveys started in 2003, it had already become heavily vegetated and CTS have never been documented breeding there (DD&A, 2013b). Four additional ponds are documented to have been important breeding resources in the past (presence of significant numbers of larvae and/or adults): Roadrunner Pond, Salamander Pond, PO-2, and PO-3 (Hemingway and D’Amore, 2008; DD&A, 2013a [Appendix C]; DD&A, 2013b; Anderson, 2013 and 2014). Of these four ponds, Roadrunner Pond was the only pond documented to support successful breeding in 2011 and 2013 (DD&A, 2013a [Appendix C]; DD&A, 2013b; Anderson, 2013); however, successful breeding was observed in both



- Animus 1 Parcel
- Homeland Area
- Project Site
- Santa Lucia Preserve
- Palo Corona Regional Park
- Ephemeral Drainages/Rivers
- Ponds
- CTS Occurrence (Aquatic)
- CTS Occurrence (Upland)
- 2km buffer of CTS Breeding Ponds
- 1867m from CTS Breeding Ponds
- 562m from CTS Breeding Ponds



## CTS Occurrences within 2 kilometers of Project Site

	<b>Denise Duffy and Associates, Inc.</b>	Date 11-5-18	Figure <b>7</b>
	Planning and Environmental Consulting	Scale 1 in=0.4 mi	

Roadrunner and Salamander ponds from 2015-2017. This is potentially a result of management activities at Salamander pond in 2014 that removed significant amounts of bulrush from the pond in an effort to improve breeding habitat for CTS and CRLF. In 2017, MPRPD constructed a new pond (Salamander 2) immediately adjacent to Salamander Pond on PCRCP as a part of their Safe Harbors Agreement to create new suitable breeding habitat for CTS and CRLF. A single aquatic survey of this pond was conducted in 2018 by DD&A and SLC staff; no CTS were observed. CTS larvae have not been found in any ponds other than Roadrunner and Salamander since 2008, despite targeted annual surveys.

While no aquatic resources suitable for CTS breeding are located on the property, the property is a significant upland resource associated with this localized CTS metapopulation. CTS were observed utilizing the grassland and scrub habitats on the property during upland drift fence/pitfall trap surveys conducted in 2012/2013 (DD&A, 2013a [Appendix C]). During the 2012/2013 season, drift fence/pitfall trap arrays were placed at strategic locations in both grassland and dense scrub within the property and one of the adjacent Animus parcels. The main goal of the study was to determine if CTS were moving from occupied ponds, through scrub, and into isolated grasslands. The upland data clearly shows that adult CTS are present within the landscape associated with the pond complex and are moving through dense scrub and grasslands. It is uncertain if CTS are occupying the scrub under duff or within mammal burrows for short or long durations, or for the full dry season between breeding efforts. However, the scrub that was cut to facilitate this study contained very few, if any obvious mammal burrows. While it is possible that scrub close to Roadrunner Pond is being utilized as primary estivation habitat, it is more likely that CTS are traveling through the scrub to access the grasslands beyond. While the number of arrays was limited to cover such a large area, the data indicates that the density of CTS in the uplands is negatively correlated with distance from the ponds (i.e., the majority of the CTS were caught within a relatively close proximity to a pond). This data is consistent with other work done in the region (Searcy and Shaffer, 2008; Searcy and Shaffer, 2011; and Trenham and Shaffer, 2005).

### **CTS Habitat**

The Service considers suitable upland aestivation habitat within two kilometers of known or potential breeding locations for CTS as occupied habitat unless protocol-level surveys are conducted with negative results pursuant to the *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander* (Service and CDFW, 2003). According to Searcy and Shaffer (2011), 95% of the population occurs in upland habitat within 1,867 meters of breeding ponds and 50% of the population occurs within 562 meters. The entire property and driveway are within two kilometers and 1,867 meters of known CTS breeding ponds (Figure 7). Additionally, the entire project site (with the exception of a small portion of the driveway) is within 562 meters of known CTS breeding ponds (Figure 7).

### **Localized CTS Habitat Trends**

Historically, CTS probably occupied lower, flatland elevations within San Francisquito Flats on the SLP, where seasonal wetlands and vernal pool complexes likely existed prior to European settlement. Subsequent to settlement, seasonal resources were drained in favor of concentrating the hydrologic resources of the area into a large permanent water body, Moore's Lake, to supply a year-round water source. Fish and bullfrog have colonized the lake and golf course ponds that have been created more recently, leaving only man-made CTS breeding habitat on the margin of their previous habitat, in the hills

surrounding the flats. The stock ponds that are relatively high in the watershed dry periodically during drought cycles and thus do not support fish or bullfrog. Regularly grazed, these annual ponds stayed free of vegetation and were relatively good habitat for CTS breeding in that managed state, even though these areas were likely not historically occupied by CTS.

Grazing was removed from the SLP in the early 1990s and was sporadic on PCRCP during the same period, during which multiple ownership transfers occurred. In addition, the ponds on PCRCP were fenced in 2010 to protect them from over-grazing. As a result, all of the ponds adjacent to the property experienced an increase in vegetation cover compared to prior conditions. Large areas of grassland on the property have also converted into non-native scrub. These type conversion habitat trends may degrade this previously-managed, artificial habitat and affect the local CTS metapopulation negatively. The man-made ponds are not in a steady state as they are not natural features. Without ongoing management, all the ponds will likely follow the same trajectory, increased aquatic and emergent vegetation consisting primarily of bulrush. Bulrush forms very dense stand and can completely fill in a pond. Riparian or tree species typically follow, increasing the cover. The increase in pond vegetation may eventually preclude the presence or successful breeding of CTS in unmanaged ponds (please see DD&A, 2013b for a detailed discussion of the relationship between water depth, duration of inundation, vegetation, predacious hexapods, and CTS).

However, as identified above, MPRPD began implementing management activities at the ponds under their Safe Harbors Agreement, including mowing, allowing cattle grazing at certain times of the year, removal of bulrush and sediment from Animus Pond (2013), and removal of bulrush from Salamander Pond (2014). The SLC has also reintroduced grazing at the SLP to manage grassland areas.

### ***3.2.2. California Red-Legged Frog***

The CRLF was listed as a federally threatened species on June 24, 1996 (61 FR 25813-25833) and is also a CDFW species of special concern

The CRLF is the largest native frog in California (44-131 mm snout-vent length) and was historically widely distributed in the central and southern portions of the state (Jennings & Hayes, 1994). Adults generally inhabit aquatic habitats with riparian vegetation, overhanging banks, or plunge pools for cover, especially during the breeding season (Jennings and Hayes, 1988). They may take refuge in small mammal burrows, leaf litter, or other moist areas during periods of inactivity or to avoid desiccation (Rathbun, et al., 1993; Jennings and Hayes, 1994). Radiotelemetry data indicates that adults engage in straight-line breeding season movements irrespective of riparian corridors or topography and they may move up to two miles between non-breeding and breeding sites (Bulger et. al., 2003). During the non-breeding season, a wider variety of aquatic habitats are used including small pools in coastal streams, springs, water traps, and other ephemeral water bodies (Service, 1996). CRLF may also move up to 300 feet from aquatic habitats into surrounding uplands, especially following rains, where individuals may spend days or weeks (Bulger et al., 2003).

This species requires still or slow-moving water during the breeding season where it can deposit large egg masses, which are most often attached to submergent or emergent vegetation. Breeding typically occurs between December and April depending on annual environmental conditions and locality. Eggs require six to 12 days to hatch and metamorphosis generally occurs after 3.5 to seven months, although larvae are also capable of over-wintering. Following metamorphosis, generally between July and September, juveniles

are 25-35 mm in size. Juvenile CRLF appear to have different habitat needs than adults. Jennings and Hayes (1988) recorded juvenile frogs mostly from sites with shallow water and limited shoreline or emergent vegetation. Additionally, it was important that there be small one-meter breaks in the vegetation or clearings in the dense riparian cover to allow juveniles to sun themselves and forage, but to also have close escape cover from predators. Jennings and Hayes also noted that tadpoles have different habitat needs and that in addition to vegetation cover, tadpoles use mud. It is speculated that CRLF larvae are algae grazers, however, foraging larval ecology remains unknown (Jennings, et. al., 1993).

It has been shown that occurrences of CRLF are negatively correlated with presence of non-native bullfrogs (Moyle, 1973; Jennings and Hayes, 1986 and 1988), although both species are able to persist at certain locations, particularly in the coastal zone. It is estimated that CRLF has disappeared from approximately 75% of its former range and has been nearly extirpated from the Sierra Nevada Mountains, Central Valley, and much of southern California (Service, 1996).

**CRLF Occurrence Information**

The CNDDDB reports six occurrences of CRLF within 1.0 mile of the property (Figure 8; CDFW, 2018). Aquatic data has been collected on the SLP and PCRPs on and off over the last decade, resulting in a data set that identifies ponds that are known to support CRLF breeding activity now, or have in the past. The result of this data confirms that CRLF currently occupy multiple ponds on the SLP and PCRPs, including the cluster of nine ponds adjacent to the property. Within this cluster area there are several ponds that are currently being used as a breeding resource by CRLF; ponds which supported CRLF breeding in the past but may not now; one pond that likely never supported CRLF; and a new pond that may provide breeding habitat in the future (Table 5).

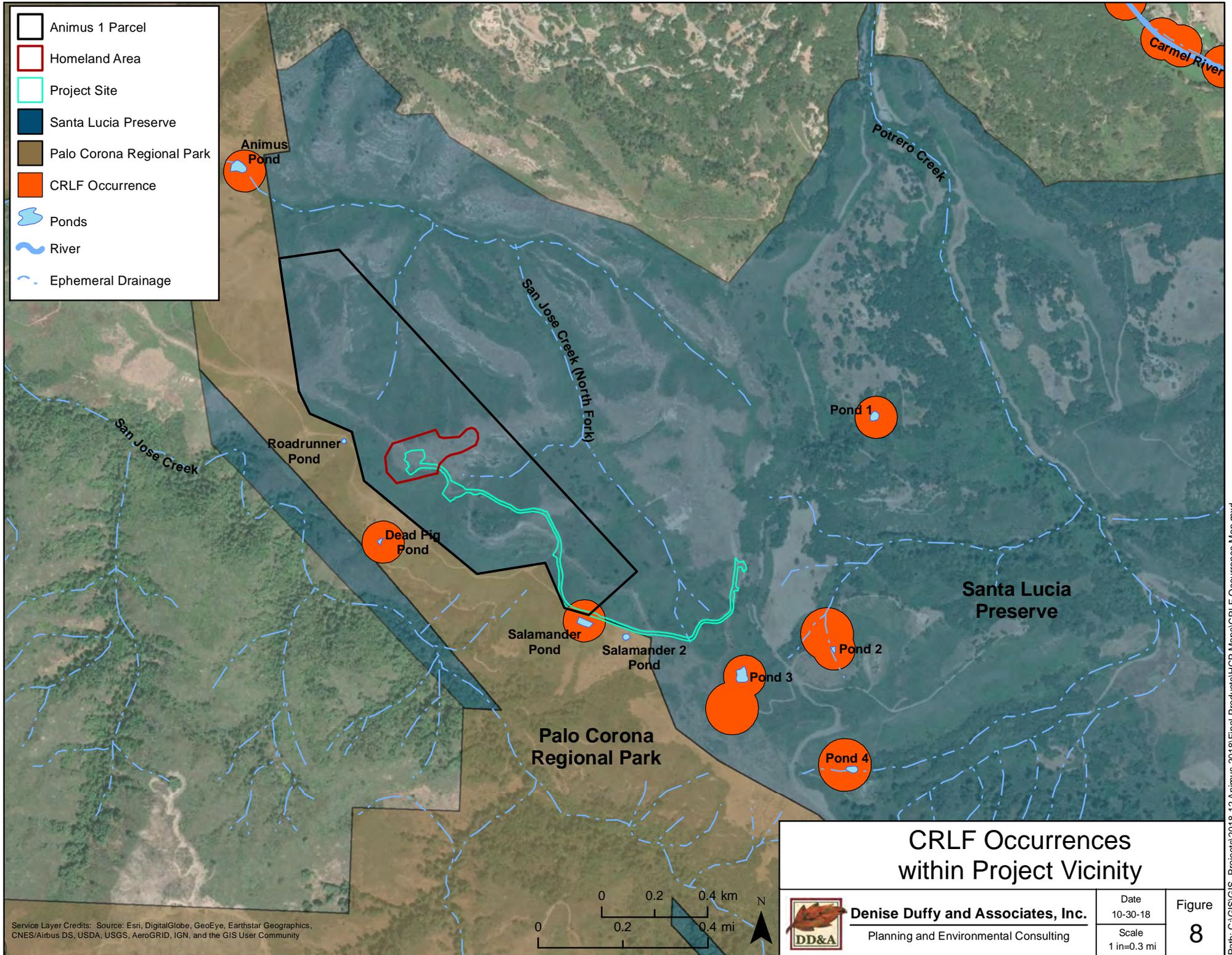
*Table 5. CRLF Detections at Ponds Surrounding Animus 1*

Survey Year	Pond								
	Roadrunner	Salamander	Salamander 2	Dead Pig	Animus	PO-1	PO-2	PO-3	PO-4
2003	NS	NS	N/A	NS	NS	L & A	L & A	L & A	L & A
2004	NS	NS	N/A	NS	NS	L & A	L & A	L & A	L & A
2005	L	L	N/A	L	L	L & A	L & A	L & A	L & A
2006	0	L	N/A	L	NS	L & A	L & A	L & A	L
2007	NS	NS	N/A	NS	NS	A	L & A	L	L
2008	0	L	N/A	L & A	L	NS	L & A	L & A	0
2009	NS	L & A	N/A	NS	NS	NS	L & A	L	0
2010	NS	NS	N/A	NS	NS	NS	NS	NS	NS
2011	0	L	N/A	L & A	L & A	NS	L & A	L	NS
2012	0	L & A	N/A	NS	NS	NS	L & A	L & A	NS
2013	0	L & A	N/A	NS	NS	0	L & A	L & A	0
2014	0	L & A	N/A	L & A	L & A	NS	L & A	L	NS
2015	0	L	N/A	L	L	NS	L & A	L & A	NS
2016	A	L	N/A	L	L	0	L & A	L & A	0
2017	A	L	N/A	L	L	0	L & A	L & A	0
2018	0	L & A	0	NS	NS	NS	L & A	L	NS

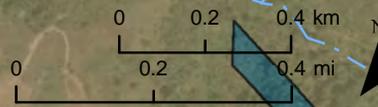
NS = No Survey, 0 = None Detected, L = Larvae, A = Adult (includes juvenile and metamorphs), E = Eggs.

\*Please note that Salamander 2 Pond was created in 2017

-  Animus 1 Parcel
-  Homeland Area
-  Project Site
-  Santa Lucia Preserve
-  Palo Corona Regional Park
-  CRLF Occurrence
-  Ponds
-  River
-  Ephemeral Drainage



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



<h2>CRLF Occurrences within Project Vicinity</h2>		
 <b>Denise Duffy and Associates, Inc.</b> Planning and Environmental Consulting	Date 10-30-18	Figure <b>8</b>
	Scale 1 in=0.3 mi	

Path: C:\GIS\GIS\_Projects\2018-12 Animus 2018\Final Products\HCP Maps\CRLF Occurrence Map.mxd

All nine of the ponds within the cluster are man-made and, with the exception of Salamander 2 Pond, were constructed to facilitate grazing over the last two centuries. It is likely that CRLF have never bred in the Roadrunner Pond due to the short inundation period and lack of sufficient depth and vegetation typically required for successful CRLF breeding. Two ponds, PO-1 and PO-4, supported CRLF breeding historically, but CRLF have not been detected during aquatic surveys at these ponds since 2007 (Table 6; DD&A, 2013b). PO-1 is a highly vegetated pond, approximately 95% of which is covered by cattail. If CRLF are still breeding in this pond, they are undetectable during aquatic surveys due to the limited amount of open water available to survey. Five additional ponds are documented to be important breeding resources for CRLF (presence of significant numbers of larvae and/or adults): Salamander Pond, Animus Pond, Dead Pig Pond, PO-2, and PO-3 (Hemingway and D'Amore, 2008; DD&A, 2008; DD&A, 2013a [Appendix C]; DD&A, 2013b; Anderson, 2013 and 2014). In 2017, MPRPD constructed a new pond (Salamander 2) immediately adjacent to Salamander Pond on PCRFP as a part of their Safe Harbors Agreement to create new suitable breeding habitat for CTS and CRLF. A single survey of this pond was conducted in 2018 by DD&A and SLC staff; no CRLF were observed.

No aquatic resources suitable for CRLF breeding are located on the property. However, CRLF may use the habitats within the property that surround adjacent ponds for upland refugia. A 2003 study by Bulger et. al. found that 11-22% of frogs dispersed from the ponds he studied. The remainder of the population was resident at permanent aquatic sites over the course of a year. Ninety percent of these resident frogs remained within 60 meters of water at all times and none were found farther than 130 meters from the pond. Bulger et. al. found that dispersing frogs moved in approximately straight lines to target sites, showing neither avoidance nor preference for any particular landscape feature or vegetation type. This study concluded that “adequate protection of [CRLF] populations inhabiting relatively undeveloped landscapes is liable to be achieved by retaining an array of suitable habitat elements within at least 100 meters of occupied aquatic sites, and by imposing seasonal limitations on detrimental human activities occurring within this zone.” The study also concluded that because only a small portion of the population migrates [disperses] away from breeding ponds, individuals move over a broad spatial scale, and migration is spread out over time and does not occur as a synchronous event, “the density of [CRLF] migrating through uplands is usually so low that protective considerations may often be unwarranted.” However, a study by Fellers and Kleeman (2005) observed higher dispersal rates than Bulger et. al and concluded that the suggested 100-meter buffer of occupied ponds alone is inadequate to protect local CRLF populations. Fellers and Kleeman suggest that “it is important to identify each habitat component [breeding habitat, upland non-breeding habitat and migration (dispersal) corridors] separately and then include a buffer that is sufficiently large to maintain the integrity of each habitat type.”

### **CRLF Critical Habitat**

Critical habitat was designated for CRLF on April 13, 2006 (71 FR 19244-19346) and revised on March 17, 2010 (75 FR 12816-12959). The revised critical habitat went into effect on April 16, 2010. The primary physical and biological features (PBFs) CRLF critical habitat are:

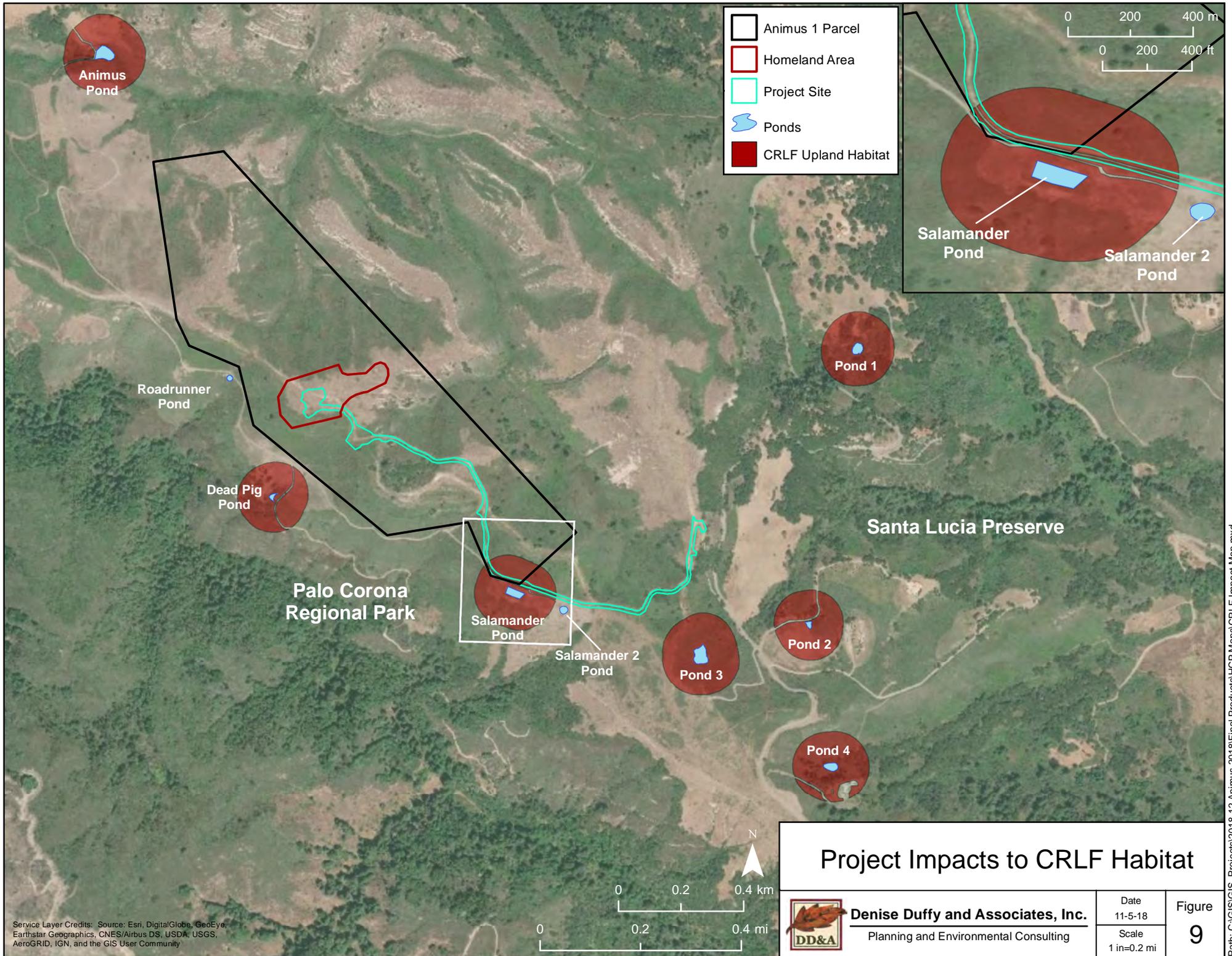
1. **Aquatic Breeding Habitat:** Standing bodies of fresh water (with salinities less than 7.0 ppt.), including natural and manmade ponds, slow moving streams or pools within streams, and other ephemeral or permanent water bodies that typically become inundated during winter rains and hold water for a minimum of 20 weeks in all but the driest years.

2. **Non-Breeding Aquatic Habitat:** Fresh water habitats, as described above, that may or may not hold water long enough for the subspecies to hatch and complete its aquatic life cycle but that do provide for shelter, foraging, predator avoidance, and aquatic dispersal for juvenile and adult CRLF. Other wetland habitats that would be considered to meet these elements include, but are not limited to: plunge pools within intermittent creeks; seeps; quiet water refugia during high water flows; and springs of sufficient flow to withstand the summer dry period.
3. **Upland Habitat:** Upland areas within 200 feet (60 meters) of the edge of the riparian vegetation or dripline surrounding aquatic and riparian habitat, and comprised of various vegetational series such as grasslands, woodlands, and/or wetland/riparian plant species that provides the frog shelter, forage, and predator avoidance. Upland features are also essential in that they are needed to maintain the hydrologic, geographic, topographic, ecological, and edaphic features that support and surround the wetland or riparian habitat. These upland features contribute to the filling and drying of the wetland or riparian habitat and are responsible for maintaining suitable periods of pool inundation for larval frogs and their food sources, and provide breeding, non-breeding, feeding, and sheltering habitat for juvenile and adult frogs (e.g., shelter, shade, moisture, cooler temperatures, a prey base, foraging opportunities, and areas for predator avoidance). Upland habitat can include structural features such as boulders, rocks and organic debris (e.g. downed trees, logs), as well as small mammal burrows and moist leaf litter.
4. **Dispersal Habitat:** Accessible upland or riparian dispersal habitat within designated units and between occupied locations within 0.7 mile (1.2 km) of each other that allows for movement between such sites. Dispersal habitat includes various natural habitats and altered habitats such as agricultural fields, which do not contain barriers to dispersal (an example of a barrier to dispersal is a heavily traveled road constructed without bridges or culverts). Dispersal habitat does not include moderate to high density urban or industrial developments with large expanses of asphalt or concrete, nor does it include large reservoirs over 50 acres (20 ha) in size, or other areas that do not contain those features identified in PBF 1, 2, or 3 as essential to the conservation of the subspecies.

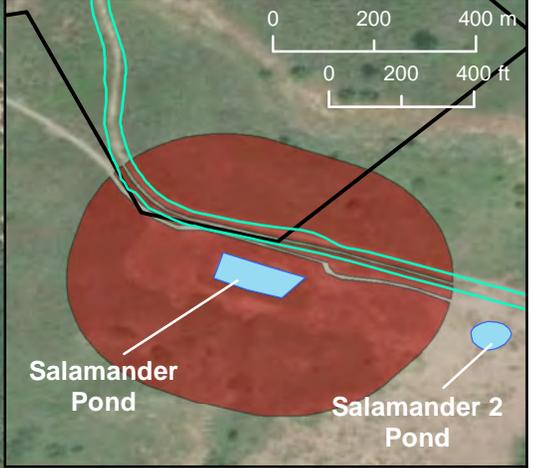
The property and driveway are located within CRLF critical habitat mapping unit MNT-2. If a 100-meter buffer of the adjacent ponds is projected, as suggested by Bulger et. al. (2003), the buffers do not intersect the project site, except at Salamander Pond where the buffer extends into a very small portion (0.6 acre) of the proposed driveway (Figure 9). If an additional consideration of appropriate CRLF upland, non-breeding habitat is made as suggested by Fellers and Kleman, the result is that the homeland site consists primarily of open grassland and does not provide appropriate cover or habitat conditions (i.e., woodland or riparian corridor) necessary for use by CRLF other than for dispersal. In addition, because the homeland is located on a ridge, there is appropriate non-breeding habitat in the form of riparian corridors at the bottom of all of the surrounding ravines and canyons, making it likely that the only use of the homeland site by CRLF would be as dispersal habitat. Straight-line dispersal by CRLF between any of the breeding ponds adjacent to the property might include passage through the project site.

### **Localized CRLF Habitat Trends**

CRLF occupy a large number of ponds on the PCRP and SLP and are present as a very stable and self-sustaining series of metapopulation within the region. While the species has lost much of its historical habitat throughout its range and has been heavily impacted by non-native predators such as fish and



- Animus 1 Parcel
- Homeland Area
- Project Site
- Ponds
- CRLF Upland Habitat



<h2>Project Impacts to CRLF Habitat</h2>		
	<b>Denise Duffy and Associates, Inc.</b>	
	Planning and Environmental Consulting	
Date 11-5-18	Figure <b>9</b>	
Scale 1 in=0.2 mi		

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

bullfrog, it is abundant and under very little pressure from development or predation locally. Unlike CTS habitat within the region, CRLF benefit from increased vegetation resulting from a lack of management of man-made stock ponds. In addition, CRLF are known to breed and persist within habitat associated with the Carmel River, San Jose Creek, and Potrero Creek, and are abundant through the upper watershed within natural, self-sustaining habitat not directly associated with man-made stock ponds.

### **3.3 Other Federal and State Listed Species Considered, but not Covered**

The potential for other federally and state listed species to occur within the project site was evaluated in the *Animus 1 Biological Resources Report* (DD&A, 2018, Appendix A). The report included a review of federally listed species known to occur in the vicinity (Service, 2018) and CNDDDB reports for federally and state-listed species within the Seaside and Monterey quadrangles and the six surrounding quadrangles (Carmel Valley, Marina, Mt. Carmel, Salinas, Soberanes Point, and Spreckels) (CDFW, 2018). Only two other federally listed species, the south-central California steelhead DPS (steelhead) and SBB are known to occur on the SLP and PCRP in the vicinity of the project site.

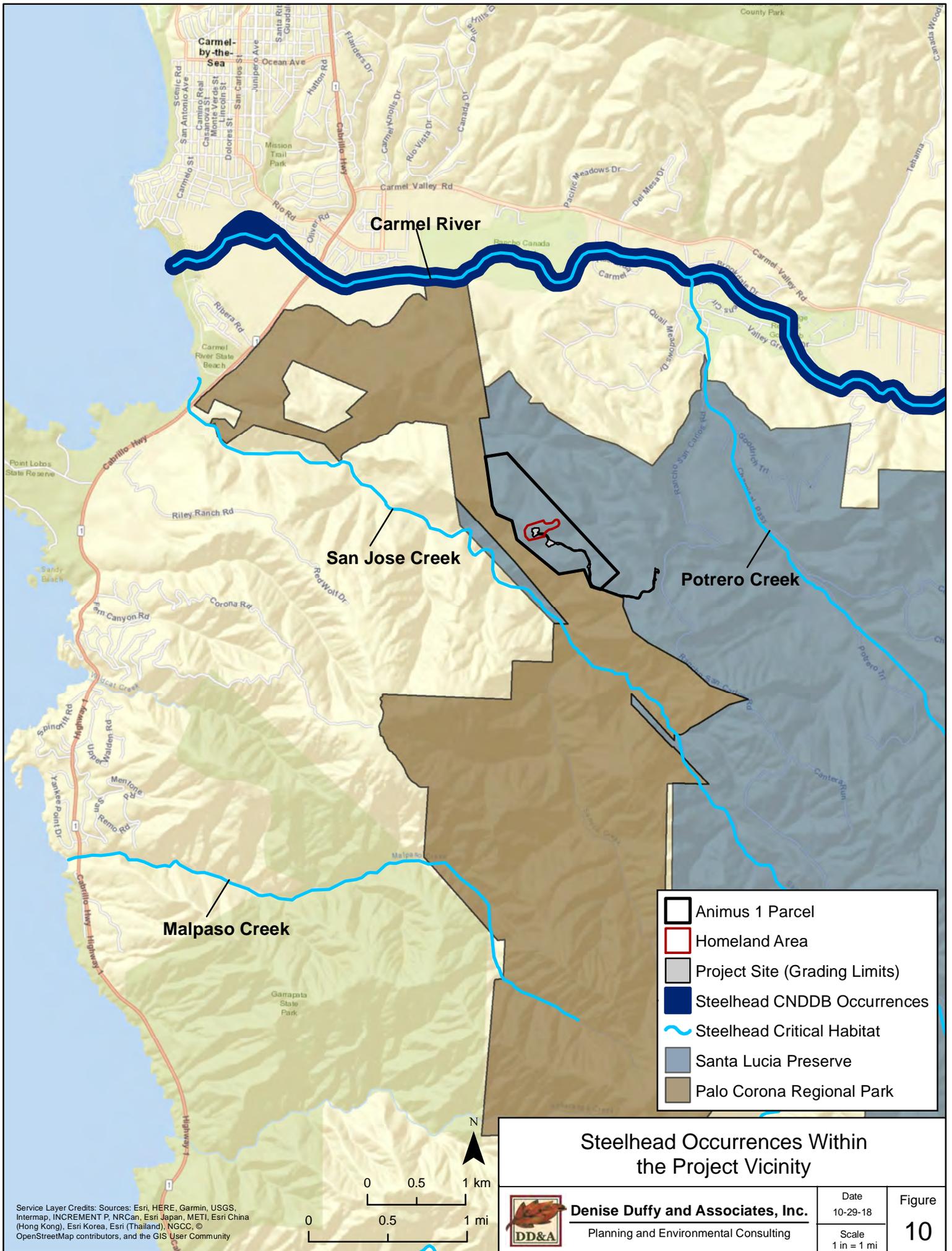
#### **3.3.1. South-Central California Coast Steelhead**

Steelhead are known to occupy the Carmel River and its tributaries, such as Potrero Creek located 0.9 mile from the property, as well as other coastal drainages, such as San Jose located 0.2 mile from the property (Figure 10). Although the north fork of San Jose Creek is present immediately adjacent to the property, this drainage is not known to support steelhead. Therefore, the project will not directly or indirectly affect steelhead and the species is not covered in this HCP.

#### **3.3.2. Smith's Blue Butterfly**

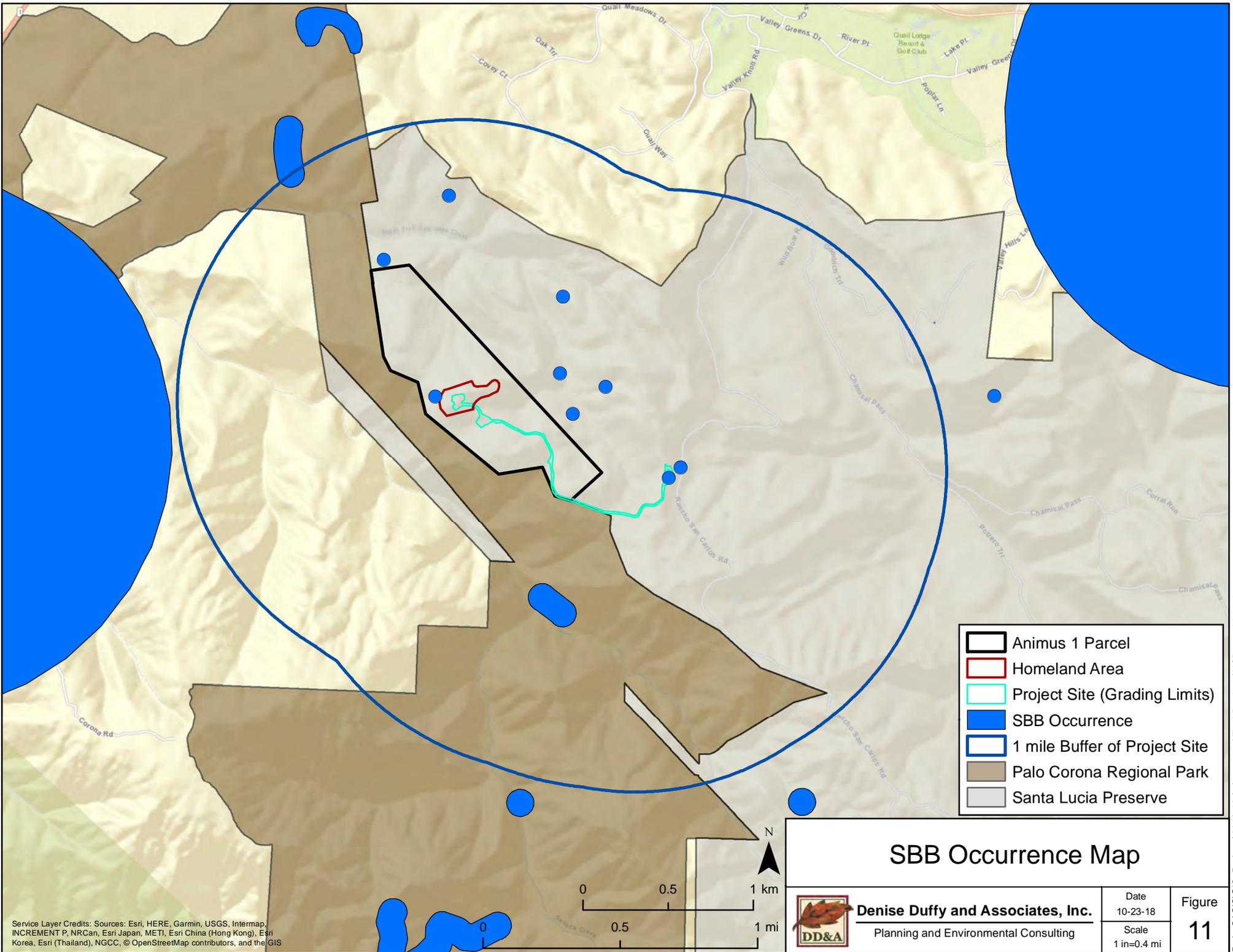
The CNDDDB reports two occurrences of SBB within one mile of the property, located within the PCRP (Figure 11). Significant stands of the obligate host plant for SBB (dune buckwheat [*Eriogonum parvifolium*]) occur on the PCRP and SLP adjacent to the property. The overwhelming majority of these buckwheat stands are in permanent conservation on both properties; PCRP is operating under an approved Safe Harbors Agreement (MPRPD and Service, 2011) with SBB being a covered species, and the SLP operates with specific avoidance and protection obligations resulting from the certification of the SLP EIR. The result is that the species is locally abundant and protected within the region.

Five occurrences of this species were also recorded within the Animus parcels by Dick Arnold in 2003 and 2004, including one occurrence within the property, located immediately adjacent to the homeland, and one occurrence near the driveway where it meets Rancho San Carlos Road. Buckwheat occurrences were mapped by Dick Arnold in 1991 (Table 1) and updated in 2012 (DD&A, 2012; Figure 13; Appendix D) to identify the extent of the SBB habitat within the Animus parcels. Populations of dune buckwheat identified adjacent to the homeland and driveway in 1991 could not be located during multiple biological surveys by DD&A (DD&A, 2008, 2012, 2018). Near the homeland, French broom and other coastal scrub shrubs have severely encroached on this area due to the lack of grazing on the property and it is likely that the buckwheat can no longer grow in this area. Small stands of dune buckwheat have been mapped within other areas of the property, but none occur within the homeland or driveway and none will be impacted by the project (Figure 12). Therefore, the project will not directly or indirectly affect Smith's blue butterfly and the species is not covered in this HCP.



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-  Animus 1 Parcel
-  Homeland Area
-  Project Site (Grading Limits)
-  SBB Occurrence
-  1 mile Buffer of Project Site
-  Palo Corona Regional Park
-  Santa Lucia Preserve

## SBB Occurrence Map

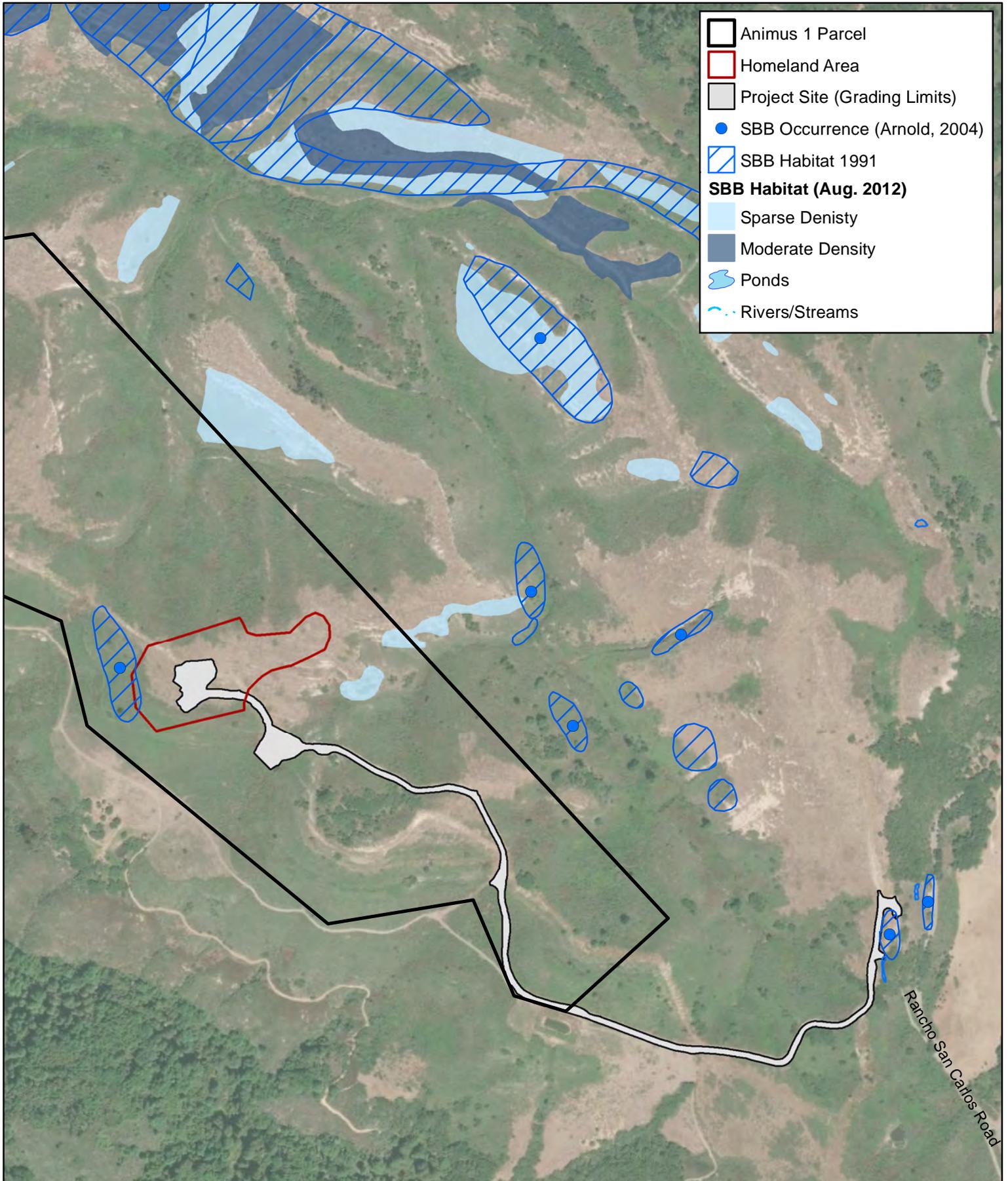


**Denise Duffy and Associates, Inc.**  
 Planning and Environmental Consulting

Date  
 10-23-18  
 Scale  
 1 in=0.4 mi

Figure  
**11**

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS



- Animus 1 Parcel
- Homeland Area
- Project Site (Grading Limits)
- SBB Occurrence (Arnold, 2004)
- SBB Habitat 1991
- SBB Habitat (Aug. 2012)**
- Sparse Denisty
- Moderate Density
- Ponds
- Rivers/Streams

## SBB Habitat



**Denise Duffy and Associates, Inc.**

Planning and Environmental Consulting

Date  
10-23-2018

Scale  
1 in = 731 ft

Figure

**12**

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



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## **SECTION 4. IMPACT ASSESSMENT**

### **4.1. Direct and Indirect Impacts to Covered Species**

The following section describes the type of take of each covered species that could occur as a result of construction-phase and post-construction/on-going activities. This section also includes a discussion of the impact of each type of take.

#### ***4.1.1. Permanent Impacts***

Permanent impacts include all hardscape and landscape that permanently replace existing vegetation.

#### ***4.1.2. Temporary Impacts***

Temporary impacts include all disturbances associated with the project that are not permanent. All temporarily disturbed areas will be revegetated with native, locally-occurring plant species following construction. Revegetation will be accomplished by hydroseeding. Temporary impacts may result from grading, materials transport and storage, access, staging, vegetation removal, and vehicle and foot traffic. Temporary impacts will occur during the construction window during the dry season and revegetation will occur in the fall of the same year.

#### ***4.1.3. Direct Impacts***

Construction-phase activities associated with the development of the homesite and the driveway have the potential to impact individual CTS and CRLF. This may include direct injury or mortality as a result of vegetation removal, ground disturbance, and construction vehicle traffic.

Potential impacts to CTS and CRLF following construction include the potential for take of individuals on the driveway, as they may be run over at night during rain or heavy fog events when they are likely to be moving aboveground. However, the frequency and timing of traffic on the driveway would be unlikely to result in significant numbers of amphibians killed or injured if any and would have a very low impact on these species. Mortality and/or injury to CTS and CRLF may also result from the occupancy and maintenance of the residence, such as maintenance of the landscaping and residential infrastructure.

#### ***4.1.4. Indirect Impacts***

Construction activities would result in temporary and permanent removal of CTS and CRLF upland habitat and CRLF dispersal habitat. The driveway to the homeland may also act as a barrier to CTS movement if not designed properly.

The Service considers suitable upland aestivation habitat for CTS within two kilometers of known or potential CTS breeding resources as occupied habitat unless protocol-level surveys are conducted with negative results. Therefore, areas of native and non-native grasslands, coyote brush scrub, and oak woodland within the property and driveway are considered moderate to high quality CTS upland habitat. Ruderal areas may also provide upland habitat; however, these areas are mostly compacted and unvegetated and are considered low-quality CTS upland habitat. The existing 0.1-acre paved area is not considered suitable upland habitat for CTS and is not included in the impact calculations. Table 6 presents the area of CTS upland habitat that would be temporarily impacted and permanently lost associated with the project

based on the quality of the habitat. Table 6 also identifies the percentage of the upland habitat present within the property and driveway that would be impacted by the project.

**Table 6. Area of CTS Upland Habitat Impacted**

Upland Habitat Quality	Upland Habitat* Impacted		% Upland Habitat Impacted within Property and Driveway	
	Temp.	Perm.	Temp.	Perm.
High to Moderate	4.7 ac	1.6 ac	2.6%	0.9%
Low	0.1 ac	1.1 ac	0.1%	0.6%
<b>Total</b>	<b>4.8 ac</b>	<b>2.7 ac</b>	<b>2.7%</b>	<b>1.5%</b>
*Please note that the 0.1 acre of developed (paved road) is not considered CTS upland habitat and is not included in the calculations.				

The project will result in the loss of a very small portion of CRLF upland habitat within 100 meters of known breeding ponds, associated with construction of the driveway (Figure 9). However, the homesite and other portions of the driveway may be used by CRLF for dispersal between breeding ponds. Table 7 presents the area of CRLF upland and dispersal habitat that would be temporarily impacted and permanently lost associated with the project. Table 7 also identifies the percentage of the upland and dispersal habitat present within the property and driveway that would be impacted, and the percentage of upland habitat within a one-mile buffer of the proposed project limits that would be impacted.

