# APPENDIX E

## Biological Resources Report

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# BIOLOGICAL RESOURCES REPORT

## PROPOSED CALIFORNIA STATE UNIVERSITY, MONTEREY BAY MASTER PLAN AND NEAR-TERM DEVELOPMENT COMPONENTS

**FEBRUARY 2022**

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# TABLE OF CONTENTS

# FIGURES



# TABLES

# 1.0 PROJECT SUMMARY

The Project consists of the proposed California State University Monterey Bay (CSUMB) Master Plan (proposed Master Plan), including Project Design Features (PDFs) drawn from the 2019 CSUMB Master Plan Guidelines (Master Plan Guidelines[1]), and five "near-term" development components to be constructed pursuant to the proposed Master Plan (collectively, the Project). The Project would provide a blueprint for land uses and building and facility space requirements to support a campus enrollment of 12,700 full-time-equivalent (FTE) students and 1,776 FTE faculty and staff by the year 2035. The campus is located on approximately 1,396 acres of land within the former Fort Ord military base, in Monterey County, California. This report presents the findings of a biological resources assessment conducted by Denise Duffy & Associates, Inc. (DD&A) for the Project. The emphasis of this study is to describe existing and potential biological resources within and surrounding the Project site, assess potential impacts to biological resources that may result from implementation of the proposed Master Plan, and recommend appropriate mitigation measures necessary to reduce those impacts in accordance with the California Environmental Quality Act (CEQA). This analysis evaluates potential impacts to sensitive biological resources within the Project site at a programmatic-level commensurate with the conceptual level of project information available and the approval being considered. In addition, this analysis addresses specific development projects expected to be constructed in the next ten years, which are referred to as "near-term development components." The five near-term development components are described and evaluated at a project-specific level in this study.

## 1.1 Summary of Results

Five vegetation types were observed within the Project site: coast live oak woodland, central maritime chaparral, central coastal scrub, non-native grassland, and ruderal/disturbed. In addition, several areas were identified where these vegetation types intergrade with one another and some areas are developed. Central maritime chaparral habitat (including the central maritime chaparral/non-native grassland, central maritime chaparral/central coastal scrub, and central maritime chaparral/coast live oak woodland mix habitats) are listed as sensitive on the California Department of Fish and Wildlife's (CDFW's) *Natural Communities List* (CDFW, 2010).

Several special-status plant species are known or have the potential to occur within the Project site based on observations, presence of appropriate habitat, and known occurrences within the vicinity. Please refer to **Appendix A** and **Section 4.0 "Results"** for an analysis of each species within the Project site. All other species evaluated have a low potential to occur but are unlikely to be impacted, are assumed "unlikely to occur," or were determined "not present" within the Project site for the species-specific reasons presented in **Appendix A**.

The special-status wildlife species that are known to or have been determined to have a moderate or high potential to occur within or immediately adjacent the Project site are discussed below. 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. Although the likelihood for California red-legged

[1] The Master Plan Guidelines were made available to the general public and local agencies for review and comment in 2017 under the title CSUMB Comprehensive Master Plan. Since that time the title has been changed to Master Plan Guidelines.

frog (CRLF) to occur within the Project site is unlikely, a discussion of this species is included below as this is a federally listed species that is known to occur in other portions of the former Fort Ord.

The following special-status wildlife species are known or have been determined to have a moderate or high potential to occur within or immediately adjacent the Project site:

- Townsend's big-eared bat (*Corynorhinus townsendii*) – CSC[2],
- Hoary bat (*Lasiurus cinereus*) – CNDDB,
- Monterey dusky-footed woodrat (*Neotoma macrotis fuscipes*) – CSC,
- Monterey shrew (*Sorex ornatus salarius*) – CSC/HMP,
- American badger (*Taxidea taxus*) – CSC,
- California tiger salamander (CTS, *Ambystoma californiense*) – FT/ST/HMP,
- Northern California legless lizard (*Anniella pulchra*) – CSC/HMP,
- Coast horned lizard (*Phrynosoma blainvillii*) – CSC,
- Obscure bumble bee (*Bombus caliginosus*) – CNDDB,
- Western bumble bee (*Bombus occidentalis*) – CNDDB,
- Smith's blue butterfly (SBB, *Euphilotes enoptes smithi*) – FE/HMP, and
- Nesting raptors and other protected avian species, including:
    - Burrowing owl (*Athene cunicularia*) – CSC,
    - White-tailed kite (*Elanus leucurus*) – CFP, and
    - California horned lark (*Eremophila alpestris actia*) – CNDDB.

The following special-status plant species are known or have been determined to have a moderate or high potential to occur within or immediately adjacent the Project site:

- Toro manzanita (*Arctostaphylos montereyensis*) – CRPR 1B/HMP,
- Sandmat manzanita (*A. pumila*) – CRPR 1B/HMP,
- Pajaro manzanita (*A. pajaorensis*) – CRPR 1B,
- Hooker's manzanita (*A. hookeri*) – CRPR 1B/HMP,
- Monterey ceanothus (*Ceanothus rigidus*) – CRPR 4/HMP,
- Fort Ord spineflower (*Chorizanthe minutiflora*) – CRPR 1B,
- Monterey spineflower (*C. pungens* var. *pungens*) – FT/CRPR 1B/HMP,
- Seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*) – SE/CRPR 1B/HMP,
- Eastwood's goldenbush (*Ericameria fasciculata*) – CRPR 1B/HMP,
- Sand-loving wallflower (*Erysimum ammophilum*) – CRPR 1B/HMP,
- Sand gilia (*Gilia tenuiflora* ssp. *arenaria*) – FE/ST/CRPR 1B/HMP,
- Kellogg's horkelia (*Horkelia cuneata* var. *sericea*) – CRPR 1B,
- Point Reyes horkelia (*H. marinensis*) – CRPR 1B,
- Marsh microseris (*Microseris paludosa*) – CRPR 1B,
- Northern curly-leaved monardella (*Monardella sinuata* ssp. *nigrescens*) – CRPR 1B,

[2] Status Definitions – FE – Federally endangered, FT: Federally threatened; ST: State threatened; CSC: California Species of Concern; CFP: California Fully Protected Species; HMP: Fort Ord Habitat Management Plan Species; CRPR 1B: California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) 1B Species (rare, threatened, or endangered in California and elsewhere); CRPR 4: CNPS CRPR 4 Species (plants of limited distribution – a watch list); CNDDB: animal species on the CNDDB "Special Animals" list that are not assigned any of the other status designations but the CDFW considers to be those of greatest conservation need, regardless of their legal or protection status.

- Woodland woolythreads (*Monolopia gracilens*) – CRPR 1B,
- Yadon's piperia (*Piperia yadonii*) – FE/CRPR 1B/HMP,
- Santa Cruz microseris (*Stebbinsoseris decipiens*) – CRPR 1B,
- Santa Cruz clover (*Trifolium buckwestiorum*) – CRPR 1B, and
- Pacific Grove clover (*T. polyodon*) – CRPR 1B.

The proposed near-term development components are generally located on sites that have been disturbed and are mostly developed. However, the construction of the near-term development components may result in direct loss of individuals and habitat for a number of special-status wildlife species, including special-status bat species, Monterey dusky-footed woodrat, Northern California legless lizard, and nesting raptors and other protected avian species. In addition, the construction of the near-term development components may also result in direct loss of individuals and habitat for Monterey spineflower.

The implementation of the proposed Master Plan or near-term development components would not result in significant impacts to any sensitive biological resources known or with the potential to occur within the Project site with implementation of the mitigation identified in **Sections 5.2** and **5.3**.

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# 2.0 INTRODUCTION

The Project consists of the proposed Master Plan, including PDFs drawn from the CSUMB Master Plan Guidelines (Master Plan Guidelines), and more detailed evaluation of five "near-term" development components to be constructed pursuant to the proposed Master Plan (collectively, the Project). The Project would provide a blueprint for land uses and building and facility space requirements to support a campus enrollment of 12,700 FTE students and 1,776 FTE faculty and staff by the year 2035. The campus is located on approximately 1,396 acres of land within the former Fort Ord military base, in Monterey County, California (**Figure 1**). This report presents the findings of a biological resources assessment conducted by DD&A for the Project. The emphasis of this study is to describe existing and potential biological resources within and surrounding the Project, assess potential impacts to biological resources that may result from implementation of the proposed Master Plan, and recommend appropriate mitigation measures necessary to reduce those impacts in accordance with CEQA. This analysis evaluates potential impacts to sensitive biological resources within the Project site at a programmatic level commensurate with the conceptual level of project information available and the approval being considered. In addition, this analysis addresses specific development projects expected to be constructed in the next ten years, which are referred to as "near-erm Development components." The five near-term development components are described and evaluated at a project-specific level in this study.

## 2.1 Project Location and Area

The Project site is located at the existing CSUMB campus, on the former U.S. Department of the Army (Army) military facility known as Fort Ord. The CSUMB campus is approximately 100 miles south of San Francisco and is located north of the Monterey Peninsula and west of the Salinas Valley, as shown in **Figure 1**. Portions of the existing CSUMB campus are within the city boundaries of Seaside and Marina, and within the unincorporated Monterey County, as shown in **Figure 2**.

## 2.2 Project Description

### 2.2.1 Master Plan

As indicated previously, the Project would provide a blueprint for land uses and building and facility space requirements to support an on-campus enrollment of 12,700 full-time-equivalent students (FTES[3]) and 1,776 FTE faculty and staff by the year 2035. Achieving this growth would result in an increase of approximately 6,066 FTES and 752 FTE faculty/staff over existing levels in academic year 2016-2017, which were 6,634 FTES and 1,024 FTE faculty/staff.

The Project also would result in a net increase of approximately 2.6 million gross square feet (GSF) of new academic, administration, student life, athletic and recreational, and institutional partnership[4] facilities, and housing (see **Table 2-1**). On-campus housing would be constructed sufficient to continue to accommodate 60 percent of FTES and existing housing would accommodate 65 percent of FTE faculty and staff, with a projected increase of 3,820 student beds and 757 converted residential units for faculty

[3] Full-time equivalent student (FTES) is the unit of measurement used to convert class load to student enrollment. At CSUMB, one FTES is equal to 15 units. Thus, one FTES is equal to one student enrolled in 15 units or three students each enrolled in 5 units. A related unit of measurement is "headcount." In the case of one student taking 15 units, the headcount is 1; in the case of three students collectively taking 15 units, the headcount is 3.

[4] Institutional partnerships are projects involving public-public or public-private partnerships and long-term contractual relationships that use or develop CSU real property to further the educational mission of the campus.

and staff. The Project also would accommodate redevelopment and growth in outdoor athletics and recreation facilities to serve campus needs, with space set aside for additional athletic fields, tennis courts, and pools, as well as for replacement of the existing stadium, field house, and pool house.