**Table 7. Area of CRLF Habitat Impacted**

	Upland Habitat* Impacted		Dispersal Habitat Impacted	
	Temp.	Perm.	Temp.	Perm.
<b>Total Impacted</b>	<b>0.4 ac</b>	<b>0.2 ac</b>	<b>4.4 ac</b>	<b>2.6 ac</b>
<b>Total Present within Property and Driveway</b>	<b>2.7 ac</b>		<b>175.5 ac</b>	
<b>% Impacted within Property and Driveway</b>	<b>14.8%</b>	<b>7.4%</b>	<b>2.5%</b>	<b>1.5%</b>
<b>Total Present within Vicinity</b>	<b>74.2 ac</b>		<b>N/A</b>	
<b>% Impacted of Total Present within Vicinity</b>	<b>0.5%</b>	<b>0.3%</b>	<b>N/A</b>	<b>N/A</b>
*Upland habitat includes non-compacted and undeveloped areas 100 meters from the following known CRLF breeding ponds: Salamander, Animus, Pond Dead Pig, and SLP Ponds 1-4 (Figure 9).				

## 4.2. Anticipated Take of Covered Species

The project could result in take of CTS and CRLF within the 7.6 acres where soil disturbance would occur during construction activities. The project could also result in the take of CTS and CRLF following construction as a result of vehicle traffic on the driveway or from the occupancy and maintenance of the residence.

### **4.3. Effects on Critical Habitat**

The property and driveway are located within CRLF critical habitat mapping unit MNT-2. Critical habitat PBF's present within the property include upland habitat within the vicinity of Salamander Pond and dispersal habitat throughout the remainder of the project site and property. Within the project site, 0.6 acre of upland habitat and 7.0 acres of dispersal habitat are present and would be impacted (Please refer to the discussion of CRLF habitat in Section 3.2.2 and 4.1.2). These areas constitute only a small percentage (less than 1%) of the habitat available within the property and the surrounding vicinity. As such, the effect of the project on CRLF critical habitat is very low and the project is unlikely to adversely modify critical habitat.

### **4.4. Cumulative Effects**

The project site and property consist of a portion of occupied habitat for two federally listed species, one of which is also a State listed species. The habitat occupied by local populations of these species includes the project property and the adjacent SLP and PCR. The SLP has been entitled and the extent of development is defined. The development on the SLP includes the preservation of approximately 18,000 acres of open space under easement in perpetuity. In addition, the SLC actively manages habitat occupied by local populations of both species. Like the SLP, the PCR consists of approximately 4,350 acres of open space set aside in perpetuity. In addition, a federal Safe Harbors Agreement, which includes these two species, has been approved and is being implemented on the PCR (MPRPD and Service, 2011).

The greatest cumulative threat to the use and value of the upland habitat for both CTS and CRLF within the proposed conservation easement is encroachment of the grasslands by dense, non-native scrub. This is an on-going trend and process within the region. Approximately two acres of the conservation easement are currently significantly degraded due to the aggressive growth of French broom. The project requires that an Invasive Plant Management Plan be prepared and implemented that improves and maintains habitat function and value for the covered species within the conservation easement. This plan includes an aggressive approach to invasive species removal and management, which will improve and maintain upland habitat for CTS and CRLF. Additionally, this plan includes adaptive management that will allow the most successful management techniques for the site to be utilized. The results of a no-project alternative would be the continued encroachment of the grasslands by scrub, reducing the value of the habitat for CTS significantly. In the worst-case scenario, and likely the result if the property was left alone; eventually the grassland would be completely replaced by scrub, making it unavailable as upland habitat for CTS and degraded for CRLF.

By increasing the amount of permanently conserved upland habitat for CTS and dispersal habitat for CRLF, the project provides beneficial impacts to both species. The net effect of this management is that habitat conditions will be improved and preserved within the conservation easement. Take of a small number of individual CTS and CRLF is outweighed by the management of the conservation easement.

As such, upland habitat for CTS and dispersal habitat for CRLF contiguous with existing conserved habitat would be conserved in perpetuity and the project would result in a cumulatively beneficial effect on these species.

#### **4.5. Anticipated Impacts of the Taking**

Direct construction and maintenance impacts are likely to have a low impact on CTS because it is unlikely that the majority of the population is concentrated within the project site given the amount of available upland habitat within the vicinity; less than 5% of the available CTS upland habitat within the property and driveway would be impacted. Direct construction impacts on CRLF will likely only have a very low impact on CRLF, as very little upland habitat for CRLF is present within the project site and very few individuals are anticipated within these areas.

Loss of CTS upland aestivation habitat would have a low impact on the species as only a small percentage (1.5%) of the available upland habitat within the property would be permanently impacted and additional upland habitat is also present outside of the property. Loss of upland habitat for CRLF would have a low impact on the species as only a small percentage of the available upland habitat surrounding Salamander Pond is within the project site. Loss of dispersal habitat for CRLF would have a very low impact on the species as the homeland and driveway constitute only a small percentage of the dispersal habitat present within the property and surrounding vicinity.

## SECTION 5. CONSERVATION PROGRAM

### 5.1. Approach

The project parcel is a 175.7 acre undeveloped, privately held property located just south of the Carmel River in Monterey County, on the central coast of California. The property is wedged in between, and shares open borders with, the PCRCP and SLP. The SLP is a 20,000 acre privately-held development. However, it is unique in that approximately 18,000 acres of the SLP are conserved and will remain undeveloped in perpetuity. The PCRCP consists of 4,350 acres and will also remain undeveloped in perpetuity.

The property has extraordinary value for conservation, due to its large size, location adjacent to other protected areas, diverse mosaic of ecological communities, and populations of several rare and endangered species. Of particular conservation importance are the 31 acres of native grasslands— unique and diverse communities that provide upland habitat for CTS and dispersal habitat for CRLF. The PCRCP and SLP contain ponds directly adjacent to the property that support populations of these two Threatened amphibian species. Metapopulations of these listed species occur within habitat units that are contiguous beyond the property boundaries.

Currently, the greatest threat to listed species on the property is lack of management. The grassland habitat that these two species require was, to a significant extent, created and maintained by historical grazing over the last 200 years. As much of the native, self-sustaining grasslands and seasonal wetlands have been degraded or destroyed, active grazing has maintained appropriate habitat for these listed species in the absence of a natural fire regime. Without ongoing grazing and active invasive plant control, much of these coastal grasslands have type converted to very dense non-native scrubland dominated by French broom, which does not appear to support the covered species (Figure 6).

The MPRPD has engaged in active grazing, mowing, and invasive plant removal programs at PCRCP to specifically manage for CTS and CRLF. A federal Safe Harbors Agreement has been approved for the PCRCP and is currently being implemented (MPRPD and Service, 2011). The SLC also implements these management actions within the wildlands and openlands at the SLP under multiple conservation easements.

Currently, development is allowed within the 10-acre homeland and the remaining areas on the property are designated as openlands. Implementation of this HCP for the property would decrease the area of developable land within the property by placing otherwise developable lands within the homeland under a conservation easement, thus conserving upland habitat for CTS and dispersal habitat for CRLF contiguous with existing habitat for these species. In addition, the implementation of this HCP would provide for consistent management of contiguous habitat units that support metapopulations common to the properties. Through this process, the amphibian upland and dispersal habitat located on the property can be enhanced, restored, and managed consistently with breeding habitat located on PCRCP and SLP.

Maintenance of grassland for the covered species will require proactive management to address the threats confronting these systems, particularly invasion by non-native plant species. As such, the HCP approach relies on the implementation of an Invasive Plant Management Plan (Appendix F). The plan provides the following content:

- ◆ Biological goals and objectives that identify the desired future condition for the treatment areas.
- ◆ Management strategies and techniques developed based on available scientific information and designed to achieve the biological goals.
- ◆ Monitoring and adaptive management components to evaluate the effects and effectiveness of management, and incorporate new scientific information in order to facilitate long-term success toward the biological goals.

The easement on the openlands surrounding the 10-acre homeland (the Animus Easement) is held by the SLC. The preferred approach would be to have the SLC become an approved land manager by CDFW. The SLC is not currently approved by CDFW to hold easements or manage land; however, they have applied to be approved. The Service finds the SLC to be a qualified easement holder and land manager for the conservation program. In the case that CDFW does not approve the SLC, feasible alternatives include purchasing credits at the Sparling Conservation Bank or in-lieu fee mitigation.

## 5.2. Goals and Objectives

Section 10 of the ESA 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 Service and NOAA Fisheries in 2000, HCPs must establish biological goals and objectives (65 *Federal Register* 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 to the applicant 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 requirements for an application for an ITP under the CESA are described in Section 2081 of the California Fish and Game Code, and the final adopted regulations for implementing Sections 2080 and 2081 require that the impacts of the authorized take are minimized and fully mitigated. The measures must be roughly proportional in extent to the impact of the taking on the species, maintain the applicant’s objectives to the greatest extent possible, and be capable of successful implementation.

The goals and objectives of this HCP are as follows:

- ◆ **Goal 1:** Avoid or minimize the take of covered species via design of the residential development
  - **Objective 1:** Implement design features as outlined in Section 5.4.
- ◆ **Goal 2:** Avoid or minimize the take of covered species during the construction of the homeland and driveway.
  - **Objective 2:** Implement avoidance and minimization measures as outlined in Section 5.5.
- ◆ **Goal 3:** Restore the 4.8 acres of temporary impacts to CTS and CRLF upland habitat and CRLF dispersal habitat.
  - **Objective 3:** The Revegetation Plan shall be implemented for the project as outlined in Section 5.5.

- ◆ **Goal 4:** Avoid or minimize the take of covered species during ongoing residential activities.
  - **Objective 4:** Implement avoidance and minimization measures as outlined in Section 5.6.
- ◆ **Goal 5:** Mitigate for the loss of 1.6 acres of moderate- to high-quality CTS upland habitat and 0.2 acre of CRLF upland habitat at a 3:1 ratio and 1.1 acres of low-quality CTS upland habitat and 2.6 acre of CRLF dispersal habitat at a 1:1 ratio. The mitigation acreage for each species spatially overlaps, resulting in a total of 5.9 acres required for mitigation.
  - **Objective 5:** Place 5.9 acres of otherwise developable land within the homeland under conservation easement for preservation into perpetuity, as outlined in Section 5.7.
  - **Objective 6:** Implement the Invasive Plant Management Plan that improves and maintains habitat function and value for the covered species within the conservation easement, as outlined in Section 5.7.

### **5.3. Success Criteria**

Success criteria to achieve Objectives 1, 2 and 4 will be to document that avoidance and minimization measures have been implemented via monitoring and reporting protocols outlined below in Sections 5.8 and 5.9 below.

Success criteria to achieve Objective 5 will be to document the conservation easement, as described in Section 5.7 below. Specific success criteria to achieve Objectives 3 and 6 are provided within the Revegetation Plan (Appendix E) and the Invasive Plant Management Plan (Appendix F), respectively. Success criteria are based on the collection of field data to be used as indices of success. The indices are measurable and demonstrate a clear relationship between the implementation of mitigation and habitat improvement.

If success criteria are not met, an analysis of the cause(s) of failure shall be prepared and, if determined necessary, remedial action shall be proposed for approval. The permit holder shall be responsible for reasonable funding of the adaptive management actions necessary for successful completion of the mitigation effort. In addition, an adaptive management approach shall be employed which consists of evaluating the monitoring data and modifying the mitigation approach as necessary in order to increase the potential to achieve the stated success criteria (Please refer to Section 5.10).

### **5.4. Measures to Avoid and Minimize Impacts Via Design**

The following design features will be implemented to achieve Goal 1:

1. The residence is designed to reduce take of the covered species to the greatest extent practicable. Design elements considered include; size, barriers to movement and migration, and entrapment. The size of the structures is significantly reduced from what is typical on the SLP and from what was originally proposed in order to minimize impacts to covered species. The length and placement of retaining walls were evaluated and modified to reduce barriers to dispersal and migration to minimize impacts to covered species. Additionally, curbs were removed from the original driveway design to reduce barriers to dispersal and minimize impacts to covered species.

2. Seasonal windows for construction have been incorporated into the project to reduce impacts to covered species to the greatest extent practicable. All ground disturbing activities will be restricted to a window of June 1 to October 15.

## **5.5. Measures to Avoid and Minimize Impacts During Construction**

The following measures will be implemented to achieve Goals 2 and 3:

1. A Service and CDFW-approved biologist would survey the project site no more than 48 hours before the onset of work activities. If any life stage of CRLF or CTS are found and these individuals are likely to be killed or injured by work activities, the approved biologist would be allowed sufficient time to move them from the site before work begins. Any CTS or CRLF will be allowed to vacate the worksite on its own accord under the observation of a Service-approved biologist. If CTS or CRLF do not relocate on their own, or if they are in harm's way, they will be relocated out of harm's way to nearby suitable habitat, similar to that in which it was found, and outside the project area. The Service and CDFW-approved biologist will coordinate with the Service on the relocation site prior to the capture of any CTS or CRLF. CTS and CRLF will not be relocated except by a Service and CDFW-approved biologist. The Declining Amphibian Task Force Fieldwork Code of Practice will be implemented for all amphibian relocation activities.
  - a. The Service and CDFW-approved biologist will relocate any CTS found within the project footprint to an active rodent burrow system located no more than 300 feet outside of the project area, unless otherwise approved by CDFW and the Service. The individual will be handled with clean and moistened hands. During relocation they will be placed in a clean, covered plastic container with a non-cellulose moistened sponge. Relocations will take place immediately; individuals will not be stored for lengthy periods or in heated areas. The relocation container will be kept out of direct sunlight. The relocated CTS will be monitored until it enters a burrow and is concealed underground. Relocation areas will be identified by the Service and CDFW-approved biologist based upon best suitable habitat available. The Service and CDFW-approved biologist will document both locations by photographs and GPS positions. The CTS will be photographed and measured (snout-vent) for identification purposes prior to relocation. All documentation will be provided to the Service and CDFW within 24 hours of relocation.
  - b. Pre-construction Burrow Surveys: Rodent burrows will be avoided to the maximum extent possible. Burrows that cannot be avoided and fall within the project right-of-way, but not subject to ground disturbing activities (e.g., grading, disking, excavating, etc.) should be protected using steel plates or plywood to avoid collapsing the burrows. Plates and plywood should only be used on burrows that may be run over by equipment. Plywood should only be used for lighter equipment such as pickup trucks; plates should be used for all heavier construction equipment. Plates and plywood will not be left in place for: 1) more than 48 hours, 2) when a significant rain event is forecasted within 24 hours, or 3) if work is scheduled to cease for consecutive days.
  - c. Burrow excavation should only occur on burrows that are located within areas that are subject to ground disturbing activities. The applicant will retain a Service and CDFW-approved biologist(s) (i.e., persons in possession of valid recovery permits for CTS) to

conduct burrow excavation. The biologist(s) will be allowed sufficient time to excavate burrows and relocate CTS to a suitable relocation site. The Service and CDFW-approved biologist(s) will scope and excavate small mammal burrows within the impact area prior to the initiation of ground disturbing activities. The Service and CDFW-approved biologist(s) will utilize a fiber optic scope or similar device to scope the burrows to determine if CTS are present; burrow excavation will proceed after the burrow has been scoped. If the Service and CDFW-approved biologist(s) is unable to scope the entire length of the burrow, the burrow will be scoped and excavated in sections. For example, if the scope can only reach the first three feet of a burrow, excavation will only occur along those three feet. The biologist will then scope the next three feet before that is excavated and so on and so forth until the end of the burrow is reached or the burrow leaves the area subject to ground disturbance. Burrow excavation may be performed using hand tools or via gentle excavation using construction equipment, under the direct supervision of a Service and CDFW-approved biologist, until it is certain that the burrows are unoccupied or the burrow navigates to areas that are not subject to ground disturbing activities.

- d. The Service-approved biologist will relocate any CRLF found within the project footprint to the nearby ponds located on PCRCP, if agreed-upon with the property owner. If access to the ponds is not granted, or if the Service-approved biologist determines that relocating the frog to these ponds would not benefit it, CRLF may also be relocated to areas of protected habitat (such as dense, moist vegetation or downed logs). The individual will be handled with clean and moistened hands. During relocation they will be placed in a clean, covered plastic container with a non-cellulose moistened sponge. Relocations will take place immediately; individuals will not be stored for lengthy periods or in heated areas. The relocation container will be kept out of direct sunlight. The relocated CRLF will be monitored until it enters cover in the habitat. Relocation areas will be identified by the Service-approved biologist based upon best suitable habitat available. The Service-approved biologist will document both locations by photographs and GPS positions. The CRLF will be photographed and measured (snout-vent) for identification purposes prior to relocation. All documentation will be provided to the Service within 24 hours of relocation.
2. A Service and CDFW-approved biologist will monitor initial ground disturbing construction activity for a sufficient amount of time to train an individual to act as the on-site construction monitor. This would typically take two days. The determination of when the construction monitor is sufficiently trained to act independently shall be made by the qualified biologist and may be less or more than two days. The construction monitor will have attended the training described below. Both the Service and CDFW-approved biologist and the construction monitor will have the authority to stop and/or redirect project activities to ensure protection of resources and compliance with all environmental permits and conditions of the project. The construction monitor is not authorized to capture or handle CTS or CRLF; only the Service and CDFW-approved biologist is authorized to do so. The construction monitor will complete a daily log summarizing activities and environmental compliance.

3. Before ground disturbing work activities begin each day, the construction monitor will conduct a pre-construction survey and inspect under construction equipment and materials to look for CTS and CRLF. If a CTS or CRLF is found during these checks or during construction, the construction monitor will halt work that may affect the animal until the Service and CDFW-approved biologist can move it out of harm's way. The Service and CDFW-approved biologist will notify the Service and/or CDFW of any CTS or CRLF encounters within 48 hours.
4. A Service and CDFW-approved biologist will train all project staff regarding habitat sensitivity, identification of special-status species, and required practices before the start of construction. The training will include a brief review of the biology of the covered species, the general measures that are being implemented to conserve these species as they relate to the project, guidelines to avoid impacts to these species during the construction period, the penalties for non-compliance, and the boundaries of the project area. A fact sheet or other supporting materials containing this information will be prepared and distributed. Upon completion of training, employees will sign a form stating that they attended the training and understand all the conservation and protection measures. Educational programs will be conducted for new personnel before they join construction activities. The crew foreman will be responsible for ensuring that all crew members comply with the guidelines.
5. Work will be postponed if chance of rain is greater than 70% based on the NOAA National Weather Service forecast or within 48 hours following a rain event greater than 0.1 inch. If an unpredicted rainfall event commences while construction activities are in progress, the applicant will suspend all work activities and equipment and personnel will be demobilized. Equipment may be moved to a designated staging area until work is allowed to resume. The designated area will be a hard surface devoid of small mammal burrows. A Service and CDFW-approved biologist would survey the project site immediately before resuming project activities.
6. The project site and driveway will be closed to all construction activities and traffic one half hour before sunset and will not begin prior to one half hour after sunrise.
7. All construction-related vegetative debris (e.g., larger brush, tree limbs, tree trunks) will be hauled offsite daily for disposal.
8. To prevent inadvertent entrapment of CTS and CRLF during construction, all excavated, steep-walled holes or trenches more than two (2) feet deep will be covered at the close of each working day with plywood or similar materials. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If holes or trenches are too large to be covered, the construction crew will place adequate means of escape (earthen ramps not more than 2:1 slope, wooden boards, etc.) to allow animals to exit.
9. During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.

10. All refueling, maintenance, and staging of equipment and vehicles will occur at least 100 feet from water bodies and in a location from where a spill would not drain directly toward aquatic habitat (e.g., on a slope that drains away from the water). The construction monitor will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the contractor will ensure that a plan is in place for prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
11. Only tightly woven fiber netting or similar material may be used for erosion control at the project site. Coconut coir matting is an acceptable erosion control material. No plastic mono-filament matting will be used for erosion control, as this material may ensnare wildlife, including CTS and CRLF.
12. The Revegetation Plan shall be implemented for the project (Appendix E). The Revegetation Plan includes, but is not limited to, the following:
  - ◆ Planting and/or seeding of only locally-occurring native species collected from the project vicinity or acquired from local suppliers;
  - ◆ A detailed description of revegetation areas, sources for plant material, and seeding and planting specifications;
  - ◆ Procedures to control invasive plant species;
  - ◆ Provisions to ensure compliance with the requirements of the plan; and
  - ◆ A monitoring program that describes annual monitoring efforts which incorporate success criteria and contingency plans if success criteria are not met.

## **5.6. Measures to Avoid and Minimize Impacts During Residential Occupancy**

The following measures will be implemented to achieve Goal 4:

1. No rodenticide will be used on the property as this would result in take of any amphibians that come in contact with the poison.
2. All mowing will be restricted to a window of June 1 to October 15, except within 50-feet of the residence. Within 50-feet of the residence, where mowing year-round is desired, mowing shall not occur within 24 hours of measurable rain (0.25 of an inch) or if rain is anticipated within the next 24 hours (50% chance or greater).
3. A Service and CDFW-approved biologist will conduct long-term compliance monitoring. The biologist will visit the site annually in the month of September for the duration of the HCP to review the land use and determine if it is consistent with the terms and conditions of the HCP. A monitoring report will be prepared, as described in Section 5.9 of this HCP, and submitted to the Service and CDFW no more than 30 days after the site visit.

## **5.7. Measures to Mitigate Unavoidable Impacts**

The following measure will be implemented to achieve Goal 5:

1. A conservation easement shall be prepared that precludes development within 5.9 acres of otherwise developable land within the designated 10-acre homeland.
2. The Invasive Plant Management Plan shall be implemented within the conservation easement to improve and maintain habitat function and value for the covered species (Appendix F). The Invasive Plant Management Plan targets the removal and reduction of non-native plant species within the conservation easement, particularly French broom.

## **5.8. Monitoring**

Monitoring tracks compliance with the terms and conditions of the HCP and ITPs. As outlined in Section 5.5, a Service and CDFW-approved biologist will train all project staff regarding habitat sensitivity, identification of covered species, and required practices before the start of construction, and document contractor attendance. The Service and CDFW-approved biologist will monitor initial ground disturbing construction activity for a sufficient amount of time to train an individual to act as the on-site construction monitor. The construction monitor will have attended the training described above. Both the Service and CDFW-approved biologist and the construction monitor will have the authority to stop and/or redirect project activities to ensure protection of resources and compliance with all environmental permits and conditions of the project. The construction monitor will complete a daily log summarizing activities and environmental compliance.

Following construction, as outlined in Section 5.6, a Service and CDFW-approved biologist will conduct long-term compliance monitoring to review the land use and determine if it is consistent with the terms and conditions of the HCP including an evaluation of any changed circumstances, as outlined in Section 6.1.1. Specific monitoring data will also be collected via monitoring protocols provided in the proposed Revegetation and Invasive Plant Management Plans, and shall be directly linked to the established success criteria outlined for the project (Appendices E and F).

## **5.9. Reporting**

A post-construction report will be provided to the Service and CDFW and shall include:

- ◆ Brief summary or list of project activities accomplished during construction (e.g. this includes development/construction activities and other covered activities).
- ◆ Project impacts (e.g. number of acres graded, number of buildings constructed, etc.).
- ◆ Description of any take that occurred for each covered species (includes cause of take, form of take, take amount, location of take and time of day, and deposition of dead or injured individuals).
- ◆ Brief description of how the conservation strategy was implemented.
- ◆ Compliance monitoring results.
- ◆ Description of any changed or unforeseen circumstances that occurred and how they were dealt with.

Long-term compliance monitoring reports will be provided to the Service and CDFW within 30 days of each annual monitoring event, no later than November 1<sup>st</sup>. Annual reports will include, but are not limited to:

- ◆ Brief summary or list of project activities accomplished during the reporting year (e.g. maintenance activities and other covered activities);
- ◆ Project impacts (e.g. number of acres grazed);
- ◆ Description of any take that occurred for each covered species (includes cause of take, form of take, take amount, location of take and time of day, and deposition of dead or injured individuals);
- ◆ Brief description of how the conservation strategy was implemented;
- ◆ Monitoring results and survey information;
- ◆ Description of circumstances that made adaptive management necessary and how it was implemented, including a table of the cumulative totals by reporting period, all adaptive management changes to the HCP, and a very brief summary of the actions;
- ◆ Description of any changed or unforeseen circumstances that occurred and how they were dealt with (please refer to Section 6.1 below);
- ◆ Identification of any discoveries of newly-listed or other currently-listed species within the project site, including any discovery of the obligate plant host species (dune buckwheat) for SBB (please refer to Section 6.1 below);
- ◆ Funding expenditures, balance, and accrual; and
- ◆ Description of any minor or major amendments.

Specific monitoring reports will also be prepared via reporting protocols provided in the Revegetation and Invasive Plant Management Plans (Appendices E and F).

## **5.10. Adaptive Management**

Adaptive management is the process by which the HCP may be adjusted to reflect new information based on the results of monitoring. These adjustments may occur as a result of continuing research on the species or evaluation of the monitoring results and the effectiveness of the minimization and mitigation measures contained in the HCP. Adaptive management for this HCP may include:

- ◆ Changes in duration or frequency of specific monitoring actions or reporting protocols,
- ◆ Changes to the Revegetation Plan, such as planting live plants, changes to the planting palette, irrigation, and weeding schedules, and/or
- ◆ Changes to the Invasive Plant Management Plan, such as timing, methods of removal, targeting additional species, etc.

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## **SECTION 6. PLAN IMPLEMENTATION**

### **6.1. Changed and Unforeseen/Extraordinary Circumstances**

Section 10 regulations [(69 *Federal Register* 71723, December 10, 2004 as codified in 50 C.F.R., 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 or extraordinary circumstances that may arise during the implementation of the HCP. “Unforeseen” or “extraordinary” circumstances are defined by 50 CFR 17.3 as changes in circumstances surrounding an HCP that were not or could not be anticipated by HCP participants and the Service, that result in a substantial and adverse change in the status of a covered species. This does not include “changed circumstances” which are not uncommon during the course of an HCP and can be reasonably anticipated and planned for (e.g. listing of a new species, modifications in a project as described in the original HCP, or modifications of the HCP’s monitoring program). Changed circumstances are defined in 50 CFR 17.3 as changes in circumstances affecting a species or geographic area covered by an HCP that can reasonably be anticipated by plan developers and the Service and for which contingency plans can be prepared (e.g., the new listing of species, a fire, or other natural catastrophic event in areas prone to such event).

In addition, Department of Interior’s “No Surprises” Policy defines the obligations of the Permittee and the Service, stating that if unforeseen circumstances occur during the life of an HCP, the Service will not require additional lands, funds, or restrictions on lands or other natural resources released for development or use from any Permittee who in good faith is adequately implementing or has implemented an approved HCP. Consequently, the “No Surprises” Policy provides that if additional mitigation measures are deemed necessary to provide for the conservation of a species that was otherwise adequately covered under the terms of a properly functioning HCP, the obligation will not rest with the HCP Permittee.

#### **6.1.1. Changed Circumstances**

If additional conservation and mitigation measures are deemed necessary to respond to changed circumstances, and these additional measures were already provided for in the plan’s operating conservation program (e.g., the conservation management activities or mitigation measures expressly agreed to in the HCP), then the Permittee will implement those measures as specified in the plan. However, if additional conservation and mitigation measures are deemed necessary to respond to changed circumstances, and such measures were not provided for in the plan’s operating conservation program, the Service will not require these additional measures absent the consent of the Permittee, provided that the HCP is being “properly implemented” and the species in question is adequately covered (properly implemented means the commitments and the provisions of the HCP have been or are being fully implemented).

Long-term compliance monitoring, as monitoring outlined in Sections 5.6 and 5.8, would include an evaluation of any changed circumstances. The evaluation would include both the project site and conservation easement.

#### **Fire**

It is possible that fire could occur on the property. While a significant fire might negatively impact the covered species on the property and/or within the region during the event, fire would very like have a

beneficial effect in the moderate to long term. Fire would reduce vegetation, halt or reduce conversion of coastal prairie to scrubland, and favor perennial and native vegetation, all important elements of good quality CTS habitat.

CRLF would likely not benefit as much from a reduction in vegetation, especially within breeding habitats. However, it is unlikely that a fire would significantly reduce the local population or preclude on-going use of both upland and breeding habitat subsequent to the fire.

Although a fire would likely improve habitat conditions for the covered species, it could also result in infestation or spread of invasive plant species, which could degrade the habitat for covered species. In the event of a fire within the project site, the long-term compliance monitoring outlined in Sections 5.6 and 5.8 shall include an evaluation of any burned areas for infestation by invasive plant species. If an infestation is documented, measures shall be implemented, as identified in the Invasive Plant Management Plan, to manage the infestation.

### **Decline of Species Abundance or Absence**

There is the potential that breeding habitat for CRLF and CTS would become degraded or absent within properties adjacent to the project site. The property does not contain breeding habitat for these two species and the use of upland areas by these species on the property is wholly reliant of the presence of functioning breeding habitat off-site.

There is no ability to affect management or improvement of habitat not owned by the Applicants. There is no responsibility to mitigate for effects on properties the Applicants do not own or control. No additional mitigation is proposed in the case of decline in abundance or absence of the covered species resulting from loss of habitat on adjacent properties.

### **Newly Listed Species**

If a new species that is not covered by the HCP, but that may be affected by activities covered by the HCP, is listed under the ESA or CESA during the term of the ITPs, the ITP will be re-evaluated by the Service and/or CDFW and the HCP covered activities may be modified, as necessary, to ensure that the activities covered under the HCP are not likely to jeopardize a population of the newly listed species or adversely modify any newly designated critical habitat. The Permittee shall implement the modifications to the HCP covered activities identified by the Service and/or CDFW as necessary to avoid the likelihood of jeopardy of the newly listed species or adverse modification of newly designated critical habitat. The Permittee shall continue to implement such modifications until such time as the Permittee has applied for and the Service and/or CDFW has approved an amendment of the ITP, in accordance with applicable statutory and regulatory requirements, to cover the newly listed species or until the Service and/or CDFW notifies the Permittee in writing that the modifications to the HCP covered activities are no longer required to avoid the likelihood of jeopardy of the newly listed species or adverse modification of newly designated critical habitat.

It is not anticipated that a new species with the potential to be impacted by the project would be listed or new Critical Habitat be designated that includes the property during the term of the HCP. No additional mitigation is proposed as the impact is unlikely and appropriate mitigation is subjective.

### **Discovery of Other Currently-Listed Species within the Project Site**

If one or more federally or state listed species other than the covered species are identified within the project area of impact (i.e. the grading limits) or the conservation easement, the applicant will cease any project activities that would result in the incidental take of the newly discovered species, including management activities within the established conservation easement, and apply for a permit amendment. This would include SBB and its obligate plant host species (dune buckwheat), which are known to occur within the property but were not identified within the project site (see Section 3.3 above).

It is highly unlikely based on the significant biological survey work conducted over the last two decades within the vicinity of the project that a new currently listed species would be discovered within the project site. As detailed in Table 1, not only has the project site been thoroughly evaluated, but the two adjoining properties, which total more than 35,000 acres, consist of large swaths of conservation land that has been the subject of sophisticated conservation studies and biological surveys. The result is a plethora of resources and references to incorporate into the covered species analysis. A careful and deliberate assessment was conducted utilizing the large data set and leveraging the intimate and extensive knowledge of biologists and land managers involved. No additional mitigation is proposed at this time as the impact is highly unlikely and the applicant has not requested incidental take coverage for any other currently-listed species.

#### ***6.1.2. Unforeseen/Extraordinary Circumstances***

In the case of an unforeseen/extraordinary event, the Permittee shall immediately notify the Service and CDFW staff who have functioned as the principal contacts for the proposed action. In determining whether such an event constitutes an unforeseen/extraordinary circumstance, the Service and CDFW shall 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 HCP.
- ◆ Percentage of the range conserved by the HCP.
- ◆ Ecological significance of the portion of the range affected by the HCP.
- ◆ Level of knowledge about the affected species and the degree to specificity of the species' conservation program under the HCP.
- ◆ Whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the affected species in the wild.

If the Service and/or CDFW determine that additional conservation and mitigation measures are necessary to respond to the unforeseen/extraordinary circumstances where the HCP is being properly implemented, the additional measures required of the Permittee must be as close as possible to the terms of the original HCP and must be limited to modifications within any conserved habitat or area or to adjustments within lands or waters that are already set aside in the HCP's operating conservation program. Additional conservation and mitigation measures shall involve the commitment of additional land or financial compensation or restrictions of the use of land or other natural resources otherwise available for development or use under the original terms of the HCP only with the consent of the Permittee.

## **6.2. Amendments**

### **6.2.1. Minor Amendments**

Minor amendments are changes that do not affect the scope of the HCP's impact and conservation strategy, change amount of take, add new species, or change significantly the boundaries of the HCP. Minor amendments are accomplished through an exchange of letters between the ITP holder and the Service and CDFW's Field Offices. Examples of minor amendments to this HCP include:

- ◆ Corrections to spelling or grammatical errors that do not change the intended meaning.
- ◆ Corrections to maps or figures to correct errors.
- ◆ Minor changes to surveying, monitoring, or reporting protocols.

### **6.2.2. Major Amendments**

Major amendments to the HCP and ITPs are changes that do affect the scope of the HCP and conservation strategy, increase the amount of take, add new species, and change significantly the boundaries of the HCP. Major amendments often require amendments to the Service and CDFW's decision documents, including the NEPA and CEQA documents, Biological Opinion, and findings and recommendations document. Major amendments will often require additional public review and comment.

## **6.3. Suspension/Revocation**

The Service or CDFW may suspend or revoke their respective ITPs if the Permittee fails to implement the HCP in accordance with the terms and conditions of the ITPs or if suspension or revocation is otherwise required by law. Suspension or revocation of the ITPs, in whole or in part, by the Service and or CDFW shall be in accordance with 50 CFR 13.27-29, 17.32 (b)(8) and Fish and Game Code.

## **6.4. Permit Renewal**

Upon expiration, the ITPs may be renewed without the issuance of a new permit, provided that the permit is renewable, and that biological circumstances and other pertinent factors affecting covered species are not significantly different than those described in the original HCP. To renew the ITPs, the Permittee shall submit to the Service and CDFW, in writing:

- ◆ A request to renew the permit, referencing to the original permit number.
- ◆ Certification that all statements and information provided in the original HCP and permit application, together with any approved HCP amendments, are still true and correct, and inclusion of a list of changes.
- ◆ A description of any take that has occurred under the existing permit.
- ◆ A description of any portions of the project still to be completed, if applicable, or what activities under the original permit the renewal is intended to cover.
- ◆ Evidence that annual reports have been timely submitted.

If the Service and CDFW concur with the information provided in the request, it shall renew the ITP consistent with permit renewal procedures required by Federal regulation (50 CFR 13.21-13.22) and Fish

and Game Code. If the Permittee files a renewal request and the request is on file with the issuing Service and CDFW offices at least 30 days prior to the permit expiration, the ITP shall remain valid while the renewal is being processed, provided the existing ITP is renewable. However, the Permittee may not take covered species beyond the quantity authorized by the original ITP or change the scope of the HCP. If the Permittee fails to file a renewal request within 30 days prior to ITP expiration, the ITP shall become invalid upon expiration.

The Permittee may desire to renew the ITPs in order to preclude prosecution under Section 9 of the ESA or Fish and Game Code if take were to occur subsequent to the expiration of the ITPs. It is possible that take could occur incidental to otherwise approved, allowable, and lawful activities such as maintenance of vegetation or other previously covered actions.

## **6.5. Permit Transfer**

In the event of a sale or transfer of ownership of the property during the life of the ITPs, the following will be submitted to the Service and CDFW by the new owner(s):

- ◆ A new ITP application.
- ◆ Permit fee.
- ◆ Written documentation providing assurances pursuant to 50 CFR 13.25 (b)(2) and Fish and Game Code that the new owner will provide sufficient funding for the HCP and will implement the relevant terms and conditions of the permit, including any outstanding minimization and mitigation.

The new owner(s) will commit to all requirements regarding the take authorization and mitigation obligations of this HCP unless otherwise specified in writing and agreed to in advance by the Service and CDFW.

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## SECTION 7. FUNDING

### 7.1. Cost of HCP Implementation

Costs to implement the conservation strategy described in this HCP are listed in Table 8.

*Table 8. Costs to Implement Conservation Strategy*

Item/Activity	One-Time Cost	Re-occurring Costs	Total (10 years)
<b>Conservation Strategy</b>			
Biological Training	\$1,500		\$1,500
Implementation of Revegetation Plan	\$18,000		\$18,000
Implementation of Invasive Plant Management Plan	\$8,000		\$8,000
Maintenance of Revegetation and Invasive Plant Management Plans		\$2,500 x 10	\$25,000
<i>Subtotal</i>			<i>\$50,500</i>
<b>Monitoring</b>			
Construction Phase Monitoring	\$18,000		\$18,000
Long-Term Monitoring		\$2,000 x 10	\$20,000
<i>Subtotal</i>			<i>\$38,000</i>
<b>Changed Circumstances</b>			
Changed Circumstances	\$10,000		\$10,000
<i>Subtotal</i>			<i>\$10,000</i>
<b>Reporting</b>			
Construction Phase Reporting	\$4,000		\$4,000
Long-Term Compliance Monitoring Annual Reporting		\$1,500 x 10	\$15,000
<i>Subtotal</i>			<i>\$19,000</i>
<b>GRAND SUBTOTAL</b>		<b>\$59,500</b>	<b>\$6,000 x 10</b>
<b>GRAND TOTAL</b>			<b>\$119,500</b>

### 7.2. Funding Source

The Applicant will pay for all costs associated with implementing the HCP (Please refer to Section 7.1).

### 7.3. Funding Mechanism and Management

An endowment to fund compensatory mitigation and management activities will be created that meets Government Code Sections 65965-65968 of California state law.

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## **SECTION 8. ALTERNATIVES ANALYZED**

Section 10(a)(2)(A)(iii) of the ESA, as amended, [and 50 CFR 17.22(b)(1)(iii) and 17.32(b)(1)(iii)] requires that alternatives to the taking of species be considered and reasons why such alternatives are not implemented be discussed.

### **8.1. Alternative 1: No Action Alternative**

The No Action Alternative means that an HCP would not be prepared, and ITPs would not be issued. This also means current conditions and activities that will not cause take of federal or state listed species could continue. This alternative would preclude the development of any residential structures or uses on the legal lot of record. This alternative does not meet the goals and objectives of the project.

### **8.2. Alternative 2: Larger Development**

The Larger Development Alternative would include construction of a larger residential structure, accessory buildings, and/or hardscape features within the homeland, totaling up to the allowed 10.0 acres. As such, potential impacts to CTS, CRLF, and their habitats would be greater than under the proposed project. An HCP would still be prepared and ITPs would be issued; however, the mitigation strategy would not include preservation of otherwise developable land within the homeland. It is likely that off-site mitigation would be necessary as the remainder of the property is preserved under the Animus Easement, which would not provide benefit to the local population of CTS and CRLF within the vicinity.

### **8.3. Alternative 3: Smaller Development**

The Smaller Development Alternative would include construction of a smaller residential structure, accessory buildings, and/or hardscape features within the homeland. As such, potential impacts to CTS, CRLF, and their habitats would be less than under the proposed project. An HCP would still be prepared, and ITPs would be issued, and while the mitigation strategy would still include preservation of otherwise developable land within the homeland, it would be less than under the proposed project. The original proposed project was significantly larger. The project proponent has coordinated with the SLC and a qualified team of biologists to modify and reduce the project to the smallest size necessary to meet the minimum goals and objectives in order to reduce impacts to covered species and other biological resources, such as native grassland. Any further reduction in project size would not meet the goals and objectives of the project.

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## SECTION 9. REFERENCES

- Anderson, R. 2013. *Report for Amphibian Management and Monitoring at Palo Corona Regional Park, Garland Ranch Regional Park, and Frog Pond Wetland Preserve, Monterey County, California.*
- Anderson, R. 2014. *Report for Monterey Peninsula Regional Park District, Amphibian Management and Monitoring at Palo Corona Regional Park, Garland Ranch Regional Park, and Frog Pond Wetland Preserve, Monterey County, California.*
- Arnold, R. A. 2003. *Surveys for the Endangered Smith's Blue Butterfly and Habitat Characteristics of its Actual and Potential Buckwheat Food Plants at Rancho San Carlos in the Northern Santa Lucia Mountains of Monterey County, California.*
- Arnold, R. A. 2004. *2004 Monitoring Report for the Endangered Smith's Blue Butterfly and its Habitat at Rancho San Carlos.*
- Bulger, J. B., N. J. Scott Jr., and R. B. Seymour. 2003. Terrestrial activity and conservation of adult California red-legged frog *Rana aurora draytonii* in coastal forests and grasslands. *Biological Conservation*, Vol 110. Pp. 85-95.
- California Department of Fish and Wildlife (CDFW). 2018. California Natural Diversity Data Base Rare Find Report (July, 2018).
- Cleary Consultants, Inc. 1994. Geological and Geotechnical Investigation Vesting Tentative Map Submittal, Rancho San Carlos, Monterey County, California.
- DD&A. 2008. Protocol-level California Tiger Salamander Survey Report for the Santa Lucia Preserve, Monterey County, California.
- DD&A. 2012. Smith's Blue Butterfly Habitat Survey Results for the Malcolm Property Project (Letter to Denise Malcolm 9-21-12)
- DD&A. 2013a. California Tiger Salamander Survey Results at the Malcolm Property and Adjacent Palo Corona Regional Park – 2011-2013
- DD&A. 2013b. 2013 Stock-Pond Survey Report for the Santa Lucia Preserve, Monterey County, California. Technical Document: Santa Lucia Conservancy.
- DD&A. 2018. Animus 1 Biological Resources Report.
- Fellers, G. M. and P. M. Kleeman. 2007. California Red-legged Frog (*Rana draytonii*) Movement and Habitat Use: Implications for Conservation. *Journal of Herpetology*. Vol 41(2): Pp. 276-286.
- Hemingway, V. and A. D'Amore. 2008. Final report for amphibian management and monitoring at Palo Corona Regional Park, Monterey County, Ca. Technical Document: Monterey Peninsula Regional Park District.

- Jennings, M. R. and M. P. Hayes. 1986. Decline of ranid frog species in western North America: are bullfrogs (*Rana catesbeiana*) responsible? *Journal of Herpetology*, Vol. 20 (4). Pp. 490-509.
- Jennings, M.R. and M.P. Hayes. 1988. Habitat correlates of distribution of the California red-legged frog (*Rana draytonii*) and the foothill yellow-legged frog (*Rana boylei*): implications for management. *Proceedings from Management of Amphibians, Reptiles and Small Mammals in North America Symposium 1988*.
- Jennings, M. R. and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California. Final report to the California Department of Fish and Game, Inland Fisheries Division. 255 pp.
- Jennings, M.R. and M.P. Hayes, and D.C. Holland. 1993. A petition to the US fish and wildlife service to place the California red-legged frog and the Western pond turtle (*Clemmys marmorata*) on the list of endangered and threatened wildlife and plants.
- Jones and Stokes Associates, Inc. 1995. Santa Lucia Preserve Project Final Environmental Impact Report.
- Jones and Stokes Associates. 1997. County of Monterey Santa Lucia Preserve Addendum to EIR (No. 94-005).
- Larson, J. and Z. Lunder. 2007. Palo Corona Regional Park Fire Management Plan.
- Loredo et al, 1996. Habitat use and migration behavior of the California tiger salamander. *Journal of Herpetology*, Vol. 30(2). Pp. 282-285.
- McGraw, J. 2007. Grassland Management Plan for Palo Corona Regional Park.
- Monterey Peninsula Regional Park District and U.S. Fish and Wildlife Service. 2011. Safe Harbor Agreement for California Red-Legged Frog, California Tiger Salamander, Smith's Blue Butterfly, and Yadon's Piperia, at Palo Corona Regional Park, Monterey County, California.
- Moyle, P.B. 1973. Effects of introduced bullfrogs, *Rana catesbeiana*, on the native frogs of the San Joaquin Valley, California. *Copeia* 1973. Pp. 18-22.
- National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). 2006. Endangered and Threatened Species; Final Listing Determinations for 10 Distinct Population Segments of West Coast Steelhead; Final Rule. *Federal Register*, Vol. 71(3). Pp. 833-862.
- Orloff, S. 2007. Migratory Movements of California Tiger Salamander in Upland Habitat – A Five-Year Study, Pittsburg, California. Report prepared for Bailey Estates LLC. 47 pp.
- PMC. 2003. Potrero Area Subdivision Supplemental Environmental Impact Report.
- Rathbun, G.B., M.R. Jennings, T.G. Murphey, and N.R. Siepel. 1993. Status and ecology of sensitive aquatic vertebrates in lower San Simeon and Pico Creeks, San Luis Obispo County, California. Unpublished report, National Ecology Research Center, Piedras Blancas Research Station, San Simeon, California. 103 pp.