**Table 2-1. Proposed Master Plan Development**

| Campus Space | Beds/Units | GSF[1] | Implementation | |
|---|---|---|---|---|
| | | | Horizon I | Horizon II |
| *Existing Space (2016-2017)* | | | | |
| Main Campus Facilities (Non-Residential)[2] | — | 1,142,777 | NA | |
| Student Housing Main Campus | 2,600 beds | 1,171,264 | NA | |
| Student Housing East Campus Housing[3] | 1,380 beds / 466 units | | | |
| Faculty, Staff & Community Partners Housing (East Campus Housing)[4] | 754 units | 876,515 | NA | |
| **Total Existing Space** | **3,980 beds / 1,220 units** | **3,190,556** | NA | |
| *Approved but not Constructed Project* | | | | |
| Monterey Bay Charter School | — | 60,000 | ✓ | |
| **Total Pending or Approved Space** | — | **60,000** | ✓ | |
| *Proposed Master Plan - New Development[5]* | | | | |
| Academic Space | — | 403,160 | | |
| • Academic IV | | 95,000 | ✓ | |
| • Academic V | | 76,704 | ✓ | |
| • Academic VI | | 76,704 | | ✓ |
| • Academic VII | | 76,704 | | ✓ |
| • Academic VIII | | 76,704 | | ✓ |
| • Greenhouses[6] | | 1,344 | ✓ | |
| Institutional Partnerships - Panetta Institute | — | 64,000 | ✓ | |
| Administration Buildings | — | 77,454 | ✓ | |
| "Student Life" Buildings | — | 270,764 | | |
| • Childcare Center | | 23,000 | ✓ | |
| • Student Life Space (Phase I and II)[6] | | 145,473 | ✓ | |
| • Campus Arts & Auditorium | | 82,291 | | ✓ |
| • Student Union Phase II | | 20,000 | | ✓ |
| Indoor Recreation Buildings and Facilities | — | 165,343 | | |
| • Recreation Center (Phase I and II) | | 70,000 | ✓ | |
| • Recreation Center Addition (Phase III) | | 64,574 | | ✓ |
| • Wellness Center | | 30,769 | ✓ | |
| Outdoor Athletics & Recreation Support | — | 59,679 | | |
| • Stadium House | | 40,177 | ✓ | |
| • Otter Retail Space | — | 10,502 | ✓ | |
| • Aquatics Center | | 7,000 | | ✓ |
| • Field House | | 2,000 | ✓ | |
| Facilities Building | — | 73,590 | | |
| • Facilities Building | | 23,590 | ✓ | |
| • Facilities Storage Buildings | | 50,000 | ✓ | |
| Housing | 3,820 beds / 757 units | 1,760,000 | | |
| • East Campus Housing Conversion[7] | -1,380 beds / 757 units | NA | ✓ | |

**Table 2-1. Proposed Master Plan Development**

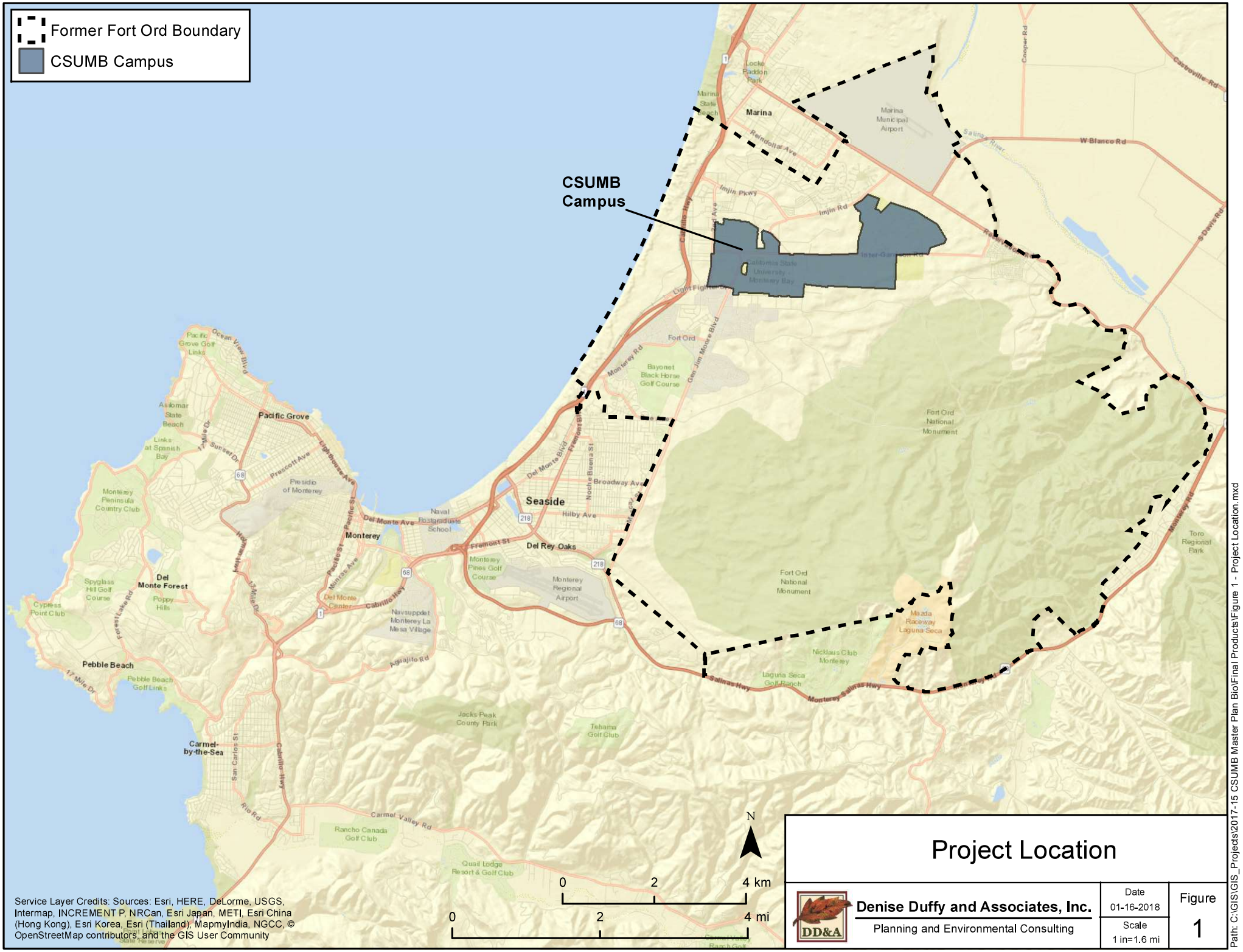
| Campus Space | Beds/Units | GSF[1] | Implementation | |
|---|---|---|---|---|
| | | | Horizon I | Horizon II |
| • Student Housing Phase IIB | 400 beds | 160,000 | ✓ | |
| • Student Housing Phase III | 600 beds | 200,000 | ✓ | |
| • Student Housing Phase IV | 600 beds | 200,000 | ✓ | |
| • Student Housing Phase V | 600 beds | 200,000 | ✓ | |
| • Student Housing Phase VI | 600 beds | 200,000 | ✓ | |
| • Student Housing Phase VII | 600 beds | 200,000 | | ✓ |
| • Student Housing Phase VIII | 600 beds | 200,000 | | ✓ |
| • Student Housing Phase IX | 600 beds | 200,000 | | ✓ |
| • Student Housing Phase X | 600 beds | 200,000 | | ✓ |
| **Total New Space with Master Plan[7]** | **3,820 beds / 757 units** | **2,873,990** | NA | |
| **Existing Building** | **3,980 beds / 1,220 units** | **3,190,556** | NA | |
| **Approved and Pending Building Projects** | NA | **60,000** | NA | |
| **Total New Building Space with Master Plan[7]** | **3,820 beds / 757 units** | **2,873,990** | NA | |
| **Total Building Space to be Demolished** | NA | **-256,366** | NA | |
| **Net Increase in Building Space with Master Plan[6]** | **3,820 beds / 757 units** | **2,617,624** | NA | |
| **TOTAL FUTURE BUILDING SPACE** | **7,800 beds / 1,220 units** | **5,868,180** | NA | |

As part of the Project, numerous PDFs are included that address various topics including open space, transportation, water and wastewater systems, energy systems and greenhouse gas reduction, and design. For example, transportation PDFs will enhance and expand the campus' existing Transportation Demand Management (TDM) program in order to further reduce vehicle trips and prioritize pedestrian and bicycle movement.

As noted above, the Project includes specific development components identified in the proposed Master Plan and expected to be constructed in the next 10 years; these Project components are referred to throughout this EIR as "near-term development components." These near-term development components include: (1) Student Housing Phase III (600 student housing beds); (2) Academic IV (95,000 GSF of classroom/instructional space); (3) Student Recreation Center (70,000 GSF of recreation space); (4) Student Housing Phase IIB (400 student housing beds); and (5) Academic V (76,700 GSF of classroom/instructional space).

Portions of the campus not currently proposed for development under this Project could be the subject of future development proposals. Such development proposals could be institutional partnerships or campus projects. Environmental review under CEQA would be pursued if and when such development proposals are pursued.

See CSUMB Master Plan Draft EIR Chapter 3, Project Description for additional details for the Project.




# Project Location

**Denise Duffy and Associates, Inc.**
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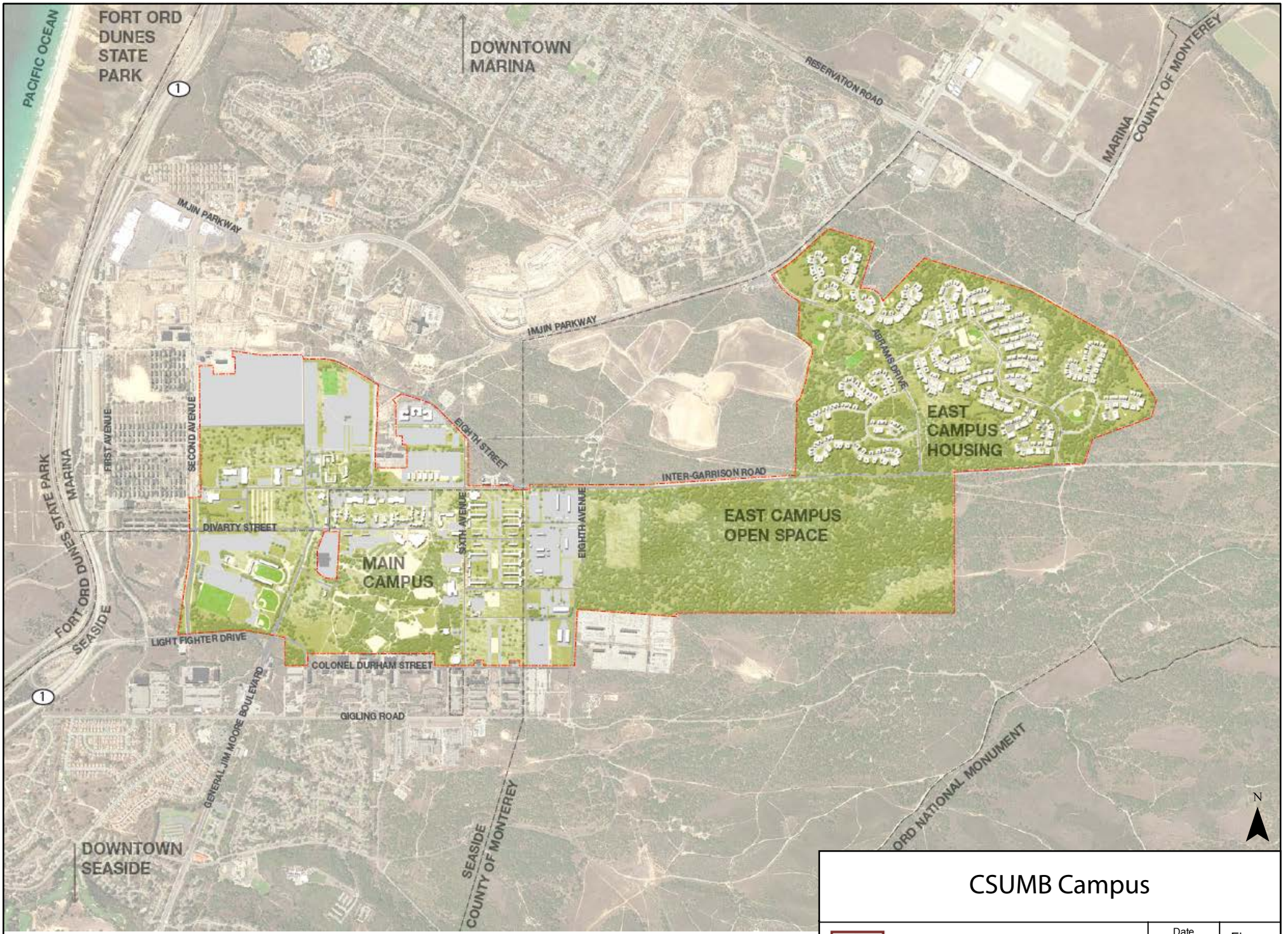


# CSUMB Campus

Source: CSUMB Comprehensive Master Plan, Draft June 2017

Denise Duffy and Associates, Inc.
Planning and Environmental Consulting

Date: 09-08-2017
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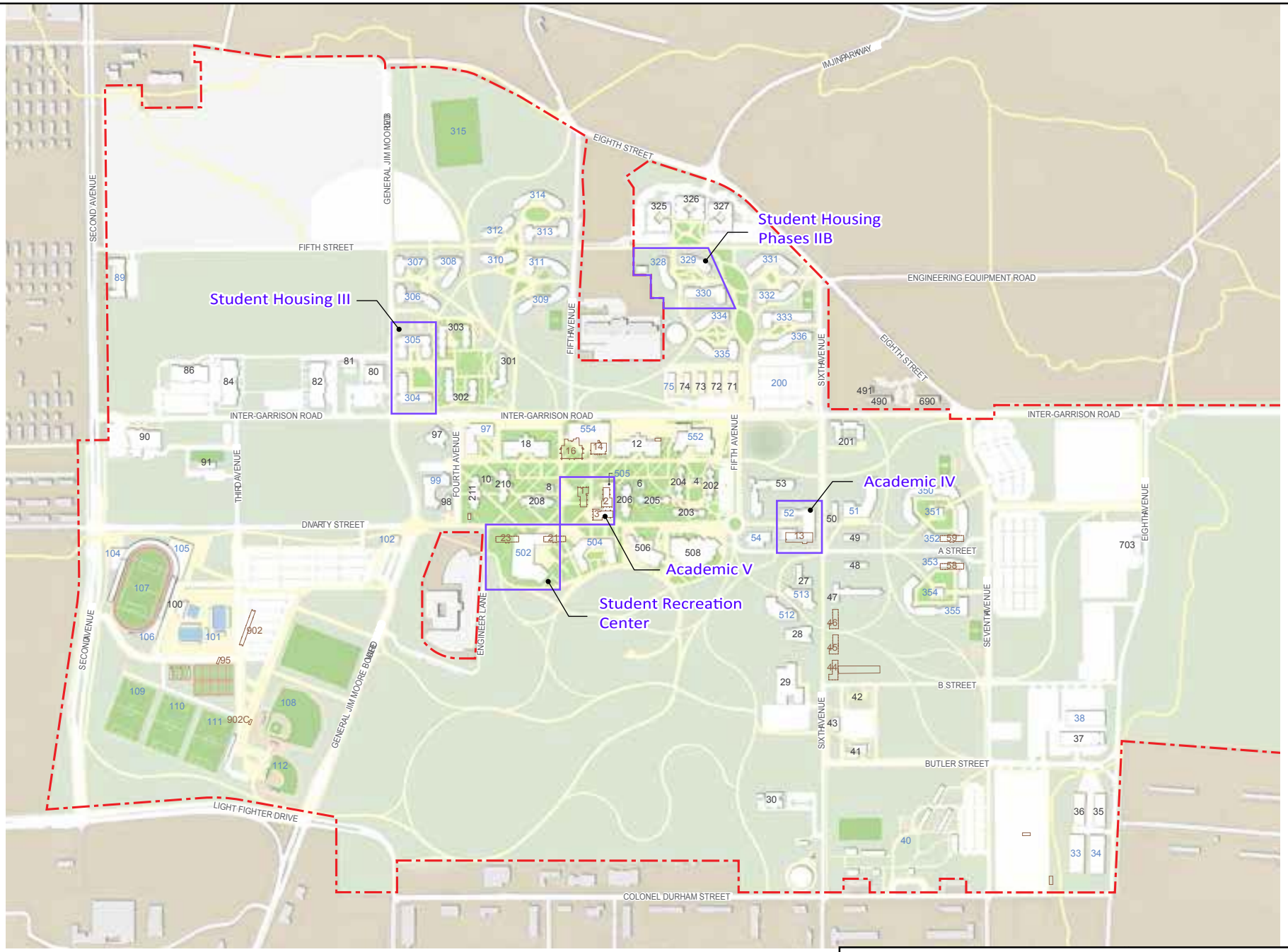



Numbers

10X Existing Buildings Removed

10X Existing Buildings to Remain

10X Proposed Buildings

Existing Buildings Removed

Near-Term Projects

Source: Dudek, 2018

# Implementation Plan and Near-Term Project Sites

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

Date 01-17-2018

Scale 1 in=1.6 mi

Figure 3

2.2.2 Near-Term Development Components

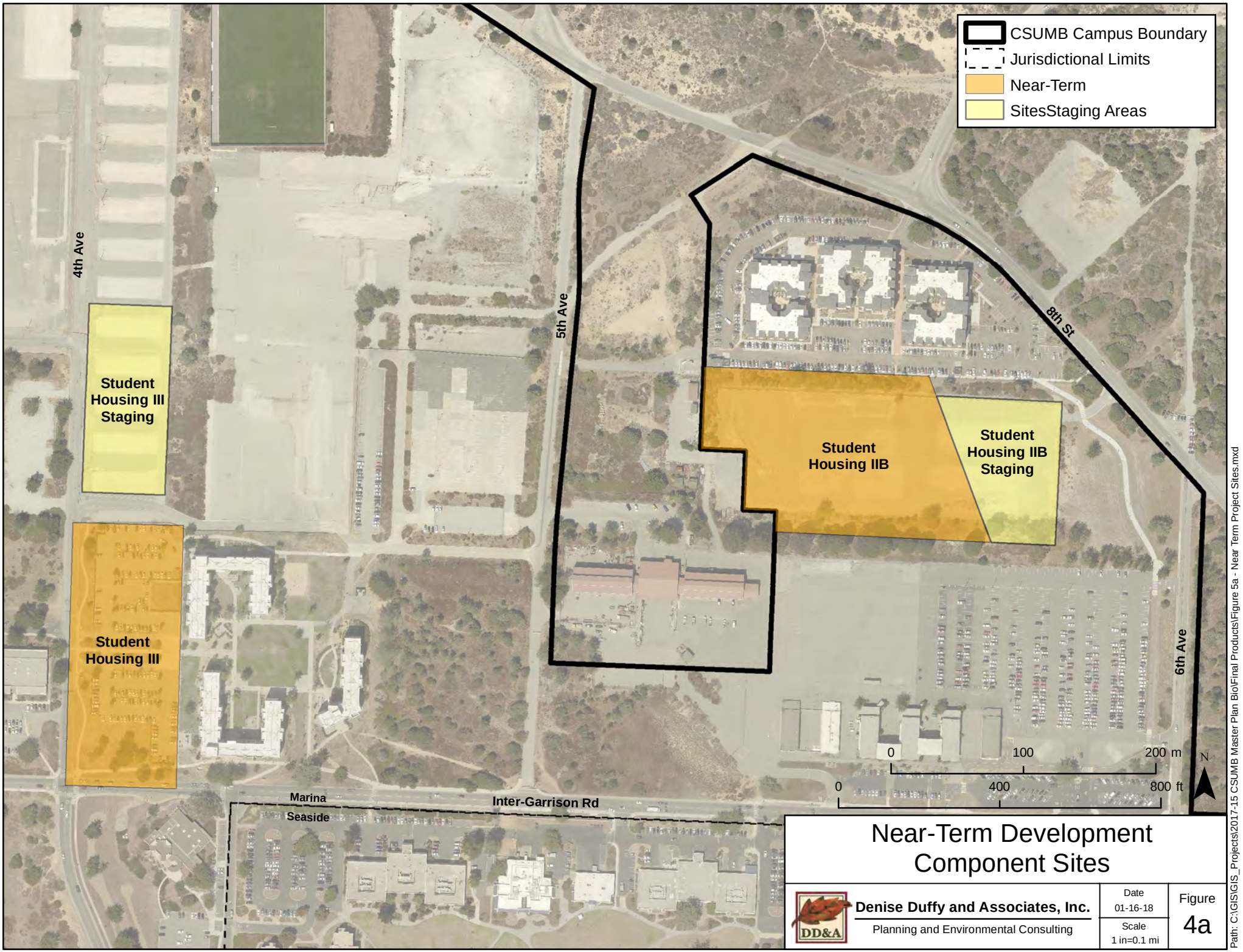
In addition to providing a framework for the development of facilities to accommodate the proposed student, faculty and staff growth, the Project includes near-term development components. A brief description of each project is provided below, including anticipated year of construction; site locations are shown on **Figures 3, 4a,** and **4b**.

1. **Student Housing Phase III**. Student Housing Phase III would provide an approximately 200,000-square-foot residential building complex with 600 beds on an approximately 6.4-acre site in the North Quad on an existing parking lot. The planned four-story buildings would provide a range of housing types. At least one apartment in each building would be dedicated to CSUMB Housing staff/student staff space.

   Amenities would include: multi-purpose rooms and AV-connected classroom space,[5] laundry, indoor bike parking, lounges/communal rooms, half courts outside (basketball and/or sand volleyball), picnic tables, urban agriculture/garden, outdoor social spaces, art, and connections to pedestrian/bicycle paths and trails. An approximately 7,600-square-foot dining facility would be located on the ground floor.

   New utility connections to adjacent services would be installed with this development. Additionally, appropriate building/site scale LID BMPs would be implemented. Construction staging would occur north of the North Quad in existing paved area.

[5] Multipurpose space could be used as classroom space during the day and for housing programs at other times.