- Searcy, C.A. and H.B. Shaffer. 2008. Calculating Biologically Accurate Mitigation Insights from the California Tiger Salamander. *Conservation Biology*, Volume 22, No. 4, pp. 997-1005.
- Stebbins, R. C. 1972. *California Amphibians and Reptiles*. University of California Press, Berkeley. 152 pp.
- Stebbins, R.C. 2003. *Western reptiles and amphibians*, 3<sup>rd</sup> edition. Houghton Mifflin Company, New York, NY. 533 pp.
- Trenham, P.C. and H.B. Shaffer. 2005. Amphibian upland habitat use and its consequences for population viability. *Ecological Applications* 15:1158-1168.
- U.S. Department of Agriculture – Natural Resources Conservation Service. 2003. Soil Survey Geographic (SSURGO) Database.
- United States Fish and Wildlife Service (Service). 1976. Determination That Six Species of Butterflies are Endangered Species; 41 FR 22041-22044 (Lotis blue, *Lycaeides argyrognomon lotis*; El Segundo blue, *Shijimiaeoides battoides allyni*; Smith's blue, *Shijimiaeoides enoptes smithi*; Mission blue, *Icaricia icarioides missionensis*; San Bruno elfin, *Callophrys mossi bayensis*; Lange's metalmark, *Apodemia mormo langei*). *Federal Register*, Vol. 41(106). Pp. 22041-22044.
- Service. 1996. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the California Red-legged Frog; Final Rule. *Federal Register*, Vol. 61(101). Pp. 25813-25833.
- Service. 2000. Notice of Availability of a Final Addendum to the Handbook for Habitat Conservation Planning and Incidental Take Permitting Process. *Federal Register*, Vol. 65(106). Pp. 35242-35257.
- Service. 2004a. Endangered and threatened wildlife and plants; Determination of threatened status for the California Tiger Salamander; and special rule exemption for existing routine ranching activities; Final rule. *Federal Register*, Vol. 69(149). Pp. 47211-47248.
- Service. 2004b. Endangered Species Act Incidental Take Permit Revocation Regulations; Final Rule. *Federal Register*, Vol. 69 (237). Pp. 71723-71731.
- Service. 2005. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California Tiger Salamander; Central Population; Final Rule. *Federal Register*, Vol. 70(162). Pp 49379-49458.
- Service. 2006. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California Red-legged Frog and Special Rule Exemption Associated with Final Listing for Existing Routine Ranching Activities; Final rule. *Federal Register*, Vol. 71(71). Pp. 19244-19292.
- Service. 2010. Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the California Red-legged Frog; Final rule. *Federal Register*, Vol. 75(51). Pp. 12816-12959.
- Service. 2018. IPaC Resource List. Available online at <https://ecos.fws.gov/ipac/>

U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. 2003. Interim guidance on site assessment and field surveys for determining presence of a negative finding of the California tiger salamander. Available online at:

[http://www.fws.gov/sacramento/es/documents/cts\\_survey\\_protocol.PDF](http://www.fws.gov/sacramento/es/documents/cts_survey_protocol.PDF)

# **Appendix A.**

Animus 1 Biological Resources Report

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# ANIMUS 1 BIOLOGICAL RESOURCES REPORT



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**AUGUST 2018**

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## **INTRODUCTION**

DENISE DUFFY & ASSOCIATES, Inc. (DD&A) was contracted by Dris Uptis to prepare a biological resources report for the Animus 1 Project (project). The project is located within the Coastal Zone at 12 Rancho San Carlo Road in Monterey County, California (Figures 1 and 2). The project consists of the development a single-family residential home, a guest house, and improvement of an existing driveway (Figure 3). The residential development and most of the driveway improvements are located on assessor's parcel (APN) 157-131-002, or "Animus 1." Portions of the driveway improvements will occur on adjacent parcels (APN 157-131-010 and APN 239-021-004) within existing easements (Figure 2).

The project site is part of the Santa Lucia Preserve (SLP). The SLP is a 20,000-acre development. One ten-acre development envelope, henceforth referred to as the "homeland," is allowed within the project parcel. The remaining area of the parcel, henceforth referred to as "openlands," is under conservation easements held by the Santa Lucia Conservancy (SLC), an independent land conservation organization actively managing lands under their easements within the SLP.

This report describes the biological resources within and surrounding the project site, identifies any special-status species and sensitive habitats known or with the potential to occur within or adjacent to the project site, assesses potential impacts that may occur to biological resources as a result of development of the project, and recommends appropriate avoidance, minimization, and mitigation measures, if necessary, to reduce those impacts to less-than-significant in accordance with the California Environmental Quality Act (CEQA).

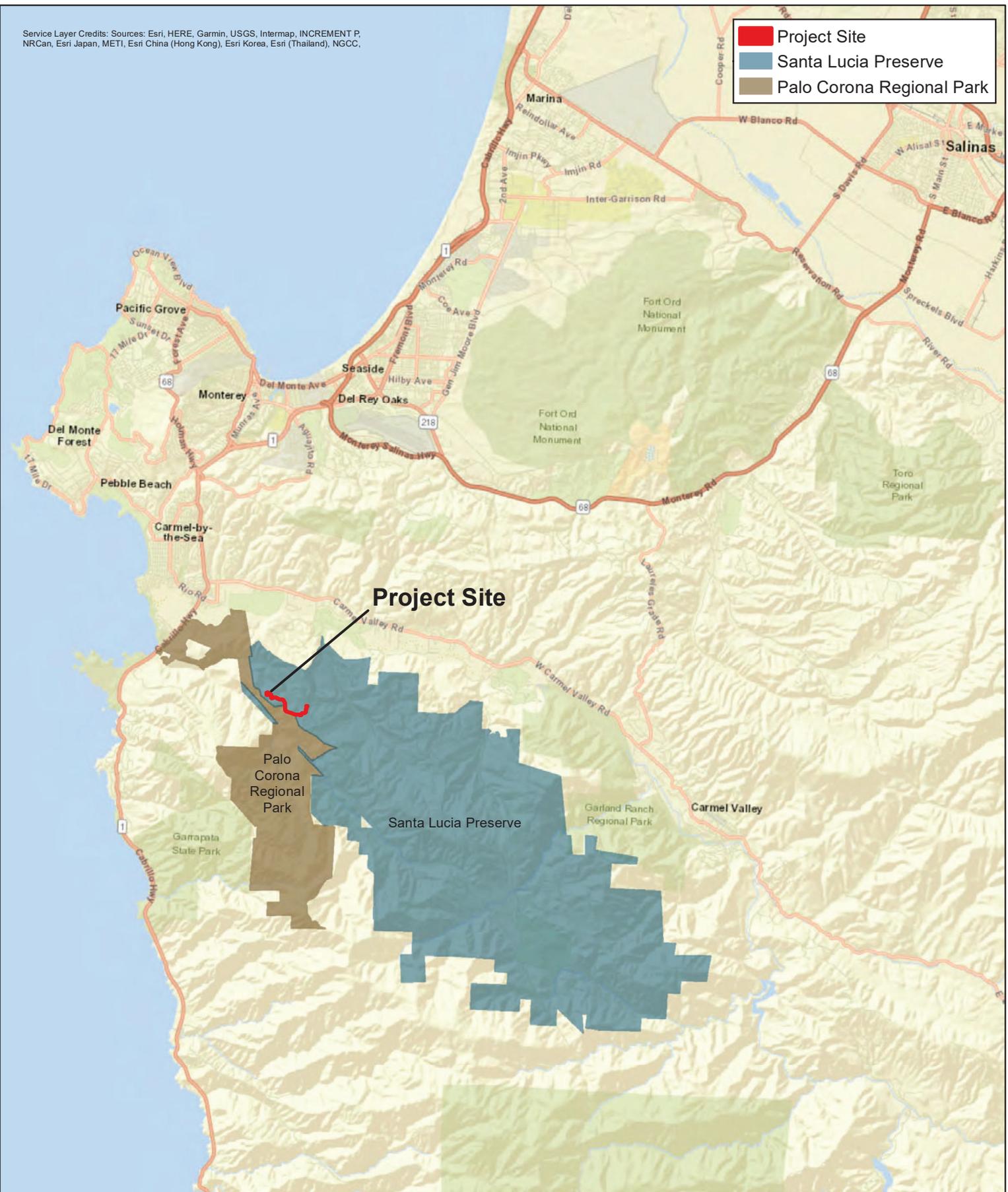
### **PROJECT BOUNDARIES**

The project consists of a proposed development within the 10-acre homeland of a 1,757-acre parcel, and includes a driveway easement on adjacent parcels owned by Denise Malcom (APN 157-131-010) and the SLP (APN 239-021-004) (Figure 2). The project is bounded by the SLP on the east and Palo Corona Regional Park (PCRP) on the west (Figure 2).

### **PROJECT DESCRIPTION**

The proposed development consists of a two-story single-family residence with an attached garage, a single-story guest house, patios, walkways, retaining walls, planters, terraces, and a vegetated guest parking area (Table 1; Figure 3). The proposed main residence will be situated on the flattest portion of a knoll, which generally has an east-west orientation; the main floor will be above grade, while the ground floor will be built into the hillside below grade. The main floor includes a great room, office, gym, a master bedroom, four bathrooms, and an entryway with an elevator. The ground floor includes a three-car garage, various utility and storage rooms and closets, a theater, and a hallway with an elevator. The proposed guest house will be located on the same knoll, approximately 100 feet to the south of the main residence and approximately 20 feet lower in elevation; the guest house will also be built into the hillside. The guest house includes one bedroom, one bathroom, a kitchenette, living space, storage, and an outdoor shower. A portion of the main house and the guest house will include a living roof, and landscaping will be installed immediately surrounding the living areas. Additional grassland areas will be restored around the landscaped area to blend into the surrounding openlands. Please refer to the Project Plans in Appendix B for more detail.

- Project Site
- Santa Lucia Preserve
- Palo Corona Regional Park



**Project Site**

Palo Corona Regional Park

Santa Lucia Preserve

Carmel Valley



## Project Vicinity

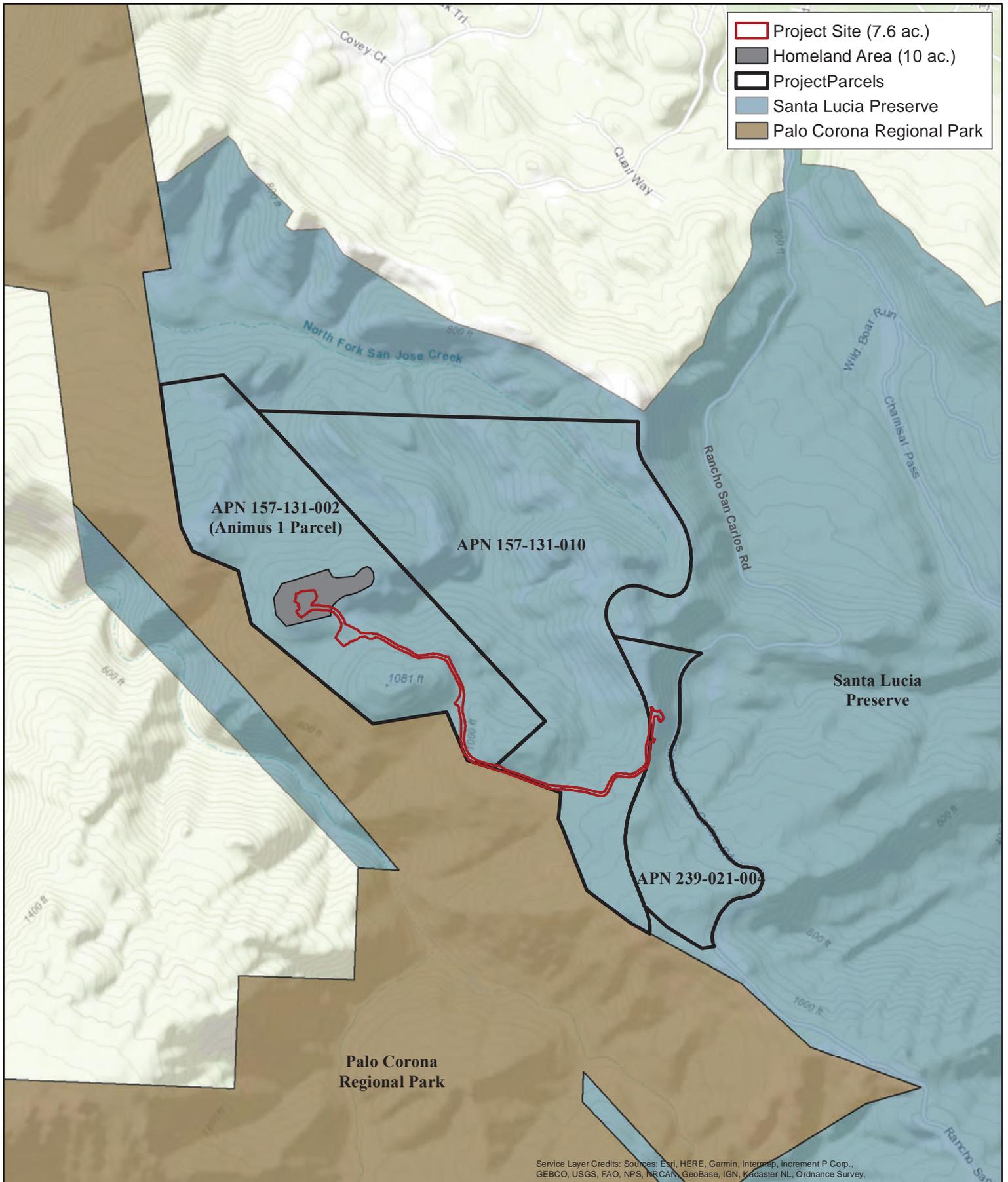


**Denise Duffy and Associates, Inc.**  
 Planning and Environmental Consulting

Date  
08-13-2018

Scale  
1 in = 194 mi

Figure  
**1**



## Project Location

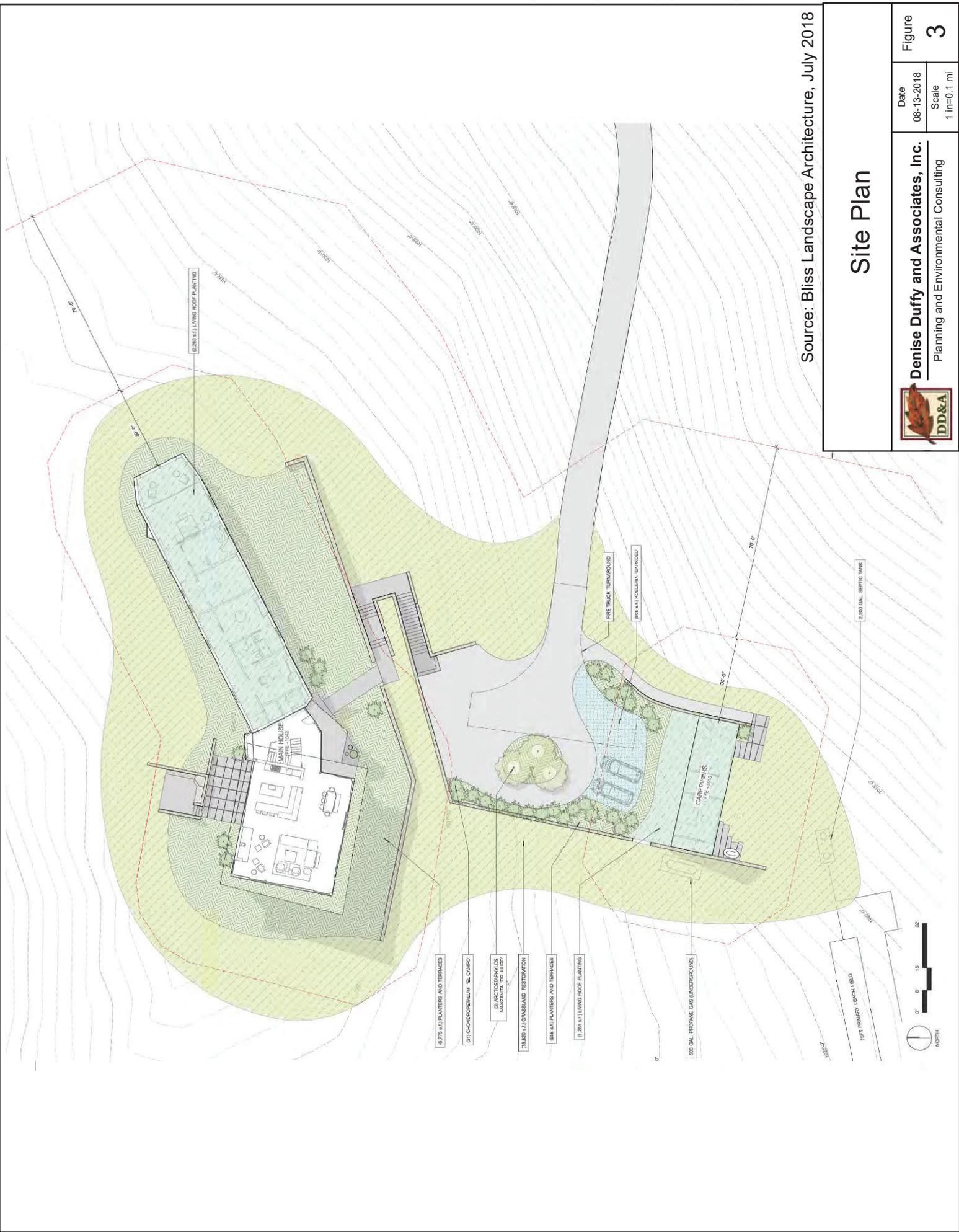


**Denise Duffy and Associates, Inc.**  
 Planning and Environmental Consulting

Date  
08-15-2018

Scale

Figure  
**2**



Source: Bliss Landscape Architecture, July 2018

# Site Plan



**Denise Duffy and Associates, Inc.**  
Planning and Environmental Consulting

Date  
08-13-2018

Scale  
1 in=0.1 mi

Figure  
**3**

Table 1. *Homeland Components*

<b>Homeland Component</b>	<b>Area (Square Feet)</b>
Two-story, single-family residence	6,800
<i>Ground floor</i>	2,276
<i>Main floor</i>	4,524
Guest house	800
Patios, walkways, and retaining walls	2,920
Planters, terraces, vegetated guest parking area	8,880

***Infrastructure***

An approximately 6,100 linear-foot paved driveway (approximately 3,100 square feet including turnarounds) will provide access from Rancho San Carlos Road to the homeland (Appendix B). The driveway would follow an existing ranch road for the majority of the alignment; however, the driveway would deviate somewhat from the current alignment near the homeland in order to improve the turns. Additionally, the driveway would be widened from the existing width of approximately eight to nine feet to approximately 12 to 18 feet wide. The project will also include installation of a 2,500-gallon septic tank, which will drain to two 75-foot leachfields, and a 500-gallon underground propane tank.

***Grading***

A Preliminary Grading Plan (Appendix B) has been developed by Bestor Engineers, Inc. showing areas to be graded and approximately cut and fill volumes. The grading area is 7.6 acres and will consist of 3,100 cubic yards of cut and 4,400 cubic yards of fill. Imported baserock and sub-base material will provide the additional fill to balance the grading on the site. The majority of grading will be for improvements to the existing ranch road for the driveway.

***Openlands***

Residential development is not allowed within the openlands of the property; however, the easements identified above allow for improvements to utility and sanitary systems, access, agricultural (grazing), and recreational uses.

**PROJECT APPROVALS**

The project will require the following approvals:

- Federal Approvals
  - U.S. Fish and Wildlife Service – Endangered Species Act Section 10 Take Permit
- State Approvals
  - California Coastal Commission – Coastal Development Permit
  - California Department of Fish and Wildlife – Section 2081 Take Permit
- Local Approvals
  - Monterey Bay Air Resources District – Authority to Construct
  - Monterey County – Encroachment Permit

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## METHODS

### PERSONNEL AND SURVEY DATES

Multiple biological surveys have been conducted on the project site and the adjacent PCRP and SLP since 1991. During this time all special-status plant and wildlife species identified on the SLP and the Animus have been documented and a comprehensive understanding of the biological resources present on the project site has been developed. Recent biological surveys by DD&A environmental scientists have been conducted to confirm or update existing biological survey information for the area. Available reference materials were reviewed prior to conducting the field surveys, including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) occurrence reports (CDFW, 2018a), the U.S. Fish and Wildlife Service (USFWS) IPaC Resource List (USFWS, 2018), numerous biological reports prepared for the Preserve (see “Data Sources” below), the *Malcolm Property Biological Resources Report* (DD&A, 2014), the *Biological Assessment for the Potrero Area Subdivision* (DD&A, 2003), and aerial photographs of the project site. Table 2 presents the known biological analyses and surveys conducted within and directly adjacent to the project site.

### SPECIAL-STATUS SPECIES

Special-status species are those plants and animals that have been formally Listed or Proposed as Endangered or Threatened, or are Candidates for such listing under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA). Listed and Proposed species are afforded legal protection under these acts. Species that meet the definition of rare or endangered under CEQA Section 15380 are also considered special-status species. State species of special concern meet this definition and are typically provided management consideration through the CEQA process, although they are not legally protected under the ESA or CESA. Additionally, the CDFW also includes some animal species that are not assigned any of the other status designations in the CNDDDB “Special Animals” list. The CDFW considers the taxa on this list to be those of greatest conservation need, regardless of their legal or protection status.

Plants listed under the California Native Plant Protection Act (CNPPA) or on the California Native Plant Society (CNPS) lists are also considered special-status species. In general, the CDFW considers plant species on List 1 (List 1A [Plants Presumed Extinct in California] and List 1B [Plants Rare, Threatened, or Endangered in California and Elsewhere]), or List 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere) of the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2018) as qualifying for legal protection under this CEQA provision.<sup>1</sup> In addition, species of vascular plants, bryophytes, and lichens listed as having special-status by the CDFW are considered special-status plant species (CDFW, 2018a).

Raptors (e.g., eagles, hawks, and owls) and their nests are protected in California under Fish and Game Code Section 3503.5. Section 3503.5 states that it is “unlawful to take, possess, or destroy the nest or eggs of any such bird except otherwise provided by this code or any regulation adopted pursuant thereto.”

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<sup>1</sup> Species on CNPS List 3 (Plants About Which We Need More Information - A Review List) and List 4 (Plants of Limited Distribution - A Watch List) may, but generally do not, qualify for protection under this provision.

Table 2. *Biological Analyses and Surveys Conducted Within and Adjacent to the Project Site*

Survey Type	Location	Year	Surveyors	Document Prepared
Habitat/Vegetation Characterization and Mapping	SLP (including the project site)	1990-1991	BioSystems Analysis Inc. and Habitat Restoration Group	<i>The Santa Lucia Preserve Comprehensive Development Plan – Technical Appendices 6.1 and 6.2</i>
Special-status Plant Species and Sensitive Plant Communities Surveys	SLP (including the project site)	1990-1991	BioSystems Analysis Inc. and Habitat Restoration Group	<i>Rancho San Carlos Special-Status Biological Resources Report</i>
Baseline Wildlife Survey	SLP (including the project site)	1990-1994	BioSystems Analysis Inc.	<i>The Santa Lucia Preserve Comprehensive Development Plan – Technical Appendices 6.1 and 6.3</i>
Special-Status Plant Species, Sensitive Plant Communities, and Dune Buckwheat Population Surveys	Greater Monterey Peninsula Area Plan area within SLP	1992-1993	BioSystems Analysis Inc. and Habitat Restoration Group	<i>Rancho San Carlos Special-Status Biological Resources Report</i>
CRLF Stream Habitat Assessment	SLP	2001	Wetlands Research Associates, Inc.	<i>California Red-Legged Frog Stream Habitat Assessment, Santa Lucia Preserve, Monterey County, California</i>
CRLF Upland Habitat Impact Assessment	SLP	2002	Wetlands Research Associates, Inc.	<i>California Red-Legged Frog Associated Uplands Impact Analysis, Santa Lucia Preserve, Monterey County, California</i>
Biological Resources Assessment	Potrero Area Subdivision	2003	DD&A	<i>Biological Assessment for the Potrero Area Subdivision Santa Lucia Preserve, Monterey County, California</i>
Aquatic and Upland Amphibian Surveys	SLP	2003-2008, 2009, 2011-2013	DD&A	<i>2008 Protocol-Level California Tiger Salamander Survey Report for the Santa Lucia Preserve, Monterey County, California;</i> <i>2009, 2011, &amp; 2012 Data reported directly to SLC;</i> <i>2013 Stock-Pond Survey Report for the Santa Lucia Preserve, Monterey County, California</i>
Aquatic Amphibian Surveys	PCRCP	2004-2006	V. Hemingway & A. D'Amore	<i>Final Report for Amphibian Management and Monitoring at Palo Corona Regional Park, Monterey County, California</i>
Aquatic Amphibian Surveys	PCRCP	2004, 2008, 2011-2013	DD&A	Data reported directly to Monterey Peninsula Regional Park District
Biological Resources Assessment	Animus parcels (including the project site)	2005	DD&A	Letter report to Maureen Wruck 6-8-05
Grassland Monitoring Study	PCRCP	2008	J. Cushman	<i>Assessing the Influence of Cattle Grazing on Vegetation at Palo Corona Regional Park</i>
Biological Resources Assessment	Animus parcels (including the project site)	2008, 2009, 2014	DD&A	<i>Malcolm Property Biological Assessment (2008);</i> <i>Addendum to the Malcolm Property Biological Assessment (Letter to Denise Malcolm 5-22-09);</i> <i>Malcolm Property Biological Assessment (2014)</i>

**Methods**

<b>Survey Type</b>	<b>Location</b>	<b>Year</b>	<b>Surveyors</b>	<b>Document Prepared</b>
Grassland Mapping	Animus parcels (including the project site)	2009	DD&A	<i>Addendum to the Malcolm Property Biological Assessment</i> (Letter to Denise Malcolm 5-22-09)
CTS Drift Fence/Pitfall Trap Study	Salamander and Roadrunner Ponds on PCRPP	2011-2012	DD&A	<i>California Tiger Salamander Survey Results for Two Ponds at the Palo Corona Regional Park – 2011/2012 Season</i>
Grassland Monitoring Study	PCRPP	2012	DD&A	<i>2012 Grassland Monitoring Report Palo Corona Regional Park</i>
Vegetation Type Mapping	SLP (including the project site)	2012	Aerial Information Systems	GIS dataset prepared for SLC using 2010 aerials
CTS Drift Fence/Pitfall Trap Study	Selected upland areas of the Animus parcels (including the project site)	2012-2013	DD&A	<i>California Tiger Salamander Survey Results at the Malcolm Property and Adjacent Palo Corona Regional Park – 2011-2013</i>
Aquatic Amphibian Surveys	PCRPP	2014-2017	Rachel Anderson	Data reported directly to Monterey Peninsula Regional Park District
Aquatic Amphibian Surveys	SLP (select ponds)	2017 & 2018	DD&A	Data reported directly to SLC

In addition, fully protected species under the Fish and Game Code Section 3511 (birds), Section 4700 (mammals), Section 5515 (fish), and Section 5050 (reptiles and amphibians) are also considered special-status animal species. Species with no formal special-status designation but thought by experts to be rare or in serious decline are also considered special-status animal species (CDFW, 2018a).

### SENSITIVE HABITATS

The project site was surveyed for sensitive habitats. Sensitive habitats include riparian corridors, wetlands, habitats for legally protected species, areas of high biological diversity, areas supporting rare or special-status wildlife habitat, and unusual or regionally restricted habitat types. Habitat types considered sensitive include those listed on the CDFW's *California Natural Communities List* (i.e., those habitats that are Rare or Endangered within the borders of California) (CDFW, 2018b), those that are occupied by species listed under the ESA or are critical habitat in accordance with ESA, and those that are defined as Environmentally Sensitive Habitat Areas (ESHA) under the Coastal Act (CCA). Specific habitats may also be identified as sensitive in City or County General Plans or ordinances. Sensitive habitats are regulated under federal regulations (such as the Clean Water Act and Executive Order 11990 – Protection of Wetlands), state regulations (such as CEQA and the CDFW's Streambed Alteration Program), or local ordinances or policies (such as City or County tree ordinances, Habitat Management Plan [HMP] habitat reserve areas, and General Plan elements).

### DATA SOURCES

The primary literature and data sources reviewed in order to determine the occurrence or potential for occurrence of special-status species at the project site are as follows: the *Malcom Property Biological Resources Report* (DD&A 2014); the *Final Special-status Biological Resources Report for Rancho San Carlos* (BioSystems Analysis, Inc. 1994); technical appendices 6.1-List of Plant Species by Habitat Encountered at Rancho San Carlos and 6.2-Rancho San Carlos Habitat List and Descriptions from the *SLP Resource Management Plan* (The Rancho San Carlos Partnership, 1994a and b); the *Biological Assessment for the Potrero Area Subdivision Santa Lucia Preserve Monterey County, California* (DD&A, 2003); *Protocol-level California Tiger Salamander and California Red-legged Frog Survey Report for the Santa Lucia Preserve, Monterey County, California* (DD&A, 2008); *2013 Stock-Pond Survey Report for the Santa Lucia Preserve, Monterey County, California* (DD&A, 2013a); the *California Tiger Salamander Surveys Results at the Malcolm Property and Adjacent Palo Corona Regional Park 2011-2013* (DD&A, 2013b); current agency status information from the USFWS and CDFW for species Listed, Proposed for listing, or Candidates for listing as Threatened or Endangered under ESA or CESA, and those considered CDFW "species of special concern: (2018a); the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2018); and the CDFW CNDDDB occurrence reports (2018a). The Seaside and Monterey quadrangles and the six surrounding quadrangles (Carmel Valley, Marina, Mt. Carmel, Salinas, Soberanes Point, and Spreckels) from the CNDDDB were reviewed for documented special-status species occurrences on and in the vicinity of the project site.

From these resources a list of special-status plant and wildlife species known or with the potential to occur in the vicinity of the project site was created (Appendix A). The list presents these species along with their legal status, habitat requirements, and a brief statement of the likelihood to occur on the project site.

## **Botany**

Vegetation on the project site was classified and mapped during surveys of the SLP before the property was annexed (Biosystems Analysis, Inc., 1994a and PMC, 2003). The vegetation classification schemes are based on those described by Holland (1986) and *A Manual of California Vegetation* (Sawyer et.al., 2009). The final classification and characterization of the vegetation of the project site is based on field observations. Each habitat type description (see below) lists both the *Manual of California Vegetation* (Sawyer et.al., 2009), the Holland types, and the 1994 Biosystems Analysis names for cross-reference purposes. Vegetation types identified in *A Manual of California Vegetation* (Sawyer et.al., 2009) were utilized to determine if vegetation types identified as sensitive on CDFW's *California Natural Communities List* (CDFW, 2018b) are present within the evaluation area.

Information regarding the distribution and habitats of local and state vascular plants were reviewed (Howitt and Howell, 1964 and 1973; Munz and Keck, 1973; Baldwin, et. al, 2012; Matthews and Mitchell, 2015; Jepson Flora Project, 2018). All plants observed within the project site were identified to species or intraspecific taxon using keys and descriptions in *The Jepson Manual: Vascular Plants of California, Edition 2* (Baldwin, et. al., 2012) and *The Plants of Monterey County an Illustrated Field Key* (Matthews and Mitchell, 2015). Scientific nomenclature for plants in this report follows Baldwin, et.al., (2012) and common names follow Matthews (2015).

In 2009 and 2018, the homeland was surveyed for botanical resources following the applicable guidelines outlined in *Guidelines for Conducting and Reporting Botanical Inventories for Federally listed, Proposed and Candidate Plants* (USFWS, 2000), *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW, 2009), and *CNPS Botanical Survey Guidelines* (CNPS, 2001). All plant species encountered were identified to species or intraspecific taxon necessary to eliminate them as being special-status species.

## **Wildlife**

The following literature and data sources were reviewed: CDFW reports on special-status wildlife (Remsen, 1978; Williams, 1986; Jennings and Hayes, 1994; Thelander, 1994); California Wildlife Habitat Relationships Program species-habitat models (Zeiner et al., 1988 and Zeiner et al., 1990); and general wildlife references (Stebbins, 1985).

## **REGULATORY SETTING**

The following regulatory discussion describes the major laws that may be applicable to the project.

### ***Federal Regulations***

#### ***Federal Endangered Species Act***

Provisions of the ESA of 1973 (16 USC 1532 et seq., as amended) protect federally listed threatened or endangered species and their habitats from unlawful take. Listed species include those for which proposed and final rules have been published in the Federal Register. The ESA is administered by the USFWS or National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). In general, NOAA Fisheries is responsible for the protection of ESA-listed marine species and anadromous fish, whereas other listed species are under USFWS jurisdiction.

Section 9 of ESA prohibits the take of any fish or wildlife species listed under ESA as endangered or threatened. Take, as defined by ESA, is “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” Harm is defined as “any act that kills or injures the fish or wildlife...including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife.” In addition, Section 9 prohibits removing, digging up, and maliciously damaging or destroying federally listed plants on sites under federal jurisdiction. Section 9 does not prohibit take of federally listed plants on sites not under federal jurisdiction. If there is the potential for incidental take of a federally listed fish or wildlife species, take of listed species can be authorized through either the Section 7 consultation process for federal actions or a Section 10 incidental take permit process for non-federal actions. Federal agency actions include activities that are on federal land, conducted by a federal agency, funded by a federal agency, or authorized by a federal agency (including issuance of federal permits).

#### *Executive Order 13112-Invasive Species*

Executive Order 13112 - Invasive Species requires the prevention of introduction and spread of invasive species. Invasive species are defined as “alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Each federal agency whose actions may affect the status of invasive species on a project site shall, to the extent practicable and permitted by law, subject to the availability of appropriations, use relevant programs and authorities to: 1) prevent the introduction of invasive species; 2) detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner; 3) monitor invasive species populations accurately and reliably; 4) provide for restoration of native species and habitat conditions in ecosystems that have been invaded; 5) conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species; and 6) promote public education on invasive species and the means to address them. A national invasive species management plan was prepared by the National Invasive Species Council and the Invasive Species Advisory Committee (ISAC) that recommends objectives and measures to implement the Executive Order.

#### *State Regulations*

##### *California Endangered Species Act*

The CESA was enacted in 1984. The California Code of Regulations (Title 14, §670.5) lists animal species considered endangered or threatened by the state. Section 2090 of CESA requires state agencies to comply with endangered species protection and recovery and to promote conservation of these species. Section 2080 of the Fish and Game Code prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. “Take” is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." A Section 2081 Incidental Take Permit from the CDFW may be obtained to authorize “take” of any state listed species.

##### *California Fish and Game Code*

**Birds:** Section 3503 of the Fish and Game Code states that it is “unlawful to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Section 3503.5 prohibits the killing, possession, or destruction of any birds in the orders Falconiformes or Strigiformes (birds-of-prey). Section 3511 prohibits take or possession of fully protected

birds. Section 3513 prohibits the take or possession of any migratory nongame birds designated under the federal Migratory Bird Treaty Act. Section 3800 prohibits take of nongame birds.

**Fully Protected Species:** The classification of fully protected was the state's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish (§5515), mammals (§4700), amphibians and reptiles (§5050), and birds (§3511). Most fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations. Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

**Species of Special Concern:** As noted above, the CDFW also maintains a list of animal “species of special concern.” Although these species have no legal status, the CDFW recommends considering these species during analysis of project impacts to protect declining populations and avoid the need to list them as endangered in the future.

#### *Native Plant Protection Act*

The CNPPA of 1977 directed the CDFW to carry out the legislature’s intent to “preserve, protect and enhance rare and endangered plants in the state.” The CNPPA prohibits importing rare and endangered plants into California, taking rare and endangered plants, and selling rare and endangered plants. The CESA and CNPPA authorized the Fish and Game Commission to designate endangered, threatened and rare species and to regulate the taking of these species (§2050-2098, Fish and Game Code). Plants listed as rare under the CNPPA are not protected under CESA.

#### *California Coastal Act*

The California Coastal Commission was established by voter initiative in 1972 (Proposition 20) and later made permanent by the California State Legislature through adoption of the California Coastal Act of 1976. The Coastal Commission, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone. Development activities, which are broadly defined by the Coastal Act to include (among others) construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a coastal permit from either the Coastal Commission or the local government. After certification of a Local Coastal Plan (LCP), coastal development permit authority is delegated to the appropriate local government, but the Commission retains original permit jurisdiction over certain specified lands (such as tidelands and public trust lands). The Commission also has appellate authority over development approved by local governments in specified geographic areas as well as certain other developments. The Commission may designate areas of rare or unique biological value, such as wetland and riparian habitat and habitats for special-status species, as Environmentally Sensitive Habitat Areas (ESHA). Development is restricted within the coastal zone and prohibited within designated ESHA, unless the development is coastal dependent and does not have a significant effect on the resources. Coastal Act Section 30240 states that “environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.” This section also states that “development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and

designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.”

***Local Regulations***

*Habitat Conservation Plans or NCCP*

There are no adopted Habitat Conservation Plans (HCP) or Natural Community Conservation Plans (NCCP) associated with the project site.

## RESULTS

### VEGETATION TYPES

Four vegetation units are mapped within the project site (Table 3, Figure 4). Additionally, a small portion of the project site is developed (paved road). The mapped units are underlined below and the constituent vegetation associations bolded.

Table 3. *Vegetation Types Within the Project Site*

<b>Vegetation Type within Project Site</b>	<b>Permanent Impact</b>	<b>Temporary Impact</b>	<b>Total</b>
<u>Native Grassland</u>	0.8 ac	1.6 ac	2.4 ac
<u>Non-native Grassland</u>	0.1 ac	0.1 ac	0.2 ac
<u>Coyote Brush Scrub</u>	0.7 ac	2.8 ac	3.5 ac
<u>Coast Live Oak Woodland</u>	0 ac	0.2 ac	0.2 ac
<u>Ruderal (Dirt Road)</u>	1.1 ac	0.1 ac	1.2 ac
<u>Developed (Paved Road)</u>	0.1 ac	0 ac	0.1 ac
<b>Total</b>	<b>2.8 ac</b>	<b>4.8 ac</b>	<b>7.6 ac</b>

#### Native Grassland

##### **California Oat Grass Prairie**

- ◆ *A Manual of California Vegetation* 2009 classification: California oat grass prairie (*Danthonia californica* herbaceous association)
- ◆ Holland 1986 classification: Bald hills prairie
- ◆ 1994 BioSystems Analysis classification: Coastal terrace prairie
- ◆ CDFW *California Natural Communities List*: Sensitive
- ◆ ESHA: Potential

Holland describes this vegetation type (identified as bald hills prairie) as an edaphically (soil) determined grassland found on fine-textured soils on ridge crests, usually a few miles back from the coast. Within the project site, the dominant species in this grassland type are foothill sedge (*Carex tumulicola*), California wild oat (*Danthonia californica*), and leafy bent-grass (*Agrostis pallens*). Native and non-native forb species present within this habitat type include Pacific sanicle (*Sanicula crassicaulis*), California acaena (*Acaena pinnatifida* var. *californica*), common fiddleneck (*Amsinckia intermedia*), sandmat (*Cardionema ramosissimum*), soap plant (*Chlorogalum pomeridianum*), common hareleaf (*Lagophylla ramosissima*), meadow foam (*Limnanthes douglasii* var. *douglasii*), California poppy (*Eschscholzia californica*), holly-leaved navarretia (*Navarretia atractyloides*), pretty face (*Triteleia ixioides*), Fremont's star lily (*Toxicoscordion fremontii*), windmill pink (*Silene gallica*), sheep sorrel (*Rumex acetosella*), and red-stemmed filaree (*Erodium cicutarium*).

Several special-status wildlife species are known or have the potential to occur in or disperse through the California oat grass prairie within the project site, including American badger (*Taxidea taxus*), long-eared owl (*Asio otus*), burrowing owl (*Athene cunicularia*), white-tailed kite (*Elanus leucurus*), California horned lark (*Eremophila alpestris actia*), California tiger salamander (CTS; *Ambystoma californiense*), California

red-legged frog (CRLF; *Rana draytonii*), California newt (*Taricha torosa torosa*), western bumble bee (*Bombus occidentalis*), and obscure bumble bee (*Bombus caliginosus*).

### **Purple Needle Grass Grassland**

- ◆ *A Manual of California Vegetation* 2009 classification: Purple needle grass grassland (*Nassella pulchra* herbaceous association)
- ◆ Holland 1986 classification: Valley needlegrass grassland
- ◆ 1994 BioSystems Analysis classification: Coastal terrace prairie
- ◆ CDFW *California Natural Communities List*: Sensitive
- ◆ ESHA: Potential

The dominant species in this vegetation type is purple needle grass (*Stipa pulchra*), with introduced annual grasses occurring between the perennials. Forb species present within this vegetation type are comparable to those listed above for California oat grass prairie. Special-status wildlife species that may occur within this vegetation type are comparable to those identified above for California oat grass prairie.

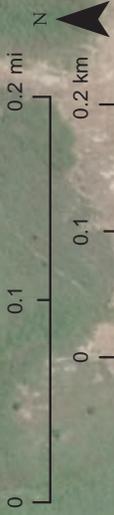
### **Non-Native Grassland**

#### **Wild Oats Grassland**

- ◆ *A Manual of California Vegetation* 2009 classification: Wild oats grasslands (*Avena* [*barbata*, *fatua*] semi-natural herbaceous stands)
- ◆ Holland 1986 classification: Non-native grassland
- ◆ 1994 BioSystems Analysis classification: Ruderal grassland
- ◆ CDFW *California Natural Communities List*: Not sensitive
- ◆ ESHA: No

Throughout California, wild oats grasslands typically occur in open areas of valleys and foothills, usually on fine-textured clay or loam soils that are somewhat poorly drained (Holland, 1986). They are dominated by non-native annual grasses and forbs along with scattered native grasses and wildflowers. Within the project site, this community is dominated by non-native annual grass species and weedy forbs such as slender wild oat (*Avena barbata*), rippgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), silvery hair-grass (*Aira caryophyllea*), rat-tail fescue (*Festuca myuros*), summer mustard (*Hirschfeldia incana*), windmill pink, sheep sorrel, bull thistle (*Cirsium vulgare*), and red-stemmed filaree. A few native grass and forb species such as purple needle grass, California poppy, holly-leaved navarretia, pretty face, and Fremont's star lily occur mixed within the non-native species.

Special-status wildlife species that may occur within this vegetation type are comparable to those identified above for California oat grass prairie.

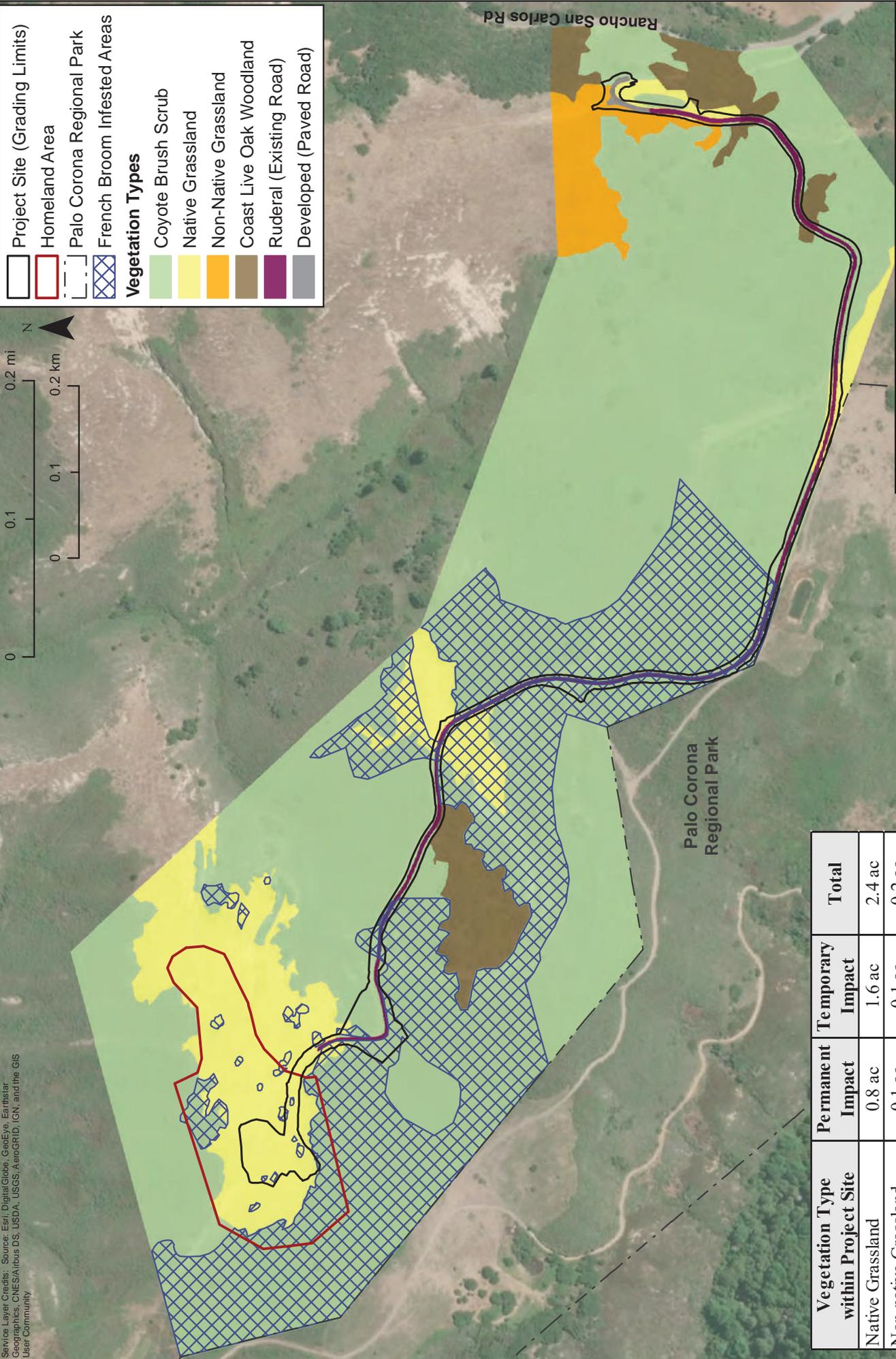


**Project Site (Grading Limits)**

- Project Site (Grading Limits)
- Homeland Area
- Palo Corona Regional Park
- French Broom Infested Areas

**Vegetation Types**

- Coyote Brush Scrub
- Native Grassland
- Non-Native Grassland
- Coast Live Oak Woodland
- Ruderal (Existing Road)
- Developed (Paved Road)



Vegetation Type within Project Site	Permanent Impact	Temporary Impact	Total
Native Grassland	0.8 ac	1.6 ac	2.4 ac
Non-native Grassland	0.1 ac	0.1 ac	0.2 ac
Coyote Brush Scrub	0.7 ac	2.8 ac	3.5 ac
Coast Live Oak Woodland	0 ac	0.2 ac	0.2 ac
Ruderal (Dirt Road)	1.1 ac	0.1 ac	1.2 ac
Developed (Paved Road)	0.1 ac	0 ac	0.1 ac
<b>Total</b>	<b>2.8 ac</b>	<b>4.8 ac</b>	<b>7.6 ac</b>

## Vegetation Types Map

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Planning and Environmental Consulting

Date: 08-14-2018  
Scale: 1 in=0.1 mi.