# Near-Term Development Component Sites

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Date 01-16-18

Scale 1 in=0.1 mi

Figure 4a

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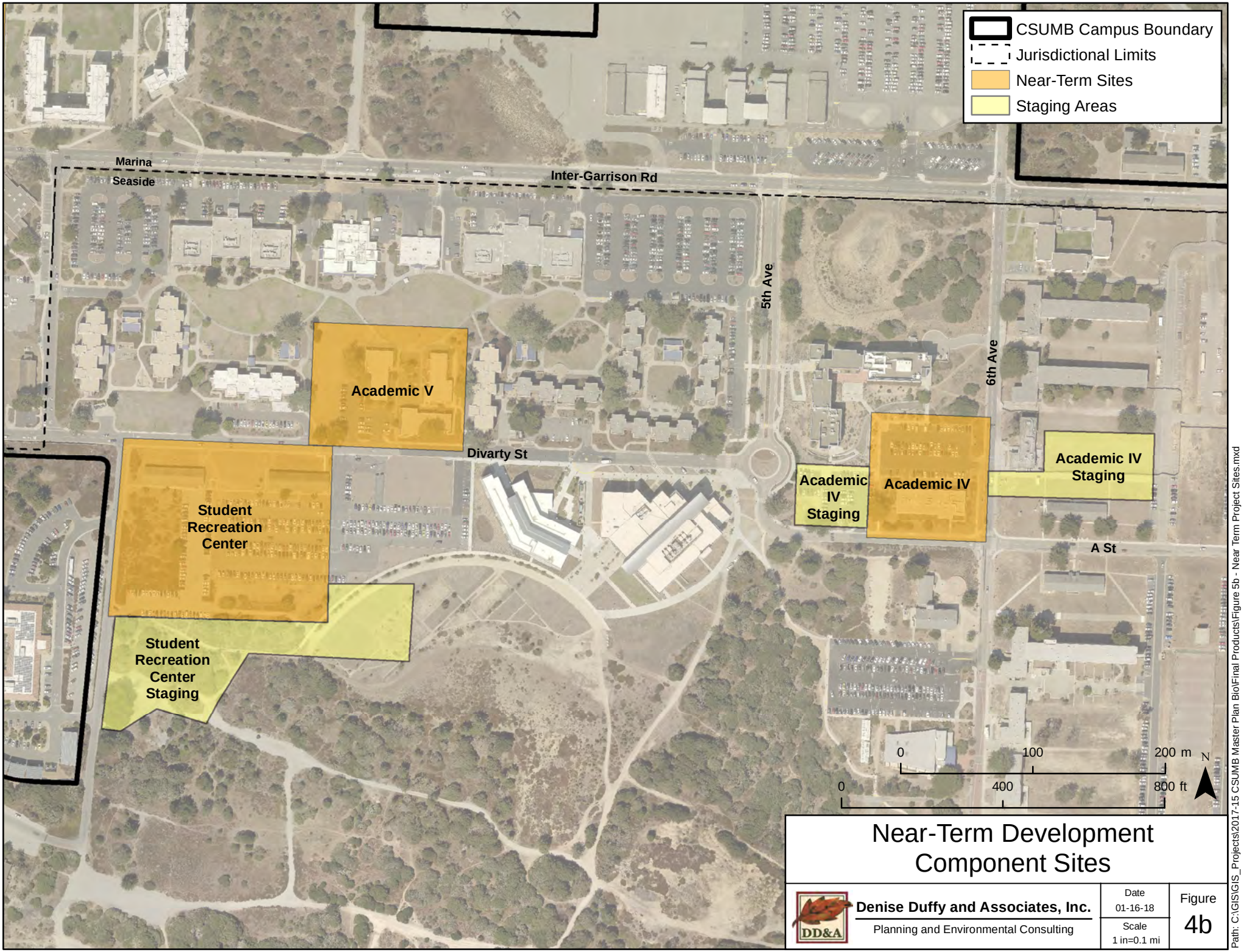


# Near-Term Development Component Sites

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Date 01-16-18
Scale 1 in=0.1 mi

Figure 4b

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2. **Academic IV Building**. Academic IV would provide an approximately 95,000-square-foot science building devoted to laboratory, lecture, and office space located in the campus core on an approximately 4.0-acre site. The building would be up to four stories and would include an on-site emergency generator. Future construction would require demolition of existing Building 13 (Science Research Lab Annex) and portions of parking lot areas13 and 19. The development would include construction of a pedestrian/bike path north of existing Building 53 (Chapman Science Academic Center) for improved connectivity to the multimodal hub and parking to the east.

   New utility connections to adjacent services would be installed with this development. Additionally, appropriate building/site scale LID BMPs would be implemented. Construction and staging would likely use parking lots 13 and 19 and/or close A Street between 5th and 6th Avenues.

3. **Student Recreation Center**. The approximately 70,000-square-foot Student Recreation Center would be located on an approximately 8.5-acre site south of the Main Quad and Divarty Street and includes demolition of Building 21 (Beach Hall) and Building 23 (Tide Hall), and portions of parking lots 23 and 508. This facility would primarily house recreation (potentially up to 75 percent) and the remaining space allocated to the Kinesiology department. Kinesiology has demonstrated steady growth in the last 5 years and lacks appropriate teaching spaces to support the curriculum.

   The building would be up to two stories and would be constructed in two phases (Phase I – 2021, approximately 33,000 square feet; Phase II – 2026, approximately 36,000 square feet). The building would include multi-use indoor courts (for uses such as intramural basketball, soccer and volleyball), including bleachers/seating, weight room (free weights and machines), a climbing wall, fitness rooms, cardio-dance studios indoor, lockers and restrooms, laundry rooms, equipment check out area, storage, Kinesiology department special instruction rooms, Kinesiology department faculty office, administrative office space and conference room, and outdoor court areas. Only intramural sports would occur in the Recreation Center, not indoor athletic team competitions.

   New utility connections to adjacent services would be installed with this development. Additionally, appropriate building/site scale LID BMPs would be implemented. Construction staging would take place south of the building site and within the Crescent in previously disturbed open space areas with little or no habitat value.

4. **Student Housing Phase IIB**. Student Housing Phase IIB would provide an approximately 160,000-square-foot, student residential building complex south of the Promontory on a vacant paved lot approximately 7.2-acres in size. The planned four-story buildings would provide approximately 400 beds in apartments or suites for sophomores, juniors, and seniors. At least one apartment in each building would be dedicated to CSUMB Housing staff/student staff space. Planned amenities include laundry, indoor bike parking, lounges/communal rooms, half courts outside (basketball or sand volleyball), picnic tables, urban agriculture/garden, outdoor social spaces, art, and connections to pedestrian/bicycle paths and nature. A convenience store would be included.

   New utility connections to adjacent services would be installed with this development. Additionally, appropriate building/site scale LID BMPs would be implemented. Construction staging is planned just east of the building in already paved areas.

5. **Academic V**. Academic V would provide an approximately 76,700-square-foot academic building on an approximately 2.7-acre site in the Main Quad and includes demolition of existing Buildings 1, 2, and 3 (Administration, Playa, and Del Mar buildings) and parking lot 18. The development would involve temporary relocation of the administration offices until the new Administration Building, another new building identified on the proposed Master Plan, is constructed. The building would support academic uses, i.e., learning and meeting spaces. The building would be up to four stories.

   New utility connections to adjacent services would be installed with this development. Appropriate building/site scale LID BMPs would also be implemented. Construction staging would be conducted within the site boundaries on the Main Quad, and if necessary, in previously disturbed open space areas south of the Crescent

# 3.0 METHODS

## 3.1 Personnel and Survey Dates

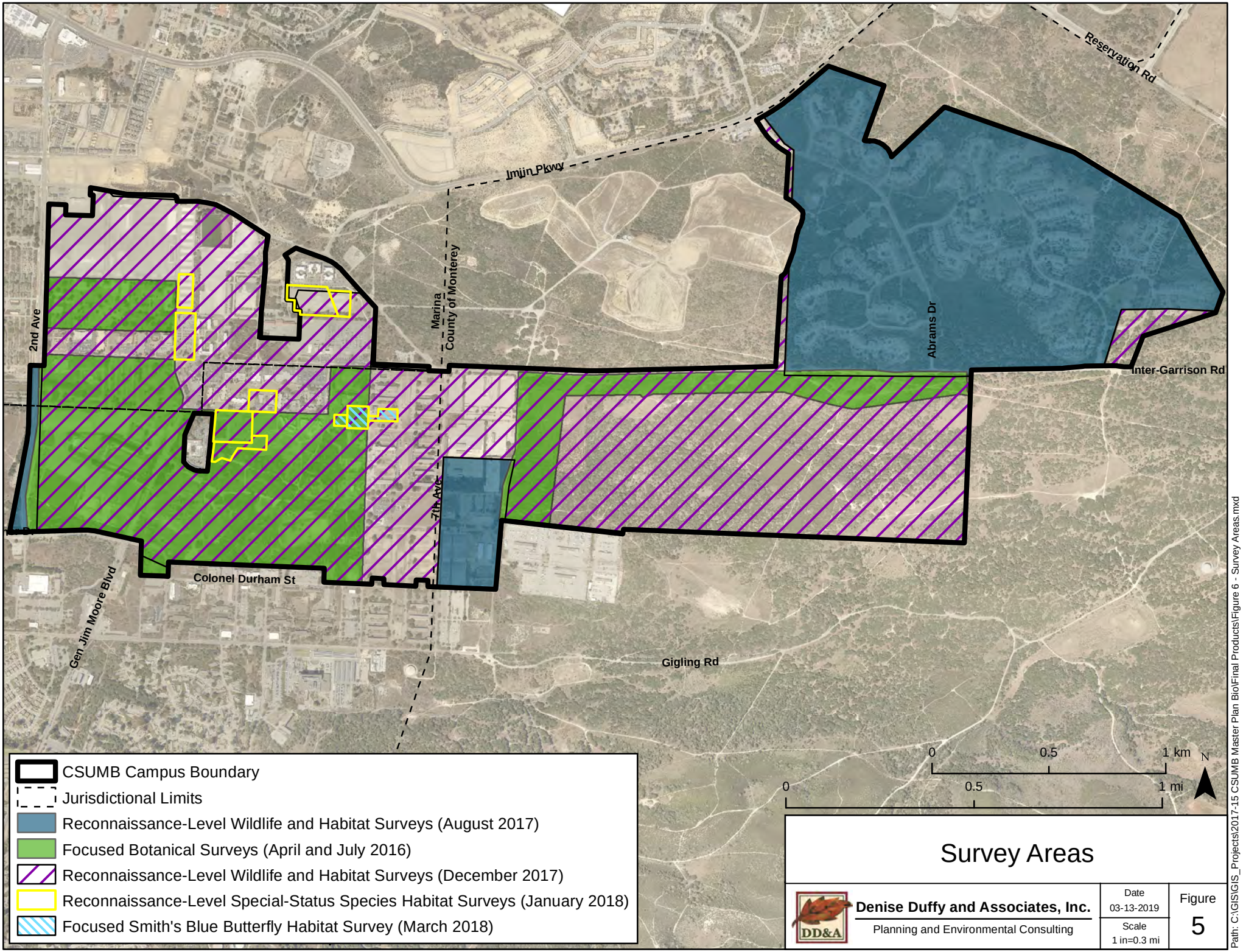
Reconnaissance-level wildlife and general habitat surveys were completed by DD&A biologists Matthew Johnson (Senior Environmental Scientist), Jami Colley (Associate Environmental Scientist), Shaelyn Hession (Assistant Environmental Scientist), and Patric Krabacher (Assistant Environmental Scientist) in December 2016 (for a separate, overlapping project under contract with the Fort Ord Reuse Authority [FORA]) that included the Main Campus and East Campus Open Space areas (**Figure 5**). Focused botanical surveys were conducted within a designated survey area within the Project site in April and June 2016 by DD&A biologists. Reconnaissance-level wildlife and general habitat surveys were completed by DD&A biologists in August 2017 within the East Campus Housing area and portions of Main Campus that were not surveyed during previous surveys. Reconnaissance-level surveys for special-status plant and wildlife species habitat were conducted by DD&A biologists in January 2018 within the five Near-Term Development sites and proposed associated staging areas. An additional focused survey for SBB habitat was conducted in March 2019 at the Academic IV site and staging areas based on information that habitat had previously been observed by CSUMB faculty at this site. The focused botanical survey area and Near-Term Development sites were defined by maps provided by the CSUMB Campus Planning & Development (CPD) Department, which included portions of the Main Campus and East Campus Open Space areas. The dates for each of these surveys are outlined in **Table 3-1**.

**Table 3-1. Biological Survey Dates within the Project Site**

| Survey Type | Location | Date(s) |
|---|---|---|
| Focused spring-flowering plant species survey | Survey Area | April 2016 |
| Focused summer-flowering plant species survey | Survey Area | July 2016 |
| Reconnaissance-level wildlife and general habitat survey | Main Campus and East Campus Open Space | December 2016[6] |
| Reconnaissance-level wildlife and general habitat survey | East Campus Housing and Portions of Main Campus | August 2017 |
| Reconnaissance-level special-status plant and wildlife species habitat survey | Near-Term Development Sites | January 2018 |
| Focused Smith's blue butterfly habitat survey | Academic IV and Staging sites | March 2019 |

Prior to surveys in 2016, local reference populations of Monterey spineflower and sand gilia were checked on an approximately weekly basis from mid-March until the time of the survey to ensure these species would be in peak bloom during the time of the survey. In 2016, local reference populations for seaside bird's-beak and Yadon's piperia were checked on an approximately weekly basis for two to three weeks prior to the surveys.

[6] Surveys completed in December 2016 for the Oak Woodlands Conservation Area Project under contract with FORA.




# Survey Areas

Denise Duffy and Associates, Inc.
Planning and Environmental Consulting

Date
03-13-2019

Scale
1 in=0.3 mi

Figure
5

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Reconnaissance-level wildlife and general habitat survey methods included using aerial maps to identify general habitat types and potential sensitive habitats and verifying conditions in the field. General habitat types were mapped using a combination of GPS and hand drawing on aerial maps, which were later digitized using ArcGIS software.

Available reference materials were reviewed prior to conducting the field surveys, including the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB) occurrence reports (**Appendix B**, CDFW, 2017a), current agency status information from the U.S. Fish and Wildlife Service (USFWS or Service) and CDFW for species listed, proposed for listing, or candidates for listing as threatened or endangered under the federal Endangered Species Act (ESA) or California ESA (CESA), and those considered CDFW "species of special concern" (**Appendix C**, Service, 2017a; **Appendix B**, CDFW, 2017a and 2017b), aerial photographs of the Project site, and numerous biological reports prepared for the former Fort Ord (see "Data Sources" below).

Portions of the campus were surveyed for botanical resources following the applicable guidelines outlined in: *Guidelines for Conducting and Reporting Botanical Inventories for Federally listed, Proposed and Candidate Plants* (Service, 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 special-status plant species identified were mapped using a Trimble Pro XH GPS unit, which were later digitized using ArcGIS software. Populations of plants with greater than six individuals were mapped as a polygon and the density of the population was documented. Densities were recorded as low (1-33% cover), medium (34-66% cover) and high (67-100% cover). Individual plants or populations of less than six individuals were mapped as a point and a count of the number of individual plants was documented. Populations included all individuals within approximately three feet of another individual; individual plants further away than three feet were mapped as a separate polygon or point. Data collected during the surveys was used to assess the environmental conditions of the Project site and its surroundings, evaluate environmental constraints at the site and within the local vicinity, and provide a basis for recommendations to minimize and avoid impacts.

### 3.2 Special-Status Species

Special-status species are those plants and animals that have been formally listed or proposed for listing as endangered or threatened, or are candidates for such listing under the ESA or CESA. Listed species are afforded legal protection under the ESA and CESA. Species that meet the definition of rare or endangered under the CEQA Section 15380 are also considered special-status species. Animals on the CDFW's list of "species of special concern" (most of which are species whose breeding populations in California may face extirpation if current population trends continue) 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 on their "Special Animals" list (CDFW, 2017b). The CDFW considers the taxa on this list to be those of greatest conservation need, regardless of their legal or protection status.

Plants listed as rare under the California Native Plant Protection Act (CNPPA) or included in California Native Plant Society (CNPS) California Rare Plant Ranks (CRPR)[7] 1A, 1B, 2A, and 2B are also treated as special-status species as they meet the definitions of Sections 2062 and 2067 of the CESA and in accordance with CEQA Guidelines Section 15380. In general, the CDFW requires that CRPR 1A species (Plants presumed extirpated in California and Either Rare or Extinct Elsewhere), CRPR 1B species (Plants rare, threatened, or endangered in California and elsewhere), CRPR 2A species (Plants presumed extirpated in California, but more common elsewhere); and CRPR 2B species (Plants rare, threatened, or endangered in California, but more common elsewhere) of the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2017) be fully considered during the preparation of environmental documents relating to CEQA.[8] In addition, species of vascular plants, bryophytes, and lichens listed as having special-status by CDFW are considered special-status plant species (CDFW, 2017a).

Raptors (e.g., eagles, hawks, and owls) and their nests are protected under both federal and state laws and regulations. The federal Migratory Bird Treaty Act (MBTA) of 1918 and California Fish and Game Code (FGC) Section 3513 prohibit killing, possessing, or trading migratory birds except in accordance with regulation prescribed by the Secretary of the Interior. Birds of prey are protected in California under FGC 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." In addition, fully protected species under the FGC 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, 2017a).

### 3.3 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 as sensitive on the on CDFW's *Natural Communities List* (CDFW, 2010), those that are occupied by species listed under ESA or are critical habitat in accordance with ESA, and those that are defined as Environmentally Sensitive Habitat Areas (ESHA) under the California 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 [CWA] and Executive Order 11990 – Protection of Wetlands), state regulations (such as CEQA and FGC Section 1600-1616), or local ordinances or policies (such as city or county tree ordinances and general plan policies).

### 3.4 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: current agency status information from the Service and CDFW for species listed, proposed for listing, or candidates for listing as threatened

[7] Formerly known as CNPS Lists. CNPS initially created five CRPR in an effort to categorize degrees of concern; however, in order to better define and categorize rarity in California's flora, the CNPS Rare Plant Program and Rare Plant Program Committee have developed the new CRPR 2A and CRPR 2B.

[8] Species on CRPR 3 (Plants about which we need more information - a review list) and CRPR 4 (Plants of limited distribution - a watch list) may, but generally do not, meet the definitions of Sections 2062 and 2067 of CESA, and are not typically considered in environmental documents relating to CEQA.

or endangered under ESA or CESA and those considered CDFW "species of special concern" (**Appendix C**, Service, 2017a; **Appendix B**, CDFW, 2017a and 2017b); the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2017); CNDDB occurrence reports (**Appendix B,** CDFW, 2017a); the Service's Critical Habitat Mapper (2017b); *Flora and Fauna Baseline Study of Fort Ord* (U.S. Army Corps of Engineers [ACOE], 1992); and the *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord* (HMP) (ACOE, 1997). The U.S. Geological Survey (USGS) Marina quadrangle and the six surrounding quadrangles (Monterey, Moss Landing, Prunedale, Salinas, Seaside, and Spreckels) from the CNDDB were reviewed for documented special-status species occurrences in the vicinity of the Project site.

In addition, all of the comment letters received in response to the Notice of Preparation (NOP) for the Project's Environmental Impact Report (EIR) were reviewed to ensure all potential biological resources known or with the potential to occur were evaluated and concerns were addressed in accordance with CEQA.

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.

### 3.4.1 Botany

The classification and characterization of the vegetation of the Project site is based on field observations and the *Manual of California Vegetation* (Sawyer et.al., 2009). A generalized nomenclature for vegetation types is used within this document for ease of reference; however, each vegetation type description also lists the *Manual of California Vegetation* (Sawyer et.al. 2009) vegetation type(s) in order to provide a crosswalk to the *Natural Communities List* (CDFW, 2010).

Information regarding the distribution and habitats of local and state vascular plants was also reviewed (Howitt and Howell, 1964 and 1973; Munz and Keck, 1973; Matthews and Mitchell, 2015; Baldwin, et. al, 2012; Jepson Flora Project, 2017; ACOE, 1992; ACOE, 1997). All plants observed within the Project site were identified to species or intraspecific taxon using keys and descriptions in Baldwin, et. al, (2012) and Matthews and Mitchell (2015). Scientific nomenclature for plants in this report follows Baldwin, et.al., (2012) and common names follow Matthews and Mitchell (2015). A full botanical inventory was not recorded for the Project site; however, the dominant species within each habitat were recorded and all plant species encountered were identified to species or intraspecific taxon necessary to eliminate them as being special-status species. Dominant plant species are those which are more numerous than its competitors in an ecological community or makes up more of the biomass; generally, the species that are most abundant. Most ecological communities are defined by their dominant species.

### 3.4.2 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); *Monterey Birds* (Roberson 2002); California Wildlife Habitat Relationships Program species-habitat models (CDFW, 2008; Zeiner et al., 1988 and 1990); *Flora and Fauna Baseline Study of Fort Ord* (ACOE, 1992); and the HMP (ACOE, 1997); and general wildlife references (Stebbins, 1985).

## 3.5 Regulatory Setting

### 3.5.1 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 (FR). The ESA is administered by the Service or the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS). In general, the NMFS is responsible for the protection of ESA-listed marine species and anadromous fish, whereas other listed species are under Service 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).

*Critical Habitat*

Critical habitat is a term defined and used in the ESA. It is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery. An area is designated as "critical habitat" after the Service publishes a proposed federal regulation in the Federal Register and then public comments are received and considered on the proposal. The final boundaries of the critical habitat area are also published in the Federal Register. Federal agencies are required to consult with the Service on actions they carry out, fund, or authorize to ensure that their actions will not destroy or adversely modify critical habitat. In this way, a critical habitat designation protects areas that are necessary for the conservation of the species. No critical habitat for federally listed species is designated within the Project site.

*Recovery Plans*

The ultimate goal of the ESA is the recovery (and subsequent conservation) of endangered and threatened species and the ecosystems on which they depend. A variety of methods and procedures are used to recover listed species, such as protective measures to prevent extinction or further decline, consultation to avoid adverse impacts of federal activities, habitat acquisition and restoration, and other on-the-ground activities for managing and monitoring endangered and threatened species. The collaborative efforts of the Service and its many partners (federal, state, and local agencies, tribal governments, conservation organizations,

the business community, landowners, and other concerned citizens) are critical to the recovery of listed species.

Two recovery plans have been prepared for listed species known or with the potential to occur within the Project site:

- Recovery Plan for the Central California Distinct Population Segment of the California Tiger Salamander (*Ambystoma californiense*) (Service, 2017c) and
- Smith's Blue Butterfly Recovery Plan (Service, 1984).

*Migratory Bird Treaty Act*

The MBTA (16 USC 703 et seq.) of 1918 prohibits killing, possessing, or trading migratory birds except in accordance with regulation prescribed by the Secretary of the Interior. Most actions that result in taking or in permanent or temporary possession of a protected species constitute violations of the MBTA. The Service is responsible for overseeing compliance with the MBTA and implements Conventions (treaties) between the United States and four countries for the protection of migratory birds – Canada, Mexico, Japan, and Russia. The Service maintains a list of migratory bird species that are protected under the MBTA, which was updated in 2010 to: 1) correct previous mistakes, such as misspellings or removing species no longer known to occur within the United States; 2) add species, as a result of expanding the geographic scope to include Hawaii and U.S. territories and new evidence of occurrence in the United States or U.S. territories; and 3) update name changes based on new taxonomy (Service, 2013).

*Clean Water Act*

The ACOE and Environmental Protection Agency (EPA) regulate discharge of dredged and fill material into "Waters of the United States" (waters of the U.S.) under Section 404 of the CWA (33 USC 1344). Waters of the U.S. are defined broadly as waters susceptible to use in commerce (including waters subject to tides, interstate waters, and interstate wetlands) and other waters (such as interstate lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds) (33 CFR 328.3). Potential wetland areas are identified as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils conditions."