Figure 4

### **Coyote Brush Scrub**

- ◆ *A Manual of California Vegetation* 2009 classification: Coyote brush scrub (*Baccharis pilularis* shrubland alliance)
- ◆ Holland 1986 classification: Northern coyote brush scrub
- ◆ 1994 BioSystems Analysis classification: Coastal scrub and Coyote brush scrub
- ◆ CDFW *California Natural Communities List*: Not sensitive
- ◆ ESHA: No

This community is composed of several shrub species that form a canopy of approximately one to five feet high with a sparse understory. Coyote brush (*Baccharis pilularis*) is dominant or co-dominant in the canopy with coast sagebrush (*Artemisia californica*), chamise (*Adenostoma fasciculatum*), blue blossom (*Ceanothus thyrsiflorus*), coast ceanothus (*C. cuneatus* var. *fascicularis*), toyon (*Heteromeles arbutifolia*), ocean spray (*Holodiscus discolor*), California coffeeberry (*Frangula californica*), poison oak (*Toxicodendron diversilobum*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), common snowberry (*Symphoricarpos albus*), and pink flowering currant (*Ribes sanguineum* var. *glutinosum*).

Several special-status wildlife species are known or have the potential to occur within the coyote brush scrub in the project site, including CTS, CRLF, California newt, Monterey dusky-footed woodrat (*Neotoma macrotis luciana*), and white-tailed kite.

### **Coast Live Oak Woodland**

- ◆ *A Manual of California Vegetation* 2009 classification: Coast live oak woodland (*Quercus agrifolia*/Toxicodendron diversilobum/grass association)
- ◆ Holland 1986 classification: Coast live oak woodland
- ◆ 1994 BioSystems Analysis classification: Coast live oak woodland
- ◆ CDFW *California Natural Communities List*: Not sensitive
- ◆ ESHA: No

Within this vegetation type, coast live oak trees (*Quercus agrifolia*) create a dense canopy over an understory dominated by poison oak and sparse coyote brush scrub species.

Several special-status species are known or have the potential to occur within this vegetation type: Monterey dusky-footed woodrat, white-tailed kite, and California newt.

## **PLANTS**

Suitable habitat for several special-status plant species is present within the site, including Jolon clarkia (*Clarkia jolonensis*), San Francisco collinsia (*Collinsia multicolor*), Hospital Canyon California larkspur (*Delphinium californicum* ssp. *interius*), Pinnacles buckwheat (*Eriogonum nortonii*), fragrant fritillary (*Fritillaria liliacea*), Carmel Valley bush mallow (*Malacothamnus palmeri* var. *involutus*), Carmel Valley malacothrix (*Malacothrix saxatilis* var. *arachnoidea*), Santa Cruz microseris (*Stebbinsoseris decipiens*), California screw moss (*Tortula californica*), and Santa Cruz clover (*Trifolium buckwestiorum*) (Appendix A). However, no impacts will occur to special-status plants as a result of the project because none of these species were observed within or adjacent to the project boundaries during focused, protocol-level botanical surveys.

## WILDLIFE

The project area was evaluated for the presence or potential presence of special-status wildlife species (Appendix A). The following species are discussed because they are known or have a moderate or high potential to occur within or adjacent to the project area (Table 4). All other species presented in Appendix A are assumed “unlikely to occur” or have a low potential to occur but are unlikely to be impacted for the species-specific reasons presented in Appendix A.

Table 4. *Potential for Special-Status Wildlife Species Presence within the Project site*

Species	Homeland and Driveway
Monterey dusky-footed woodrat	Moderate
American badger	Moderate
Long-eared owl	Moderate
Western burrowing owl	Moderate
White-tailed kite	High
California horned lark	Moderate
California tiger salamander	Known
California red-legged frog	High
California newt	High
Obscure bumble bee	Moderate
Western bumble bee	Moderate

### *Monterey Dusky-Footed Woodrat*

The Monterey dusky-footed woodrat is a CDFW species of special concern. This is a subspecies of the dusky-footed woodrat (*Neotoma macrotis*), which is common to oak woodlands throughout California. Dusky-footed woodrats are frequently found in forest habitats with moderate canopy cover and a moderate to dense understory; however, they may also be found in chaparral and scrub communities. Relatively large nests are constructed of grass, leaves, sticks, and feathers and are built in protected spots, such as rocky outcrops or dense brambles of blackberry and/or poison oak. Typical food sources for this species include leaves, flowers, nuts, berries, and truffles. Dusky-footed woodrats may be a significant food source for small- to medium-sized predators. Populations of this species may be limited by the availability of nest material. Within suitable habitat, nests are often found in close proximity to each other.

The CNDDDB does not report any occurrences of Monterey dusky-footed woodrat within the eight quadrangles reviewed; however, woodrat nests were observed within the openlands on the Animus during several biological surveys. Woodrat nests were not observed within the project homeland; however, this species has the potential use the project site where suitable habitat is present prior to construction. Therefore, Monterey dusky-footed woodrat has a high potential to occur within the project site where suitable habitat is present.

### *American Badger*

The American badger is a CDFW species of special concern. Badgers occupy a diversity of habitats within California. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated grounds. Grasslands, savannas, and mountain meadows near timberline are preferred. Badgers feed primarily on burrowing rodents such as gophers, squirrels, mice, and kangaroo rats, as well as some

insects and reptiles. Badgers also break open bee hives to eat both the brood and honey. They are active all year long and are nocturnal and diurnal. Mating occurs in summer and early fall, and two to five young are born in burrows that are dug in relatively dry, often sandy soil, usually with sparse overstory cover.

The CNDDDB reports nine occurrences of American badger within the eight quadrangles reviewed, with the nearest occurrence approximately 6.2 miles northeast of the project site. The 1994 BioSystems Analysis Inc. report also notes an occurrence on the adjacent SLP, although it does not indicate the location of the observation. No suitable badger burrows were observed within the homeland during biological surveys; however, this species has the potential to move into the area prior to construction. Therefore, the American badger has a moderate potential to occur within the project site.

### ***Nesting Raptors and Other Protected Avian Species***

Raptors, their nests, and other nesting birds are protected under California Fish and Game Code. While the life histories of these species vary, overlapping nesting and foraging similarities (approximately February through August) allow for their concurrent discussion. Many raptor species are breeding residents throughout most of the wooded portions of the state. Stands of live oak, riparian deciduous, or other forest habitats, as well as open grasslands, are used most frequently for nesting. Breeding occurs February through August, with peak activity May through July. Prey for these species includes small birds, small mammals, and some reptiles and amphibians. Many raptor species hunt in open woodland and habitat edges.

Suitable habitat is also present on the site for several other special-status avian species, including the long-eared owl, western burrowing owl, white-tailed kite, and California horned lark.

#### *Long-eared Owl*

The long-eared owl is a CDFW Species of Special Concern. It is usually found in open areas with few trees, such as annual and perennial grasslands, prairies, meadows, dunes, irrigated lands, and saline and freshwater emergent marshes. Dense vegetation, including tall grasses, brush, ditches, or wetlands, is required for roosting and nesting cover.

Suitable foraging habitat for this species is present within the grassland and prairie habitats in the homeland, and suitable nesting habitat is present within the coyote scrub in the adjacent openlands. Two occurrences of the long-eared owl are known on the SLP, the nearest on the north side of Chamisal Ridge, approximately 1.2 miles east of the project site (SLC, 2006).

#### *Western Burrowing Owl*

The western burrowing owl is a CDFW Species of Special Concern. It is found in open, dry grassland and desert habitats, and uses rodent burrows (often those of California ground squirrels) for roosting and nesting cover.

Suitable foraging habitat for the owl is present within the grassland habitats within the homeland. No suitable burrows were observed within the homeland during biological surveys; however, this species may move into the area prior to construction. The CNDDDB reports seven occurrences of the owl near the project site, the nearest approximately 5.5 miles north of the site.

### *White-tailed Kite*

The white-tailed kite is a California Fully Protected Species. It is a small raptor which forages in open groves, river valleys, marshes, and grasslands, and nests in shrubs and trees adjacent to grasslands.

Suitable foraging habitat for the kite is present within the grassland habitats in the homeland, and suitable nesting habitat is present within the coyote scrub in the adjacent openlands. The CNDDDB does not report any occurrences of the white-tailed kite within the eight quadrangles reviewed; however, this species has been observed within the immediate project vicinity during several biological surveys.

### *California Horned Lark*

The California horned lark is on the CNDDDB list of “special animals”. It is found in a variety of open habitats, usually where large trees and shrubs are absent, and it builds open, cup-like nests on the ground. Suitable nesting and foraging habitat for the lark is present within the grassland habitats in the homeland. The CNDDDB reports two occurrences of the lark near the project site, both approximately 13.2 miles north of the site. This species is also known from the Potrero subdivision area of the SLP, located to the east of the site (DD&A, 2003).

### *California Tiger Salamander*

CTS was listed as a federally threatened species on August 4, 2004 (69 FR 47211-47248). Critical habitat was designated for CTS on August 23, 2005 (70 FR 49379-49458), and went into effect on September 22, 2005. Additionally, CTS was listed as a state threatened species on March 3, 2010.

The CTS is a large, stocky salamander most commonly found in annual grassland habitat, but also occurring in the grassy understory of valley-foothill hardwood and chaparral habitats, and uncommonly along stream courses in valley-foothill riparian habitats (USFWS, 2004). Adults spend most of their lives underground, typically in burrows of ground squirrels and other animals (USFWS, 2004). The CTS has been eliminated from an estimated 55 percent of its documented historic breeding sites. Currently, about 150 known populations of CTS remain. The CTS persists in disjunct remnant vernal pool complexes in Sonoma County and Santa Barbara County, in vernal pool complexes and isolated stockponds scattered along a narrow strip of rangeland on the fringes of the Central Valley from southern Colusa County south to northern Kern County, and in sag ponds and human-maintained stockponds in the coast ranges from the San Francisco Bay Area south to the Temblor Range.

Above-ground migratory and breeding activity may occur under suitable environmental conditions from mid-October through May. Adults may travel long distances between upland and breeding sites; adults have been found more than two kilometers (1.24 miles) from breeding sites (USFWS, 2004). Breeding occurs from November to February, following relatively warm rains (Stebbins, 2003). The CTS breeds and lays eggs primarily in vernal pools and other temporary rainwater ponds. Permanent human-made ponds are sometimes utilized if predatory fishes are absent; streams are rarely used for reproduction. Eggs are laid singly or in clumps on both submerged and emergent vegetation and on submerged debris in shallow water (Stebbins, 1972; Jennings and Hayes, 1994). Males typically spend 6-8 weeks at breeding ponds, while females typically spend only 1-2 weeks (Loredo et al., 1996). Eggs hatch within 10-14 days (USFWS, 2004) and a minimum of 10 weeks is required to complete development through metamorphosis (Jennings and

Hayes, 1994), although the larval stage may last up to six months and some larvae in Contra Costa and Alameda Counties may remain in their breeding sites over the summer (USFWS, 2004).

Figure 5 shows the known CTS occurrences within two kilometers of the project site. The occurrences come from the following sources: DD&A, 2008; DD&A, 2013a (Appendix C); and CNDDDB, 2018a. Aquatic and upland data has been collected on the SLP and PCRP on and off for over a decade, resulting in a data set that identifies ponds that are known to support CTS breeding activity now, or have in the past. The result of this data confirms that a localized metapopulation of CTS currently occupy an area associated with a cluster of eight ponds near the project site. Within this cluster area there are ponds that likely never have supported CTS, ponds which likely did in the past but do not now, and one pond that is currently being used as a breeding resource by CTS.

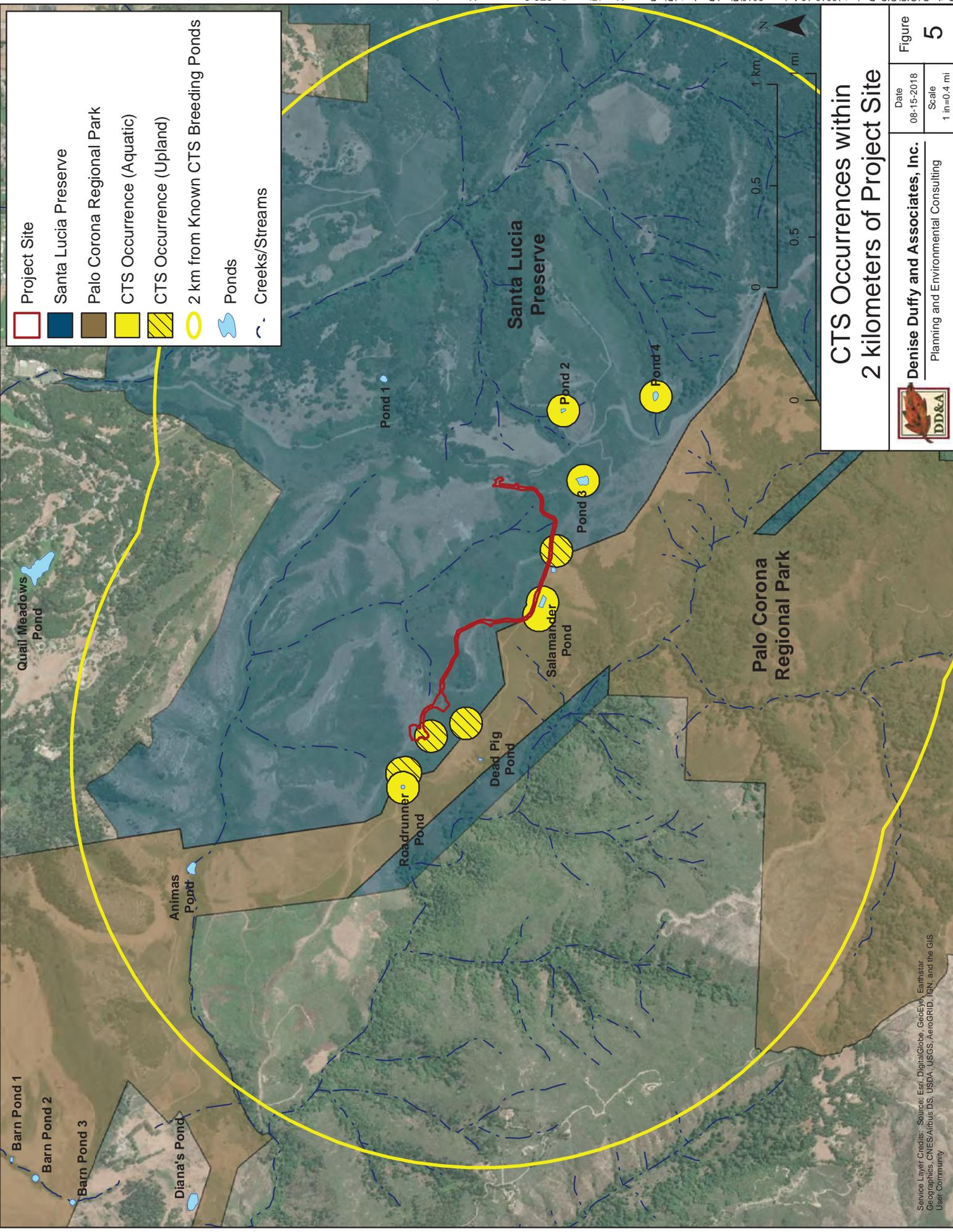
While no aquatic resources are located on the project site, the site is a significant upland resource associated with this localized CTS metapopulation. CTS were observed utilizing the grassland and scrub habitats on the homeland during upland drift fence/pitfall trap surveys conducted in 2012/13 (Appendix C).

### ***California Red-Legged Frog***

The California red-legged frog (*Rana draytonii*, CRLF) was listed as a federally Threatened species on June 24, 1996 (61 FR 25813-25833) and is also a CDFW species of special concern. Critical habitat was designated for CRLF on April 13, 2006 (71 FR 19244-19346) and revised on March 17, 2010 (75 FR 12816-12959). The revised critical habitat went into effect on April 16, 2010.

The CRLF is the largest native frog in California (44-131 mm snout-vent length) and was historically widely distributed in the central and southern portions of the state (Jennings & Hayes, 1994). Adults generally inhabit aquatic habitats with riparian vegetation, overhanging banks, or plunge pools for cover, especially during the breeding season (Jennings and Hayes, 1988). They may take refuge in small mammal burrows, leaf litter, or other moist areas during periods of inactivity or to avoid desiccation (Rathbun, et al., 1993; Jennings and Hayes, 1994). Radio telemetry data indicates that adults engage in straight-line breeding season movements irrespective of riparian corridors or topography and they may move up to two miles between non-breeding and breeding sites (Bulger et. al., 2003). During the non-breeding season, a wider variety of aquatic habitats are used, including small pools in coastal streams, springs, water traps, and other ephemeral water bodies (USFWS, 1996). CRLF may also move up to 100 meters from aquatic habitats into surrounding uplands, especially following rains, where individuals may spend days or weeks (Bulger et al., 2003).

This species requires still or slow-moving water during the breeding season where it can deposit large egg masses, which are most often attached to submergent or emergent vegetation. Breeding typically occurs between December and April depending on annual environmental conditions and locality. Eggs require six to 12 days to hatch and metamorphosis generally occurs after 3.5 to seven months, although larvae are also capable of over-wintering. Following metamorphosis, generally between July and September, juveniles are 25-35 mm in size. Juvenile CRLF appear to have different habitat needs than adults. Jennings and Hayes (1988) recorded juvenile frogs mostly from sites with shallow water and limited shoreline or emergent vegetation. Additionally, it was important that there be small one-meter breaks in the vegetation or clearings in the dense riparian cover to allow juveniles to sun themselves and forage, but to also have close escape



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Date: 08-15-2018  
 Scale: 1 in=0.4 mi

Figure **5**

## CTS Occurrences within 2 kilometers of Project Site

cover from predators. Jennings and Hayes also noted that tadpoles have different habitat needs and that in addition to vegetation cover, tadpoles use mud. It is speculated that CRLF larvae are algae grazers; however, foraging larval ecology remains unknown (Jennings, et. al., 1993).

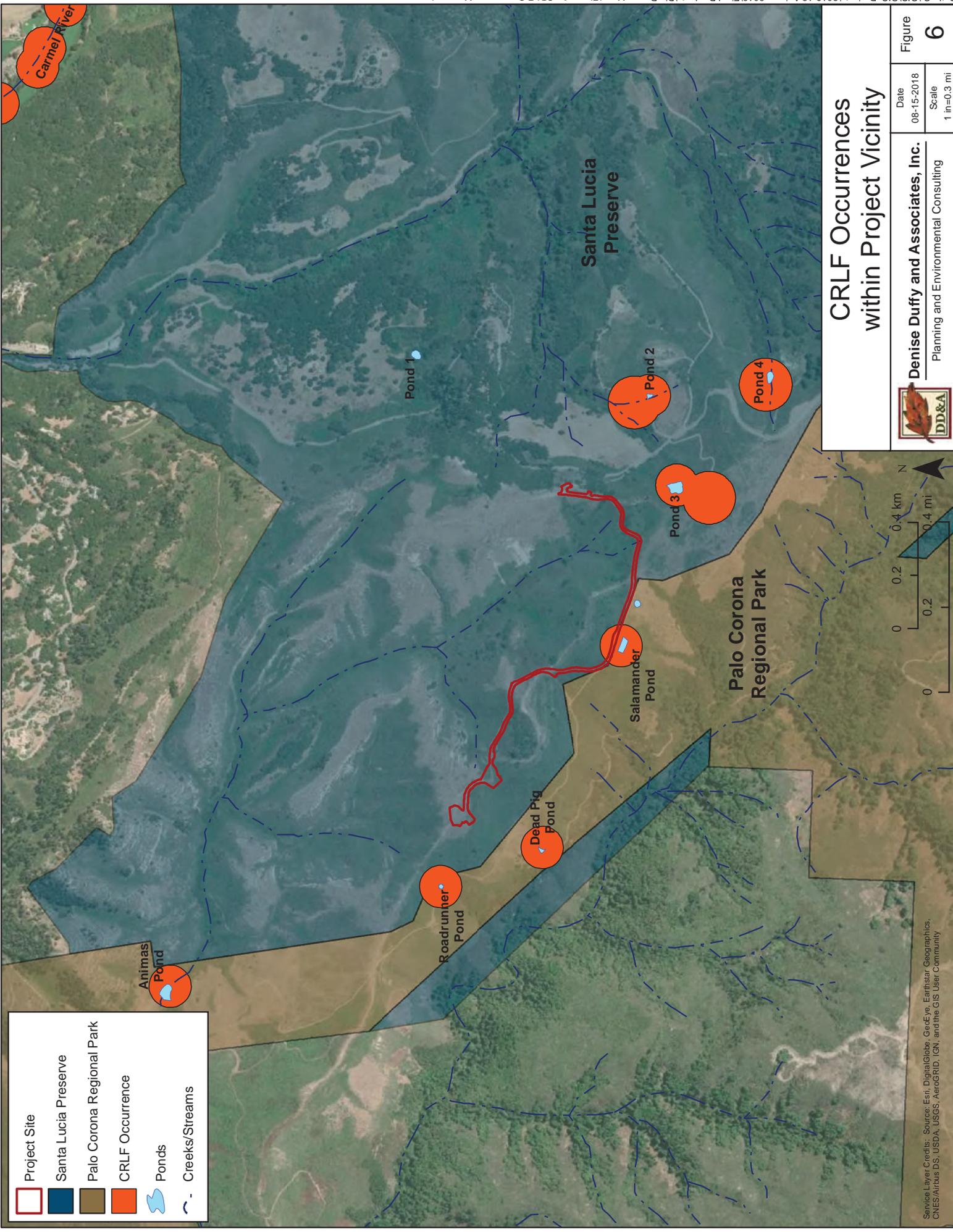
It has been shown that occurrences of CRLF are negatively correlated with presence of non-native bullfrogs (Moyle, 1973; Jennings and Hayes, 1986 and 1988), although both species are able to persist at certain locations, particularly in the coastal zone. It is estimated that CRLF has disappeared from approximately 75% of its former range and has been nearly extirpated from the Sierra Nevada, Central Valley, and much of southern California (USFWS, 1996).

Figure 6 shows the known occurrences of CRLF within the vicinity of the project site. Aquatic data has been collected on the SLP and PCRP on and off for over a decade, resulting in a data set that identifies ponds that are known to support CRLF breeding activity now, or have in the past. The result of this data confirms that CRLF currently occupy multiple ponds on the SLP and PCRP, including the cluster of eight ponds near the project site. Within this cluster area there are several ponds that are currently being used as a breeding resource by CRLF, some ponds which supported CRLF breeding in the past but may not now, and one pond that likely never supported CRLF. Although no aquatic resources are located on the project site, CRLF may use the habitats within the site as upland refugia from the surrounding ponds. The project site is located within CRLF critical habitat mapping unit MNT-2.

### ***California Newt***

The California newt is a CDFW species of special concern. This species occurs commonly in the Coast Ranges from central Mendocino County south to northern San Diego County, primarily in valley-foothill hardwood, valley-foothill hardwood-conifer, coastal scrub, and mixed chaparral, but is also known from annual grassland and mixed conifer habitat types. The elevation range extends from sea level to 6,000 feet. Juveniles and terrestrial adults prey on earthworms, snails, slugs, sowbugs, and insects (Stebbins, 1972). Adults at breeding ponds have been observed to take the eggs of their own species and other amphibians, as well as trout, adult and larval aquatic insects, small crustaceans, snails, and clams. Aquatic larvae eat many small aquatic organisms, especially crustaceans. Terrestrial individuals seek cover under surface objects, such as rocks and logs, or in mammal burrows, rock fissures, or human-made structures, such as wells. Aquatic larvae find cover beneath submerged rocks, logs, debris, and undercut banks. Breeding and egg-laying occur in intermittent streams, rivers, permanent and semi-permanent ponds, lakes, and large reservoirs. Eggs are laid in small clusters on the submerged portion of emergent vegetation, on submerged vegetation, and on the underside of rocks off the bottom. Terrestrial individuals are relatively inactive in subterranean refuges most of the year. Migrations to and from breeding areas usually occur at night during or just following rains.

The CNDDDB reports two occurrences of the California newt near the project site, both of which occur within the project parcel. Although these occurrences are outside the homeland, one occurrence intersects the driveway easement near Salamander Pond. This species is known to breed in several ponds within the adjacent SLP and PCRP. Additionally, this species was observed within the homeland and the openlands during upland drift-fence/pitfall trap surveys in 2012/13.



	Project Site
	Santa Lucia Preserve
	Palo Corona Regional Park
	CRLF Occurrence
	Ponds
	Creeks/Streams

## CRLF Occurrences within Project Vicinity

	<b>Denise Duffy and Associates, Inc.</b> Planning and Environmental Consulting	
	Date 08-15-2018	Figure <b>6</b>
		Scale 1 in=0.3 mi

N

0 0.2 0.4 km  
0 0.2 0.4 mi

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

### ***Obscure Bumble Bee***

The obscure bumble bee is on the CNDDDB list of “special animals.” Native to the west coast of the United States, this species occurs primarily along the coast in grassy prairies and meadows within the Coast Ranges. It can nest both under and above ground, and is found in areas which are relatively humid or frequently foggy. Recent data suggest that the obscure bumble bee is currently experiencing very high population decline throughout its entire range (Hatfield et al, 2014). However, this species can be easily overlooked because of its close resemblance to other common bees, which may be a factor in its apparent decline. Therefore, there is uncertainty if the species is truly experiencing a population decline.

Suitable habitat for this species is present within the grassland habitats in the homeland. The CNDDDB reports four occurrences of the species within the quadrangles reviewed, the nearest occurrence approximately two miles west of the project site.

### ***Western Bumble Bee***

The western bumble bee is on the CNDDDB list of “special animals.” This species occurs in open grassy areas, urban parks, urban gardens, chaparral, and meadows, and it generally nests underground. Like *B. caliginosus*, it has been experiencing recent population decline throughout most of its range, much of it caused by pathogens and parasites. Other stressors include habitat loss and alteration due to agricultural intensification, urban development, conifer encroachment, grazing, logging, and climate change.

Suitable habitat for this species is present within the grassland habitats in the homeland. The CNDDDB reports six occurrences of the species within the quadrangles reviewed, the nearest occurrence approximately 2.4 miles northwest of the project site.

## **SENSITIVE HABITATS**

The project site was evaluated for the presence of sensitive habitats. As identified above, native grasslands are present within the site and would be impacted by the project (Figure 4). The vegetation alliances identified within the native grassland habitat are identified as sensitive on the CDFW *California Natural Communities List* (CDFW, 2018). This vegetation type may also be considered ESHA under the California Coastal Act.

In addition, the site supports habitat for special-status species that may also be considered ESHA under the California Coastal Act. These include upland aestivation habitat for CTS and critical upland and dispersal habitat for CRLF.

## IMPACTS AND MITIGATION

Suitable habitat for special-status plant species is present within the project site (Appendix A); however, special-status plants were not observed on the project site during focused botanical surveys and are not expected to occur on the site. Therefore, the project will not result in impacts to special-status plants.

Special-status wildlife and sensitive habitats that are known or have the potential to occur within the project site are identified in *Results* above. Impacts to these sensitive resources may occur as a result of the project. The following identifies the project impacts and mitigation measures to reduce these potentially significant impacts to a less-than-significant level.

***Impact 1:*** *Special-status wildlife species, including the Monterey dusky-footed woodrat, American badger, long-eared owl, western burrowing owl, white-tailed kite, California horned lark, California newt, obscure bumble bee, western bumble bee, and nesting birds, have the potential to occur within the project site. Construction activities may result in direct mortality of individuals and loss of habitat. This is a potentially significant impact that can be reduced to a less-than-significant level with implementation of the mitigation measures recommended below.*

***Mitigation 1a:*** A qualified biologist will conduct an Employee Education Program for the construction crew prior to any construction activities. A qualified biologist will meet with the construction crew at the onset of construction at the project site to educate the construction crew on the following: 1) the appropriate access route(s) in and out of the construction area and review project boundaries; 2) how a biological monitor will examine the area and agree upon a method which will ensure the safety of the monitor during such activities, 3) the special-status species that may be present; 4) the specific mitigation measures that will be incorporated into the construction effort; 5) the general provisions and protections afforded by the USFWS and CDFW; and 6) the proper procedures if a special-status species is encountered within the project site.

***Mitigation 1b:*** To avoid and reduce impacts to the Monterey dusky-footed woodrat, the project applicant will retain a qualified biologist to conduct pre-construction surveys in suitable habitat proposed for construction. Surveys will be done within three days prior to construction for woodrat nests within the project site and in a buffer zone 25 feet out from the limit of disturbance. All woodrat nests within the buffer zone will be flagged and avoided. Nests that cannot be avoided will be manually deconstructed prior to land clearing activities to allow animals to escape harm. If a litter of young is found or suspected, nest material will be replaced, and the nest left alone for 2-3 weeks before a re-check to verify that young are capable of independent survival before proceeding with nest dismantling.

***Mitigation 1c:*** To avoid and reduce impacts to the American badger, the project applicant will retain a qualified biologist to conduct focused pre-construction surveys for badger dens in all suitable habitat proposed for construction, ground disturbance, or staging no more than two weeks prior to construction. If no potential badger dens are present, no further mitigation is required. If potential dens are observed, the following measures are required to avoid potential significant impacts to the American badger:

- If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent badgers from re-using them during construction.
- If the qualified biologist determines that potential dens may be active, the entrances of the dens shall be blocked with soil, sticks, and debris for three to five days to discourage the use of these dens prior to project disturbance. The den entrances shall be blocked to an incrementally greater degree over the three to five day period. After the qualified biologist determines that badgers have stopped using active dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent re-use during construction.

***Mitigation 1d:*** In order to avoid impacts to active burrowing owl nests, a qualified biologist will conduct pre-construction surveys in suitable habitat within the construction footprint and within 250 feet of the footprint no more than 30 days prior to the start of construction. If ground disturbing activities are delayed or suspended for more than 30 days after the pre-construction survey, the site shall be resurveyed. The survey shall conform to the CDFW 1995 Staff Report protocol. If no burrowing owls are found, no further mitigation is required. If it is determined that burrowing owls occupy the site during the non-breeding season (September 1 through January 31), then a passive relocation effort (e.g., blocking burrows with one-way doors and leaving them in place for a minimum of three days) may be necessary to ensure that the owls are not harmed or injured during construction. Once it has been determined that the owls have vacated the site, the burrows can be collapsed, and ground disturbance can proceed. If burrowing owls are detected within the construction footprint or immediately adjacent lands (i.e. within 250 feet of the footprint) during the breeding season (February 1 to August 31), a construction-free buffer of 250 feet will be established around all active owl nests. The buffer area will be enclosed with temporary fencing, and construction equipment and workers will not enter the enclosed setback areas. Buffers will remain in place for the duration of the breeding season or until it has been confirmed by a qualified biologist that all chicks have fledged and are independent of their parents. After the breeding season, passive relocation of any remaining owls may take place as described above.

***Mitigation 1e:*** To avoid and reduce impacts to nesting raptors and other nesting avian species including the, but not limited to; the long-eared owl, white-tailed kite, and California horned lark, construction activities can be timed to avoid the nesting season period. Specifically, tree and vegetation removal can be scheduled after September 1 and before January 31 to avoid impacts to these species. Alternatively, if avoidance of the nesting period is not feasible, a qualified biologist shall be retained to conduct pre-construction surveys for nesting raptors and other protected avian species within 250 feet of proposed construction activities if construction occurs between February 1 and August 31. Pre-construction surveys will be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). Because some bird species nest early in spring and others nest later in summer, some breed multiple times in a season, surveys for nesting birds may be required to continue during construction to address new arrivals. The necessity and timing of these continued surveys will be determined by the qualified biologist based on review of the final construction plans.

If raptors or other protected avian species nests are identified during the pre-construction surveys, the qualified biologist will notify the project applicant and an appropriate no-disturbance buffer will be imposed within which no construction activities or disturbance should take place as determined by the qualified biologist to ensure avoidance of impacts to the individuals. The buffer will remain in place until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

**Mitigation 1f:** Following construction, disturbed areas will be restored to pre-project contours to the maximum extent possible and revegetated using locally-occurring native species and native erosion control seed mix, per the recommendations of a qualified biologist.

**Mitigation 1g:** Grading, excavating, and other activities that involve substantial soil disturbance will be planned and carried out in consultation with a qualified hydrologist, engineer, or erosion control specialist, and will utilize standard erosion control techniques to minimize erosion and sedimentation to native vegetation (pre-, during, and post-construction).

**Mitigation 1h:** All food-related and other trash will be disposed of in closed containers and removed from the project area at least once a week during the construction period, or more often if trash is attracting avian or mammalian predators. Construction personnel will not feed or otherwise attract wildlife to the area.

**Mitigation 1i:** No firearms will be allowed on the project site at any time.

**Impact 2:** *CTS are known to occur within the project site. This species is listed as Threatened under ESA and CESA. Construction-phase activities associated with the development of the homeland and the driveway have the potential to impact (take) individual CTS. This may include direct injury or mortality as a result of vegetation removal, ground disturbance, and construction vehicle traffic. The project would result in the permanent loss of CTS upland habitat. On-going impacts to CTS may result from the operation of the residences, such as mowing and residential traffic. This is a potentially significant impact that can be reduced to a less-than-significant-level with the implementation of Mitigation Measures 1a, 1f-h, and the mitigation presented below.*

**Mitigation 2:** The project applicant will comply with the ESA and CESA and consult with the Service and CDFW to determine whether authorization for the incidental take of CTS is required prior to issuance of a grading permit. If it is determined that authorization for the incidental take of CTS is required from the Service and/or CDFW, the project applicant will comply with the ESA and/or CESA to obtain an incidental take permit at the project-level prior to the issuance of a grading permit. Permit requirements typically involve the preparation and implementation of a mitigation plan and mitigating impacted habitat at a 3:1 ratio through preservation and/or restoration. The project applicant would be required to retain a qualified biologist to prepare a mitigation plan, which will include, but is not limited to identifying: avoidance and minimization measures; mitigation strategy, including a take assessment, avoidance and minimization measures, compensatory mitigation lands, and success criteria; and funding assurances. The project applicant would be required to implement the approved plan and any additional permit requirements.

**Impact 3:** *CRLF* are known to occur adjacent the project site. This species is listed as Threatened under the ESA and is a CDFW species of special concern. Construction-phase activities associated with the development of the homeland and the driveway have the potential to impact (take) individual *CRLF* and their designated critical habitat. This may include direct injury or mortality as a result of vegetation removal, ground disturbance, and construction vehicle traffic. The project would result in the permanent loss of *CRLF* upland habitat and dispersal habitat. On-going impacts to *CRLF* may result from the operation of the residences, such as mowing and residential traffic. **This is a potentially significant impact that can be reduced to a less-than-significant-level with the implementation of Mitigation Measures 1a, 1f-h, and the mitigation presented below.**

**Mitigation 3:** The project applicant will comply with the ESA and consult with USFWS to determine whether authorization for the incidental take of *CRLF* is required prior to issuance of a grading permit. If it is determined that authorization for the incidental take of *CRLF* is required from USFWS, the project applicant will comply with the ESA to obtain an incidental take permit at the project-level prior to the issuance of a grading permit. Permit requirements typically involve the preparation and implementation of a mitigation plan and mitigating impacted habitat at a 3:1 ratio through preservation and/or restoration. The project applicant would be required to retain a qualified biologist to prepare a mitigation plan, which will include, but is not limited to identifying: avoidance and minimization measures; mitigation strategy, including a take assessment, avoidance and minimization measures, compensatory mitigation lands, and success criteria; and funding assurances. The project applicant would be required to implement the approved plan and any additional permit requirements.

**Impact 4:** *The project will impact a number of habitats potentially considered ESHA under the California Coastal Act. Impacts may include the construction related disturbance or permanent loss of: native grassland, CRLF critical upland and dispersal habitat, and upland habitat presumed to be occupied by CTS. This is a potentially significant impact that can be reduced to a less-than-significant-level with the implementation of Mitigation Measures 1a, 1g-i, 2, and 3, and the mitigation measures included below.*

**Mitigation 4:** The project applicant will comply with the California Coastal Act (CCA) and consult with the California Coastal Commission (CCC) to determine whether authorization for Coastal Development Permit (CDP) is required prior to issuance of a grading permit. If it is determined that a CDP is required from the CCC, the project applicant will comply with the CCA to obtain a CDP at the project-level prior to the issuance of a grading permit. Permit requirements typically involve the preparation and implementation of a mitigation plan and mitigating impacted habitat at a 3:1 ratio through preservation and/or restoration. The project applicant would be required to retain a qualified biologist to prepare a mitigation plan, which will include, but is not limited to identifying: avoidance and minimization measures; mitigation strategy (including a take assessment, avoidance and minimization measures, compensatory mitigation lands, and success criteria); and funding assurances. The project applicant would be required to implement the approved plan and any additional permit requirements.

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## REFERENCES

- Baldwin, B. G., et. al. 2012. The Jepson Manual – Vascular Plants of California, Second Edition, Thoroughly Revised and Expanded. University of California Press. Berkeley, CA. 1600 pp.
- BioSystems Analysis, Inc. 1994. Rancho San Carlos Special Status Biological Resources Report.
- Bulger, J. B., N. J. Scott Jr., and R. B. Seymour. 2003. Terrestrial activity and conservation of adult California red-legged frog *Rana aurora draytonii* in coastal forests and grasslands. Biological Conservation, Vol 110. Pp. 85-95.
- California Department of Fish and Game (CDFW). 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. Available online at: [http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/Protocols\\_for\\_Surveying\\_and\\_Evaluating\\_Impacts.pdf](http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/Protocols_for_Surveying_and_Evaluating_Impacts.pdf)
- CDFW. 2018a. California Natural Diversity Data Base Rare Find Report (July 2018).
- CDFW. 2018b. California Natural Community List. Available Online at: <https://www.wildlife.ca.gov/data/vegcamp/natural-communities#natural%20communities>
- California Native Plant Society (CNPS). 2001. Botanical Survey Guidelines. Available Online at: [http://www.cnps.org/cnps/rareplants/pdf/cnps\\_survey\\_guidelines.pdf](http://www.cnps.org/cnps/rareplants/pdf/cnps_survey_guidelines.pdf)
- CNPS. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org>
- Denise Duffy & Associates, Inc. (DD&A). 2003. Biological Assessment for the Potrero Area Subdivision Santa Lucia Preserve Monterey County, California.
- DD&A. 2008. Protocol-level California Tiger Salamander Survey Report for the Santa Lucia Preserve, Monterey County, California.
- DD&A. 2009. Addendum to the Malcolm Property Biological Assessment (Letter to Denise Malcolm 5-22-09).
- DD&A. 2013a. 2013 Stock-Pond Survey Report for the Santa Lucia Preserve, Monterey County, California. Technical Document: Santa Lucia Conservancy.
- DD&A. 2013b. California Tiger Salamander Survey Results at the Malcolm Property and Adjacent Palo Corona Regional Park – 2011-2013.
- DD&A. 2014. Malcolm Property Biological Resources Report.
- Hatfield, R., S. Colla, S. Jepsen, L. Richardson, R. Thorp, and S. F. Jordan. 2014. IUCN assessments for North American *Bombus* spp. Technical report for the North American IUCN Bumble Bee Specialist Group. Assessments completed 2014, document updated in February 2015. 56 pp.
- Hayes, M. P. and M. R. Jennings. 1986. Decline of ranid frog species in western North America: are bullfrogs (*Rana catesbeiana*) responsible? Journal of Herpetology, Vol. 20 (4). Pp. 490-509.

- Hemingway, V. and A. D'Amore. 2008. Final report for amphibian management and monitoring at Palo Corona Regional Park, Monterey County, Ca. Technical Document: Monterey Peninsula Regional Park District.
- Holland, R. F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Nongame-Heritage Program, California Department of Fish and Game, Sacramento, CA. 156 pp.
- Howitt, B. F. and J. T. Howell. 1964. The vascular plants of Monterey County, California.
- Howitt, B. F. and J. T. Howell. 1973. Supplement to the vascular plants of Monterey County, California. Pacific Grove Museum of Natural History Association, Pacific Grove, CA. 60 pp.
- Jennings, M.R. and M.P. Hayes. 1988. Habitat correlates of distribution of the California red-legged frog (*Rana draytonii*) and the foothill yellow-legged frog (*Rana boylii*): implications for management. Proceedings from Management of Amphibians, Reptiles and Small Mammals in North America Symposium 1988.
- Jennings, M. R. and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California. Final report to the California Department of Fish and Game, Inland Fisheries Division. 255 pp.
- Jennings, M.R. and M.P. Hayes, and D.C. Holland. 1993. A petition to the US fish and wildlife service to place the California red-legged frog and the Western pond turtle (*Clemmys marmorata*) on the list of endangered and threatened wildlife and plants.
- Jepson Flora Project. 2018. Jepson Online Interchange for California floristics. Available online at: <http://ucjeps.berkeley.edu/interchange.html>
- Loredo et al, 1996. Habitat use and migration behavior of the California tiger salamander. Journal of Herpetology, Vol. 30(2). Pp. 282-285.
- Matthews, M.A. and M. Mitchell. 2015. The Plants of Monterey County, an Illustrated Field Key; Second Edition. California Native Plant Society Press, Sacramento, California. 446 pp.
- Moyle, P.B. 1973. Effects of introduced bullfrogs, *Rana catesbeiana*, on the native frogs of the San Joaquin Valley, California. Copeia 1973. Pp. 18-22.
- Munz, P. A. and D. D. Keck. 1973. A California flora and supplement. University of California Press, Berkeley, CA. 1681 pp., + 224 pp. supplement.
- PMC. 2003. Potrero Area Subdivision Supplemental Environmental Impact Report.
- Rancho San Carlos Partnership. 1994a. Santa Lucia Preserve Resource Management Plan, Appendix 6.1: List of Plant Species by Habitat Encountered at Rancho San Carlos
- Rancho San Carlos Partnership. 1994b. Santa Lucia Preserve Resource Management Plan, Appendix 6.2: Rancho San Carlos Habitat List and Descriptions
- Rathbun, G.B., M.R. Jennings, T.G. Murphey, and N.R. Siepel. 1993. Status and ecology of sensitive aquatic vertebrates in lower San Simeon and Pico Creeks, San Luis Obispo County, California. Unpublished report, National Ecology Research Center, Piedras Blancas Research Station, San Simeon, California. 103 pp.

- Remsen, J. V. Jr. 1978. Bird species of special concern in California. California Dept. of Fish and Game, Nongame Wildlife Investigations, Wildlife Management Branch Administrative Report No. 78-1.
- Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A manual of California vegetation 2<sup>nd</sup> Edition. California Native Plant Society, Sacramento, CA. 1300 pp.
- Stebbins, R. C. 1972. California Amphibians and Reptiles. University of California Press, Berkeley. 152 pp.
- Stebbins, R.C. 1985. Western reptiles and amphibians. Houghton Mifflin Company, Boston, MA. 336 pp.
- Stebbins, R.C. 2003. Western reptiles and amphibians, 3<sup>rd</sup> edition. Houghton Mifflin Company, New York, NY. 533 pp.
- Thelander, C. (ed.). 1994. Life on the edge: A guide to California's endangered natural resources: wildlife. BioSystems Books, Santa Cruz, CA.
- USFWS. 1996. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the California Red-legged Frog; Final Rule. Federal Register, Vol. 61(101). Pp. 25813-25833.
- USFWS. 2000. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants. Available online at:  
[http://www.fws.gov/ventura/speciesinfo/protocols\\_guidelines/docs/botanicalinventories.pdf](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/docs/botanicalinventories.pdf)
- USFWS. 2004. Endangered and threatened wildlife and plants; Determination of threatened status for the California Tiger Salamander; and special rule exemption for existing routine ranching activities; Final rule. Federal Register, Vol. 69(149). Pp. 47211-47248.
- USFWS. 2005. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California Tiger Salamander; Central Population; Final Rule. Federal Register, Vol. 70(162). Pp 49379-49458.
- USFWS. 2006. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California Red-legged Frog and Special Rule Exemption Associated with Final Listing for Existing Routine Ranching Activities; Final rule. Federal Register, Vol. 71(71). Pp. 19244-19292.
- USFWS. 2010. Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the California Red-legged Frog; Final rule. Federal Register, Vol. 75(51). Pp. 12816-12959.
- USFWS. 2018. IPaC Resource List. Available online at <https://ecos.fws.gov/ipac/>.
- Williams, D. 1986. Mammalian species of special concern in California. California Department of Fish and Game Report 86-1. 112 pp.
- Zeiner, D. C., W. F. Laudenslayer, Jr., K. E. Mayer, and M. White (eds.). 1988. California's wildlife, Volume I: Amphibians and reptiles. California Department of Fish and Game, Sacramento, California. 272 pp.
- Zeiner, D. C., W. F. Laudenslayer, Jr., K. E. Mayer, and M. White (eds.). 1990. California's Wildlife, Volume II: Birds. California Department of Fish and Game, Sacramento, California. 731 pp.