Under Section 401 of the CWA (33 USC 1341), any applicant receiving a Section 404 permit from the ACOE must also obtain a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB). A Section 401 Water Quality Certification is issued when a project is demonstrated to comply with state water quality standards and other aquatic resource protection requirements.

*Executive Order 11990 - Protection of Wetlands*

Executive Order 11990 - Protection of Wetlands (42 FR 26961) calls for no net loss of wetlands. For the regulatory process, the ACOE and EPA jointly define wetlands as follows: "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Federal agencies are required to implement the following procedures for any federal action that involves wetlands: 1) provide an opportunity for early public involvement; 2) consider alternatives that

would avoid wetlands, and it avoidance is not possible, measures to minimize harm to wetlands must be included in the action; 3) prepare a "Wetlands Only Practicable Alternative Finding" for actions that require an Environmental Impact Study.

*Executive Order 13112-Invasive Species*

Executive Order 13112 - Invasive Species (64 FR 6183) 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 that recommends objectives and measures to implement the Executive Order. The California Invasive Plant Council (Cal-IPC) Inventory categorizes non-native invasive plants that threaten California's wildlands. Categorization is based on an assessment of the ecological impacts of each plant. The Cal-IPC Inventory represents the best available knowledge of invasive plant experts in the state. Although the impact of each plant varies regionally, its rating represents cumulative impacts statewide. Therefore, a plant whose statewide impacts are categorized as Limited may have more severe impacts in a particular region. Conversely, a plant categorized as having a High cumulative impact across California may have very little impact in some regions.

### 3.5.2 State Regulations

*California Endangered Species Act*

The CESA (FGC 2050 et seq.) was enacted in 1984. The California Code of Regulations (14 CCR 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 FGC 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 FGC 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 FGC 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 MBTA. 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 (Section 5515), mammals (Section 4700), amphibians and reptiles (Section 5050), and birds (Section 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, CDFW also maintains a list of animal "species of special concern." Although these species have no legal status, 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.

*Lake and Streambeds*: Under Sections 1600-1616 of the California Fish and Game Code, the CDFW regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFW's jurisdiction are defined in the code as the "… bed, channel or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit ..." (Section 1601). In practice, the CDFW usually marks its jurisdictional limit at the top of the stream or bank, or at the outer edge of the riparian vegetation, whichever is wider.

*Native Plant Protection Act*

The CNPPA (FGC 1900 et seq.) 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 (FGC Section 2050-2098). Plants listed as rare under the CNPPA are not protected under CESA.

*Porter-Cologne Water Quality Control Act*

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne; California Water Code [CWC] 13000 et seq.) is California's statutory authority for the protection of water quality and applies to surface waters, wetlands, and groundwater, and to both point and nonpoint sources. Under the Porter-Cologne, the State Water Resources Control Board (State Board) has the ultimate authority over State water rights and water quality policy. However, Porter-Cologne also establishes nine RWQCBs to oversee water quality on a day-to-day basis at the local/regional level. The Project site is located within Region 3 – Central Coast RWQCB. Porter-Cologne incorporates many provisions of the federal CWA, such as delegation to the State Board and RWQCBs of the National Pollutant Discharge Elimination System (NPDES) permitting program.

Under Porter-Cologne, the state must adopt water quality policies, plans, and objectives that protect the state's waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegate to the nine RWQCBs. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans.

The Porter-Cologne sets forth the obligations of the State Board and RWQCBs to adopt and periodically update water quality control plans (basin plans). The act also requires waste dischargers to notify the RWQCBs of such activities through filing of Reports of Waste Discharge (RWD) and authorizes the State Board and RWQCBs to issue and enforce waste discharge requirements (WDRs), NPDES permits, Section 401 water quality certifications, or other approvals. The RWQCBs also have authority to issue waivers to RWD requirements and WDRs for broad categories of "low threat" discharge activities that have minimal potential for adverse water quality effects, when implemented according to prescribed terms and conditions.

The term "Waters of the State" is defined by Porter-Cologne as "any surface water or groundwater, including saline waters, within the boundaries of the state." The RWQCB protects all waters in its regulatory scope but has special responsibility for wetlands, riparian areas, and headwaters, including isolated wetlands, and waters that many not be regulated by the ACOE under Section 404 of the CWA. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program, which regulates discharges of fill and dredged material under Section 401 of the CWA and the Porter-Cologne.

*CSUMB Tree Restoration Program*

CSUMB has established a tree restoration program for impacts to coast live oak and other trees resulting from projects that take place on campus. This program requires that for every tree greater than 4" diameter breast height (dbh) removed, two coast live oak trees would be replanted, and assumed to survive, in the identified restoration area on campus. In some cases, more than two trees would need to be planted to achieve this survival rate. The implementation of this program is required for all projects that would result in impacts to trees 4" dbh or greater.

### 3.5.3 Local Regulations

As a state entity, CSUMB is not subject to local government planning or ordinances, such as the general plans and ordinances for the cities of Marina and Seaside and the County of Monterey. Accordingly, because neither local general plans or any other local land use plans or ordinances are applicable to CSUMB, such local plans and ordinances are not summarized here or further analyzed in this section. However, there are a number of local plans that have come out of the former Fort Ord Base Reuse process, which are summarized below.

*Fort Ord Habitat Management Plan*

The U.S. Army's decision to close and dispose of the Fort Ord military base was considered a major federal action that could affect listed species under the ESA. The Service issued a Final Biological Opinion (BO) on the disposal and reuse of former Fort Ord requiring that an HMP be developed and implemented to reduce the incidental take of listed species and loss of habitat that supports these species (October 19, 1993). The HMP was prepared to assess impacts on vegetation and wildlife resources and provide mitigation for their loss associated with the disposal and reuse of former Fort Ord (ACOE, 1997).

The HMP establishes guidelines for the conservation and management of HMP species and their habitats on former Fort Ord lands by identifying lands that are available for development, lands that have some restrictions with development, and habitat reserve areas. The intent of the plan is to establish large, contiguous habitat conservation areas and corridors to compensate for future development in other areas of

the former base. The HMP establishes a habitat conservation area and corridor system with parcel-specific land use categories and management requirements for all lands on former Fort Ord. The HMP identifies what type of activities can occur on each parcel at former Fort Ord and parcels are designated as "development with no restrictions," "habitat reserves with management requirements," or "habitat reserves with development restrictions." Within these land use designations, parcels may also be identified as Borderlands with specific requirements for lands adjacent to BLM and contain future road corridors, easements, and rights of way. The HMP sets the standards to assure the long-term viability of former Fort Ord's biological resources in the context of base reuse so that no further mitigation should be necessary for impacts to species and habitats considered in the HMP. This plan has been approved by the Service; the HMP, deed restrictions, and Memoranda of Agreement between the Army and various land recipients, including the Board of Trustees of the California State University, provide the legal mechanism to assure HMP implementation. It is a legally binding document, and all recipients of former Fort Ord lands are required to abide by its management requirements and procedures.

The HMP anticipates some losses to HMP special-status species and HMP sensitive habitats as a result of redevelopment of the former Fort Ord. With the designated reserves and corridors and habitat management requirements in place, the losses of individuals of species and sensitive habitats considered in the HMP are not expected to jeopardize the long-term viability of those species, their populations, or sensitive habitats on former Fort Ord. Recipients of disposed land with restrictions or management guidelines designated by the HMP will be obligated to implement those specific measures through the HMP and through deed covenants.

The Coordinated Resource Management and Planning (CRMP) process is a multi-agency multi-jurisdictional land use planning effort developed under the sponsorship of the California CRMP Memorandum of Understanding (MOU). This MOU has been signed by 14 federal and state agencies, including the Bureau of Land Management (BLM), CDFW, Service, Monterey County, and University of California. The CRMP program provides a mechanism for public agencies to share resources to deliver the most efficient habitat protection and public services for the money expended.

However, the HMP does not provide specific authorization for incidental take of federal or state listed species to existing or future non-federal land recipients under the ESA or CESA. In compliance with the ESA and CESA, the Fort Ord Reuse Authority (FORA) is currently in the process of obtaining a Section 10(a)(1)(B) Incidental Take Permit from the Service and Section 2081 Incidental Take Permit from the CDFW, which will provide base-wide coverage for the take of federal and state listed wildlife and plant species to all non-federal entities receiving land on the former Fort Ord. This process involves the preparation of a Habitat Conservation Plan (HCP) and Implementing Agreement (IA). The Administrative Draft Fort Ord HCP (ICF International, Inc., 2017) and IA are currently in draft form and being reviewed by the resource agencies. The base-wide Incidental Take Permits are expected to be issued by the Service and CDFW in summer of 2019.

The entire Project site is located within designated "development" parcels under the HMP. Additionally, a portion of the campus, along the southeastern boundary of the East Campus Open Space parcel (Army parcel number S1.3.2), is designated in the HMP as having Borderlands requirements. Borderlands are designated development parcels or habitat reserve parcels at the urban/wildland interface where specific design considerations and management activities are required to minimize effects of development on HMP

species and natural communities. For the East Campus Open Space parcel, these activities include interim management activities, including but not limited to, the installation and maintenance of firebreaks and vehicle barriers where appropriate to separate developed and developing area from natural lands. To minimize the possibility of fire damage to the adjacent habitat reserve as well as structures on the development parcels, parking lots, greenbelts, or other nonflammable or fire-resistant land uses will be located as a buffer between the habitat reserve and development. Measures will also be taken to reduce potential for erosion in these parcels so as not to affect the adjacent habitat reserve from stormwater runoff that may originate in this parcel. This parcel is to be conserved and managed until development occurs. Non-native species (i.e., iceplant, scotch broom, and pampas grass) controls will also be in place to avoid spreading to the adjacent habitat reserve.

Parcels designated as "development" do not have management requirements relative to HMP species. However, the BO and HMP require the identification of sensitive biological resources within the development parcels that may be salvaged for use in restoration activities in reserve areas. In addition, the campus is required to implement the Borderlands requirements within the East Campus Open Space parcel.

*Habitat Conservation Plans or NCCP*

There are no adopted HCPs or Natural Community Conservation Plans (NCCP) associated with the Project site. Please refer to the discussion of the Draft HCP currently in progress in the Fort Ord Habitat Management Plan section above.

*Fort Ord Oak Woodland Conservation Requirements*

FORA is assisting the City of Seaside and Monterey County in preparing an Oak Woodland Conservation Area Map and an Oak Woodlands Management and Monitoring Plan on the former Fort Ord Property. The map and plan will address oak woodland areas in the City of Seaside and Monterey County, and has proposed including the use of CSUMB property to connect key oak woodland areas on Fort Ord. These agencies are obligated to comply with Oak Woodland Policy B-2 and Programs B-2.1 and B-2.2, which are described in the 1997 Base Reuse Plan (BRP) (EDAW and EMC 1996), and 2012 BRP Reassessment Report (FORA and EMC 2012).

CSUMB is involved in meeting with these agencies on the in-progress map and plan related to conservation areas that may ultimately be identified on the CSUMB campus (A. Spear, personal communication 2019).

# 4.0 RESULTS

## 4.1 Vegetation Types

The survey results include mapping and quantification of the acreage of five vegetation types within the Project site (**Figure 6**). Several areas were identified where these vegetation types intergrade with one another; these areas are identified as "mix" habitats and the dominant species from each of the two separate vegetation types are approximately evenly distributed throughout these areas. Additionally, some areas of the project site are developed. **Table 4-1** provides the acreages of these vegetation types and developed areas within the Project site and **Table 4-2** provides the acreages within the Near-Term Development sites. A brief description of each of these vegetation types and developed areas can be found below, along with a statement of the presence or potential presence of special-status species within each, and identification of whether the vegetation type is considered a sensitive habitat. In addition, each description identifies the *Manual of California Vegetation* (Sawyer et.al. 2009) vegetation type(s).

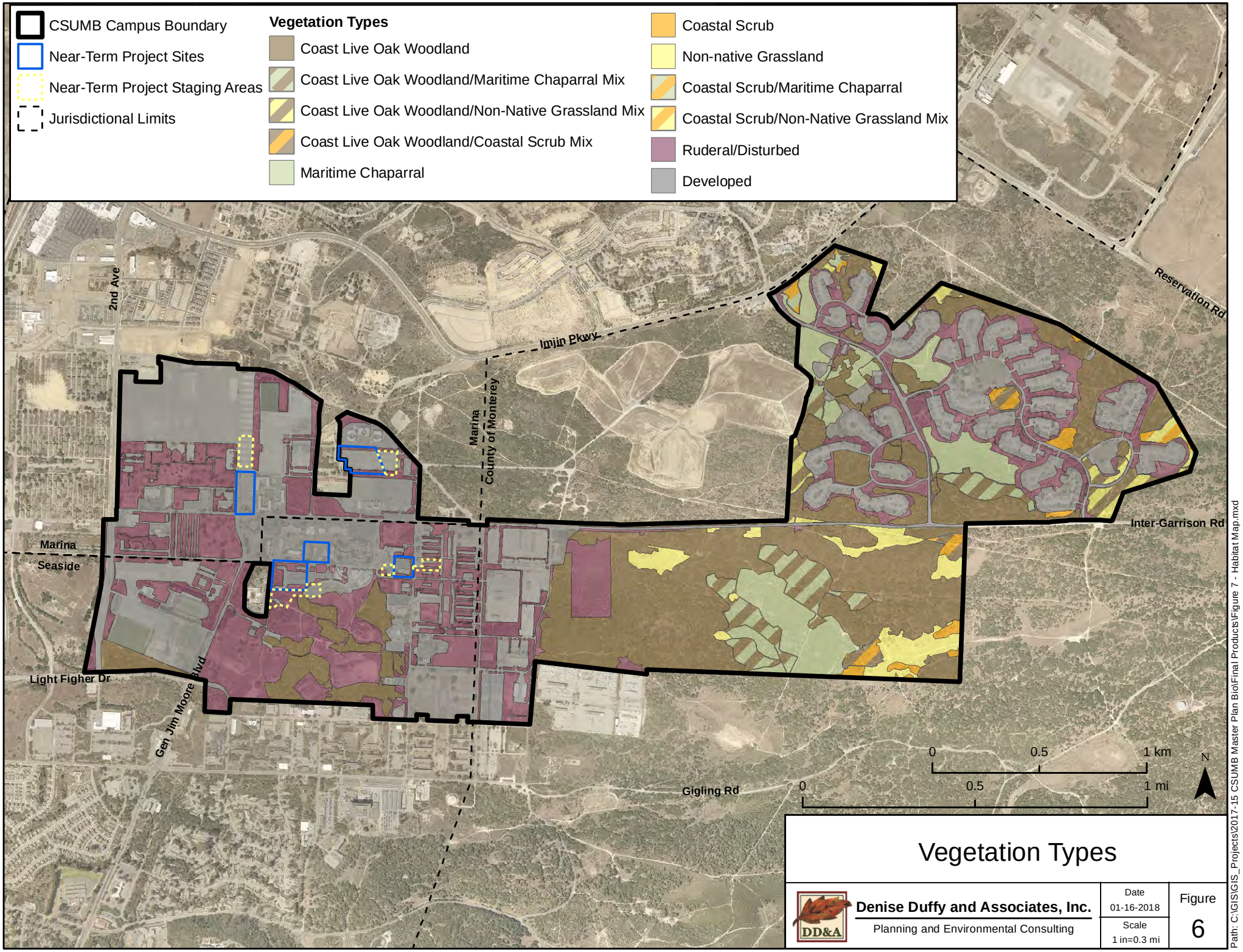
**Table 4-1. Vegetation Types within the Project Site[1]**

| Vegetation Types | Total Area (Acres) |
|---|---|
| *Coast Live Oak Woodland* | 336.4 |
| *Ruderal/Disturbed* | 327.6 |
| ***Central Maritime Chaparral*** | 74.9 |
| ***Central Maritime Chaparral****/Coast Live Oak Woodland Mix* | 46.3 |
| *Coast Live Oak Woodland/Non-Native Grassland Mix* | 23.5 |
| *Non-Native Grassland* | 33.9 |
| *Coast Live Oak Woodland/Central Coastal Scrub Mix* | 10.4 |
| *Central Coastal Scrub* | 8.6 |
| *Central Coastal Scrub/Non-Native Grassland Mix* | 4.6 |
| ***Central Maritime Chaparral****/Central Coastal Scrub Mix* | 3.1 |
| *Developed* | 526.5 |
| **Total** | **1,395.8** |

[1] **Bold** indicates sensitive habitat addressed in the Fort Ord HMP.

**Table 4-2. Vegetation Types within Near-Term Development Component Sites and Staging Areas**

| Vegetation Types | Student Housing Phase III (Acres) | | Academic IV Building (Acres) | | Student Recreation Center (Acres) | | Student Housing Phase IIB (Acres) | | Academic V Building (Acres) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Site* | *Staging* | *Site* | *Staging* | *Site* | *Staging* | *Site* | *Staging* | *Site* | *Staging* |
| *Coast Live Oak Woodland* | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 | 0 | 0 |
| *Ruderal/Disturbed* | 0 | 0.1 | 0.5 | 0.9 | 2.5 | 2.0 | 1.4 | 0.2 | 0 | 0 |
| *Developed* | 4.1 | 2.2 | 1.6 | 1.0 | 2.9 | 1.1 | 3.9 | 1.7 | 2.7 | 0 |
| **Total** | **4.1** | **2.3** | **2.1** | **1.9** | **5.4** | **3.1** | **5.3** | **1.9** | **2.7** | **0** |




# Vegetation Types

**Denise Duffy and Associates, Inc.**
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Date: 01-16-2018
Scale: 1 in=0.3 mi
Figure: 6

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4.1.1 Coast Live Oak Woodland

- ***A Manual of California Vegetation*** **classification**: coast live oak woodland (*Quercus agrifolia*/*Toxicodendron diversilobum*/grass association)

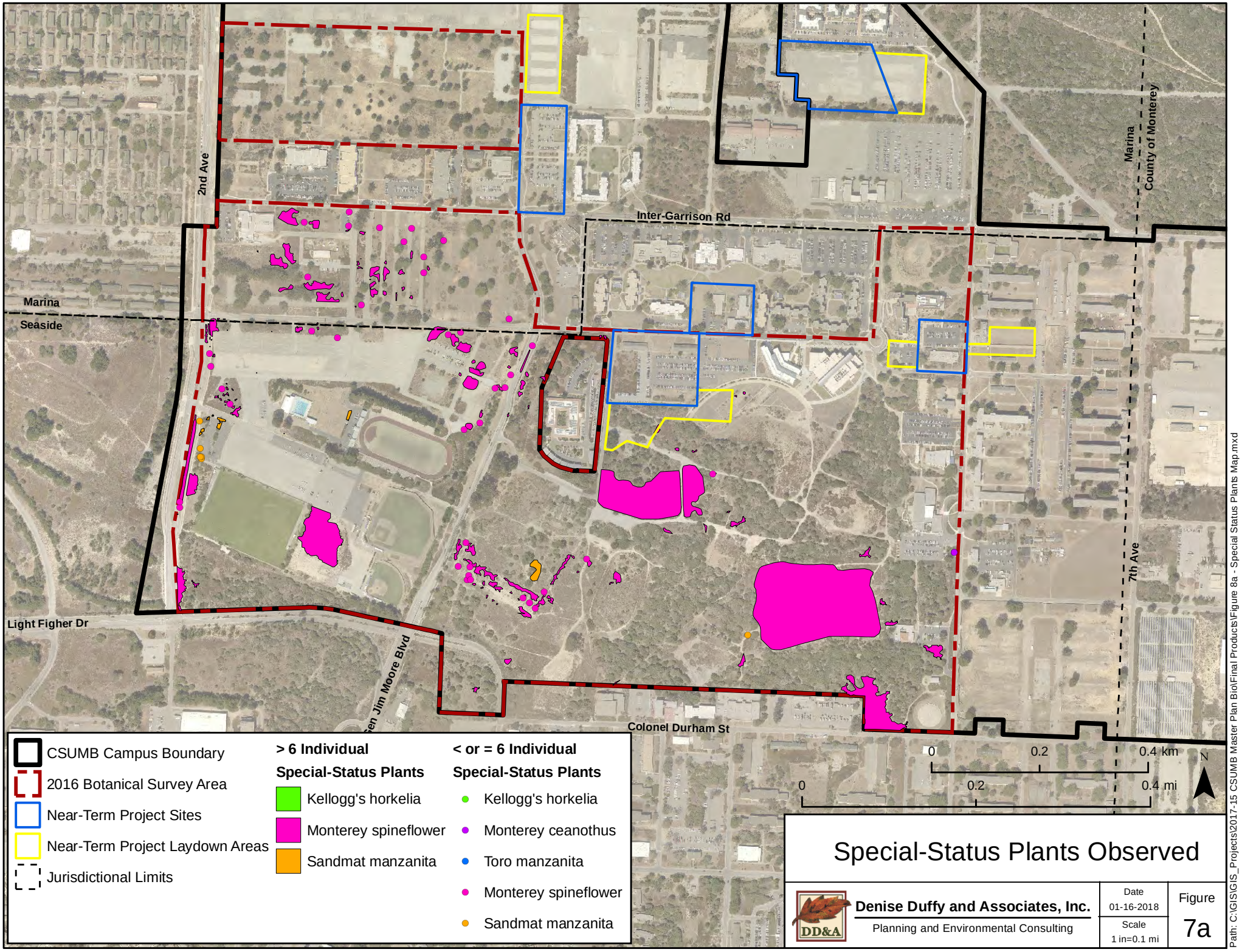
Coast live oak woodland is the dominant habitat type within the Project site (**Figure 6**). Coast live oak woodland is an open-canopied to nearly closed-canopied community with a grass or sparsely scattered shrub understory. Three coast live oak communities, each with different growth characteristics, understory associates, and canopy cover, have been recognized on the former Fort Ord: coastal coast live oak woodland, inland coast live oak woodland, and coast live oak savanna (ACOE, 1992). "Coastal" coast live oak woodland is the dominant vegetation type within the project site (**Figure 7**). The distinction of "coastal" is given based on the proximity of the coast live oak woodland to the coast. In coastal coast live oak woodland, coast live oaks grow in unprotected sites and are exposed to the combined stresses of strong winds, salt spray, and sterile, sandy soils, which are often referred to as "sand hills." These environmental factors create an oak woodland characterized by short, wind-pruned trees that intergrades with the surrounding coastal scrub and maritime chaparral communities.

Oak woodlands within the project site are largely homogeneous, in species composition. Within the project site, the coast live oak (*Quercus agrifolia*) canopy is quite dense in many areas with an understory dominated by poison oak or, in some areas, invasive ice plant. Other plant species observed within the coast live oak woodland include hedge-nettle (*Stachys* sp.), slender wild oat (*Avena barbata*), sheep sorrel (*Rumex acetosella*), fiesta flower (*Pholistoma auritum*), and scattered shrubs such as fuchsia-flowered gooseberry (*Ribes speciosum*), California coffeeberry (*Frangula californica*), and sticky monkey flower (*Mimulus aurantiacus*).