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# **APPENDIX A**

## **Special-Status Species Table**

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## Special-Status Species Table

USGS quadrangles: *Carmel Valley, Marina, Monterey, Mt. Carmel, Salinas, Seaside, Soberanes Point, and Spreckels.*

Species	Status (USFWS/ CDFW/ CNPS)	General Habitat	Occurrence Potential within the Homeland and Driveway	Occurrence Potential within Openlands
<b>MAMMALS</b>				
<i>Antrozous pallidus</i> Pallid bat	-- / CSC / --	Occurs in a wide variety of habitats including grasslands, shrublands, arid desert areas, oak savanna, coastal forested areas, and coniferous forests of the mountain regions of California. Most common in open, dry habitats with rocky areas for roosting. Day roosts include caves, crevices, mines, and occasionally hollow trees and buildings. Seems to prefer rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Similar structures are used for night roosting and will also use more open sites such as caves, awnings, and open areas under bridges for feeding roosts.	<b>Low:</b> May forage over open areas; however, no suitable roosting habitat is present.	<b>Low:</b> May forage over open areas; however, no suitable roosting habitat is present.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-- / CSC / --	Found primarily in rural settings from inland deserts to coastal redwoods, oak woodland of the inner Coast Ranges and Sierra foothills, and low to mid-elevation mixed coniferous-deciduous forests. Typically roost during the day in limestone caves, lava tubes, and mines, but can roost in buildings that offer suitable conditions. Night roosts are in more open settings and include bridges, rock crevices, and trees.	<b>Low:</b> May forage over open areas; however, no suitable roosting habitat is present.	<b>Low:</b> May forage over open areas; however, no suitable roosting habitat is present.
<i>Lasiurus cinereus</i> Hoary bat	-- / CNDDDB / --	Prefers open habitats or habitat mosaics with access to trees for cover and open areas or edge for feeding. Generally, roosts in dense foliage of trees; does not use buildings for roosting. Winters in California and Mexico and often migrates towards summer quarters in the north and east during the spring. Young are born and reared in summer grounds, which is unlikely to occur in California.	<b>Low:</b> May forage over open areas; however, no suitable roosting habitat is present.	<b>Low:</b> May forage over open areas; however, no suitable roosting habitat is present.
<i>Neotoma macrotis luciana</i> Monterey dusky-footed woodrat	-- / CSC / --	Forest and oak woodland habitats of moderate canopy with moderate to dense understory. Also occurs in chaparral habitats.	<b>Moderate:</b> Most of the homeland is defined by grassland, but suitable some coyote brush habitat is present.	<b>Moderate:</b> Suitable habitat is present within the coyote brush scrub habitat.
<i>Reithrodontomys megalotis distichis</i> Salinas harvest mouse	-- / CNDDDB / --	Known only to occur from the Monterey Bay region. Occurs in fresh and brackish water wetlands and probably in the adjacent uplands around the mouth of the Salinas River.	<b>Unlikely:</b> No suitable habitat present.	<b>Unlikely:</b> No suitable habitat present.

<i>Taxidea taxus</i> American badger	-- / CSC / --	Dry, open grasslands, fields, pastures savannas, and mountain meadows near timberline are preferred. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated grounds.	<b>Moderate:</b> Suitable habitat is present. The nearest CNDDDB occurrence is approximately 6.2 miles northeast of the property. One occurrence is also known on the adjacent SLP (BioSystems Analysis Inc., 1994). This species has not been previously identified on the property.	<b>Moderate:</b> Suitable habitat is present.
<b>BIRDS</b>				
<i>Accipiter cooperii</i> Cooper's hawk (nesting)	-- / CNDDDB / --	Resident throughout most of the wooded portion of the state. Dense stands of live oak, riparian deciduous, or other forest habitats near water used most frequently. Seldom found in areas without dense tree stands, or patchy woodland habitats.	<b>Low:</b> May forage over open areas in the winter; however, no suitable nesting habitat is present.	<b>Low:</b> May forage over open areas in the winter; however, no suitable nesting habitat is present.
<i>Agelaius tricolor</i> Tricolored blackbird (nesting colony)	-- / CSC / --	Nest in colonies in dense riparian vegetation, along rivers, lagoons, lakes, and ponds. Forages over grassland or aquatic habitats.	<b>Low:</b> May be present within the driveway adjacent to Salamander Pond; however, suitable nesting habitat is not present within this area.	<b>Low:</b> Some foraging habitat is present, but nesting habitat is not present
<i>Aquila chrysaetos</i> Golden eagle (nesting & wintering)	-- / CFP / --	Use rolling foot-hills, mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, cliffs, and rocky outcrops. Nest in secluded cliffs with overhanging ledges as well as large trees.	<b>Low:</b> Suitable foraging habitat is present; however, no suitable nesting habitat is present.	<b>Low:</b> Suitable foraging habitat is present; however, no suitable nesting habitat is present.
<i>Asio otus</i> Long-eared owl	-- / CSC / --	Usually found in open areas with few trees, such as annual and perennial grasslands, prairies, meadows, dunes, irrigated lands, and saline and freshwater emergent marshes. Dense vegetation is required for roosting and nesting cover. This includes tall grasses, brush, ditches, and wetlands. Open, treeless areas containing elevated sites for perching, such as fence posts or small mounds, are also needed. Some individuals breed in northern California.	<b>Moderate:</b> Suitable habitat is present. Two occurrences are known on the adjacent SLP, the nearest on the north side of Chamisal Ridge, approximately 1.2 miles east of the property (SLC, 2006).	<b>Moderate:</b> Suitable habitat is present.

<i>Athene cunicularia</i> Western burrowing owl	-- / CSC / --	Year-round resident of open, dry grassland and desert habitats, and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Frequent open grasslands and shrublands with perches and burrows. Use rodent burrows (often California ground squirrel) for roosting and nesting cover. Pipes, culverts, and nest boxes may be substituted for burrows in areas where burrows are not available.	<b>Moderate:</b> Suitable habitat is present. The nearest CNDDDB occurrence is approximately 4.7 miles north of the property. Two additional occurrences are also known on the adjacent SLP; the nearest is at Mesa Pasture, approximately 2.6 miles southeast of the property (BioSystems Analysis Inc., 1994).	<b>Moderate:</b> Suitable habitat is present.
<i>Brachyramphus marmoratus</i> Marbled murrelet (nesting)	FT / SE / --	Occur year-round in marine subtidal and pelagic habitats from the Oregon border to Point Sal. Partial to coastlines with stands of mature redwood and Douglas-fir. Requires dense mature forests of redwood and/or Douglas-fir for breeding and nesting.	<b>Unlikely:</b> No suitable habitat present.	<b>Unlikely:</b> No suitable habitat present.
<i>Buteo regalis</i> Ferruginous hawk	-- / CNDDDB / --	An uncommon winter resident and migrant at lower elevations and open grasslands in the Modoc Plateau, Central Valley, and Coast Ranges and a fairly common winter resident of grassland and agricultural areas in southwestern California. Frequent open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats. Does not breed in California.	<b>Low:</b> Suitable foraging habitat is present. Does not nest in California	<b>Low:</b> Suitable foraging habitat is present. Does not nest in California
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	FT / CSC / --	Sandy beaches on marine and estuarine shores, also salt pond levees and the shores of large alkali lakes. Requires sandy, gravelly or friable soil substrate for nesting.	<b>Unlikely:</b> No suitable habitat present.	<b>Unlikely:</b> No suitable habitat present.
<i>Coturnicops noveboracensis</i> Yellow rail	-- / CSC / --	Wet meadows and coastal tidal marshes. Occurs year round in California, but in two primary seasonal roles: as a very local breeder in the northeastern interior and as a winter visitor (early Oct to mid-Apr) on the coast and in the Suisun Marsh region	<b>Unlikely:</b> No suitable habitat present.	<b>Unlikely:</b> No suitable habitat present.
<i>Cypseloides niger</i> Black swift	-- / CSC / --	Regularly nests in moist crevice or cave on sea cliffs above the surf, or on cliffs behind, or adjacent to, waterfalls in deep canyons. Forages widely over many habitats.	<b>Unlikely:</b> No suitable habitat present.	<b>Unlikely:</b> No suitable habitat present.
<i>Dendroica petechia brewsteri</i> Yellow warbler	-- / CSC / --	Usually found in riparian deciduous habitats in summer; cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodland. Visits woodland, forest, and shrub habitats.	<b>Unlikely:</b> No suitable habitat present.	<b>Unlikely:</b> No suitable habitat present.

<i>Elanus leucurus</i> White-tailed kite	-- / CFP / --	Open groves, river valleys, marshes, and grasslands. Prefer such area with low roosts (fences etc.) Nest in shrubs and trees adjacent to grasslands.	<b>High:</b> Suitable foraging habitat is present. May nest within the coyote brush scrub habitat. <b>Unlikely:</b> No suitable habitat present.	<b>High:</b> Suitable foraging habitat is present. May nest within the coyote brush scrub habitat. <b>Unlikely:</b> No suitable habitat present.
<i>Empidonax traillii</i> Southwestern willow flycatcher (nesting)	FE / SE / --	Breeds in riparian habitat in areas ranging in elevation from sea level to over 2,600 meters. Builds nest in trees in densely vegetated areas. This species establishes nesting territories and builds, and forages in mosaics of relatively dense and expansive areas of trees and shrubs, near or adjacent to surface water or underlain by saturated soils. Not typically found nesting in areas without willows ( <i>Salix sp.</i> ), tamarisk ( <i>Tamarix ramosissima</i> ), or both.	<b>Moderate:</b> Appropriate nesting and foraging habitat is present within the grassland. The CNDDDB reports the nearest occurrence as approximately 13.2 miles north of the property. This species is also known from the Potrero subdivision area of the SLP, located to the east of the property (DD&A, 2003). <b>Low:</b> Suitable foraging habitat present. No suitable nesting habitat present.	<b>Moderate:</b> Suitable habitat is present within grassland areas. <b>Low:</b> Suitable foraging habitat present. No suitable nesting habitat present.
<i>Eremophila alpestris actia</i> California horned lark	-- / CNDDDB / --	Variety of open habitats, usually where large trees and/or shrubs are absent. Found from grasslands along the coast to deserts at sea-level and alpine dwarf-shrub habitats are higher elevations. Builds open cup-like nests on the ground.	<b>Moderate:</b> Appropriate nesting and foraging habitat is present within the grassland. The CNDDDB reports the nearest occurrence as approximately 13.2 miles north of the property. This species is also known from the Potrero subdivision area of the SLP, located to the east of the property (DD&A, 2003). <b>Low:</b> Suitable foraging habitat present. No suitable nesting habitat present.	<b>Moderate:</b> Suitable habitat is present within grassland areas. <b>Low:</b> Suitable foraging habitat present. No suitable nesting habitat present.
<i>Falco mexicanus</i> Prairie falcon	-- / CNDDDB / --	Associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areas. Uses open terrain for foraging; nests in open terrain with canyons, cliffs, escarpments, and rock outcrops.	<b>Moderate:</b> Appropriate nesting and foraging habitat is present within the grassland. The CNDDDB reports the nearest occurrence as approximately 13.2 miles north of the property. This species is also known from the Potrero subdivision area of the SLP, located to the east of the property (DD&A, 2003). <b>Low:</b> Suitable foraging habitat present. No suitable nesting habitat present.	<b>Moderate:</b> Suitable habitat is present within grassland areas. <b>Low:</b> Suitable foraging habitat present. No suitable nesting habitat present.
<i>Falco peregrinus anatum</i> American peregrine falcon	-- / CFP / --	Forages for other birds over a variety of habitats. Breeds primarily on rocky cliffs. Frequents bodies of water in open areas with cliffs and canyons nearby for cover and nesting.	<b>Low:</b> Low quality foraging habitat present. No suitable nesting habitat is present.	<b>Low:</b> Low quality foraging habitat present. No suitable nesting habitat is present.
<i>Gymnogyps californianus</i> California condor	FE / SE / --	Roosting sites in isolated rocky cliffs, rugged chaparral, and pine covered mountains 2000-6000 feet above sea level. Foraging area removed from nesting/roosting site (includes rangeland and coastal area - up to 19 mile commute one way). Nest sites in cliffs, crevices, potholes.	<b>Unlikely:</b> No suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Haliaeetus leucocephalus</i> Bald eagle	-- / SE / --	Nests in large, old-growth, or dominant live tree with open branchwork, especially ponderosa pine, most frequently in stands with less than 40% canopy, but usually some foliage shading the nest. 87% of nest sites in CA are within one mile of water.	<b>Unlikely:</b> No suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.

<i>Icteria virens</i> Yellow-breasted chat	-- / CSC / --	Frequents dense, brushy thickets and tangles near water, and thick understory in riparian woodland.	<b>Unlikely:</b> No suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Laterallus jamaicensis coturniculus</i> California black rail	-- / ST&CFP / --	Inhabits freshwater marshes, wet meadows & shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that does not fluctuate during the year & dense vegetation for nesting habitat.	<b>Unlikely:</b> No suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Oceanodroma homochroa</i> Ashy storm-petrel	-- / CSC / --	Tied to land only to nest, otherwise remains over open sea. Nests in natural cavities, sea caves, or rock crevices on offshore islands and prominent peninsulas of the mainland.	<b>Unlikely:</b> No suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Pelecanus occidentalis californicus</i> California brown pelican (nesting colony & communal roosts)	-- / CFP / --	Found in estuarine, marine subtidal, and marine pelagic waters along the California coast. Usually rests on water or inaccessible rocks, but also uses mudflats, sandy beaches, wharfs, and jetties.	<b>Unlikely:</b> No suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Progne subis</i> purple martin	-- / CSC / --	Frequents old-growth, multi-layered, open forest and woodland with snags in breeding season. Woodlands and low-elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine provide cover. Often nests in tall, old trees near a body of water. Also nests occasionally in residential areas.	<b>Unlikely:</b> No suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Riparia riparia</i> bank swallow	-- / ST / --	Nest colonially in sand banks. Found near water, fields, marshes, streams, and lakes.	<b>Unlikely:</b> No suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Sterna antillarum browni</i> California least tern (nesting colony)	FE / SE&CFP / --	Sea beaches, bays; large rivers, bars.	<b>Unlikely:</b> No suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Strix occidentalis occidentalis</i> California spotted owl	-- / CSC / --	In northern California, resides in dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 2300 meters, preferring narrow, steep-sided canyons with north-facing slopes.	<b>Unlikely:</b> No suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Vireo bellii pusillus</i> Least Bell's vireo (nesting)	FE / SE / --	Riparian areas and drainages. Breed in willow riparian forest supporting a dense, shrubby understory. Oak woodland with a willow riparian understory is also used in some areas, and individuals sometimes enter adjacent chaparral, coastal sage scrub, or desert scrub habitats to forage.	<b>Low:</b> Suitable foraging habitat is present; however, no suitable breeding habitat is present.	<b>Low:</b> Suitable foraging habitat is present; however, no suitable breeding habitat is present.

**REPTILES AND AMPHIBIANS**

<p><i>Ambystoma californiense</i> California tiger salamander</p>	<p>FT / ST / --</p>	<p>Annual grassland and grassy understorey of valley-foothill hardwood habitats in central and northern California. Need underground refuges and vernal pools or other seasonal water sources.</p>	<p><b>High:</b> CTS were observed within the homeland during upland drift fence surveys in 2012/13. Additional occurrences are known from several ponds on the adjacent SLP and PCRP. Three occurrences on the SLP are located less than 0.3 mile from the eastern border of the property. Two occurrences at PCRP are located less than 100 feet from the southwestern border of the property. Appropriate upland aestivation habitat present. Additionally, Salamander Pond is located less than 100 feet from the associated driveway. No aquatic resources suitable for CTS breeding are present.</p>	<p><b>Known:</b> Suitable habitat is present, and species has been known to occur in the area.</p>
<p><i>Anniella pulchra</i> California legless lizard (includes <i>A. p. nigra</i> and <i>A. p. pulchra</i> as recognized by the Department)</p>	<p>-- / CSC / --</p>	<p>Requires moist, warm habitats with loose soil for burrowing and prostrate plant cover. Often forages in leaf litter at plant bases. May be found on beaches, sandy washes, and in woodland, chaparral, and riparian areas.</p>	<p><b>Unlikely:</b> No appropriate soils present.</p>	<p><b>Unlikely:</b> No appropriate soils present.</p>
<p><i>Emys marmorata</i> western pond turtle</p>	<p>-- / CSC / --</p>	<p>Associated with permanent or nearly permanent water in a wide variety of habitats including streams, lakes, ponds, irrigation ditches, etc. Require basking sites such as partially submerged logs, rocks, mats of vegetation, or open banks.</p>	<p><b>Unlikely:</b> No suitable habitat is present.</p>	<p><b>Unlikely:</b> No suitable habitat is present.</p>
<p><i>Phrynosoma blainvillii</i> coast horned lizard</p>	<p>-- / CSC / --</p>	<p>Associated with open patches of sandy soils in washes, chaparral, scrub, and grasslands.</p>	<p><b>Unlikely:</b> No suitable habitat is present.</p>	<p><b>Unlikely:</b> No suitable habitat is present.</p>
<p><i>Rana boylei</i> Foothill yellow-legged frog</p>	<p>-- / CSC / --</p>	<p>Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats, including hardwood, pine, and riparian forests, scrub, chaparral, and wet meadows. Rarely encountered far from permanent water.</p>	<p><b>Unlikely:</b> No suitable habitat is present.</p>	<p><b>Unlikely:</b> No suitable habitat is present.</p>

<p><i>Rana draytonii</i> California red-legged frog</p>	<p>FT / CSC / --</p>	<p>Lowlands and foothills in or near permanent or late-season sources of deep water with dense, shrubby, or emergent riparian vegetation. During late summer or fall adults are known to utilize a variety of upland habitats with leaf litter or mammal burrows.</p>	<p><b>High:</b> Appropriate dispersal habitat is present. Appropriate upland habitat is also present within the associated driveway within 100 meters of Salamander Pond. No suitable aquatic breeding or non-breeding habitat is present. CNDDDB occurrences are known from several ponds on the adjacent SLP and PCR. Four occurrences on the SLP are located less than 0.3 mile from the eastern border of the property. Two occurrences at PCR are located less than 350 feet from the southwestern border of the property. The homeland and the associated driveway are within CRLF critical habitat unit MNT-2.</p>	<p><b>High:</b> Suitable habitat is present, and species has been known to occur in the area.</p>
<p><i>Taricha torosa</i> California newt  (Monterey County south only)</p>	<p>-- / CSC / --</p>	<p>Occur mainly in valley-foothill hardwood, valley-foothill hardwood-conifer, coastal scrub, and mixed chaparral, but is known to occur in grasslands and mixed conifer types. Seek cover under rocks and logs, in mammal burrows, rock fissures, or man-made structures such as wells. Breed in intermittent ponds, streams, lakes, and reservoirs.</p>	<p><b>High:</b> Coast range newt was observed within the homeland during upland drift fence surveys in 2012/13. Additionally, appropriate upland and dispersal habitat is present within the associated driveway. No suitable aquatic breeding habitat is present. Coast range newt was also observed breeding in the adjacent Salamander Pond on PCR and within three ponds on the adjacent SLP. The CNDDDB does not report any occurrences of this species.</p>	<p><b>High:</b> Suitable habit is present, and species has been known to occur in the area.</p>
<p><i>Thamnophis hammondi</i> two-striped garter snake</p>	<p>-- / CSC / --</p>	<p>Associated with permanent or semi-permanent bodies of water bordered by dense vegetation in a variety of habitats from sea level to 2,400m elevation.</p>	<p><b>Low:</b> Low quality habitat is present within the associated driveway near Salamander Pond. No suitable habitat is present within the homeland.</p>	<p><b>Low:</b> Low quality habitat is present near Salamander and Roadrunner ponds.</p>

**FISH**

<i>Eucyclogobius newberryi</i> tidewater goby	FE / CSC / --	Brackish water habitats. Found in shallow lagoons and lower stream reaches.	Not Present: No suitable habitat is present.	Not Present: No suitable habitat is present.
<i>Oncorhynchus mykiss irideus</i> steelhead-central California coast.	FT / -- / --	Coastal perennial and near perennial streams, with suitable spawning and rearing habitat and no major barriers.	Not Present: No suitable habitat is present.	Not Present: No suitable habitat is present.

**INVERTEBRATES**

<i>Bombus caliginosus</i> Obscure bumble bee	-- / CNDDDB / --	Native to the West Coast of the United States. Occurs primarily along the coast in grassy prairies and meadows within the Coast Range. This species can nest both under and above ground. When nesting above ground the species may utilize abandoned bird nests. Found in areas that are relatively humid including areas that are frequently foggy.	Moderate: Suitable habitat is present.	Moderate: Suitable habitat is present.
<i>Bombus occidentalis</i> Western bumble bee	-- / CNDDDB / --	Occurs in open grassy areas, urban parks, urban gardens, chaparral, and meadows. This species generally nests underground.	Moderate: Suitable habitat is present.	Moderate: Suitable habitat is present.
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT / -- / --	Require ephemeral pools with no flow. Associated with vernal pool/grasslands from near Red Bluff (Shasta County), through the central valley, and into the South Coast Mountains Region.	Unlikely: No suitable habitat is present.	Unlikely: No suitable habitat is present.
<i>Coelus globosus</i> Globose dune beetle	-- / CNDDDB / --	Coastal dunes. These beetles are primarily subterranean, tunneling through sand underneath dune vegetation.	Unlikely: No suitable habitat is present.	Unlikely: No suitable habitat is present.
<i>Danaus plexippus</i> Monarch butterfly	-- / CNDDDB / --	Overwinters in coastal California using colonial roosts generally found in eucalyptus, pine, and acacia trees. Overwintering habitat for this species within the Coastal Zone represents ESHA. Local ordinances often protect this species as well.	Unlikely: No suitable habitat is present.	Unlikely: No suitable habitat is present.
<i>Euphilotes enoptes smithi</i> Smith's blue butterfly	FE / -- / --	Most commonly associated with coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz Counties. Plant hosts are <i>Eriogonum latifolium</i> and <i>E. parvifolium</i> .	Not Present: No host plants were observed during focused SBB habitat surveys.	Low: Suitable habitat is present. Several occurrences are known on the adjacent SLP.
<i>Linderiella occidentalis</i> California linderiella	-- / CNDDDB / --	Ephemeral ponds with no flow. Generally associated with hardpans.	Unlikely: No suitable habitat is present.	Low: Habitat is present, but the species has never been found during surveys.

**PLANTS**

<i>Agrostis lacunavernalis</i> Vernal pool bent grass	-- / -- / 1B	Vernal pools (mima mounds) at elevations of 115-145 meters. Annual herb in the Poaceae family; blooms April-May.	<b>Not Present:</b> Species was not identified during biological surveys. No suitable habitat is present, and the homeland is above elevation range for this species.	<b>Unlikely:</b> No suitable habitat is present, and the site is above the known elevation range for this species.
<i>Allium hickmanii</i> Hickman's onion	-- / -- / 1B	Closed-cone coniferous forests, maritime chaparral, coastal prairie, coastal scrub, and valley and foothill grasslands at elevations of 5-200 meters. Bulbiferous perennial herb in the Alliaceae family; blooms March-May.	<b>Not Present:</b> Species was not identified during botanical surveys, and the homeland is above elevation range for this species.	<b>Unlikely:</b> Site is above the known elevation range for this species.
<i>Arctostaphylos edmundsii</i> Little Sur manzanita	-- / -- / 1B	Coastal bluff scrub and chaparral on sandy soils at elevations 30-105 meters. Evergreen shrub in the Ericaceae family; blooms November-April.	<b>Not Present:</b> Species was not identified during botanical surveys. No suitable habitat is present, and the homeland is above elevation range for this species.	<b>Unlikely:</b> Site is above the known elevation range for this species.
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i> Hooker's manzanita	-- / -- / 1B	Closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub on sandy soils at elevations of 85-536 meters. Evergreen shrub in the Ericaceae family; blooms January-June.	<b>Not Present:</b> Species was not identified during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Arctostaphylos montereyensis</i> Monterey manzanita	-- / -- / 1B	Maritime chaparral, cismontane woodland, and coastal scrub on sandy soils at elevations of 30-730 meters. Evergreen shrub in the Ericaceae family; blooms February-March.	<b>Not Present:</b> Species was not identified during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Arctostaphylos pajaroensis</i> Pajaro manzanita	-- / -- / 1B	Chaparral on sandy soils at elevations of 30-760 meters. Evergreen shrub in the Ericaceae family; blooms December-March.	<b>Not Present:</b> Species was not identified during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Arctostaphylos pumila</i> sandmat manzanita	-- / -- / 1B	Openings of closed-cone coniferous forests, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils at elevations of 3-205 meters. Evergreen shrub in the Ericaceae family; blooms February-May.	<b>Not Present:</b> Species was not identified during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Arenaria paludicola</i> Marsh sandwort	FE / SE / 1B	Known from only two natural occurrences in Black Lake Canyon and at Oso Flaco Lake. Sandy openings of freshwater of brackish marshes and swamps at elevations of 3-170 meters. Stoloniiferous perennial herb in the Caryophyllaceae family; blooms May-August.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is above its known elevation range.	<b>Unlikely:</b> No suitable habitat is present, and the site is above the known elevation range for this species.

<i>Astragalus tener</i> var. <i>tener</i> Alkali milk-vetch	-- / -- / 1B	Playas, valley and foothill grassland on adobe clay, and vernal pools on alkaline soils at elevations of 1-60 meters. Annual herb in the Fabaceae family; blooms March-June.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is above its known elevation range.	<b>Unlikely:</b> Site is above the known elevation range for this species.
<i>Astragalus tener</i> var. <i>titi</i> coastal dunes milk-vetch	FE / SE / 1B	Often found in vernal mesic, sandy areas of coastal bluff scrub, coastal dunes, and coastal prairie at elevations of 1-50 meters. Annual herb in the Fabaceae family; blooms March-May.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is above its known elevation range.	<b>Unlikely:</b> No suitable habitat is present, and the site is above the known elevation range for this species.
<i>Bryoria spiralis</i> Twisted horsehair lichen	-- / -- / 1B.1	California North Coast coniferous forest at elevations of 0-30 meters. Often found on conifers, including <i>Picea sitchensis</i> , <i>Pinus contorta</i> var. <i>contorta</i> , <i>Pseudotsuga menziesii</i> , <i>Abies grandis</i> , and <i>Tsuga heterophylla</i> . Fruticose lichen in the Parmeliaceae family.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is above its known elevation range.	<b>Unlikely:</b> No suitable habitat is present, and the site is above the known elevation range for this species.
<i>Castilleja ambigua</i> var. <i>insalutata</i> Pink johnny-nip	-- / -- / 1B	Coastal prairie and coastal scrub at elevations of 0-100 meters. Annual herb in the Orobanchaceae family; blooms May-August.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is above its known elevation range.	<b>Unlikely:</b> Site is above the known elevation range for this species.
<i>Centromadia parryi</i> ssp. <i>congdonii</i> Congdon' tarplant	-- / -- / 1B	Valley and foothill grassland on alkaline soils at elevations of 0-230 meters. Annual herb in the Asteraceae family; blooms May-November.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Unlikely:</b> No suitable habitat is present.
<i>Chorizanthe minutiflora</i> Fort Ord spineflower	-- / -- / 1B	Sandy openings of maritime chaparral and coastal scrub at elevations of 55-150 meters. Only known occurrences on Fort Ord National Monument. Annual herb in the Polygonaceae family; blooms April-July.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is outside of its known elevation and distribution range.	<b>Unlikely:</b> No suitable habitat is present, and the site is outside of the known elevation and distribution range for this species.
<i>Chorizanthe pungens</i> var. <i>pungens</i> Monterey spineflower	FT / -- / 1B	Maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils at elevations of 3-450 meters. Annual herb in the Polygonaceae family; blooms April-July.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present on the homeland.	<b>Unlikely:</b> No suitable habitat is present.
<i>Chorizanthe robusta</i> var. <i>robusta</i> Robust spineflower	FE / -- / 1B	Openings in cismontane woodland, coastal dunes, maritime chaparral, and coastal scrub on sandy or gravelly soils at elevations of 3-300 meters. Annual herb in the Polygonaceae family; blooms April-September.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present on the homeland.	<b>Unlikely:</b> No suitable habitat is present.
<i>Clarkia jolonensis</i> Jolon clarkia	-- / -- / 1B	Cismontane woodland, chaparral, riparian woodland, and coastal scrub at elevations of 20-660 meters. Annual herb in the Onagraceae family; blooms April-June.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Low:</b> Marginal habitat is present within the coyote brush scrub habitat.

<i>Collinsia multicolor</i> San Francisco collinsia	-- / -- / 1B	Closed-cone coniferous forest and coastal scrub, sometimes on serpentinite soils, at elevations of 30-250 meters. Annual herb in the Plantaginaceae family; blooms March-May.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Low:</b> Marginal habitat is present within the coyote brush scrub habitat.
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i> Seaside bird's-beak	-- / SE / 1B	Closed-cone coniferous forests, maritime chaparral, cismontane woodlands, coastal dunes, and coastal scrub on sandy soils, often on disturbed sites, at elevations of 0-425 meters. Annual hemi-parasitic herb in the Orobanchaceae family; blooms April-October.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present on the homeland.	<b>Unlikely:</b> No suitable habitat is present.
<i>Delphinium californicum</i> ssp. <i>interius</i> Hospital Canyon California larkspur	-- / -- / 1B	Openings in chaparral, coastal scrub, and mesic areas of cismontane woodland at elevations of 230-1095 meters. Perennial herb in the Ranunculaceae family; blooms April-June.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Low:</b> Marginal habitat is present within the coyote brush scrub habitat.
<i>Delphinium hutchinsoniae</i> Hutchinsons' larkspur	-- / -- / 1B	Broadleaved upland forest, chaparral, coastal scrub, and coastal prairie at elevations of 0-427 meters. Perennial herb in the Ranunculaceae family; blooms March-June.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Moderate:</b> Suitable habitat is present.
<i>Delphinium umbraculorum</i> Umbrella larkspur	-- / -- / 1B	Cismontane woodland at elevations of 400-1600 meters. Perennial herb in the Ranunculaceae family; blooms April-June.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is outside its known elevation range.	<b>Unlikely:</b> The site is outside the known elevation range for this species.
<i>Ericameria fasciculata</i> Eastwood's goldenbush	-- / -- / 1B	Openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 30-275 meters. Evergreen shrub in the Asteraceae family; blooms July-October.	<b>Not Present:</b> Species was not identified during biological surveys.	<b>Unlikely:</b> No suitable habitat is present.
<i>Eriogonum nortonii</i> Pinnacles buckwheat	-- / -- / 1B	Chaparral and valley and foothill grassland on sandy soils, and often on recent burns, at elevations of 300-975 meters. Annual herb in the Polygonaceae family; blooms May-September.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Low:</b> Marginal habitat is present within the coyote brush scrub habitat.
<i>Erysimum amnophilum</i> Coast wallflower	-- / -- / 1B	Openings in maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 0-60 meters. Perennial herb in the Brassicaceae family; blooms February-June.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is outside its known elevation range.	<b>Unlikely:</b> The site is outside the known elevation range for this species.
<i>Erysimum menziesii</i> Menzies' wallflower	FE / SE / 1B	Coastal dunes at elevations of 0-35 meters. Perennial herb in the Brassicaceae family; blooms March-September.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is outside its known elevation range.	<b>Unlikely:</b> No suitable habitat is present, and the site is outside the known elevation range for this species.

<i>Fritillaria liliacea</i> Fragrant fritillaria	-- / -- / 1B	Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland, often serpentine, at elevations of 3-410 meters. Bulbiferous perennial herb in the Liliaceae family; blooms February-April.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Low:</b> Marginal habitat is present.
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i> sand gilia	FE / ST / 1B	Openings in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils at elevations of 0-45 meters. Annual herb in the Polemoniaceae family; blooms April-June.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is outside its known elevation range.	<b>Unlikely:</b> No suitable habitat is present, and the site is outside the known elevation range for this species.
<i>Hesperocyparis goventiana</i> Gowen cypress	FT / -- / 1B	Closed-cone coniferous forest and maritime chaparral at elevations of 30-300 meters. Evergreen tree in the Cupressaceae family. Natively occurring only at Point Lobos near Gibson Creek and the Huckleberry Hill Nature Preserve near Highway 68.	<b>Not Present:</b> Species was not identified during biological surveys.	<b>Unlikely:</b> No suitable habitat is present.
<i>Hesperocyparis macrocarpa</i> Monterey cypress	-- / -- / 1B	Closed-cone coniferous forest at elevations of 10-30 meters. Evergreen tree in the Cupressaceae family. Natively occurring only at Cypress Point in Pebble Beach and Point Lobos State Park; widely planted and naturalized elsewhere.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is outside its known elevation range.	<b>Unlikely:</b> No suitable habitat is present, and the site is outside the known elevation range for this species.
<i>Horkelia cuneata</i> ssp. <i>sericea</i> Kellogg's horkelia	-- / -- / 1B	Closed-cone coniferous forests, maritime chaparral, and openings in coastal scrub on sandy or gravelly soils at elevations of 10-200 meters. Perennial herb in the Rosaceae family; blooms April-September.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Moderate:</b> Suitable habitat is present.
<i>Horkelia marinensis</i> Point Reyes horkelia	-- / -- / 1B	Coastal dunes, coastal prairie, and coastal scrub on sandy soils at elevations of 5-350 meters. Perennial herb in the Rosaceae family; blooms May-September.	<b>Not Present:</b> Species was not observed during biological survey, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Lasthenia conjugens</i> Contra Costa goldfields	FE / -- / 1B	Mesic areas of valley and foothill grassland, alkaline playas, cismontane woodland, and vernal pools at elevations of 0-470 meters. Annual herb in the Asteraceae family; blooms March-June.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Layia carnosa</i> Beach layia	FE / SE / 1B	Coastal dunes and coastal scrub on sandy soils at elevations of 0-60 meters. Annual herb in the Asteraceae family; blooms March-July.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is outside its known elevation range.	<b>Unlikely:</b> No suitable habitat is present, and the site is outside the known elevation range for this species.
<i>Legenere limosa</i> Legenere	-- / -- / 1B	Vernal pools at elevations of 1-880 meters. Annual herb in the Campanulaceae family; blooms April-June.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.

<i>Lupinus tidestromii</i> Tidestrom's lupine	FE / SE / 1B	Coastal dunes at elevations of 0-100 meters. Perennial rhizomatous herb in the Fabaceae family; blooms April-June.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is outside its known elevation range.	<b>Unlikely:</b> No suitable habitat is present, and the site is outside the known elevation range for this species.
<i>Malcothamnus palmeri</i> var. <i>involutus</i> Carmel Valley bush mallow	-- / -- / 1B	Chaparral, cismontane woodland, and coastal scrub at elevations of 30-1100 meters. Deciduous shrub in the Malvaceae family; blooms May-August.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Moderate:</b> Suitable habitat is present.
<i>Malcothamnus palmeri</i> var. <i>palmeri</i> Santa Lucia bush mallow	-- / -- / 1B	Chaparral on rocky soils at elevations of 60-360 meters. Deciduous shrub in the Malvaceae family; blooms May-July.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Malcothrix saxatilis</i> var. <i>arachnoidea</i> Carmel Valley malcothrix	-- / -- / 1B	Chaparral and coastal scrub on rocky soils at elevations of 25-1036 meters. Perennial rhizomatous herb in the Asteraceae family; blooms June-December.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Low:</b> Marginal habitat is present.
<i>Meconella oregana</i> Oregon meconella	-- / -- / 1B	Coastal prairie and coastal scrub at elevations of 250-620 meters. Annual herb in the Papaveraceae Family; blooms March-April.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Moderate:</b> Suitable habitat is present.
<i>Microseris paludosa</i> marsh microseris	-- / -- / 1B	Mesic areas of closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grasslands at elevations of 3-300 meters. Perennial herb in the Asteraceae family; blooms April-June (July).	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Monardella sinuata</i> ssp. <i>nigrescens</i> Northern curly-leaved monardella	-- / -- / 1B	Chaparral, coastal dunes, coastal scrub, and lower montane coniferous forest (ponderosa pine sandhills) on sandy soils at elevations of 0-300 meters. Annual herb in the Lamiaceae family; blooms April-September.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Monolopia gracilens</i> Woodland wollythreads	-- / -- / 1B	Chenopod scrub and valley and foothill grassland on sandy soils at elevations of 60-800 meters. Annual herb in the Asteraceae family; blooms: February-May.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Pinus radiata</i> Monterey pine	-- / -- / 1B	Closed-cone coniferous forest at elevations of 25-185 meters. Evergreen tree in the Pinaceae family. Only three native stands in CA, at Ano Nuevo, Cambria, and the Monterey Peninsula; introduced in many areas.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is outside its known elevation range.	<b>Unlikely:</b> No suitable habitat is present, and the site is outside the known elevation range for this species.

<i>Piperia yadonii</i> Yadon's rein orchid	FE / -- / 1B	Sandy soils in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral at elevations of 10-510 meters. Annual herb in the Orchidaceae family; blooms May-August.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> Choris' popcorn-flower	-- / -- / 1B	Mesic areas of chaparral, coastal prairie, and coastal scrub at elevations of 15-160 meters. Annual herb in the Boraginaceae family; blooms March-June.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is outside its known elevation range.	<b>Unlikely:</b> Site is outside the known elevation range for this species.
<i>Plagiobothrys uncinatus</i> hooked popcorn flower	-- / -- / 1B	Chaparral, cismontane woodlands, valley and foothill grasslands on sandy soils; elevation 300-760 meters. Annual herb in the Boraginaceae family, blooms April-May.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Potentilla hickmanii</i> Hickman's cinquefoil	FE / SE / 1B	Coastal bluff scrub, closed-cone coniferous forests, vernal mesic meadows, and freshwater marshes and swamps at elevations of 10-149 meters. Perennial herb in the Rosaceae family; blooms April-August.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is outside its known elevation range.	<b>Unlikely:</b> No suitable habitat is present, and the site is outside the known elevation range for this species.
<i>Ramalina thrausta</i> Angel's hair lichen	-- / -- / 2B	North coast coniferous forest on dead twigs and other lichens. Epiphytic fructose lichen in the Ramalinaceae family. In northern CA it is usually found on dead twigs, and has been found on <i>Alnus rubra</i> , <i>Calocedrus decurrens</i> , <i>Pseudotsuga menziesii</i> , <i>Quercus garryana</i> , and <i>Rubus spectabilis</i> . In Sonoma County it grows on and among dangling mats of <i>R. menziesii</i> and <i>Usnea</i> spp.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Rosa pinetorum</i> Pine rose	-- / -- / 1B	Closed-cone coniferous forest at elevations of 2-300 meters. Shrub in the Rosaceae family; blooms May-July. Possible hybrid of <i>R. spithamea</i> , <i>R. gymnocarpa</i> , or others; further study needed.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Sidalcea malachroides</i> Maple-leaved checkerbloom	-- / -- / 4	Broadleaved upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, and riparian woodlands, often in disturbed areas, at elevations of 2-730 meters. Perennial herb in the Malvaceae family; blooms March-August.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Moderate:</b> Suitable habitat is present.
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	-- / -- / 1B	Broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and openings in valley and foothill grassland, sometimes on serpentine, at elevations of 10-500 meters. Annual herb in the Asteraceae family; blooms April-May.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Low:</b> Marginal habitat is present.
<i>Tortula californica</i> California screw moss	-- / -- / 1B	Valley and foothill grassland and chenopod scrub on sandy soils at elevations of 10-1460. Moss in the Pottiaceae family.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Low:</b> Marginal habitat is present.

<i>Trifolium buckwestiorum</i> Santa Cruz clover	-- / -- / 1B	Broadleaved upland forest, cismontane woodland, and margins of coastal prairie on gravelly soils at elevations of 105-610 meters. Annual herb in the Fabaceae family; blooms April-October.	<b>Not Present:</b> Species was not observed during biological surveys.	<b>Low:</b> Marginal habitat is present.
<i>Trifolium hydrophilum</i> Saline clover	-- / -- / 1B	Marshes and swamps, valley and foothill grassland (mesic, alkaline), and vernal pools at elevations of 0-300 meters. Annual herb in the Fabaceae family; blooms April-June.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.
<i>Trifolium polyodon</i> Pacific Grove clover	-- / SR / 1B	Closed-cone coniferous forest, coastal prairie, meadows and seeps, and mesic areas in valley and foothill grassland at elevations of 5-120 meters. Annual herb in the Fabaceae family; blooms April-June.	<b>Not Present:</b> Species was not observed during biological surveys, and the homeland is outside its known elevation range.	<b>Unlikely:</b> No suitable habitat is present, and the site is outside the known elevation range for this species.
<i>Trifolium trichocalyx</i> Monterey clover	FE / SE / 1B	Sandy openings and burned areas of closed-cone coniferous forest at elevations of 30-240 meters. Annual herb in the Fabaceae family; blooms April-June.	<b>Not Present:</b> Species was not observed during biological surveys, and no suitable habitat is present.	<b>Unlikely:</b> No suitable habitat is present.

**STATUS DEFINITIONS:**

**Federal**

**FE** = listed as Endangered under ESA

**FT** = listed as Threatened under ESA

-- = not listed

**State**

**SE** = listed as Endangered under CESA

**ST** = listed as Threatened under CESA

**SR** = listed as Rare under CESA

**CSC** = VDFW Species of Special Concern

**CFP** = California Fully Protected Species

-- = not listed

**California Native Plant Society**

**1B** = List 1B species; rare, threatened, or endangered in California

**POTENTIAL TO OCCUR**

**Present** – known occurrence of species within the site; presence of suitable habitat conditions; or observed during field surveys

**High** – known occurrence of species in the vicinity from the CNDDDB or other documentation; presence of suitable habitat conditions

**Moderate** – known occurrence of species in the vicinity from the CNDDDB or other documentation; presence of marginal habitat conditions

**Low** – species known to occur in the vicinity from the CNDDDB or other documentation; presence of low quality habitat conditions

**Unlikely** – species not known to occur in the vicinity from the CNDDDB or other documentation; no suitable habitat is present

**Not Present** – species not observed during surveys

# **APPENDIX B**

## **Project Plans**

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**Please see Appendix B below for the Project Plans**

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## **APPENDIX C**

**California Tiger Salamander Survey Results at the Malcolm Property  
and Adjacent Palo Corona Regional Park – 2011-2013**

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**Please see Appendix C below for the California Tiger Salamander Survey Results Report**

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# **Appendix B.**

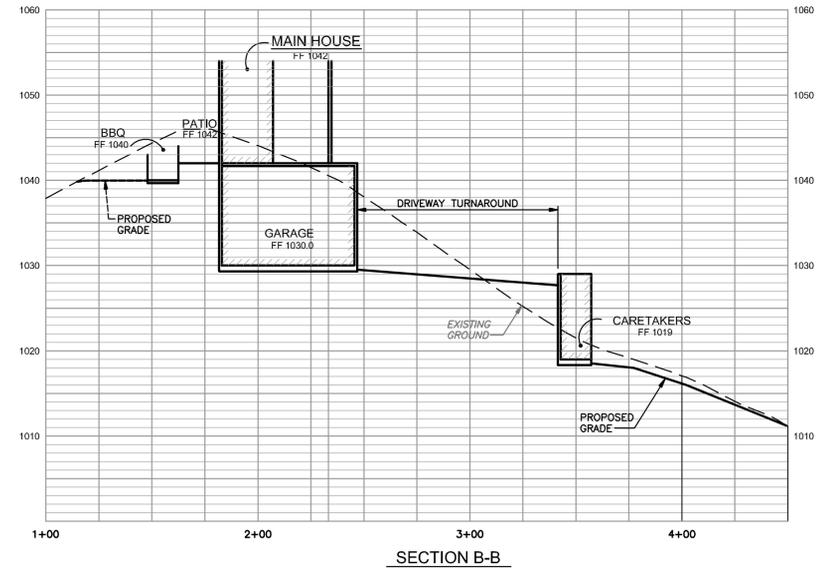
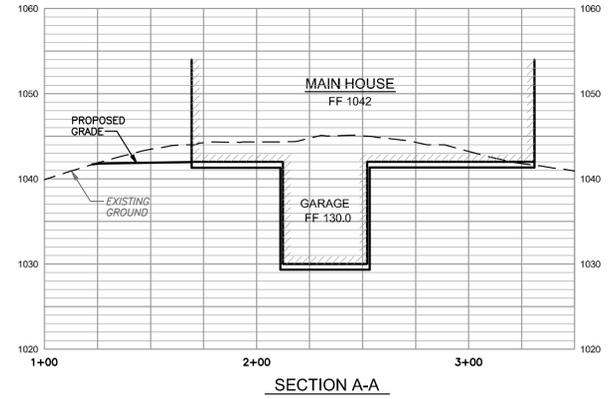
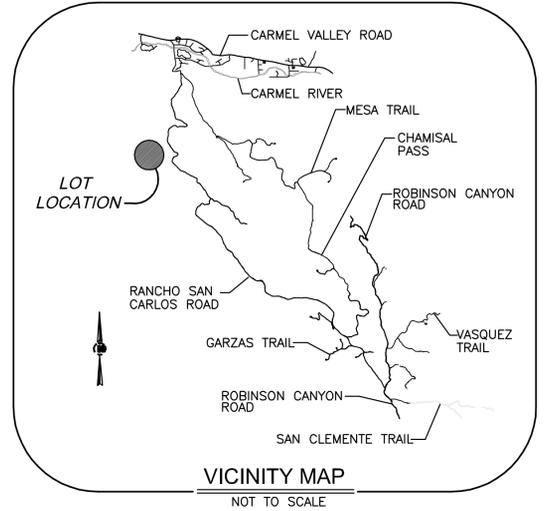
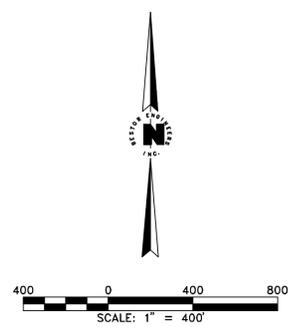
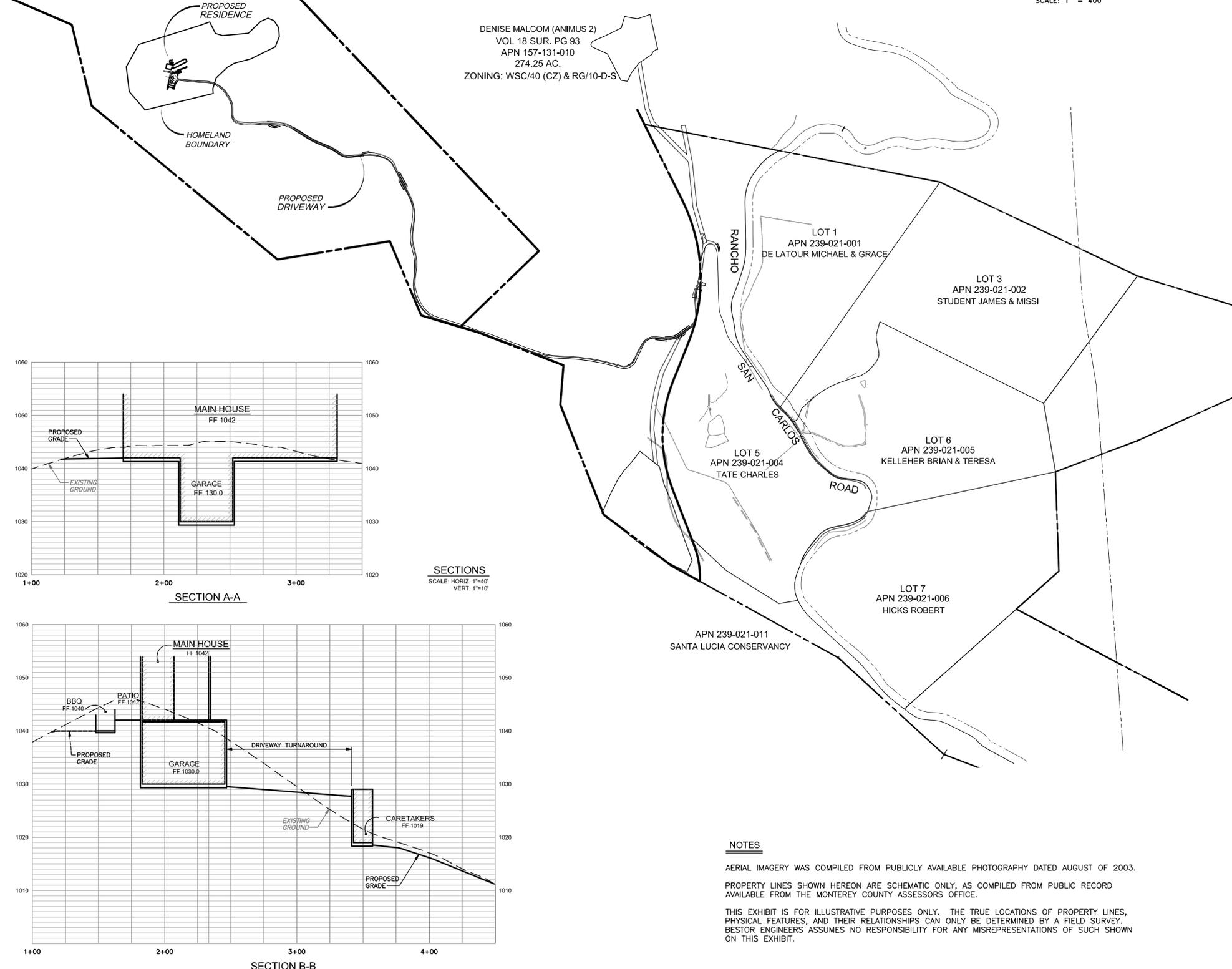
Site Plans

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UPITIS (ANIMUS 1)  
 VOL 620 O.R. PG 213  
 APN 157-131-002  
 172.09 AC.  
 ZONING: WSC/40 (CZ)

DENISE MALCOM (ANIMUS 2)  
 VOL 18 SUR. PG 93  
 APN 157-131-010  
 274.25 AC.  
 ZONING: WSC/40 (CZ) & RG/10-D-S



**NOTES**

AERIAL IMAGERY WAS COMPILED FROM PUBLICLY AVAILABLE PHOTOGRAPHY DATED AUGUST OF 2003.

PROPERTY LINES SHOWN HEREON ARE SCHEMATIC ONLY, AS COMPILED FROM PUBLIC RECORD AVAILABLE FROM THE MONTEREY COUNTY ASSESSORS OFFICE.

THIS EXHIBIT IS FOR ILLUSTRATIVE PURPOSES ONLY. THE TRUE LOCATIONS OF PROPERTY LINES, PHYSICAL FEATURES, AND THEIR RELATIONSHIPS CAN ONLY BE DETERMINED BY A FIELD SURVEY. BESTOR ENGINEERS ASSUMES NO RESPONSIBILITY FOR ANY MISREPRESENTATIONS OF SUCH SHOWN ON THIS EXHIBIT.

**LEGEND**

AB	AGGREGATE BASE	UON	UNLESS OTHERWISE NOTED
AC	ASPHALT CONCRETE	W	WATER
AD	AREA DRAIN	WM	WATER METER
ADA	DISABLED ACCESS	WV	WATER VALVE
BF	BACKFLOW PREVENTOR		GUY WIRE
CB	CATCH BASIN		BACK OF CURB
CO	CLEANOUT		FACE OF CURB
△	CONTROL POINT		GB
DI	DRAIN INLET		ELEC
EL	ELEVATION		FD
(E)	EXISTING		SD
EP	EDGE OF PAVEMENT		RD
DWSP	DRY WATER STAND PIPE		SS
FD	FOUND		TEL
FD	FOUNDATION DRAIN		W
FDC	FIRE DEPT. CONNECTION		EP
FES	FLARED END SECTION		FLOW LINE
FW	FIRE WATER		CHAIN LINK FENCE
GB	GRADE BREAK		RETAINING WALL
GR	GRATE		EXISTING CONTOUR
INV	INVERT		PROPOSED CONTOUR
IP	IRON PIPE		2% SLOPE DIRECTION
LP	LIGHT POLE		x 45.0 SPOT ELEVATION
MB	MAIL BOX		>30% SLOPE
MH	MANHOLE		
(N)	NEW		
PG&E	PACIFIC GAS & ELECTRIC		
POC	POINT OF CONNECTION		
PP	POWER POLE		
RD	ROOF DRAIN		
SS	SANITARY SEWER		
TEL	TELEPHONE		
TBM	TOP BENCH MARK		

**TREE LEGEND**

⊙	TREE
T	TREE
J	JUNIPER
P	PINE

**SHEET INDEX**

SHEET NO.	DESCRIPTION
C-1	COVER SHEET
C-2	GRADING & EROSION CONTROL
C-3	GRADING & EROSION CONTROL
C-4	GRADING & EROSION CONTROL
C-5	GRADING & EROSION CONTROL

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COVER SHEET  
 UPITIS RESIDENCE  
 SANTA LUCIA PRESERVE

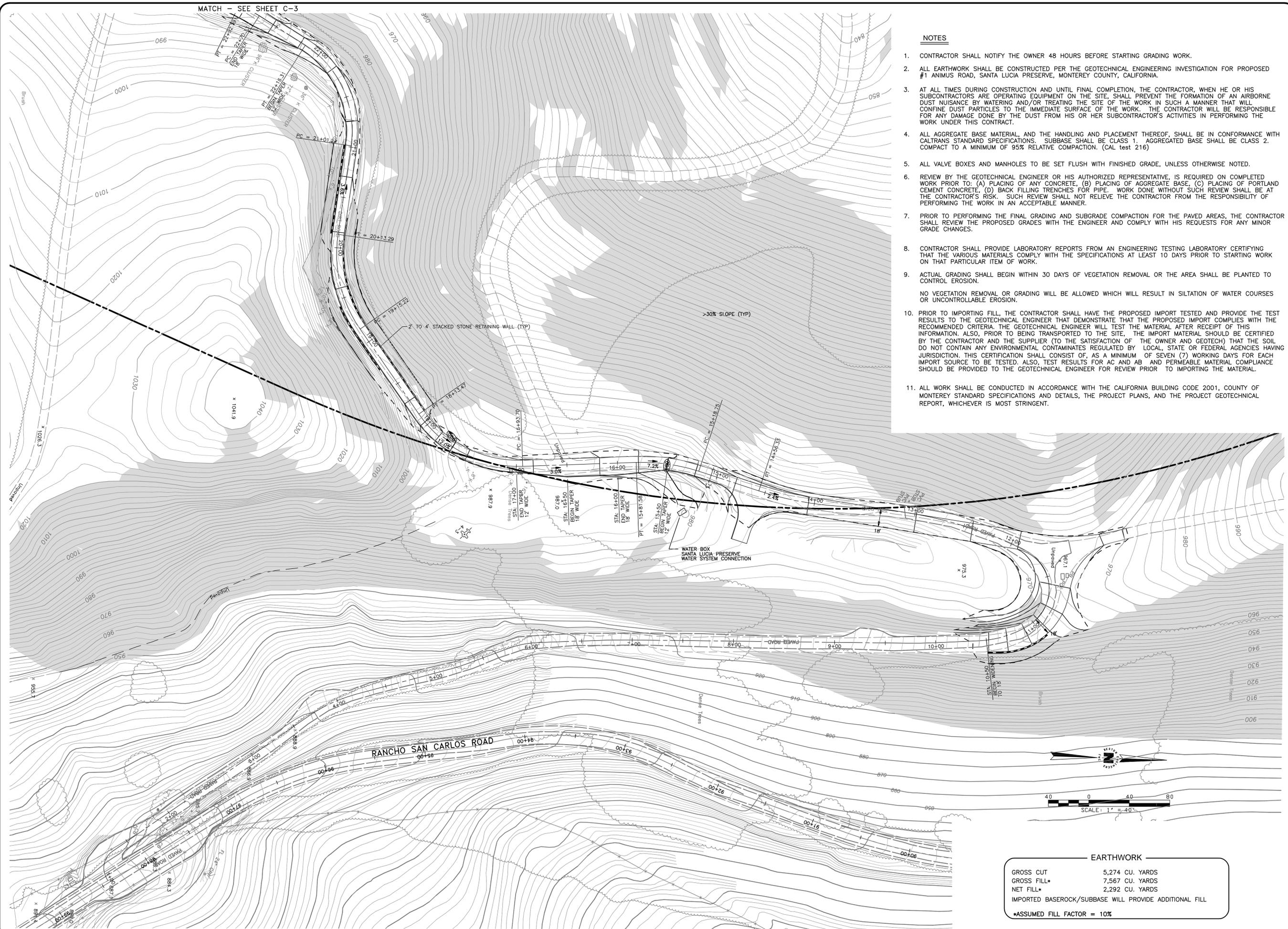
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COUNTY OF MONTEREY, CALIFORNIA

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**NOTES**

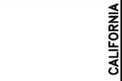
- CONTRACTOR SHALL NOTIFY THE OWNER 48 HOURS BEFORE STARTING GRADING WORK.
- ALL EARTHWORK SHALL BE CONSTRUCTED PER THE GEOTECHNICAL ENGINEERING INVESTIGATION FOR PROPOSED #1 ANIMUS ROAD, SANTA LUCIA PRESERVE, MONTEREY COUNTY, CALIFORNIA.
- AT ALL TIMES DURING CONSTRUCTION AND UNTIL FINAL COMPLETION, THE CONTRACTOR, WHEN HE OR HIS SUBCONTRACTORS ARE OPERATING EQUIPMENT ON THE SITE, SHALL PREVENT THE FORMATION OF AN AIRBORNE DUST NUISANCE BY WATERING AND/OR TREATING THE SITE OF THE WORK IN SUCH A MANNER THAT WILL CONFINE DUST PARTICLES TO THE IMMEDIATE SURFACE OF THE WORK. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE DONE BY THE DUST FROM HIS OR HER SUBCONTRACTOR'S ACTIVITIES IN PERFORMING THE WORK UNDER THIS CONTRACT.
- ALL AGGREGATE BASE MATERIAL, AND THE HANDLING AND PLACEMENT THEREOF, SHALL BE IN CONFORMANCE WITH CALTRANS STANDARD SPECIFICATIONS. SUBBASE SHALL BE CLASS 1. AGGREGATED BASE SHALL BE CLASS 2. COMPACT TO A MINIMUM OF 95% RELATIVE COMPACTION. (CAL test 216)
- ALL VALVE BOXES AND MANHOLES TO BE SET FLUSH WITH FINISHED GRADE, UNLESS OTHERWISE NOTED.
- REVIEW BY THE GEOTECHNICAL ENGINEER OR HIS AUTHORIZED REPRESENTATIVE, IS REQUIRED ON COMPLETED WORK PRIOR TO: (A) PLACING OF ANY CONCRETE, (B) PLACING OF AGGREGATE BASE, (C) PLACING OF PORTLAND CEMENT CONCRETE, (D) BACK FILLING TRENCHES FOR PIPE. WORK DONE WITHOUT SUCH REVIEW SHALL BE AT THE CONTRACTOR'S RISK. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PERFORMING THE WORK IN AN ACCEPTABLE MANNER.
- PRIOR TO PERFORMING THE FINAL GRADING AND SUBGRADE COMPACTION FOR THE PAVED AREAS, THE CONTRACTOR SHALL REVIEW THE PROPOSED GRADES WITH THE ENGINEER AND COMPLY WITH HIS REQUESTS FOR ANY MINOR GRADE CHANGES.
- CONTRACTOR SHALL PROVIDE LABORATORY REPORTS FROM AN ENGINEERING TESTING LABORATORY CERTIFYING THAT THE VARIOUS MATERIALS COMPLY WITH THE SPECIFICATIONS AT LEAST 10 DAYS PRIOR TO STARTING WORK ON THAT PARTICULAR ITEM OF WORK.
- ACTUAL GRADING SHALL BEGIN WITHIN 30 DAYS OF VEGETATION REMOVAL OR THE AREA SHALL BE PLANTED TO CONTROL EROSION.  
NO VEGETATION REMOVAL OR GRADING WILL BE ALLOWED WHICH WILL RESULT IN SILTATION OF WATER COURSES OR UNCONTROLLABLE EROSION.
- PRIOR TO IMPORTING FILL, THE CONTRACTOR SHALL HAVE THE PROPOSED IMPORT TESTED AND PROVIDE THE TEST RESULTS TO THE GEOTECHNICAL ENGINEER THAT DEMONSTRATE THAT THE PROPOSED IMPORT COMPLIES WITH THE RECOMMENDED CRITERIA. THE GEOTECHNICAL ENGINEER WILL TEST THE MATERIAL AFTER RECEIPT OF THIS INFORMATION. ALSO, PRIOR TO BEING TRANSPORTED TO THE SITE, THE IMPORT MATERIAL SHOULD BE CERTIFIED BY THE CONTRACTOR AND THE SUPPLIER (TO THE SATISFACTION OF THE OWNER AND GEOTECH) THAT THE SOIL DO NOT CONTAIN ANY ENVIRONMENTAL CONTAMINANTS REGULATED BY LOCAL, STATE OR FEDERAL AGENCIES HAVING JURISDICTION. THIS CERTIFICATION SHALL CONSIST OF, AS A MINIMUM OF SEVEN (7) WORKING DAYS FOR EACH IMPORT SOURCE TO BE TESTED. ALSO, TEST RESULTS FOR AC AND AB AND PERMEABLE MATERIAL COMPLIANCE SHOULD BE PROVIDED TO THE GEOTECHNICAL ENGINEER FOR REVIEW PRIOR TO IMPORTING THE MATERIAL.
- ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE 2001, COUNTY OF MONTEREY STANDARD SPECIFICATIONS AND DETAILS, THE PROJECT PLANS, AND THE PROJECT GEOTECHNICAL REPORT, WHICHEVER IS MOST STRINGENT.

EARTHWORK	
GROSS CUT	5,274 CU. YARDS
GROSS FILL*	7,567 CU. YARDS
NET FILL*	2,292 CU. YARDS
IMPORTED BASEROCK/SUBBASE WILL PROVIDE ADDITIONAL FILL	
*ASSUMED FILL FACTOR = 10%	

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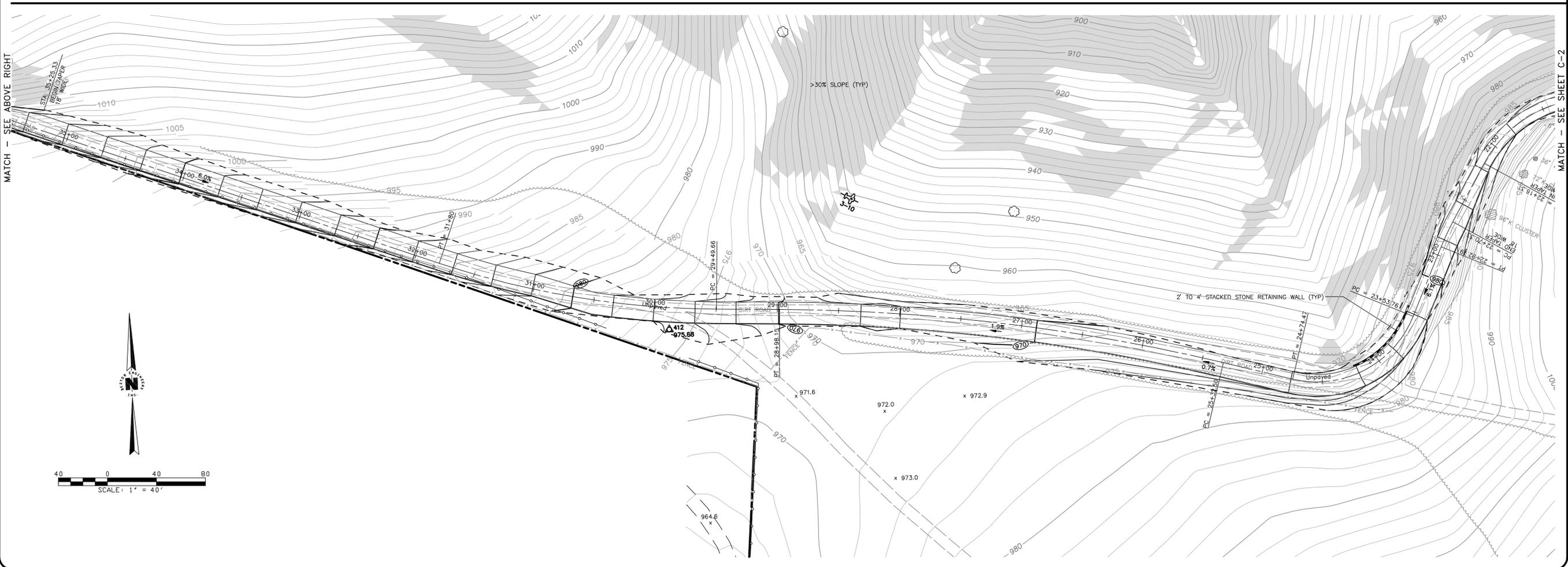
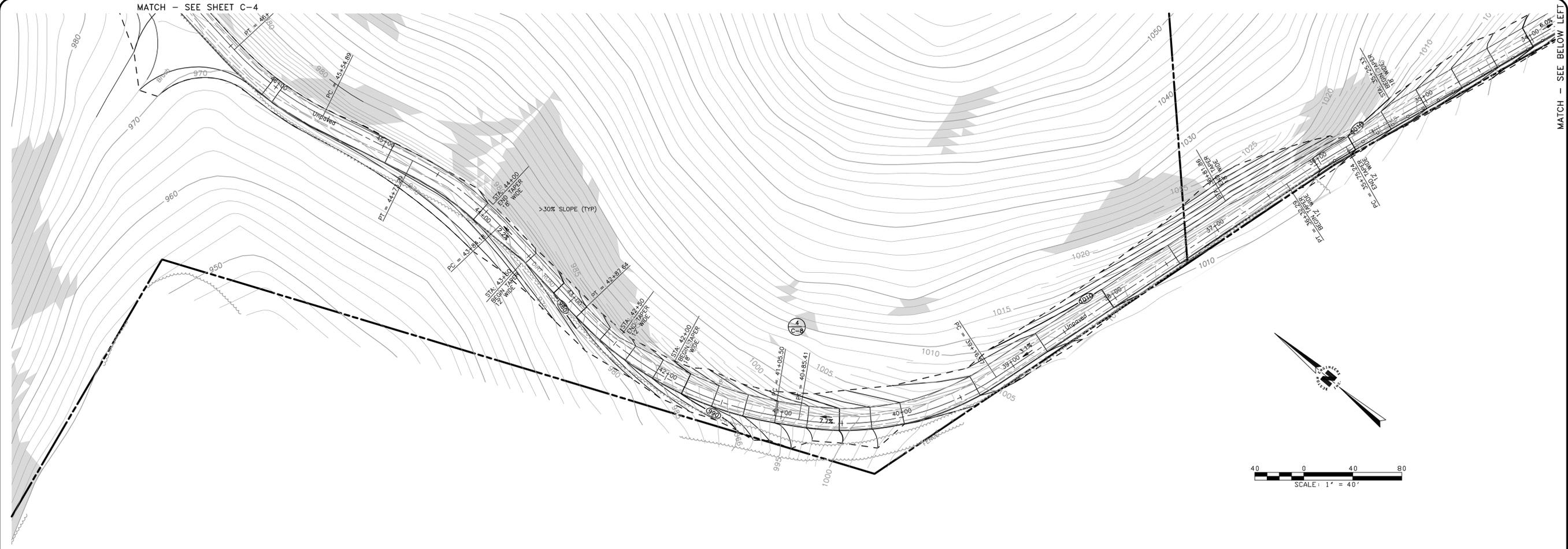


GRADING PLAN  
UPITIS RESIDENCE  
SANTA LUCIA PRESERVE  
CALIFORNIA

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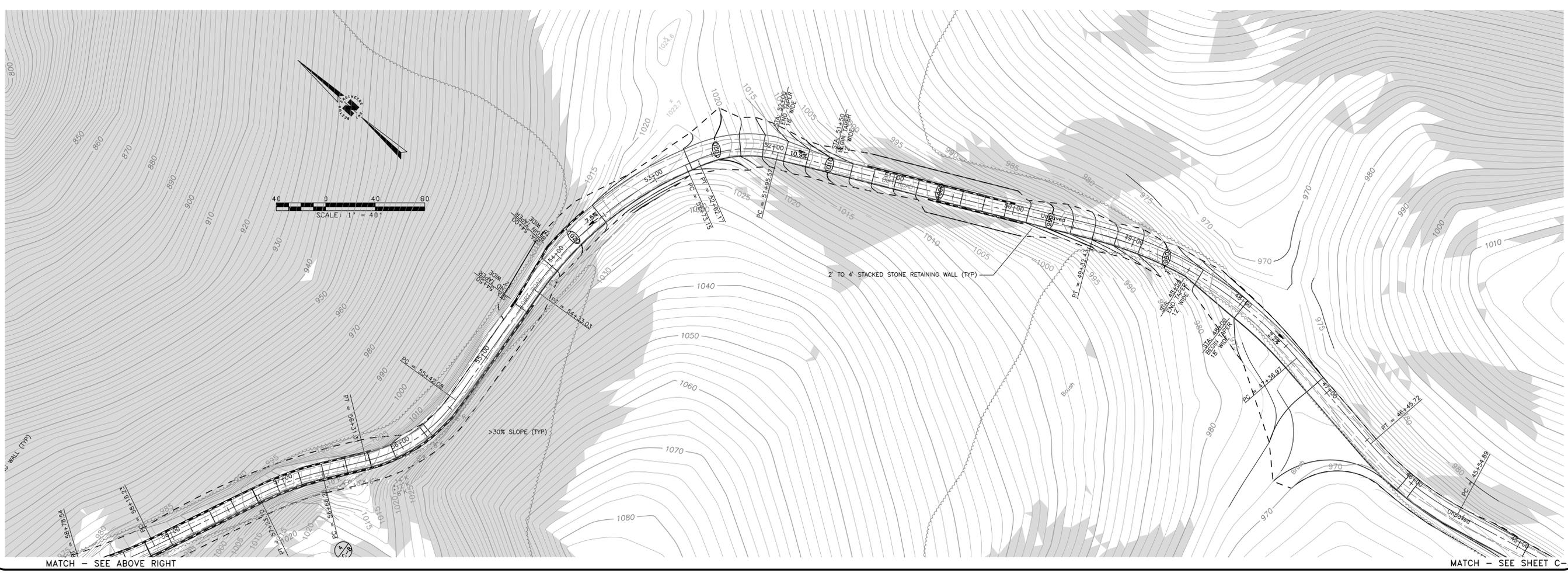
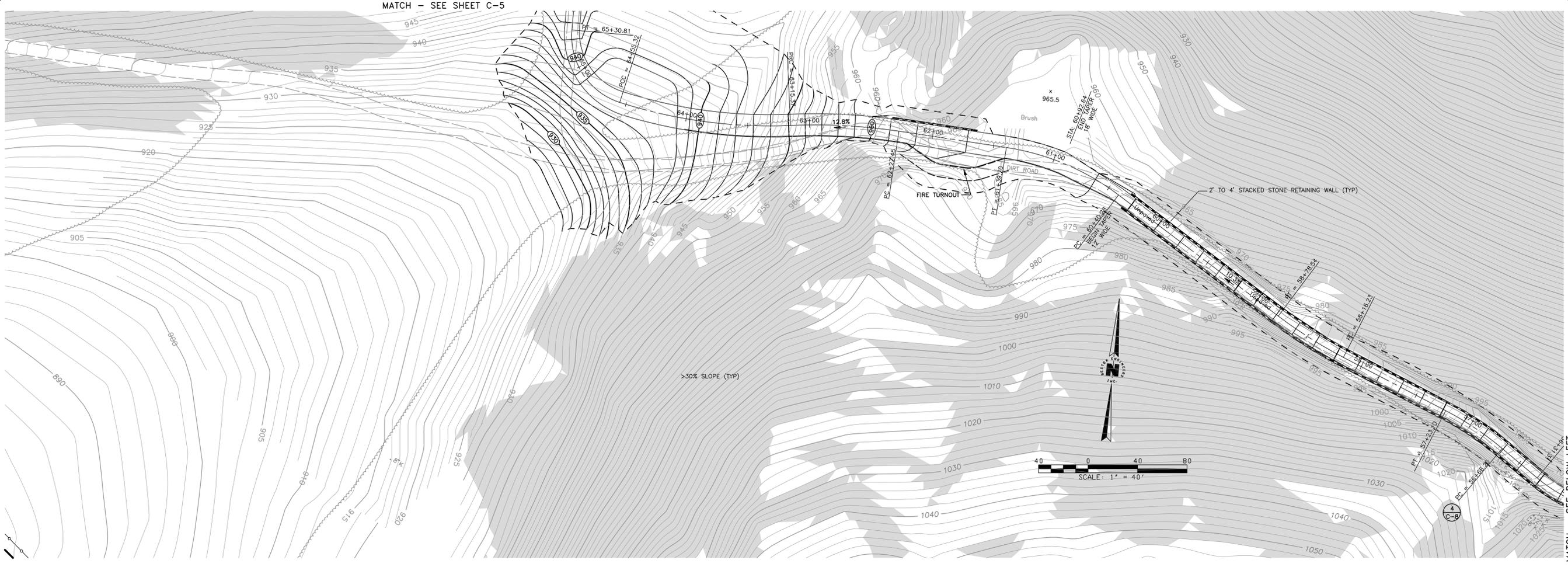
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UPTIS RESIDENCE  
SANTA LUCIA PRESERVE  
COUNTY OF MONTEREY, CALIFORNIA

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## **Appendix C.**

California Tiger Salamander Survey Results at the  
Malcolm Property and Adjacent Palo Corona Regional  
Park – 2011-2013

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**Denise Duffy & Associates, Inc.**

**PLANNING AND ENVIRONMENTAL CONSULTING**

**CALIFORNIA TIGER SALAMANDER SURVEY RESULTS  
AT THE MALCOLM PROPERTY AND ADJACENT  
PALO CORONA REGIONAL PARK –2011-2013**

December 2013

Prepared for:

U.S. Fish and Wildlife Service  
California Department of Fish and Wildlife

Prepared by:

Denise Duffy & Associates, Inc.  
947 Cass Street, Suite 5  
Monterey, California 93940  
(831)-373-4341  
CONTACT: Josh Harwayne

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## INTRODUCTION

Denise Duffy & Associates, Inc. (DD&A) was contracted by Michael and Denise Malcolm to conduct protocol-level surveys and population studies for the federal and state threatened California tiger salamander (*Ambystoma californiense*, CTS) on the Malcolm Property and at two aquatic resources located on the Palo Corona Regional Park (PCRCP), adjacent to the Malcolm property, in Monterey County, California (Figure 1). The purpose of the study was to provide baseline CTS demographic data that will inform the preparation of a Habitat Conservation Plan (HCP) for proposed development of three development envelopes (Homelands) totaling 30 acres of the 668-acre property (Figure 2). The HCP is being prepared as part of a Section 10 Incidental Take Permit application with the U.S. Fish and Wildlife Service (Service) and a Section 2081 Incidental Take Permit application for the California Department of Fish and Wildlife (Department). The Service and Department reviewed and approved these studies prior to their implementation.

The studies included a number of drift fence/pitfall trap and aquatic surveys as detailed below:

- Winter 2011/12: drift fence/pitfall trap study at Salamander and Roadrunner Ponds on the PCRCP,
- Spring 2012: aquatic surveys at Salamander and Roadrunner Ponds on the PCRCP,
- Spring 2012: aquatic population census at Roadrunner Pond on the PCRCP.
- Summer 2012: metamorph dispersal study at Roadrunner Pond on the PCRCP,
- Winter 2012/13: drift fence/pitfall trap study within upland areas associated with three proposed development envelopes on the Malcolm property,
- Spring 2013: aquatic surveys at Salamander and Roadrunner Ponds on the PCRCP, and
- Spring 2013: aquatic population census at Roadrunner Pond on the PCRCP.

In the fall of 2012 a survey results report was prepared for the studies conducted from the winter of 2011 through the summer of 2012 (*California Tiger Salamander Survey Results for Two Ponds at the Palo Corona Regional Park –2011/2012 Season*). While this 2013 document provides the methods, raw data, and results of the surveys conducted from the winter of 2012 through the spring of 2013, it only carries over the results for the 2012 report. For complete methods of the 2011/12 surveys refer to the 2012 report.

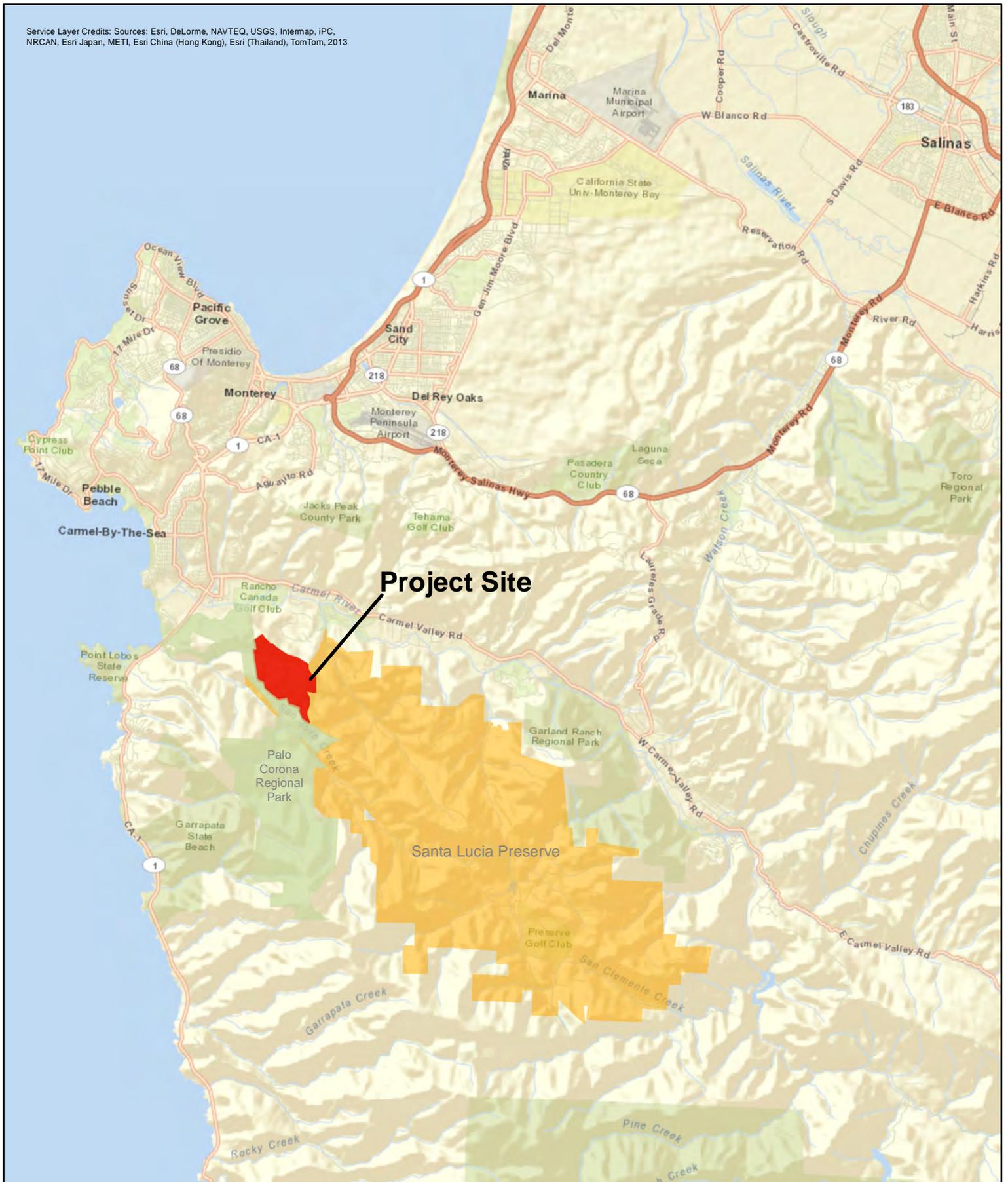
### Summary of Results

During the winter 2011/12 pitfall traps were opened 43 times at the ponds between October 15, 2011 and April 27, 2012. Additionally, the pitfall traps at Roadrunner Pond were open for 53 days between May 9, 2012 and July 1, 2012. A total of 30 CTS adults or juveniles were caught at Roadrunner Pond and two adults were caught at Salamander Pond during the upland surveys. An additional 23 CTS metamorphs were caught at Roadrunner Pond between May and July dispersing as the pond dried. Aquatic surveys were conducted in April and May at both Roadrunner and Salamander Ponds in the spring of 2012<sup>1</sup>. No CTS larvae were captured at Salamander Pond; however, 45 CTS larvae were captured at Roadrunner Pond during the larval census in May.

During the 2012/13 breeding season pitfall traps were opened 28 times in selected upland locations between October 15, 2012 and March 15, 2013. A total of five CTS were caught during the study. Aquatic surveys were conducted in March, April, and May at both the Roadrunner and Salamander Ponds in the spring of 2013. No CTS larvae were captured at Salamander Pond; however, a total of 341 CTS larvae were captured at Roadrunner Pond during the larval census in April.

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<sup>1</sup> Surveys were attempted in March 2012, but stopped due to the presence and potential impacts native amphibian eggs.



**Project Site**

Santa Lucia Preserve



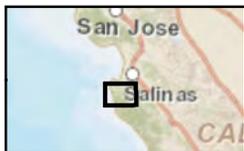
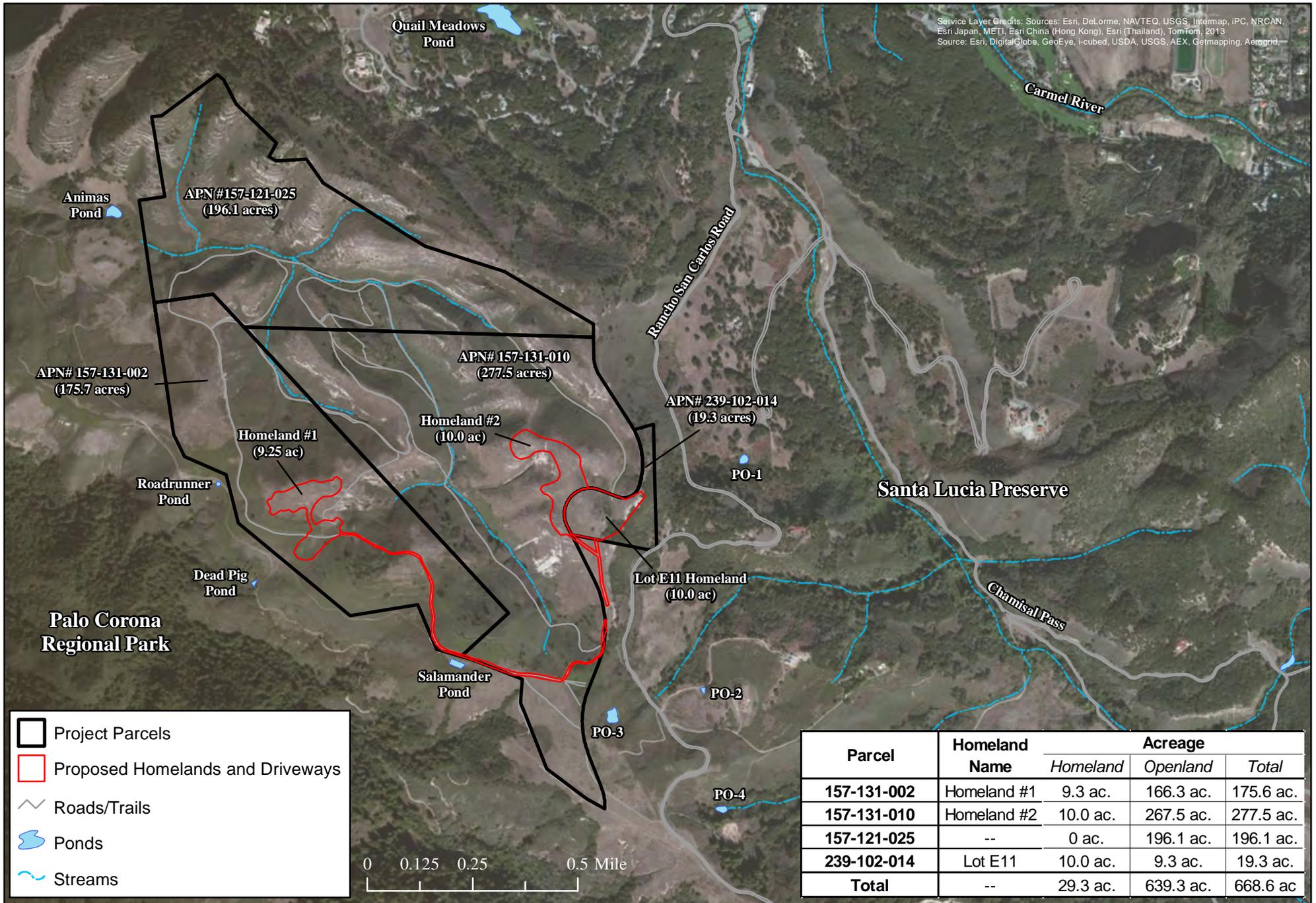
**Project Vicinity**



**Denise Duffy and Associates, Inc.**  
 Planning and Environmental Consulting

Date  
 11-1-2013  
 Scale  
 1 in = 341.1 m

Figure  
**1**



Title: **Malcolm Property CTS Study Location Map**  
 File: CTS Study Location Map 2012.mxd

Date: 11-25-2013  
 Scale: 1 inch = 0.3 miles  
 Project: 2819 Malcolm

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Figure  
**2**

## California Tiger Salamander Life History

CTS was listed as a federally Threatened species on August 4, 2004 (69 FR 47211-47248) and was listed as state Threatened on March 3, 2010. Critical Habitat was designated for CTS on August 23, 2005 (70 FR 49379-49458), and went into effect on September 22, 2005. Additionally, CTS was listed as a state threatened species on March 3, 2010.

CTS persist in disjunct remnant vernal pool complexes in Sonoma County and Santa Barbara County, in vernal pool complexes and isolated stockponds scattered along a narrow strip of rangeland on the fringes of the Central Valley from southern Colusa County south to northern Kern County, and in sag ponds and human maintained stockponds in the coast ranges from the San Francisco Bay Area south to the Temblor Range. Tiger salamanders breed and lay eggs primarily in vernal pools and other temporary rainwater ponds following relatively warm rains in November to February. Adults have been found more than two km (1.24 miles) from breeding sites (Service, 2004). Permanent human-made ponds are sometimes utilized if predatory fishes are absent; streams are rarely used for reproduction. Males typically spend six to eight weeks at breeding ponds, while females typically spend only one to two weeks (Loredo et al., 1996). Eggs are laid singly or in clumps on both submerged and emergent vegetation and on submerged debris in shallow water (Stebbins, 2003; Jennings and Hayes, 1994). In years of below average rainfall, or when rains occur late in the season, females may forego breeding (Trehnam et al., 2000). CTS have been eliminated from an estimated 55-58 percent of its documented historic breeding sites. Currently, about 150 known local populations of CTS are extant.

## Project Site Description

The 668-acre Malcolm property is located in the foothills on the southern side of Carmel Valley bordered to the east by the Santa Lucia Preserve (SLP) and the west and south by the PCRP (Figures 1 and 2). A relatively small portion of the Malcolm property is bordered to the north by the private residential community of Quail Meadows. The property is comprised of four parcels: 157-131-002, 157-131-010, and 157-121-025 (collectively referred to as “the Animus” and 239-102-014 (referred to as “Lot 11”). Two of the three Animus parcels and the Lot 11 Parcel each include a 10-acre Homeland in which development is allowed. The remaining 638 acres outside of the Homelands are covered under conservation easements, in place to mitigate for the allowable development. The easement is help by Santa Lucia Conservancy; an independent conservation and land management entity and precluded from development in perpetuity.

Eight habitat types are present within the Malcolm property, including ruderal and native grasslands and coyote brush scrub, which may support CTS upland aestivation. Dominant species within the grasslands include wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), silvery hair-grass (*Aira caryophyllea*), rat-tail fescue (*Vulpia myuros* var. *myuros*), purple needlegrass (*Stipa pulchra*), California oat-grass (*Danthonia californica*), foothill sedge (*Carex tumicola*), and leafy bentgrass (*Agrostis pallens*). Dominant species within the coyote bush scrub habitat include coyote bush (*Baccharis pilularis*), French broom (*Genista monspessulana*), poison oak (*Toxicodendron diversilobum*), coast sagebrush (*Artemisia californica*), blue blossom (*Ceanothus thyrsiflorus*), toyon (*Heteromeles arbutifolia*), ocean spray (*Holodiscus discolor*), and California coffeeberry (*Rhamnus californica*).

While there are no ponds on the Malcolm property, there are a number of ponds adjacent to the property on the SLP and PCRP that support native amphibian populations. Additionally, there is a pond located to the north between the Malcolm property and the Carmel River riparian corridor, within the Quail Meadows subdivision: however, this pond is located in a heavily wooded area, is permanent, and is very likely to contain fish and bullfrog, precluding it from supporting CTS breeding.

## METHODS

The following describes the methods used during the 2012/13 study. For a complete description of the 2011/12 survey methods please refer the 2012 survey report cited above.

### Drift Fence/Pitfall Trapping Study

Silt-fencing (woven nylon fabric with pre-attached stakes) was installed at several upland locations between the off-site ponds and the proposed homelands (Figure 3). The fencing was buried at least six inches deep, with at least two feet above ground. Pitfall traps (two-gallon plastic buckets) were arranged in pairs, one on either side of the fence, in order to capture animals migrating towards and away from the property. Please refer to Table 1 for specifics regarding drift fence/pitfall trapping arrays.

Table 1: Drift Fence/Pitfall Trapping Array Measurements

Length of Fencing (ft)	# of Fence Segments	Length of Breaks Between Segment (ft)	Total # of Traps	Trap Intervals (ft)	# of Traps per Segment
33-66	25	variable	148	33	4-6*

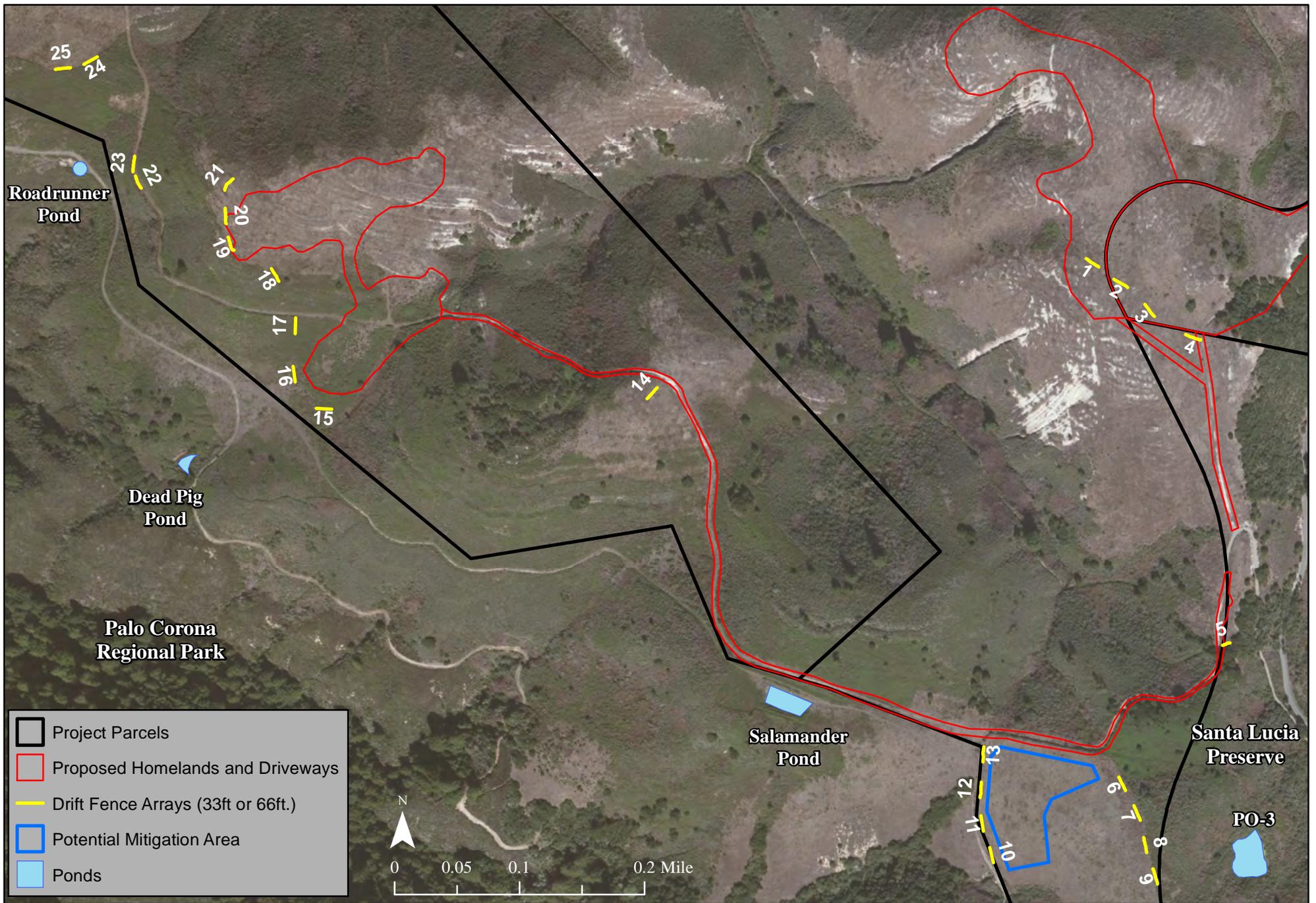
\*One fence segment (33 ft. long) had 4 traps, and 24 fence segments (66 ft. long each) had 6 traps

During the survey season drift fences and pitfall traps were in place and opened (under appropriate conditions described below) from October 15, 2012 to March 15, 2013. On days when it was raining or if at 2:00PM rain was the forecast for the remainder of the day or subsequent night ( $\geq 70\%$  probability of precipitation based on the National Weather Service web-site), pitfall traps were opened before sunset and checked the following morning. Traps remained open until no rain had fallen and/or no CTS were captured in the preceding 24 hours. Open traps were shaded with an elevated piece of plywood and pieces of foam were used to keep the traps moist. When not in use, traps were closed and the inverted shades were then weighted with bricks, to prevent entry. All amphibians captured were identified to species and the number captured was recorded for each day. All captured CTS were measured (snout-vent length and total length in mm), weighed (in grams), aged (juvenile, sub-adult, adult), sexed, and inspected for malformations, injuries, and general health. All individuals were digitally photographed in a standardized manner. Spot patterns (dorsal views) were checked against a log of photographs, from both the 2012/13 and 2011/12 studies, to uniquely identify captured individuals and to document any and all recaptures. No toe-clipping or marking occurred in 2012/13. All CTS and other amphibians captured were released into small mammal burrows or dense moist vegetation near the point of capture. To reduce the possibility of spreading disease, nitrile or vinyl gloves were worn when handling CTS and clean gloves were used each day.

### Aquatic Surveys

Aquatic surveys were conducted on March 29, April 19, and June 3, 2013 at both the Roadrunner and Salamander Ponds. Aquatic survey methods followed the *Interim guidance on site assessment and field surveys for determining presence or a negative finding of the California tiger salamander* developed by the Service and the Department in 2003, except that aquatic sampling continued beyond the standard approach to conduct a census of CTS larvae on April 19.

Long-handled D-shaped dip-nets (fine mesh) were used for the surveys in both ponds, except the April 19<sup>th</sup> census in roadrunner pond where a fine-mesh seine (4' by 10' with 1/8" mesh) was used. The census consisted of pulling the seine and collecting and holding the larvae in buckets until no additional larvae were detected. This took eight pulls of the seine and took approximately one half hour. New water was



Title: **Malcolm Property Upland Drift Fence Arrays**

File: 2012-2013 CTS Drift Fence Array Map.mxd

Date: 8-16-2013

Scale: 1 inch = 0.1 miles

Project: 2819 Malcolm

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Figure  
**3**

collected from the pond approximately every ten minutes replace the water used for holding the larvae. Care was taken to pull the seine at a speed slow enough to keep the seine dragging along the bottom without collecting much sediment, but fast enough to capture mobile larvae.

The number of CTS and other species observed at each pond during each survey was totaled and the relative abundance defined as follows:

- Few: 1 to 10 individuals;
- Common: 11 to 100 individuals; and
- Abundant: 101 or greater individuals

To reduce the possibility of spreading disease, nets and waders were scrubbed with Quat-128 solution and completely air-dried or different sets of gear were used before moving from one pond to another. At the end of each day, all nets and waders were again treated with Quat-128 solution and completely air-dried.

### **Climate Information**

Daily precipitation; high, low, and average daily temperature; and average annual rainfall were obtained from the National Climatic Data Center for the Monterey Airport Weather Station

(<http://www.ncdc.noaa.gov/cdo-web/search;jsessionid=37EE8F92FFDE9D0C37C50B3534A5503C.lwfl>).

## RESULTS

The following describes the results of the 2012/13 study and provides a brief overview of the 2011/12 results. For a complete description of the 2011/12 survey methods and data please refer the 2012 survey report cited above.

### 2011/12 Drift Fence/Pitfall and Aquatic Study

#### *Breeding Season Drift Fence/Pitfall Trapping Study*

CTS were captured at both ponds during the study in the winter of 2011/12. Captures at Roadrunner Pond during the breeding season included 17 adult males, 11 adult females, and two juveniles<sup>2</sup>, for a total of 30<sup>3</sup> individuals with 16 recaptures. Two adult males were captured at Salamander Pond during the breeding season; neither of these individuals were recaptures.

#### *Aquatic Surveys*

No CTS were captured at Salamander pond during the three aquatic surveys conducted in the spring of 2012<sup>4</sup>. No salamander larvae were captured at Roadrunner pond during the March or April 2012 aquatic surveys. Approximately 45 CTS larvae were captured during the larval census at Roadrunner Pond in May 2012. This survey was a census, such that the 45 individuals captured were likely the vast majority of the larvae in the pond at that survey time.

#### *Dispersal Drift Fence/Pitfall Trapping Study*

In the summer of 2012, subsequent to the breeding season, 23 CTS metamorphs were captured migrating out of Roadrunner Pond. Please see the 2012 report for detailed directional graphics and raw data.

The frequency of CTS adult and metamorph captures in each pitfall trap at Roadrunner pond was analyzed for the 2011/12 breeding and dispersal seasons in an attempt to assess trends in migration direction (Figure 4). CTS adults were captured more frequently in traps #2 and #5, both on the inside and outside. The most captures (12) were in the outside #5 trap. CTS metamorphs were captured most frequently in the inside #4 trap (seven captures). The inside traps #2 and #5 were the second most frequent with four captures each. Very few adults or metamorphs were captured in traps #1 or #6-8. As such, it appears that most of the CTS are moving to and from the west.

### 2012/13 Drift Fence/Pitfall and Aquatic Study

#### *Breeding Season Drift Fence/Pitfall Trapping Study*

Three adult female and two juvenile CTS were captured at various upland locations during the study (Table 2 and Figure 5). One of these individuals was identified as a recapture from Roadrunner pond from the previous year's study based on a comparison of dorsal view photographs.

California red-legged frogs (*Rana draytonii*, CRLF), a state species of special concern and federally Threatened species, were also captured. Other species captured in pitfall traps include: California newt (*Taricha torosa torosa*), Monterey ensatina (*Ensatina eschscholtzii eschscholtzii*), Santa Lucia Mountains slender salamander (*Batrachoseps luciae*), arboreal salamander (*Aneides lugubris*), Sierran treefrog (*Pseudacris sierra*), coast range fence lizard (*Sceloporus occidentalis*), alligator lizard (*Elgaria*

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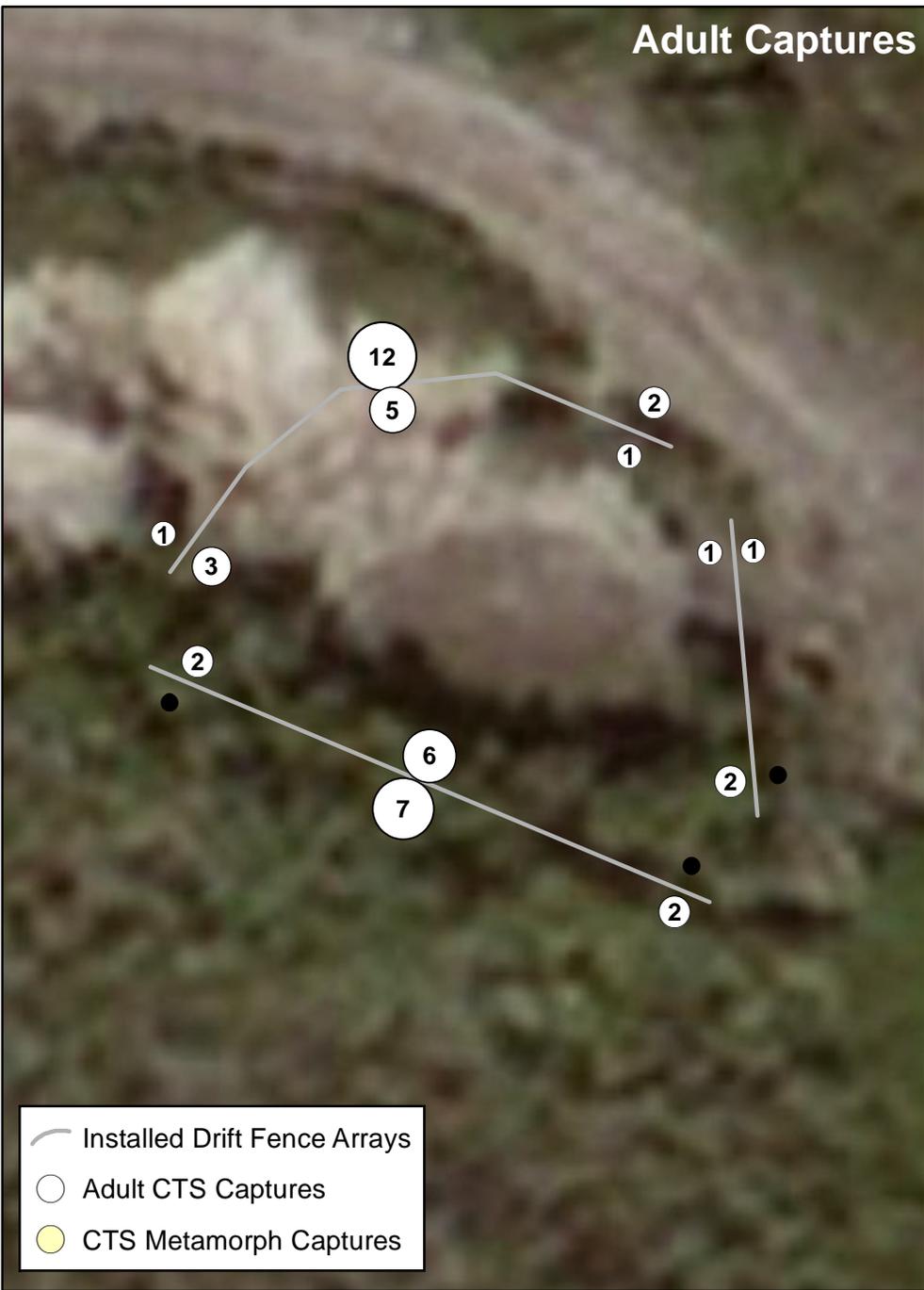
<sup>2</sup> Juveniles and metamorphs were not sexed as they did not exhibit the breeding characteristics of adults.

<sup>3</sup> Please note that one individual was not photographed and therefore could not be analyzed for recapture. As such, it is assumed this individual was not recaptured.

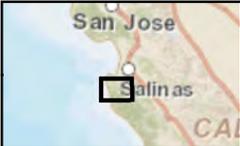
<sup>4</sup> Please note surveys were attempted in March 2012, but stopped due to the presence and potential impacts native amphibian eggs.

### Adult Captures

### Metamorph Captures



-  Installed Drift Fence Arrays
-  Adult CTS Captures
-  CTS Metamorph Captures



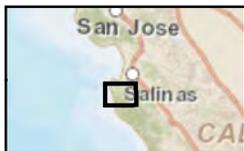
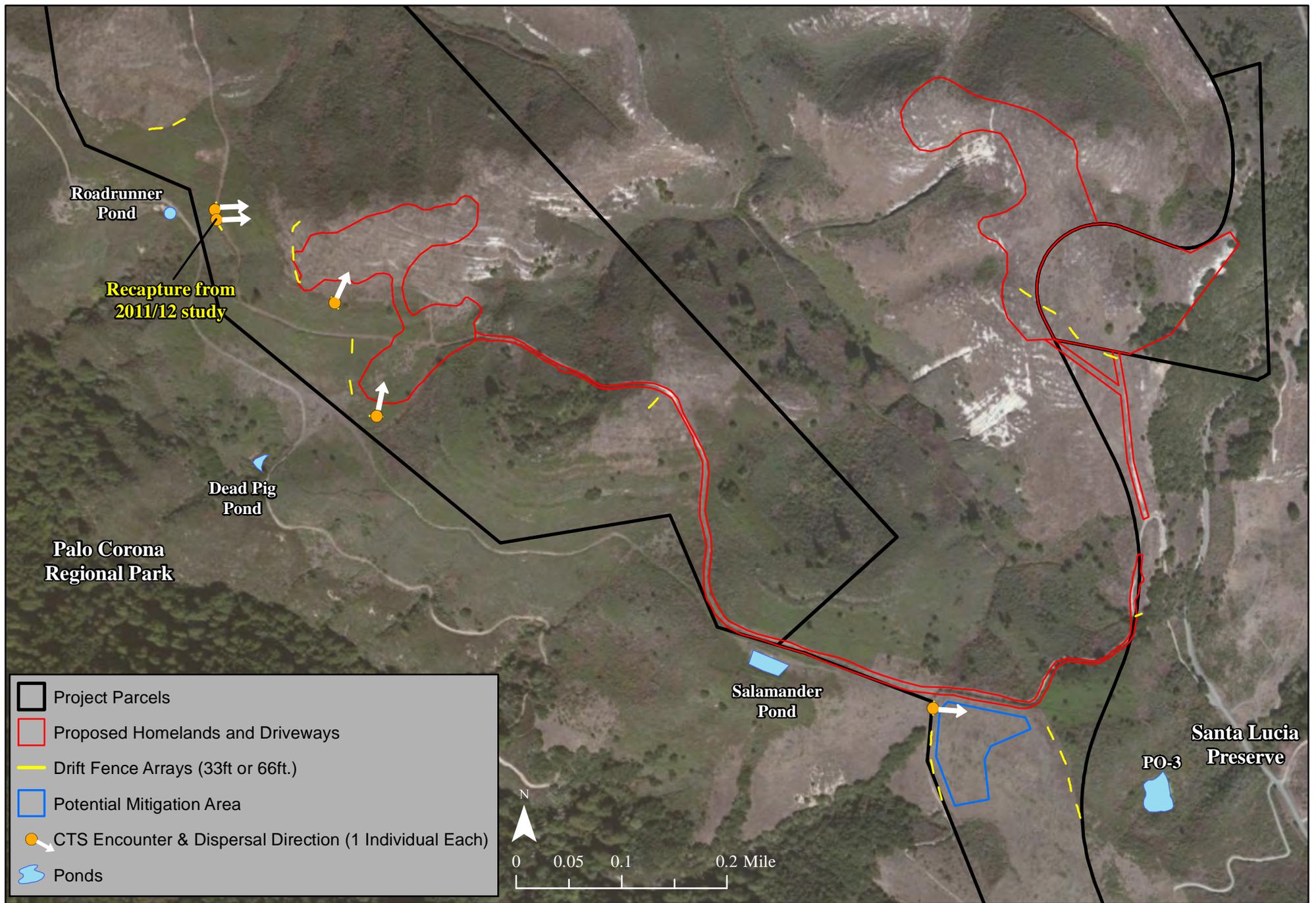
Title: **Palo Corona Regional Park 2011/2012 CTS Capture Frequency Per Trap**  
 File: CTS Frequency Map.mxd

Date: 09-25-12  
 Scale: 1 in = 20 ft  
 Project: 2819 Malcolm



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Figure  
4



Title:	<b>CTS Encounter Locations</b>
File:	2012-2013 CTS Drift Fence Array Map.mxd

Date:	11-18-13
Scale:	1 inch = 0.12 miles
Project:	2819 Malcolm

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Figure  
**5**

*multicarinata*), vole (*Microtus californicus*), mice (*Peromyscus* sp.), gopher (*Thomomys bottae*), and shrew (*Sorex* sp.). A summary of all species captured at each pond is included in Appendix A.

Table 2. CTS Capture Results 2013 Malcolm Upland Study<sup>5</sup>

Date	Trap #	New/ Recapture	Age	Sex	TL (mm)	SVL (mm)	WT (g)
11/2/12	87	New	Adult	F	160	110	28.0
11/17/12	103	New	Juvenile	N/A	152	85	23.9
11/17/12	135	New	Juvenile	N/A	119	66	9.8
12/3/12	74	New	Adult	F	220	110	57.0
12/6/12	131	Recapture	Adult	F	190	105	37.5

#### *Aquatic Surveys*

A total of 68 CTS larvae were captured at Roadrunner pond during the March 19, 2013 aquatic survey. A census was conducted at the second aquatic survey of the season, on April 19, 2013, and 341 larvae were captured. Four larvae were captured during the third aquatic survey on June 3, 2013. Due to the low water level proper dip-net and seining techniques were not possible during the third aquatic survey. Although only four individuals were captured, at least 10 larvae were observed in the water that remained within the Roadrunner Pond basin. No CTS larvae were captured or observed during any of the aquatic surveys conducted at Salamander Pond.

#### *Climate Data*

Rainfall totals were 50% of the 17-year average for the Preserve for the survey period. However, this annual average includes rainfall totals for all months, not September 1 – April 1 only, which may skew the percentage. When compared with the annual average for September 1 - April 1 collected at the Monterey Airport, rainfall totals for the 2012/13 survey period were 78% of the average. This is mentioned to highlight the fact that while it was a low rainfall year overall, the distribution of significant rainfall early in the season allowed for significant movement of CTS. There is the potential that the lack of rainfall during the second half of the season negatively affected the ability for CTS to successfully transform at some ponds. However, Roadrunner did not dry until mid-June. Therefore, it appears that adult CTS movement was not significantly negatively affected based on the documentation of high numbers of larvae in Roadrunner Pond. Charts 1 and 2 depict the climate data for the survey period. Additionally, Chart 2 includes the number of CTS captured during the survey.

<sup>5</sup> This upland study was not associated with a pond, but consisted of fences in uplands between ponds and proposed development.

Climate Information

Chart 1. Daily Temperature Range During the 2012/13 Survey Season

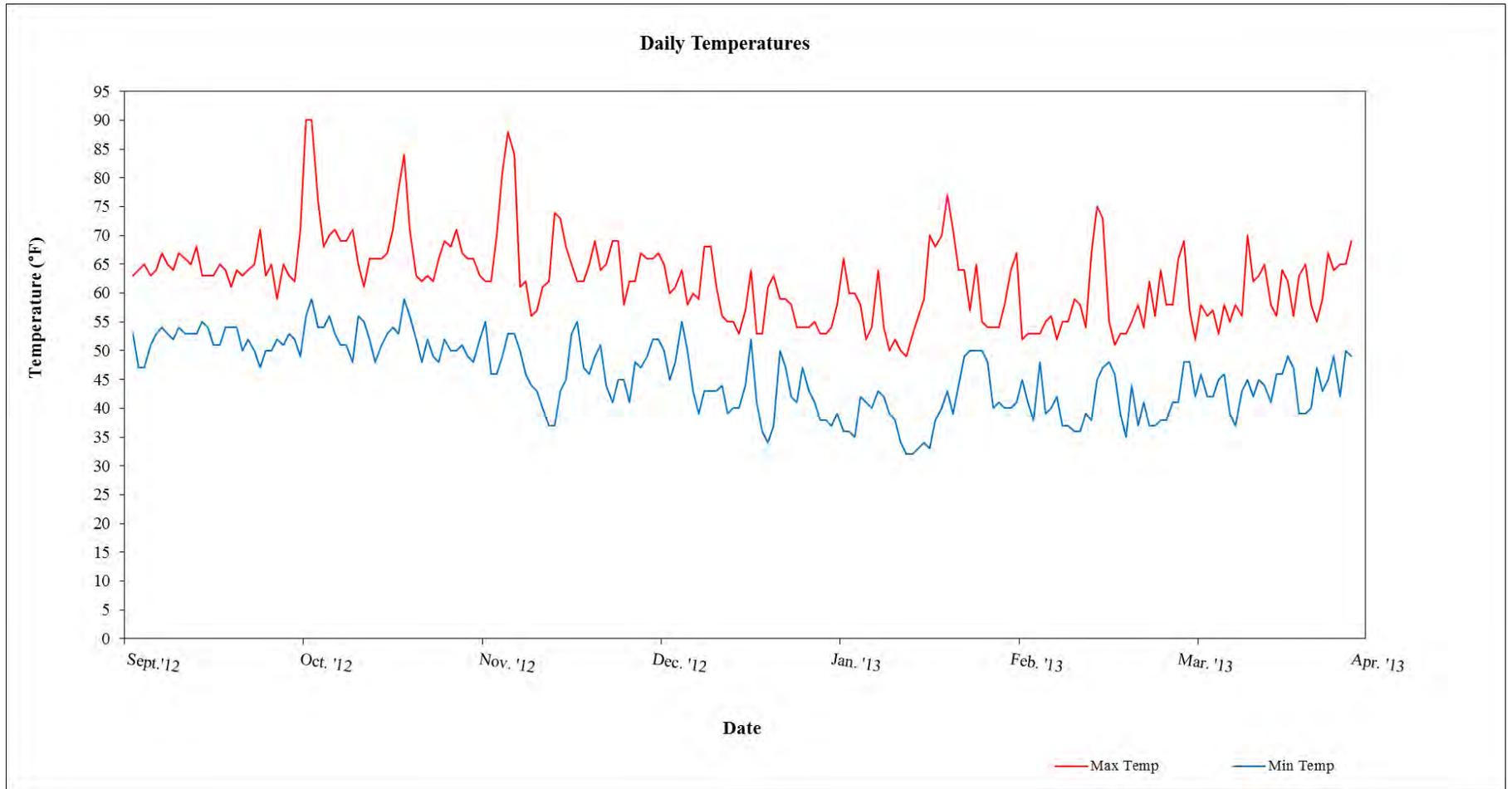
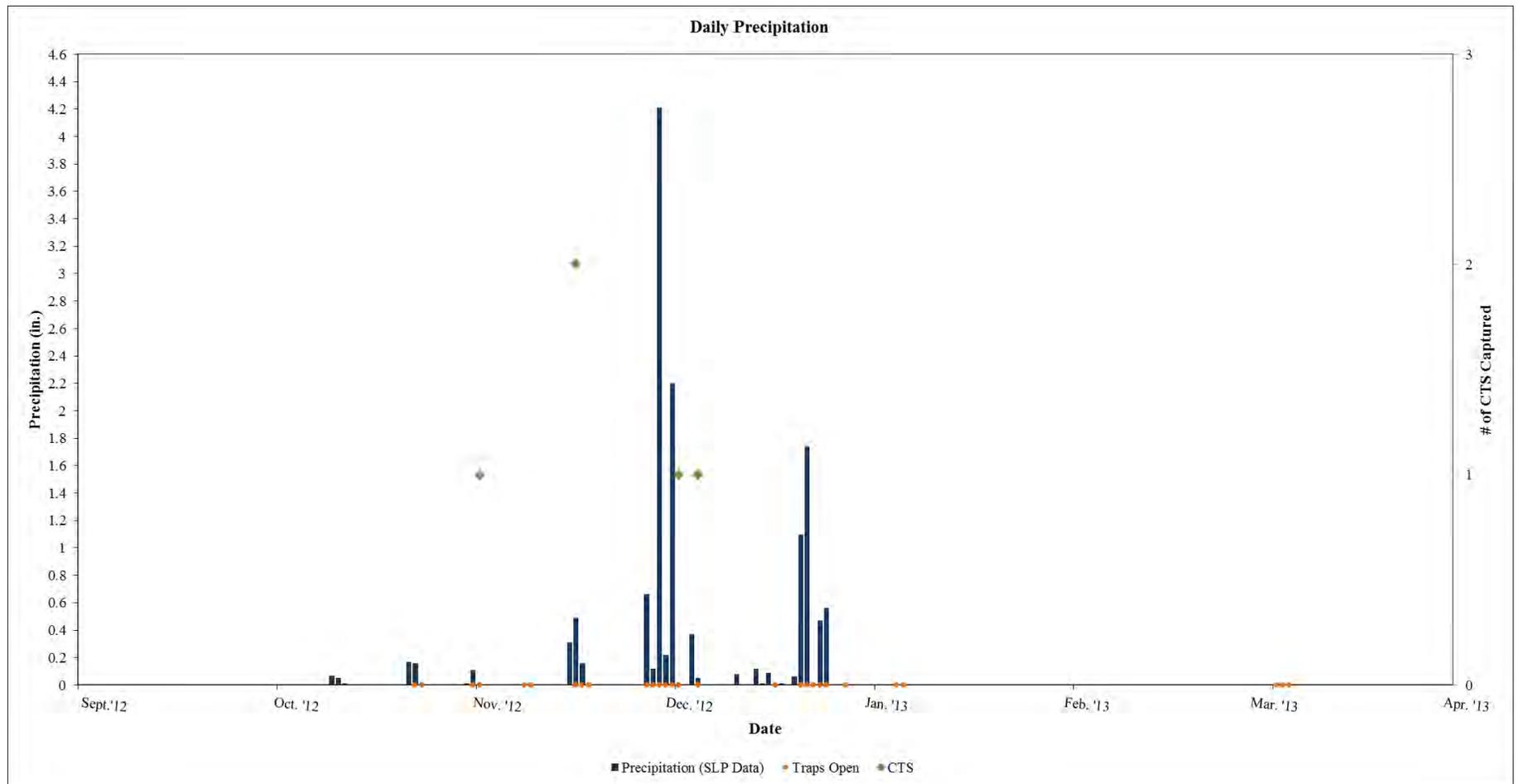


Chart 2: Daily Precipitation During the 2012/13 Survey Season



## ANALYSIS

### **Salamander Pond**

The results of the study indicate that Salamander Pond may not currently function as a CTS breeding resource. While precipitation was below normal, the rainfall early in the season, when adults are breeding, was sufficient to facilitate movement in both years, as evidenced by successful breeding and high numbers of larvae in Roadrunner pond. In addition, the depth and duration of inundation in Salamander Pond was sufficient to facilitate CTS breeding and transformation in both years. However, no larvae were detected at Salamander pond during both years of aquatic surveys, and only two adult male CTS were trapped attempting to enter the pond to breed during the upland study in 2011/12. Large numbers of CTS larvae been found at this pond in previous years (i.e., 2004 and 2008). However, like many of the other previously documented CTS breeding ponds in the region, no detections have been made since 2008.

Catching only two adult CTS attempting to breed at Salamander pond suggests that there may not currently be a sufficient adult population associated with the pond to facilitate successful breeding. One potential factor may be increased vegetation cover due to fencing of the pond or a regional trend in a reduction in grazing over the last 20 years<sup>6</sup>. It may be that significant emergent vegetation favors other pond species that predate or compete with CTS for resources. It is also possible that a significant increase in emergent vegetation cover may result in reduced detections of larvae as a result of decreased access for surveys.

### **Roadrunner Pond**

The results of the breeding season drift fence/pitfall trap, dispersal, and aquatic surveys indicate that Roadrunner Pond currently functions as a successful CTS breeding resource and individual CTS are transforming and exiting the pond to utilize the adjacent upland habitat. This pond is seasonal, which may be an important reason why it functions so well for CTS. Roadrunner Pond's hydro-period allows for sufficient depth and duration of inundation to facilitate successful transformation of CTS, while limiting the vegetation cover and competition from other pond species, which cannot successfully breed prior to the pond drying in early summer<sup>7</sup>. During drought cycles this pond may only hold water for short periods after individual rain events, which significantly limits the ability of bulrush and other emergent wetland vegetation to become well established over the long term.

The Roadrunner Pond population estimate (38 breeding adults) is consistent with other CTS breeding ponds in the region given its small size. The population appears to be stable as CTS larvae have been found consistently during aquatic sampling at this pond in the past, while detections have declined at other known breeding resources in the region during the same time period (Hemingway and D'Amore, 2008; Hemingway and Doak, 2006; McGraw, 2007; and DD&A, 2003, 2004, 2005, 2006, 2008a, 2008b, 2011a, 2011b, 2013).

CTS adults and metamorphs are moving in and out of the pond, and appear to be dispersing to the west more than in other directions. This would suggest that protected areas to the west, within PCRP, are an important upland resource for this population. However, as evidenced by the two adults caught in dense

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<sup>6</sup> It should be noted that while grazing may have been significantly reduced in recent decades compared to historically, both PCRP and the SLP are engaged in active grazing currently for management of CTS habitat, in addition to other resources.

<sup>7</sup> It should be noted that Roadrunner pond has a constructed outfall that is less than 36 inches from the lowest point in the pond, allowing it to dry each year while maintaining sufficient hydrology to facility CTS breeding, even in below normal rainfall years.

scrub moving away from Roadrunner Pond (one of which was a recapture caught a year earlier in Roadrunner Pond), CTS are also utilizing upland habitat to the east of the pond.

## **Uplands**

This study consisted of placing drift fence/pitfall trap arrays around Salamander and Roadrunner Ponds during the 2011/12 season. During the 2012/13 season, drift fence/pitfall trap arrays were placed at strategic locations in both grassland and dense scrub within the Malcolm property (Figure 3). The main goal of the study was to determine if CTS were moving from occupied ponds, through scrub, and into isolated grasslands. The upland data clearly shows that adult CTS are present within the landscape associated with the pond complex and are moving through dense scrub and grasslands. It is uncertain if CTS are occupying the scrub under duff or within mammal burrows for short or long durations, or for the full dry season between breeding efforts. However, the limited area of scrub that was cut to facilitate this study contained very few, if any obvious mammal burrows. While it is possible that scrub close to Roadrunner Pond is being utilized as primary estivation habitat, it's more likely that CTS are traveling through the scrub to access the grasslands beyond. While the number of arrays was limited to cover such a large area, the data indicates that the density of CTS in the uplands is negatively correlated with distance from the ponds (i.e., the majority of the CTS were caught within a relatively close proximity to a pond). This data is consistent with other work done in the region (Searcy and Shaffer, 2008 and Trenham and Shaffer, 2005).

## IMPACTS

The study conducted throughout the Malcolm's property attempted to understand how CTS utilize the Malcolm property in order to assess impacts from proposed development, and to inform avoidance, minimization, and mitigation efforts.

A recent, draft approach promulgated by the Fresno Office of the Department includes the identification of concentric zones around each breeding site. The specific boundaries suggested are based on research findings regarding the frequency and abundance of CTS in upland habitat within specific distances of breeding ponds. The outer boundaries of the four zones are set at 380 m (0.24 mi); 630 m (0.39 mi); 1 km (0.62 mi); and 2.2 km (1.3 mi):

The first 380-meter zone (0.24 mile) captures the distance that greater-than-50% of dispersing CTS adults and approximately 50% of dispersing CTS sub-adults will travel from the breeding pond (Trenham and Shaffer, 2005).

The second zone of 630 meters is the distance within which greater-than-95% of dispersing CTS are found (Trenham and Shaffer, 2005).

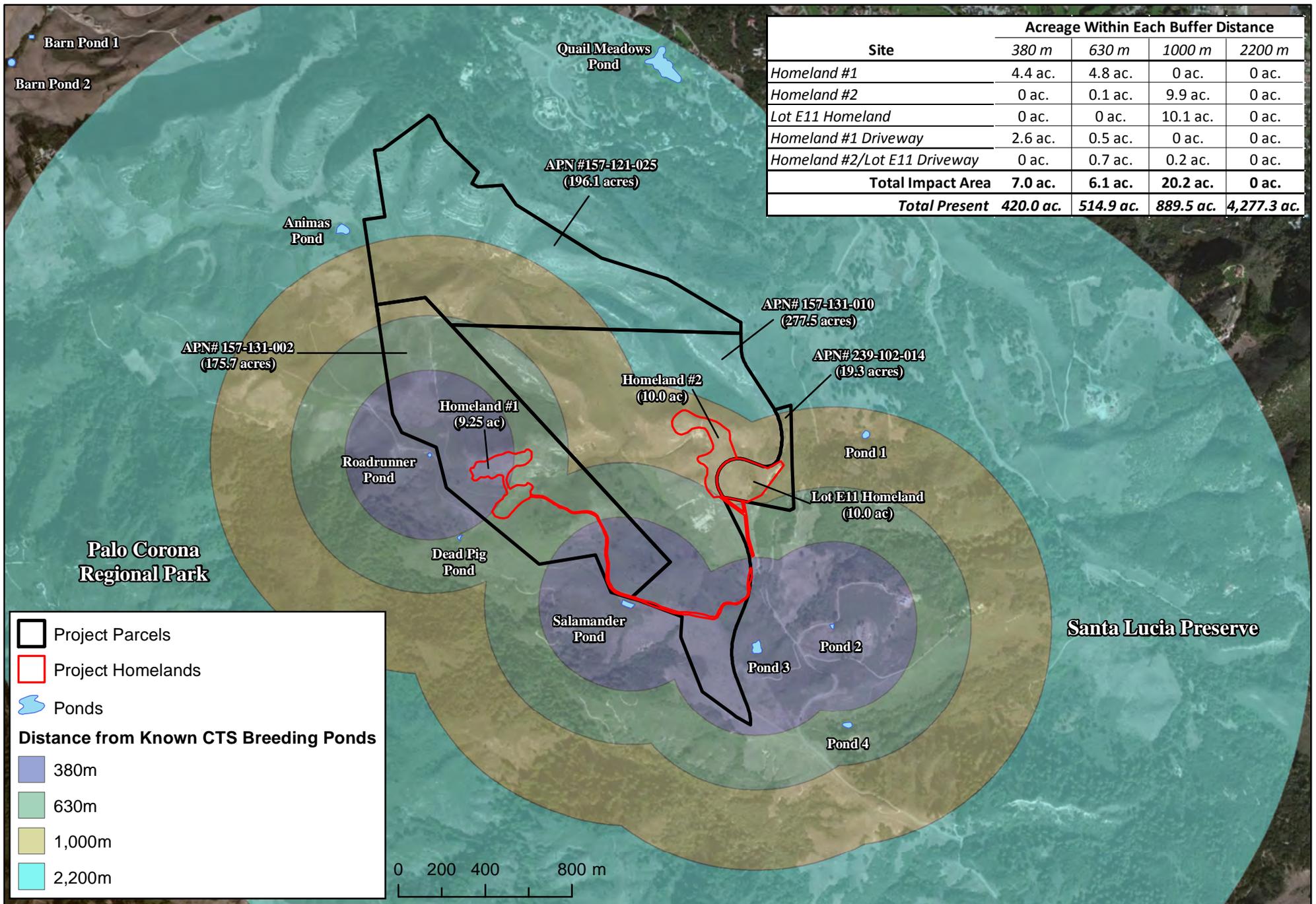
The third zone, bounded by 1 km, is based on ongoing studies which show that adults and juveniles routinely move greater than 1 km (0.62 miles) (Searcy and Shaffer, 2008).

The fourth and largest of the zones, within 2.2 km (1.3 miles) of a potential breeding pond, is based on the distance adults have been found to move from a breeding site (Orloff, 2007).

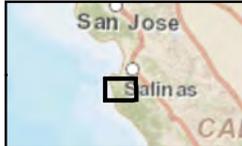
Figure 6 shows these concentric circles from the four known breeding ponds within dispersal distance of the Malcolm property and shows the acreage of temporary and permanent impacts that would result from the development of the Malcolm Homelands.<sup>8</sup>

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<sup>8</sup> It should be noted that surveys have failed to detect CTS larvae at three of these ponds (Salamander, PO-2, and PO-3) in recent years.



Site	Acreage Within Each Buffer Distance			
	380 m	630 m	1000 m	2200 m
Homeland #1	4.4 ac.	4.8 ac.	0 ac.	0 ac.
Homeland #2	0 ac.	0.1 ac.	9.9 ac.	0 ac.
Lot E11 Homeland	0 ac.	0 ac.	10.1 ac.	0 ac.
Homeland #1 Driveway	2.6 ac.	0.5 ac.	0 ac.	0 ac.
Homeland #2/Lot E11 Driveway	0 ac.	0.7 ac.	0.2 ac.	0 ac.
<b>Total Impact Area</b>	<b>7.0 ac.</b>	<b>6.1 ac.</b>	<b>20.2 ac.</b>	<b>0 ac.</b>
<b>Total Present</b>	<b>420.0 ac.</b>	<b>514.9 ac.</b>	<b>889.5 ac.</b>	<b>4,277.3 ac.</b>



Title: **Distance From Known Breeding Ponds**  
 File: CTS DFW Buffers Map.mxd

Date: 11-18-13  
 Scale: 1 inch = 0.36 miles  
 Project: 2819 Malcolm



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Figure  
**6**

## DISCUSSION

Aquatic and upland data has been collected on the SLP and PCRCP on and off over the last decade, resulting in a data set that identifies ponds that are known to support CTS breeding activity now, or have in the past. The result of this data confirms that a localized metapopulation of CTS currently occupy an area associated with a cluster of seven ponds adjacent to the Malcolm property. The Malcolm property is a significant upland resource associated with this localized CTS metapopulation. Within this cluster area there are ponds that likely never have supported CTS; ponds which likely did in the past, but do not now; and one pond that is currently being used as a breeding resource by CTS.

All seven of the ponds within the cluster are man-made and were constructed to facilitate grazing over the last two centuries. It is likely that CTS have never bred in two of the ponds, Dead Pig and Animus, due to historic conditions which preclude their presence, such as excessive vegetation cover, competition, and/or predation from an existing suite of aquatic species that flourish in deep, perennial ponds and riparian conditions. One pond; PO-1 may have supported CTS breeding historically, but when consistent surveys started in 2003, it had already become heavily vegetated and CTS have never been documented breeding there. Four additional ponds are documented to have been important breeding resources in the past (presence of significant numbers of larvae and/or adults): Roadrunner, Salamander, PO-2, and PO-3. Of these four ponds, Roadrunner was the only pond documented to support successful breeding this year. CTS larvae have not been found in any pond other than Roadrunner since 2008, despite targeted annual surveys.

### Localized CTS Habitat Trends

Historically, CTS probably occupied lower, flatland elevations within San Francisquito Flats on the SLP, where seasonal wetlands and vernal pool complexes likely existed prior to European settlement. Subsequent to settlement, seasonal resources were drained in favor of concentrating the hydrologic resources of the area into a large permanent water body, Moore's Lake, to supply a year-round water source. Fish and bullfrog were introduced into the lake and golf course ponds that have been created more recently, leaving only man-made CTS breeding habitat on the margin of their previous habitat, in the hills surrounding the flats. The stock ponds that are relatively high in the watershed dry periodically during drought cycles and thus do not support fish and bullfrog. Regularly grazed, these annual ponds stayed free of vegetation and were relatively good habitat for CTS breeding in that managed state, even though these areas were likely not occupied by CTS historically.

Grazing was removed from the SLP in the early 1990s and was sporadic on PCRCP during the same period, during which multiple ownership transfers occurred. In addition, the ponds on PCRCP were fenced in 2010 to protect them from over-grazing. As a result, all of the ponds adjacent to the Malcolm property have experienced an increase in vegetation cover compared to prior conditions. In addition, large areas of grassland have converted into non-native scrub on the Malcolm property. These type conversion habitat trends may degrade this previously-managed, artificial habitat and affect the local CTS metapopulation negatively. The mad-made ponds are not in a steady state as they are not natural features. Without ongoing management, all the ponds follow the same trajectory, increased aquatic and emergent vegetation consisting primarily of bulrush. Bulrush forms very dense stand and will completely fill in a pond. Riparian or tree species typically follow, increasing the cover.

Bobzien and DiDonato (2007) showed that CTS presence was negatively correlated with increased vegetation in a large number of ponds in the East San Francisco Bay Area. There are a number of factors that lead to CTS doing poorly in vegetated breeding habitat in the presence of other amphibian species and macroinvertebrates. There is evidence that CTS larvae are much more vulnerable to predation in a vegetated breeding resource. Vegetation is positively correlated with predaceous hexapods, such as the

giant water bug and the predaceous diving beetle, and research suggests that these lie-in-wait predators of fish and amphibian larvae rely on the presence of vegetation as a requirement of their hunting strategy (Alperyn, 2004 and Swart and Taylor, 2004). Tiger salamander larvae have been shown to move to open, unvegetated water as a primary predation avoidance strategy, indicating that in highly vegetated environments they would be at a disadvantage and potentially disproportionately preyed upon in a pond with multiple amphibian larval species (Holomuzki, 1986). CTS have evolved to reproduce under extreme hydrologic conditions that do not facilitate the breeding or permanent presence of most other amphibian species and predators (i.e., vernal pools). While CTS can breed in semi-permanent or permanent ponds under managed conditions (i.e., grazed), they may not possess the prey avoidance strategies required to successfully persist over time in the presence of amphibian and macroinvertebrate species found in un-managed, heavily vegetated ponds. While both the SLP and PCRCP are currently actively grazing to some degree, the current programs may not be sufficient to facilitate the conditions necessary for successful CTS breeding. Four ponds have been documented to facilitate CTS breeding in the project vicinity (i.e., Roadrunner, Salamander, PO-2, and PO-3); however, Roadrunner Pond is the only one to consistently produce large numbers of CTS larvae within recent years. This pond is annual, unvegetated, and supports almost no other amphibians or hexapods.

## RECOMMENDATIONS

Based on survey data collected over the last decade on PCRCP and the SLP it's likely that there is a group of four ponds which support a localized metapopulation of CTS (Salamander and Roadrunner ponds on PCRCP and ponds PO-2 and PO-3 on the SLP). Unfortunately, Roadrunner pond is the only one that CTS larvae have been detected in for the last five years, and the upland study at Salamander pond indicates that it is not currently functioning as a CTS breeding pond. If the population is declining and Roadrunner is the only pond left that functions to support breeding, the potential for the metapopulation to sustain decreases because there may be no immigration to recolonize previously occupied habitat if a stochastic event impacts the current population (i.e. drought).

The 2011/12 Palo Corona survey report concluded that it may be appropriate to look toward Roadrunner pond as an example of what works locally to facilitate CTS breeding. There is the potential that removing vegetation and/or reducing the hydro-period of Salamander pond via a constructed outfall of filling in a portion of the pond could result in an improvement in conditions for CTS attempting to breed there. This action would likely negatively affect habitat for CRLF; however, this species has a very stable population within the region. An alternative approach would be to create additional ponds with limited hydro-periods.

There is some question concerning the effectiveness of aquatic sampling in the context of significant increases in vegetative cover at some of the ponds that make up this cluster of ponds. It would be very valuable to remove a limited amount of vegetation from specific ponds to evaluate the effectiveness of the current protocol survey methods and potentially increase the confidence with which the future survey data is viewed. However, emergent vegetation is widely accepted to be an important and beneficial structural habitat component for CRLF. So, while impacts to other important amphibian species such as CRLF must be considered, CRLF and CTS populations overlap on the SLP and PCRCP and both species should be managed concurrently. One approach would be to remove vegetation from one side (50%) of a pond known to support breeding for CTS and CRLF. This would be particularly effective where bulrush has significantly reduced access and open water. Fencing off a portion of a pond in the presence of regular grazing has been successfully used to maintain habitat for both species (personal observation, J. Harwayne). It should be noted that CRLF is well established in the region with a number very stable and vigorous populations at both SLP and PCRCP. CRLF breeding occurrences have been documented at a majority of the ponds located on the SLP (DD&A, 2013) and a significant number of the ponds on the PCRCP (Monterey Peninsula Regional Park District and Service, 2011). This is in contrast to the relatively few ponds that have been documented to support successful breeding of CTS in the region.

While a park-wide program of combined mowing and grazing is currently being implemented at PCRCP, grazing the ponds sufficiently to effect conditions favorable to CTS breeding is a concern. It is recommended that the MPRPD and the Service consider modifying current grazing conditions outlined within the Safe Harbors Agreement for the PCRCP to allow for increased vegetation removal, preferable from increased grazing within the fenced areas around Salamander and Roadrunner ponds.

Portions of the historic Malcolm property grasslands have converted to dense non-native scrub over the last couple of decades. It is recommended that a plan to remove or reduce non-native scrub habitat, specifically to manage for CTS upland habitat values, be prepared and implemented.

Livestock can be effective in reducing the duff layer in grasslands, which benefits CTS by facilitating a productive rodent population, whose burrows are used as upland aestivation resources by CTS (Service, 2004). It is recommended that a plan to graze grasslands on the Malcolm property specifically to manage

for CTS upland habitat values be prepared and implemented. It may be appropriate to combine the scrub removal plan with the grassland grazing plan, as there may be approaches and practices common to both.

A final recommendation would be to explore creating new ponds on the Malcolm property that are designed and managed specifically to support CTS populations. Surveys of the property, in combination with data collected during the CTS upland studies, suggest there may be an appropriate location on the Malcolm property for creating successful CTS breeding pond(s) (Figure 5). Ideally, these pond(s) would have an annual hydroperiod in normal years and be regularly grazed. An annual hydroperiod will reduce vegetation, especially perennial emergent species such as bulrush. In addition, an annual hydroperiod may preclude other amphibian and predaceous hexapod species from persisting in significant numbers. While these species can be present in annual ponds, CTS may better out-compete competitors, such as newt and CRLF, and better evade predators, such as hexapods, in an unvegetated pool, facilitated by a reduced hydroperiod. In addition, an annual hydroperiod will preclude the presence of bullfrog and fish, which CTS do not co-occur with as a result of predation. Grazing will reduce vegetation and may function to compact soils in vernal resources, extending inundation further into the dry season. Grazing the uplands adjacent to the created pond(s) will maintain grassland and facilitate a mammal population needed to maintain CTS upland aestivation habitat. Roadrunner Pond, located on the PCRP, is a significant reference and can be viewed as a local model to evaluate appropriate depth and duration of inundation to support CTS breeding within the area.

## REFERENCES

- Alperyn, M. 2004. Factors affecting the community ecology of predaceous diving beetles in boreal and prairie ponds across southern Manitoba. A thesis/practicum submitted to the faculty of Graduate Studies of the University of Manitoba. Pp. 144.
- Bobzien, S. and J. E. DiDonato. 2007. The Status of the California Tiger Salamander (*Ambystoma californiense*), California Red-Legged Frog (*Rana draytonii*), Foothill Yellow-Legged Frog (*Rana boylei*), and Other Aquatic Herpetofauna in the East Bay Regional Park District, California. Technical Document: East Bay Regional Park District.
- Denise Duffy & Associates, Inc. 2003. Stock-Pond Survey Report for the Santa Lucia Preserve, Monterey County, California.
- Denise Duffy & Associates, Inc. 2004. Palo Corona Regional Park Aquatic Sampling Datasheets (unpublished).
- Denise Duffy & Associates, Inc. 2005. 2005 Stock-Pond Survey Report for the Santa Lucia Preserve, Monterey County, California.
- Denise Duffy & Associates, Inc. 2006. 2006 Stock-Pond Survey Report for the Santa Lucia Preserve, Monterey County, California.
- Denise Duffy & Associates, Inc. 2008a. 2008 Protocol-Level California Tiger Salamander Survey Report for the Santa Lucia Preserve, Monterey County, California.
- Denise Duffy & Associates, Inc. 2008b. Palo Corona Regional Park Aquatic Sampling Datasheets (unpublished).
- Denise Duffy & Associates, Inc. 2011a. Letter Report to Christopher Wilson (Santa Lucia Conservancy) RE: 2011 CTS Aquatic Survey Results.
- Denise Duffy & Associates, Inc. 2011b. Palo Corona Regional Park Aquatic Sampling Datasheets (unpublished).
- Denise Duffy & Associates, Inc. 2012. California Tiger Salamander Survey Results for Two Ponds at the Palo Corona Regional Park – 2011/2012 Season.
- Denise Duffy & Associates, Inc. 2013. 2013 Stock-Pond Survey Report for the Santa Lucia Preserve, Monterey County, California. Technical Document: Santa Lucia Conservancy.
- Hemingway, V. and A. D'Amore. 2008. Final report for amphibian management and monitoring at Palo Corona Regional Park, Monterey County, Ca. Technical Document: Monterey Peninsula Regional Park District.
- Hemingway, V. and D. Doak. 2006. Final Report for Amphibian Management and Monitoring at Palo Corona Regional Park, Monterey, CA. Report to the Big Sur Land Trust.
- Holomuzki, R. J. 1986. Predator avoidance and Diel patterns of microhabitat use by larval tiger salamanders. *JSTOR Ecology*, Vol. 67, No. 3, Pp. 737-748.

- Jennings, M. R. and M. P. Hayes, 1994. Amphibian and reptile species of special concern in California. Final report to the California Department of Fish and Game, Inland Fisheries Division. 255 pp.
- Loredo et al, 1996. Habitat use and migration behavior of the California tiger salamander. Journal of Herpetology, Vol. 30(2). Pp. 282-285.
- National Oceanic and Atmospheric Administration. "Daily Climate Report – Monterey Airport" Accessed on September 6, 2012. Available online at: <http://www.ncdc.noaa.gov/cdo-web/search;jsessionid=37EE8F92FFDE9D0C37C50B3534A5503C.lwfl>
- National Weather Service, California Nevada River Forecast Center. "Climate Station Precipitation Summary" Accessed on April 26, 2012. Available online at: [http://www.cnrfc.noaa.gov/rainfall\\_data.php](http://www.cnrfc.noaa.gov/rainfall_data.php)
- Orloff, S. 2007. Migratory movements of California tiger salamander in upland habitat – a five-year study (Pittsburg, California). Ibis Environmental, Inc., prepared for Bailey Estates LLC, May 2007. 47 pp. + appendices.
- McGraw, J. M. 2007. Grassland Management Plan for Palo Corona Regional Park.
- Monterey Peninsula Regional Park District and U.S. Fish and Wildlife Service. 2011. Safe harbor agreement for California red-legged frog (*Rana draytonii*), California tiger salamander (*Ambystoma californiense*), Smith's blue butterfly (*Euphilotes enoptes smithi*), and Yadon's piperia (*Piperia yadonii*), at Palo Corona Regional Park, Monterey County, California. Federal Register, Vol. 76, (173) Pp. 55413-55414.
- Searcy, C. A. and H. B. Shaffer. 2008. Calculating biologically accurate mitigation credits: insights from the California tiger salamander. Conservation Biology 22, 997–1005.
- Stebbins, R. C. 2003. Western reptiles and amphibians, 3rd edition. Houghton Mifflin Company, New York, NY. 533 pp.
- Swart, C. C. and R. C. Taylor. 2004. Behavioral Interactions between the Giant Water Bug (*Belostomatium lutarium*) and Tadpoles of *Bufo woodhousii*. Southeastern Naturalist, Vol. 3, No. 1 (2004), pp. 13-24.
- Trenham, P.C. and H. B. Shaffer. 2005. Amphibian upland habitat use and its consequences for population viability. Ecol. Appl. 15, 1158–1168.
- Trenham et al. 2000. Life History and Demographic Variation in California tiger salamander (*Ambystoma californiense*). Copeia, 200(2). Pp. 365-377.
- United States Fish and Wildlife Service. 2004. Endangered and threatened wildlife and plants; Determination of threatened status for the California Tiger Salamander; and special rule exemption for existing routine ranching activities; Final rule. Federal Register, Vol. 69(149). Pp. 47211-47248.
- United States Fish and Wildlife Service. 2005. Endangered and threatened wildlife and plants; Designation of critical habitat for the California tiger salamander, central population; Final rule. Federal Register, Vol. 70(162). Pp. 49379-49458.

United States Fish and Wildlife Service and California Department of Fish and Game. 2003. Interim guidance on site assessment and field surveys for determining presence of a negative finding of the California tiger salamander. Available online at:  
[http://www.fws.gov/sacramento/es/documents/cts\\_survey\\_protocol.PDF](http://www.fws.gov/sacramento/es/documents/cts_survey_protocol.PDF)

# **Appendix A**

Drift Fence/Pitfall Trap Survey Results









Date	Animals Captured											
	CTS	CRLF	Newt	SLM Slender	Monterey Ensatina	Sierran Treefrog	W. Fence Lizard	Alligator Lizard	Vole	Shrew	Mouse	Gopher
4/11/12		1	1		1							
4/12/12			1									
4/13/12												
4/14/12												
4/24/12			1									
4/25/12												
4/26/12			3									
4/27/12							2		2	2		

## **Appendix D.**

Smith's Blue Butterfly Habitat Survey Results for the  
Malcolm Property Project

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## Denise Duffy & Associates, Inc.

PLANNING AND ENVIRONMENTAL CONSULTING

September 21, 2012

Denise Malcolm  
PO Box 7667  
Aspen, CO. 81612

RE: Smith's Blue Butterfly Habitat Survey Results for the Malcolm Property Project

Dear Mrs. Malcolm,

The purpose of this letter is to provide the results of a survey conducted to map the presence of habitat for the Smith's blue butterfly (*Euphilotes enoptes smithi*) on your property. The Smith's blue butterfly is a federally Endangered species that is known to occur on your property based on the presence of the host species, dune buckwheat (*Eriogonum parvifolium*), and historic surveys. This survey was conducted in order to verify and update the historic mapping. The results of this survey will be used in support of the Habitat Conservation Plan (HCP) that is being prepared for your property as part of the Section 10 Consultation process with the U.S. Fish and Wildlife Service (Service).

### Methods

All areas of the Malcolm property containing appropriate habitat for buckwheat were surveyed on August 21, 24, 27, and 28, 2012 by DD&A Assistant Environmental Scientist, Jami Davis, and Senior Environmental Scientist, Josh Harwayne. Mapping consisted of a combination of GPS and hand mapping on aerial photographs. Most of areas where buckwheat occurs on the property are inaccessible due to steep slopes, and as such the use of GPS for mapping was limited. Therefore, the majority of the mapping was conducted using REI Brand XR Series 8x42 binoculars and an Eagle Optics 70mm spotting scope. Each hillside was surveyed from as many viewpoints as possible, including high points on adjacent hilltops and low points from the access road. Particular attention was paid to areas where buckwheat had been observed historically in order to verify or update the previous mapping.

### Results

Approximately 72.2 acres of Smith's blue butterfly habitat were observed and mapped within the Malcolm property (Figure 1). Two densities of buckwheat, sparse (less than 5% cover) and moderate (approximately 5-30% cover), were mapped. Moderate densities of buckwheat occurred on the steeper slopes with rock outcrops, where other vegetation was very sparse. Most of the sparse density areas of buckwheat occurred as a component of coastal scrub habitat.

### Analysis

Most of the buckwheat mapped was found in areas where it had been previously observed; however, some new areas were observed and some previously mapped areas were found to no

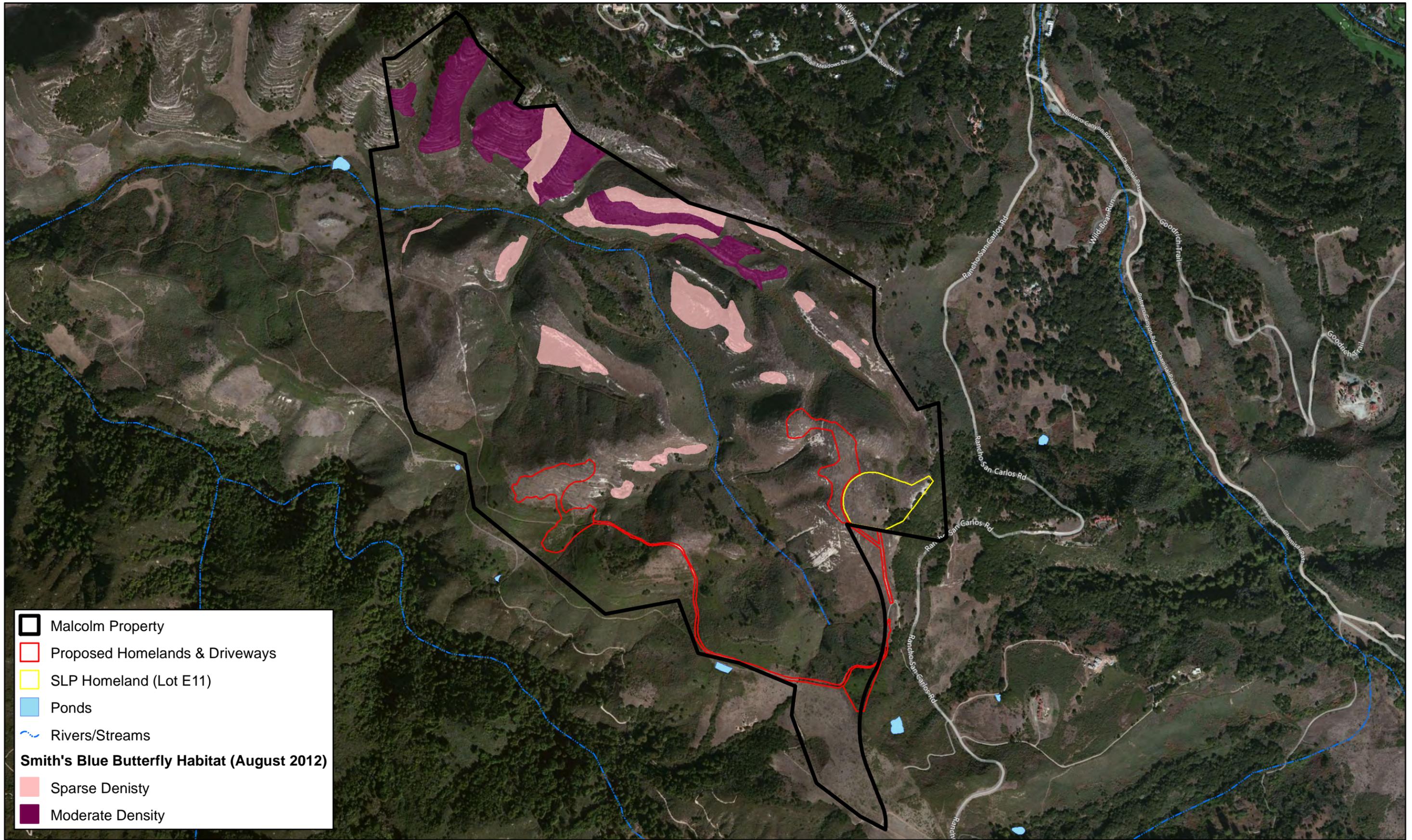
longer support buckwheat. It is likely that buckwheat could not be re-located in some of these areas due to habitat type conversion; i.e. dense scrub habitat within the property appears to be expanding, which reduces the amount of space available for buckwheat, a species typically associated with open habitats.

No buckwheat was observed within or immediately adjacent to the proposed homeland sites or driveways. All buckwheat observed was located on steep, south-facing slopes inappropriate for placement of homelands. As such, construction within the proposed homelands, or any other areas appropriate for a homeland site, will not directly impact Smith's blue butterfly habitat.

Sincerely,

A handwritten signature in black ink that reads "Josh Harwayne". The signature is written in a cursive style with a long horizontal flourish extending to the right.

Josh Harwayne  
Senior Environmental Scientist/Project Manager  
Denise Duffy & Associates, Inc.  
[jharwayne@ddaplanning.com](mailto:jharwayne@ddaplanning.com)  
(831) 373-4341



-  Malcolm Property
-  Proposed Homelands & Driveways
-  SLP Homeland (Lot E11)
-  Ponds
-  Rivers/Streams

**Smith's Blue Butterfly Habitat (August 2012)**

-  Sparse Denisty
-  Moderate Density



Title:	Smith's Blue Butterfly Habitat Map
File:	Buckwheat Survey Map.mxd

Date:	08-29-2012
Scale:	1 inch = 990 feet
Project:	2819 - Malcolm



Monterey | San Jose | Santa Barbara | Sierra Nevada  
**Denise Duffy and Associates, Inc.**  
 Environmental Consultants Resource Planners  
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Figure  
**1**

# **Appendix E.**

12 Rancho San Carlos (Ocho West)  
Revegetation, Monitoring, and Reporting Plan

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# **12 RANCHO SAN CARLOS (OCHO WEST) REVEGETATION, MONITORING, AND REPORTING PLAN**

**PREPARED FOR:**

**Andris Upitis**

**PREPARED BY:**

**Denise Duffy & Associates, Inc.**

**Contact: Josh Harwayne**

**947 Cass Street, Suite 5**

**Monterey, CA 93940**

## **Introduction**

This Revegetation, Monitoring, and Reporting Plan (Plan) is prepared for the 12 Rancho San Carlos Road (Ocho West) project (Project), located in Monterey County, California. This plan contains specific measures including the goals of the revegetation, engineering and planting specifications, success criteria, and monitoring requirements to determine whether success criteria have been met. Implementation of the following plan will satisfy requirements identified in the low-effect Habitat Conservation Plan (HCP) prepared for the Project.

## **Project Description**

The proposed development consists of a two-story single-family residence with an attached garage, a single-story accessory dwelling unit, patios, walkways, retaining walls, planters, terraces, and a vegetated guest parking area. The proposed main residence will be situated on the flattest portion of a knoll, which generally has an east-west orientation; the main floor will be above grade, while the ground floor will be built into the hillside below grade. The proposed accessory dwelling unit will be located on the same knoll, approximately 100 feet to the south of the main residence and approximately 20 feet lower in elevation; the accessory dwelling unit will also be built into the hillside. An approximately 6,100 linear-foot paved driveway (approximately 3,100 square feet including turnarounds) will provide access from Rancho San Carlos Road to the homeland. The project will also include installation of a 2,500-gallon septic tank, which will drain to two 75-foot leach fields, and a 500-gallon underground propane tank.

The grading area for the proposed development is 7.6 acres and will consist of 3,100 cubic yards of cut and 4,400 cubic yards of fill. The majority of grading will be for improvements to the existing ranch road for the driveway. The grading limits include all areas that will be disturbed, including staging and materials storage.

A portion of the main house and the accessory dwelling unit will include a living roof, and landscaping will be installed immediately surrounding the living areas. Additional grassland areas will be restored around the landscaped area to blend into the surrounding openlands.

## **Revegetation Requirements**

As identified above, the HCP prepared for the Project identifies requirements for revegetation of the Project site following construction. Specifically, the following measure is identified to achieve Goal 3 (Mitigate for the temporary loss of 4.8 acres of CTS and CRLF upland habitat and CRLF dispersal habitat at a 1:1 ratio):

*A Revegetation Plan shall be prepared by a qualified biologist and implemented for the project that includes, but is not limited to, the following:*

- *Planting and/or seeding of only locally-occurring native species collected from the project vicinity or acquired from local suppliers;*
- *A detailed description of revegetation areas, sources for plant material, and seeding and planting specifications;*
- *Procedures to control invasive plant species;*
- *Provisions to ensure compliance with the requirements of the plan; and*
- *A monitoring program that describes annual monitoring efforts which incorporate success criteria and contingency plans if success criteria are not met.*

## **Planting Plan**

A Landscape Plan has been prepared for the Project as part of the project 60% plans (Appendix A) that includes specific measures for installation methods for container-grown plants, soil preparation, irrigation, soil amendments, and mulching within landscaping areas immediately surrounding the proposed structure. The Landscape Plan also includes a grassland restoration area within areas that will be disturbed around the structure but will not be landscaped. The Landscape Plan identifies that this area will be planted with locally-occurring native grass and forb species and will receive topsoil preserved during construction.

The Landscape Plan does not, however, include revegetation of areas temporarily disturbed as a result of infrastructure installation and does not provide specifications for revegetation of these areas or the grassland restoration area. Therefore, this Plan shall supplement the Landscape Plan and is applicable to all areas that will be disturbed by the project that will not be developed or landscaped (henceforth referred to as revegetation areas and totaling 4.8 acres).

The following planting specifications shall be implemented for the revegetation areas:

- Prior to construction seed shall be collected from populations of native plants within the grading area, other areas of the property, or within the surrounding SLP or Palo Corona Regional Park (as allowed). Within the grading area, 100% of the seed from native plant species (including purple and foothill needle grasses, Idaho fescue, California poppy, and sky lupine) should be collected from the plants to be removed during construction. Within other areas, no more than 10% of the seed from any one plant shall be collected. Timing for seed collection can vary based on species and local weather patterns, and therefore, it may be necessary to collect seeds on more than one occasion. Seeds shall be stored under appropriate conditions, as determined by the Restoration Contractor until the time of propagation. Seed should be used within several months of collection to ensure maximum viability.
- Application of mulch shall not be used within the grassland restoration areas.
- As the site already includes and is well suited for native grassland vegetation, soil amendments are not recommended within the grassland restoration area. Additionally, fertilizer is not recommended within the grassland restoration area as fertilizers often promote the growth of non-native, invasive plant species.
- Irrigation is not typically recommended for native grassland restoration as it can promote prolific growth of non-native invasive species. As such, the local weather conditions shall be used to the best advantage (i.e. seeding and planting immediately before or at the beginning of the rainy season). However, supplemental irrigation during the normal wet season (October 15 to April 15) may increase survival and promote germination during rain-free periods of more than two to three weeks.

## **Goals and Success Criteria**

The goal of this Revegetation Plan is as follows:

1. Replant areas temporarily disturbed by the project (4.8 acres) with native vegetation.

The revegetation will be considered successful if:

1. The overall percent aerial coverage of vegetation within the revegetation areas is greater than 20% the first year, 40% the third year, and 80% the fifth year.
2. The overall percent aerial coverage of native vegetation within the revegetation areas is greater than 30% in year three, and 70% at year five.

3. The revegetation areas cannot have greater than 10% relative cover of any plant listed in the *California Plant Pest Council's 2006 Inventory* or the most recent update to that inventory at the time of monitoring.

### **Maintenance**

Maintenance of the revegetation area shall take two forms: 1) weed control activities outlined as a component of the revegetation implementation in this section; and 2) additional seeding or live-plant installation that may be applied as indicated by the monitoring and adaptive management protocols detailed below.

### *Weed Management*

Invasive plant species, particularly French Broom (*Genista monspessulana*) shall be removed from the revegetation areas annually for five years after initial installation. An integrated weed management approach shall be applied that considers site-specific strategies that provide the best combination of protecting biological resources, human health, and non-target organisms, and are efficient and cost-effective in controlling the invasive plant species within the project property. Hand-weeding and herbicide treatment are both effective methods of weed control; however, herbicide treatment can be more time and cost-effective as hand-weeding is labor intensive. The life-cycle of each invasive species shall be considered by the Restoration Contractor in determining the appropriate time and methodology for weed control in the restoration areas. The following specifications shall be implemented as appropriate:

- Hand-weeding shall be conducted prior to seed dispersal.
- All exotic species removed shall be disposed of in a proper off-site facility. The facility shall be notified that the waste contains invasive species. Care shall be taken to cover loads properly to avoid spread of invasive species during transport.
- If herbicide treatment is implemented, it shall be applied at regular intervals throughout the year to prevent new leaves from adequately transferring photosynthetic energy to the roots. Additionally, herbicide treatment shall be implemented according to the following best management practices (BMPs):
  - A Restoration Contractor certified by the California Department of Pesticide Regulation (CDPR) shall be contracted to implement invasive species removal. Herbicide shall only be applied by persons certified by the CDPR.
  - All reasonable precautions shall be taken to protect the environment and human health and safety. Herbicides shall be applied in an environmentally safe manner. Herbicide use shall be directed narrowly at the target organism to avoid broad impacts on the ecosystem.
  - All conditions of herbicide labels shall be followed.
  - Herbicides will not be used during the breeding season for the CRLF and CTS.
  - Herbicides shall not be applied during or within 24 hours prior to rain.
  - Drift shall be avoided by not applying herbicides under windy conditions and by using ground-based applicators, low tank pressures, and spray nozzles adjusted for larger droplet sizes, or other methods recommended by the Restoration Contractor.
  - Herbicides shall not be mixed, loaded, rinsed, or stored near aquatic resources.
  - If recommended by the Restoration Contractor, vegetation may be cut prior to herbicide application.

### **Implementation Schedule**

Construction of the project will occur during the dry season. Implementation of the Revegetation Plan shall occur immediately following construction, either immediately before and at the beginning of the rainy season to take advantage of the local weather conditions. Timing of maintenance activities (i.e. weed control) will be determined by the Project Biologist and Revegetation Contractor based on site and weather conditions.

### **Monitoring and Reporting**

Monitoring of the revegetation areas shall be conducted by a qualified biologist subsequent to the installation (within 30 days) and annually in the late spring for the next five years. A monitoring report shall be submitted to CDFW and USFWS subsequent to each monitoring visit (within 30 days). The total duration of monitoring shall be a minimum of five years from initial revegetation implementation monitoring, but may be extended if the success criteria are not met.

The reports shall be based on field observations and measurements as described in this section. The monitoring reports shall include, but not be limited to, the following information:

- The results of the data collection;
- Dates and descriptions of all maintenance activities conducted during the reporting period and the entire monitoring period, including but not limited to the amount and frequency of weed control;
- Photographic documentation;
- Description of the general health and vigor of the vegetation;
- Description of any pests or circumstances substantially affecting the vegetation;
- Description of any changes in the physical environment since the end of the previous reporting period and since the beginning of the monitoring period;
- The number and species of plants that are unhealthy or have died during the reporting period and since the beginning of the monitoring period; and
- Recommendations for further maintenance and management that may be necessary for maintaining the success criteria in this Plan.

Recommendations made in each monitoring report shall be carried out in a timely manner after approval. Follow-up of this maintenance and management shall be documented by the biologist in follow-up reports and shall be submitted within 30 days of the end of such follow-up maintenance and management activities.

A final report shall be submitted at the end of the monitoring period and shall include a cumulative analysis, summary of the data collected throughout the duration of the monitoring period, and a definitive statement as to the success of the revegetation based on the success criteria provided in this document.

If it is determined that the revegetation has not been successful, a supplemental report shall be prepared that identifies the causes of failure and suggests measures that will achieve success, and the monitoring period shall be extended one year. At the end of this extended period, an additional report shall be prepared as described above. This report shall satisfy the same criteria as outlined above for the final report. If at the end of the extended monitoring period the report indicates the success criteria have not been met, the monitoring shall be extended again and the process repeated until success is achieved.

**Contingency and Adaptive Management**

The Project Proponent shall be responsible for reasonable funding of the contingency procedures necessary for successful completion of the mitigation effort. Contingency measures might include additional broadcast seeding or live planting, fertilizing, soil amendments, invasive species control, and/or rodent and herbivore control. In addition, an adaptive management approach shall be employed which consists of evaluating the monitoring data and modifying the revegetation approach or Planting Plan, in order to increase the potential to achieve the stated success criteria. All adaptive management changes are subject to CDFW and USFWS notification and approval.

# **APPENDIX A**

## **Landscaping Plan**

(Selected pages from project 60% plans)

**PLANT LEGEND**

Symbol    Quantity    Botanical Name    Common Name    Container Size

**PLANTERS AND TERRACES**

	3	<i>Arctostaphylos 'Dr Hurd'</i>	Dr. Hurd Manzanita	24" box
	7,219 s.f.	<i>Achillea 'Somona Coast'</i>	Sonoma Coast Yarrow	4" pots
		<i>Carex pansa</i>	Sand Dune Sedge	4" pots
	31	<i>Chondropetalum 'El Campo'</i>	Small Cape Rush	1 gal
		<i>Epilobium canum 'Catalina'</i>	Catalina Fuchsia	1 gal
		<i>Poa cita</i>	Silver Tussock Grass	1 gal

**LIVING ROOF PLANTING**

	3,514 s.f.	<i>Achillea 'Somona Coast'</i>	Sonoma Coast Yarrow	4" pots
		<i>Carex pansa</i>	Sand Dune Sedge	plugs
		<i>Eschscholzia californica</i>	California Poppy	seed
		<i>Koeleria macranthua</i>	June Grass	plugs
		<i>Sesleria 'Campo Azul'</i>	Autumn Moor Grass	plugs

**GRASSLAND RESTORATION**

	19,233 s.f.	<i>Eschscholzia californica</i>	California Poppy	seed
		<i>Festuca idahoensis</i>	Idaho Fescue	seed
		<i>Lupinus nanus</i>	Sky Lupine	seed
		<i>Stipa pulchra</i>	Purple Needle Grass	seed
		<i>Stipa lepidia</i>	Foothill Needle Grass	seed

Restoration area, as shown, is approximate. All disturbed areas at main building area (not otherwise planted) shall receive native hydroseed restoration mix as approved.

**GEOBLOCK VEGETATION**

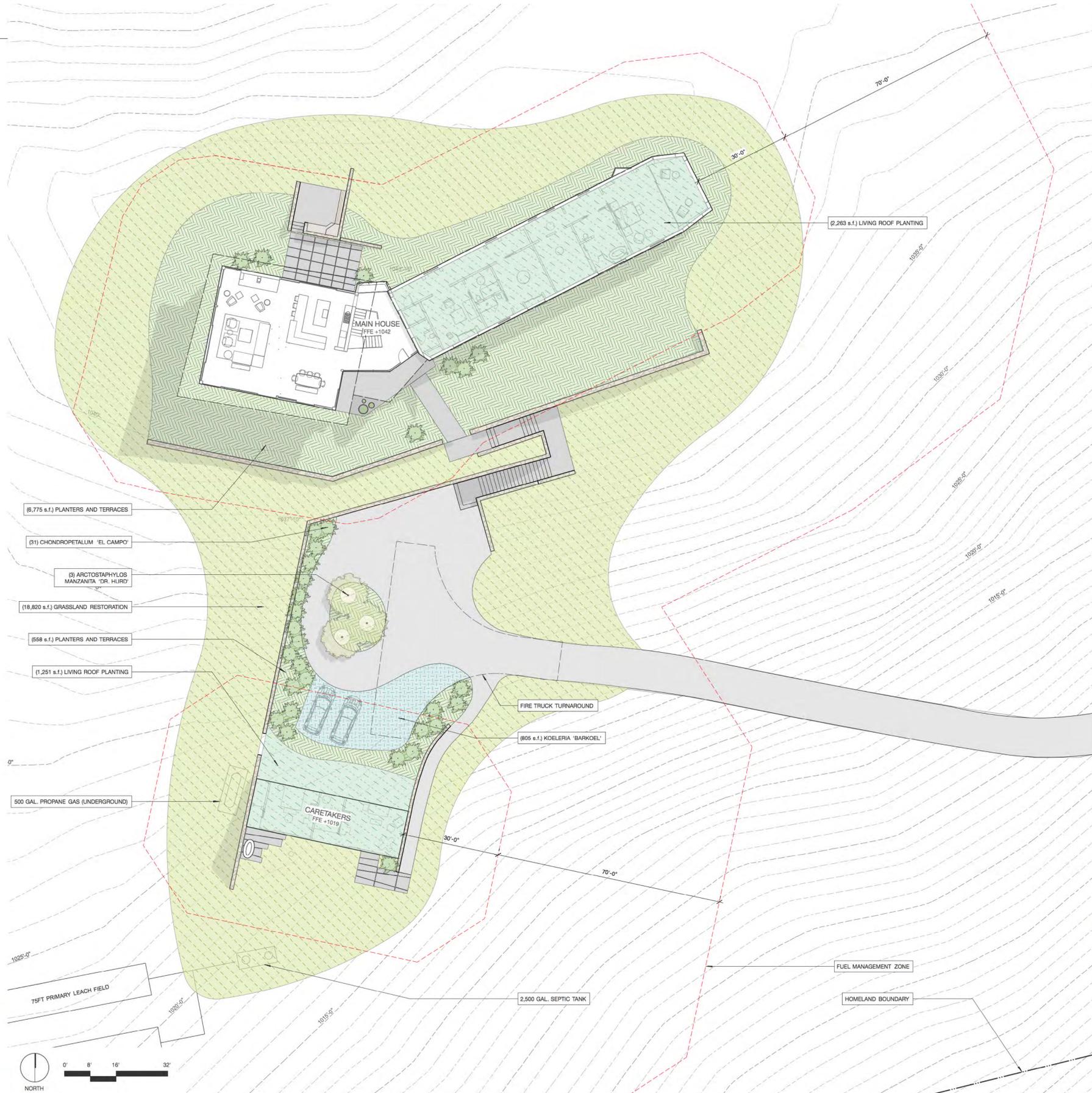
	805 s.f.	<i>Koeleria 'Barkoel'</i>	Turtle Turf	plugs
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DESIGN FLAVOR: ENTRY PLANTING (MANZANITA)



DESIGN FLAVOR: LIVING ROOF PLANTING



**PLANTING NOTES**

- All areas of the property shall be treated and managed to eliminate, as reasonably possible, invasive plant materials.
- Contractor shall be responsible for making themselves familiar with all underground utilities, pipes, and structures. Contractor shall take responsibility for any cost incurred due to damage of said utilities.
- Contractor shall not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist in planting areas. Such conditions shall be immediately brought to the attention of the Construction Manager.
- Contractor shall be responsible for any coordination with subcontractors as required to accomplish planting operations.
- Contractor shall submit a random soil samples from the site to a qualified soil testing lab for a horticultural suitability test and amendment recommendations. After amending topsoil to a depth of 8" (and in accordance with soil test recommendations), grade all areas smooth with no localized depressions or humps exceeding 1". Insufficient or unsuitable existing soil shall be augmented or replaced with topsoil as approved by the Landscape Architect.
- All plant material shall be approved by Landscape Architect prior to installation.
- Contractor to complete all soil amending, finish grading and removal of any and all construction debris from the planting areas before the laying out of approved plant material.
- Contractor shall layout all plants in their containers as per this Plan and receive approval from Landscape Architect prior to installation.
- Contractor shall notify Construction Manager + Landscape Architect 48 hours prior to commencement of work to coordinate project inspection schedules.
- Any plant substitutions must be approved by the Landscape Architect for approval or alternate choices.
- All plants shall be healthy, pest and disease free, free of girdling roots and well established in the container.
- Mycorrhizal inoculate organic fertilizer shall be applied during planting as per manufacturers recommendations. Use "Green Diamond Mykos Start Pro" (4-2-2 organic fertilizer) or approved equal.
- Trees shall be located a minimum of 4 ft. from walls, overheads, walks, headers and other trees within the project, unless shown otherwise.
- No plant shall be planted with rootballs or planting pits in a dry condition.
- Water all plants by handheld hose with watering wand attachment immediately after planting (no water "jetting"). No plant should be out of it's container more than twenty minutes before being planted and watered. Contractor shall be responsible for irrigating all new plantings until the entire project has been completed and accepted by the Owner.
- Contractor is responsible to apply sufficient but not excess irrigation to all new plantings to ensure healthy plant establishment.
- Backfill mix shall consist of 1/3 imported organic compost and 2/3 amended site soil.
- Immediately after excavation of plant pits, test drainage of pits by filling with water. Give written notification of conditions permitting the retention of water in pits for more than (3) hours. Contractor shall submit to Owner and Landscape Architect for acceptance a written proposal and cost estimate for the correction of poor drainage conditions before proceeding with planting.
- All newly planted container plants and trees shall receive watering basins 3 times the size of the root ball upon planting, unless otherwise shown on Drawings.
- Planting areas shall receive a composted arbor mulch to depth of 3", unless noted otherwise. Verify specification with Landscape Architect.
- Mulch shall be kept at a maximum depth of 3" deep near the plant crowns and trunks, and not extend higher than 1/8" onto the crown or trunk of any newly planted plant or tree. 5% minimum of landscape areas shall be left without mulch. See plan for designated 'insect habitat' area.
- All plant material shown on the Planting Plan is subject to the adverse effects of Nature including, but not limited to, fire, earthquake, flooding, freeze, drought, erosion and foraging predators. The Landscape Architect cannot, and does not, guarantee or imply warranty that specified plants will survive these Acts of Nature. All plants specified satisfy the general climatic conditions set forth by the U.S. Department of Agriculture and the Sunset Western Garden Book.
- Topsoil: Prior to rough grading operations or excavations for structures, existing native topsoil within limits of site grading shall be stockpiled separately from other excavated sub-soil. Depth of top soil excavation shall range from 2 - 5 inches and be confirmed on site with landscape architect. Topsoil stockpile shall be covered and secured, in place, for duration of construction, and available for distribution at grassland restoration areas, prior to completion of project.

**FUEL MANAGEMENT NOTES**

- To comply with the CA Department of Forestry and Fire Protection regulations, both a 30 ft. firebreak and an additional 70 ft. (totaling a 100 ft.) wide 'defensible fuel management zone' around all structures will have to be created and maintained.
  - an understory less than 18" high
  - removal of all dead and dying woody material
  - limbing up all tree branches to provide a minimum 6 ft. clearance off the ground
  - maintain a cleared area around all downed logs embedded in soils
  - 20 ft. spacing between edges of tree canopies
  - occasional spacing of shrubs over 18" high
- In the first 30 ft. (from the structure) 'firebreak' zone, it is required to remove all flammable vegetation. If the entire 30 ft. is not available on the bluff top, before the top of bank mark, and the firebreak includes a portion of the top of the canyon slope, the natural ground cover present should be maintained at less than 18" in height, but not cleared. This modification of the regulations is allowed on sites with the high potential of erosion.



DESIGN FLAVOR: GRASSLAND RESTORATION



# **Appendix F.**

12 Rancho San Carlos (Ocho West)  
Invasive Plant Management, Monitoring, and Reporting Plan

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# **12 RANCHO SAN CARLOS (OCHO WEST) INVASIVE PLANT MANAGEMENT, MONITORING, AND REPORTING PLAN**

**PREPARED FOR:**

**Andris Upitis**

**PREPARED BY:**

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**Contact: Josh Harwayne**

**947 Cass Street, Suite 5**

**Monterey, CA 93940**

## **Introduction**

This Invasive Plant Management, Monitoring, and Reporting Plan (Plan) is prepared for the 12 Rancho San Carlos Road (Ocho West) project (Project), located in Monterey County, California. This Plan contains specific measures including the goals of the invasive plant management, an implementation plan, success criteria, and monitoring requirements to determine whether success criteria have been met. Implementation of the following plan will satisfy requirements identified in the low-effect Habitat Conservation Plan (HCP) that was prepared to cover take of the federally and state Threatened California Tiger Salamander (CTS, *Ambystoma californiense*) and the federally Threatened California red-legged frog (CRLF, *Rana draytonii*), resulting from development of Project.

## **Project Description**

The proposed development consists of a two-story single-family residence with an attached garage, a single-story accessory dwelling unit, patios, walkways, retaining walls, planters, terraces, and a vegetated guest parking area. The proposed main residence will be situated on the flattest portion of a knoll, which generally has an east-west orientation; the main floor will be above grade, while the ground floor will be built into the hillside below grade. The proposed accessory dwelling unit will be located on the same knoll, approximately 100 feet to the south of the main residence and approximately 20 feet lower in elevation; the accessory dwelling unit will also be built into the hillside. An approximately 6,100 linear-foot paved driveway (approximately 3,100 square feet including turnarounds) will provide access from Rancho San Carlos Road to the homeland. The project will also include installation of a 2,500-gallon septic tank, which will drain to two 75-foot leach fields, and a 500-gallon underground propane tank.

The grading area for the proposed development is 7.6 acres and will consist of 3,100 cubic yards of cut and 4,400 cubic yards of fill. The majority of grading will be for improvements to the existing ranch road for the driveway. The grading limits include all areas that will be disturbed, including staging and materials storage.

A portion of the main house and the accessory dwelling unit will include a living roof, and landscaping will be installed immediately surrounding the living areas. Additional grassland areas will be restored around the landscaped area to blend into the surrounding openlands.

## **Invasive Plant Management Requirements**

The HCP prepared for the Project identifies requirements for management of invasive plant species within the 5.9 acre conservation easement that will be placed over a portion of the existing homeland. Specifically, the following measure is identified (in addition to placement of the conservation easement) to achieve Goal 5 (Mitigate for the loss of 1.6 acres of moderate- to high-quality CTS upland habitat and 0.2 acre of CRLF upland habitat at a 3:1 ratio and 1.1 acres of low-quality CTS upland habitat and 2.6 acre of CRLF dispersal habitat at a 1:1 ratio. The mitigation acreage for each species spatially overlaps, resulting in a total of 5.9 acres required for mitigation.):

*An Invasive Plant Management Plan shall be prepared and implemented for the project that improves and maintains habitat function and value for the covered species within the conservation easement. The Invasive Plant Management Plan would target the removal and reduction of non-native plant species within the conservation easement, particularly French broom.*

## Goals and Success Criteria

The goal of this Plan is as follows:

1. Manage invasive plant species populations within the 5.9 acre conservation easement.

The Plan will be considered successful if:

1. The overall percent aerial coverage of French Broom or other species with an invasiveness rating of “high” in the California Invasive Plant Council’s *2006 Inventory* or the most recent update to that inventory at the time of monitoring within the conservation easement is less than 10%.

## Rational for expecting implementation success

Approximately two acres of the conservation easement are currently significantly degraded due to the aggressive growth of invasive species, particularly French Broom (*Genista monspessulana*). This plan includes an aggressive approach to invasive species removal and management, which will open up space for the re-establishment of native species. Additionally, this plan includes adaptive management that will allow the most successful management techniques for the site to be utilized.

A qualified biologist/restoration practitioner shall be contracted prior to restoration of the site and designated as the Project Biologist<sup>1</sup> to ensure that the specific components of this plan are implemented to the appropriate specification. The Project Biologist is responsible for communication and coordination with the Restoration Contractor on technical details to ensure invasive species removal efforts are consistent and appropriate for the specific site conditions. Additionally, regular monitoring will ensure the invasive species removal has been successful according to the goals and objectives of this plan.

## Implementation Plan

Invasive plant species, particularly French Broom, shall be removed from the conservation easement area using an integrated invasive species management approach that considers site-specific strategies that provide the best combination of protecting biological resources (including HCP target species), human health, and non-target organisms, and are efficient and cost-effective in controlling invasive species. The life-cycle of each invasive species shall be considered by the Restoration Contractor in determining the appropriate time and methodology for weed control. Removal methods may include manual (cutting and or/pulling), mechanical (mowing), chemical (herbicide), or a combination thereof, as deemed appropriate by the Restoration Contractor.

The following specifications shall be implemented as appropriate:

- All invasive species removed manually shall be disposed of at an appropriate location off-site. The facility shall be notified that the waste contains invasive species. Care shall be taken to cover loads properly to avoid spread of invasive species during transport.
- Mechanical removal of invasive species will be restricted to a window of June 1 to October 15.
- Herbicides may be used where alternative methods are known to be ineffective. If herbicides are used on site, the following best management practices (BMPs) shall be implemented to avoid or reduce impacts to the surrounding resources and HCP target species:
  - A Restoration Contractor certified by the California Department of Pesticide Regulation (CDPR) shall be contracted to implement invasive species removal. Herbicide shall only be applied by persons certified by the CDPR.

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<sup>1</sup> The Project Biologist must possess an education in biology or another related field and demonstrate experience with the management of restoration projects of a similar nature within the region.

- All reasonable precautions shall be taken to protect the environment and human health and safety. Herbicides shall be applied in an environmentally safe manner. Herbicide use shall be directed narrowly at the target organism to avoid broad impacts on the ecosystem.
- All conditions of herbicide labels shall be followed.
- Herbicides will not be used during the breeding season for the CRLF or CTS.
- Herbicides shall not be applied during or within 24 hours prior to rain.
- Drift shall be avoided by not applying herbicides under windy conditions and by using ground-based applicators, low tank pressures, and spray nozzles adjusted for larger droplet sizes, or other methods recommended by the Restoration Contractor.
- Herbicides shall not be mixed, loaded, rinsed, or stored near aquatic resources.
- If recommended by the Restoration Contractor, vegetation may be cut prior to herbicide application.

### **Implementation Schedule**

Construction of the project will occur during the dry season. Implementation of the invasive plant management shall occur within one year following completion of construction. Management activities shall occur prior to seed dispersal; however, timing and frequency will be determined by the Restoration Contractor and Project Biologist based on site and weather conditions and target species.

### **Monitoring and Reporting**

Monitoring of the management area shall be conducted by a qualified biologist in the late spring in years 1, 2, 3, 5, and 10 following the first management activity. Monitoring shall include percent aerial coverage of invasive species within the conservation easement.

A monitoring report shall be submitted to CDFW and USFWS subsequent to each monitoring visit (within 30 days). The total duration of monitoring shall be a minimum of 10 years from initial implementation monitoring, but may be extended if the success criteria are not met.

The reports shall be based on field observations and measurements as described in this section. The monitoring reports shall include, but not be limited to, the following information:

- The results of the data collection;
- Dates and descriptions of all management activities conducted during the reporting period and the entire monitoring period;
- Photographic documentation;
- Description of any changes in the physical environment since the end of the previous reporting period and since the beginning of the monitoring period; and
- Recommendations for further maintenance and management that may be necessary for maintaining the success criteria in this Plan.

Recommendations made in each monitoring report shall be carried out in a timely manner after approval. Follow-up of these recommendations shall be documented by the biologist in follow-up reports and shall be submitted within 30 days of the end of such follow-up activities.

A final report shall be submitted at the end of the monitoring period and shall include a cumulative analysis, summary of the data collected throughout the duration of the monitoring period, and a definitive statement as to the success of the management based on the success criteria provided in this document.

If it is determined that the invasive plant management has not been successful, a supplemental report shall be prepared that identifies the causes of failure and suggests measures that will achieve success, and the monitoring period shall be extended one year. At the end of this extended period, an additional report shall be prepared as described above. This report shall satisfy the same criteria as outlined above for the final report. If at the end of the extended monitoring period the report indicates the success criteria have not been met, the monitoring shall be extended again and the process repeated until success is achieved.

### **Adaptive Management and Changed Circumstances**

Adaptive management approach shall be employed which consists of evaluating the monitoring data and modifying the management approach as suggested by the Project Biologist or Restoration Contractor in order to increase the potential to achieve the stated success criteria. Adaptive management may include changing or combining management techniques, changing the timing or frequency of management, and/or changing the type of herbicide used. Any adaptive management changes beyond those described in this plan are subject to CDFW and USFWS notification and approval.

As identified in the HCP, changed circumstances are defined as changes in circumstances affecting a species or geographic area covered by an HCP that can reasonably be anticipated by plan developers and the Service and for which contingency plans can be prepared (e.g., the new listing of species, a fire, or other natural catastrophic event in areas prone to such event). The HCP identifies that it is possible that a fire could occur on the property that could result in infestation or spread of invasive plant species within the conservation easement. Long-term compliance monitoring outlined in the HCP would include an evaluation of invasive species within any burned areas. If an infestation is documented, measures included in this plan would be implemented to manage the infestation.

In addition, if one or more federally or state listed species other than the HCP-covered species (i.e. CTS and CRLF) are identified within the conservation easement, the applicant will cease any activities that would result in the incidental take of the newly discovered species, including invasive species management actions described in this plan, and apply for a permit amendment. This would include discovery of the federally endangered Smith's blue butterfly (*Euphilotes enoptes smithi*) and its obligate plant host species, dune buckwheat (*Eriogonum parvifolium*), which are known to occur within the property but were not identified within the conservation easement area.