In several areas, the coast live oak woodland intergrades with other vegetative communities, including maritime chaparral, coastal scrub, and non-native grassland. Where these vegetative communities comprise of approximately half of the dominant species, the areas have been mapped as coast live oak mixes (**Figure 7**). The dominant plant species and the common wildlife found in these mixed vegetation types are generally the same as those described for the individual vegetation types.

Coast live oak woodland is important habitat to many wildlife species. Oaks provide nesting sites for many avian species and cover for a variety of mammals, including mourning dove (*Zenaida macroura*), American kestrel (*Falco sparverius*), California ground squirrel (*Spermophilus beecheyi*), and California pocket mouse (*Chaetodipus californicus*). Acorns provide an important food source for acorn woodpecker (*Melanerpes formicivorus*), western scrub jay (*Aphelocoma californica*), and black-tailed deer (*Odocoileus hemionus columbianus*). Other common wildlife species found in the coast live oak woodland are raccoon (*Procyon lotor*), Nuttall's woodpecker (*Picoides nuttallii*), northern flicker (*Colaptes auratus*), bobcat (*Lynx rufus*), and coyote (*Canis latrans*). Generally, red-tailed hawks (*Buteo jamaicensis*) and great-horned owls (*Bubo virginianus*) nest and roost in the coast live oaks. Additional avian species that may be found within the oak woodland habitat are presented in **Appendix D**.

Special-status plant species were identified within some grassy openings of the coast live oak woodland habitat, mostly at the edges in transition areas with other habitats, within the area surveyed in 2016, including Monterey spineflower, Kellogg's horkelia, sandmat manzanita, and Toro manzanita (**Figure 7**). Additional special-status plant species that may occur within the coast live oak woodland habitat, outside




# Special-Status Plants Observed

Denise Duffy and Associates, Inc.
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Date 01-16-2018
Scale 1 in=0.1 mi
Figure 7a

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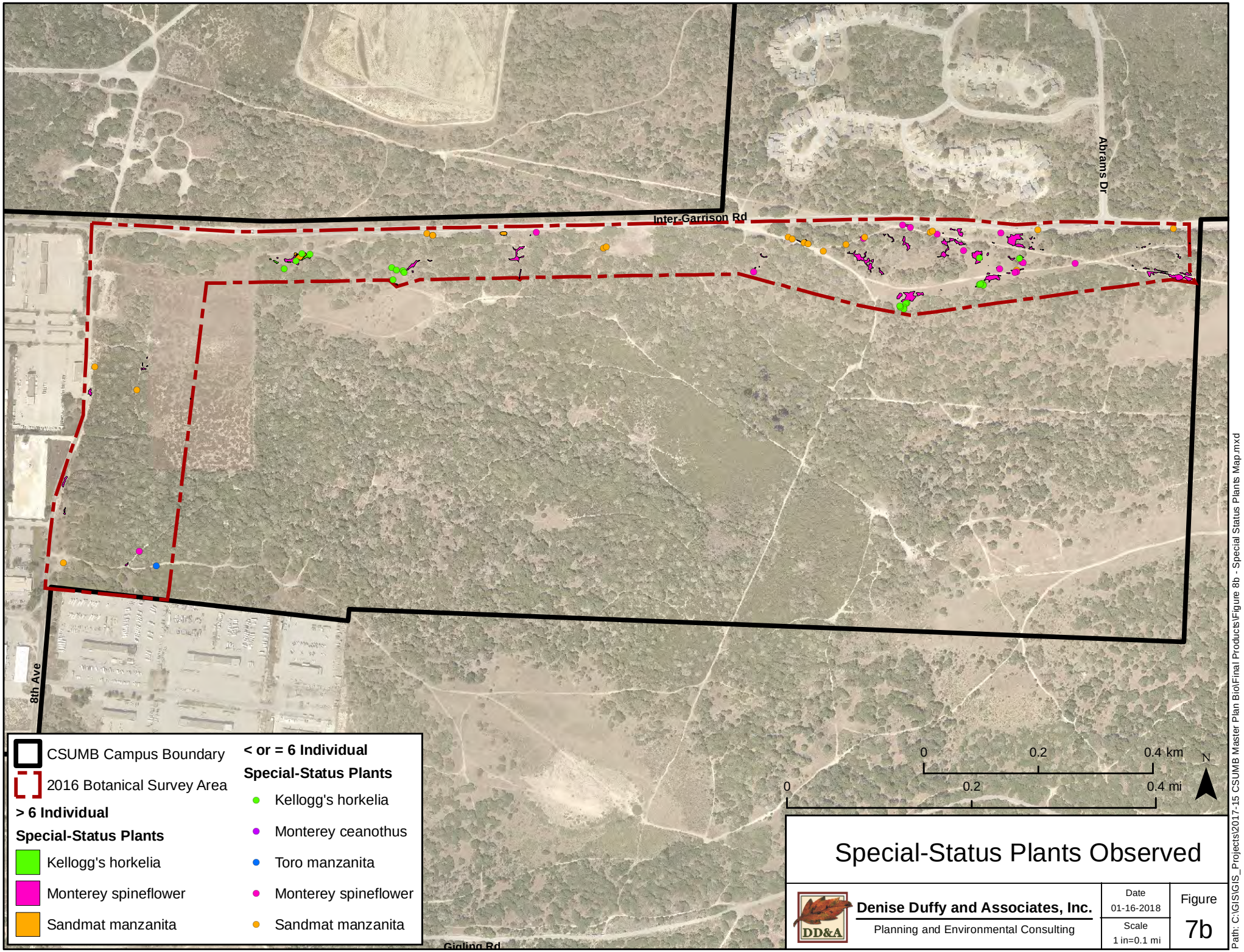


# Special-Status Plants Observed

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

Date: 01-16-2018
Scale: 1 in=0.1 mi
Figure: 7b

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of the area surveyed in 2016, include Hooker's manzanita, seaside bird's-beak, woodland woolythreads, and Santa Cruz clover.

No special-status wildlife species were observed within the coast live oak woodland habitat; however, the presence of several large woodrat nests indicates the presence of Monterey dusky-footed woodrats within the Project site. The Northern California legless lizard may use this habitat type for foraging and cover, and white-tailed kite, other raptors and protected avian species, and special-status bat species may nest or roost within the coast live oak trees. Figure B-18 in the HMP identifies this habitat type as potential habitat for the Monterey ornate shrew. Additionally, most of coast live oak woodland habitat within the Project site is within the known dispersal range of the CTS and may be used as upland aestivation and dispersal habitat for this species.

Oak woodlands are considered important natural communities because they provide a variety of ecological, aesthetic, and economical values. The extent of oak woodland in California has declined due to agricultural conversion, urban development, fuelwood harvesting, and grazing activities. Coast live oak woodland is not considered a sensitive habitat by CDFW (CDFW, 2010); however, as a native tree and habitat, impacts to coast live oak trees and woodland are typically addressed and mitigated under CEQA.

4.1.2 Central Maritime Chaparral

- ***A Manual of California Vegetation*** **classifications:** brittle leaf–wooly leaf manzanita chaparral (*Arctostaphylos* [*crustacea, tomentosa*] shrubland alliance) and sandmat manzanita chaparral (*Arctostaphylos pumila* provisional shrubland alliance)

Central maritime chaparral within the Project site (**Figure 6**) is dominated by shaggy-barked manzanita, sandmat manzanita, dwarf ceanothus, coyote brush (*Baccharis pilularis*), chamise, and sticky monkey flower. Additional species within this habitat type include California coffeeberry, fuchsia-flowered gooseberry, chaparral currant (*Ribes malvaceum*), poison oak, black sage (*Salvia mellifera*), sticky cinquefoil (*Drymocallis glandulosa*), and creeping snowberry (*Symphoricarpos mollis*).

Common wildlife species that occur within central maritime chaparral habitat include California quail (*Callipepla californica*), California towhee (*Melozone crissalis*), California thrasher (*Toxostoma redivivum*), common poorwill (*Phalaenoptilus nuttallii*), Anna's hummingbird (*Calypte anna*), wrentit (*Chamaea fasciata*), western scrub jay, northern pacific rattlesnake (*Crotalus oreganus* ssp. *oreganus*), coast range fence lizard (*Sceloporus occidentalis bocourtii*), gopher snake (*Pituophis catenifer catenifer*), coast gartersnake (*Thamnophis elegans terrestris*), and brush rabbit (*Sylvilagus bachmani*). Additional avian species that may be found within the central maritime chaparral habitat are presented in **Appendix D**.

No special-status plant species were observed within the maritime chaparral habitat within the area surveyed in 2016. However, special-status plant species that may occur or are assumed present within this habitat type outside of the surveyed area include: Hooker's manzanita, Toro manzanita, Pajaro manzanita, sandmat manzanita, Monterey ceanothus, Fort Ord spineflower, Monterey spineflower, seaside bird's-beak, Eastwood's goldenbush, sand-loving wallflower, sand gilia, Kellogg's horkelia, Northern curly-leaved monardella, Yadon's piperia, and Santa Cruz microseris.

No special-status wildlife species were observed within the central maritime chaparral habitat; however, the presence of several large woodrat nests distributed throughout this habitat type indicates the presence

of Monterey dusky-footed woodrats within the Project site. Northern California legless lizard and coast horned lizard may occur throughout this habitat type. Special-status raptor and bat species may also forage within this habitat type, including white-tailed kite, Townsend's big-eared bat, and hoary bat. Figure B-18 in the HMP also identifies this habitat type as potential habitat for the Monterey ornate shrew. Additionally, most of the central maritime chaparral within the project site is within the known dispersal range of the CTS and may be used as upland aestivation and dispersal habitat for this species.

4.1.3 Central Coastal Scrub

- ***A Manual of California Vegetation*** **classifications:** coyote brush scrub (*Baccharis pilularis* shrubland alliance) and black sage scrub (*Salvia mellifera* shrubland alliance)

Holland (1986) describes central coastal scrub habitat as an area with dense shrubs, approximately one to two meters tall, which lacks grassy openings and is often integrated with other habitat types. Dominant shrub species in the central coastal scrub habitat within the Project site (**Figure 6**) include black sage, coyote brush, poison oak, sticky monkey flower, and coast sagebrush (*Artemisia californica*).

Central coastal scrub habitats provide cover and food for a number of wildlife species, including songbirds, snakes, lizards, rodents, and other small mammals. Common species that may occur within the central coastal scrub habitat include California quail, blue-gray gnatcatcher (*Polioptila caerulea*), Anna's hummingbird, coast range fence lizard, northern pacific rattlesnake, gopher snake, brush rabbit, and California ground squirrel. Additional avian species that may be found within the central coastal scrub habitat are presented in **Appendix D**.

Monterey spineflower and sandmat manzanita were identified within central coastal scrub habitat, within the area surveyed in 2016 (**Figure 7**). Additionally, special-status plant species that may occur or are assumed present within this habitat type, outside of the surveyed area, include: Hooker's manzanita, Toro manzanita, Monterey ceanothus, Fort Ord spineflower, seaside bird's-beak, Eastwood's goldenbush, sand-loving wallflower, sand gilia, Kellogg's horkelia, Point Reyes horkelia, Northern curly-leaved monardella, and Santa Cruz microseris.

No special-status wildlife species were observed within this habitat type; however, Northern California legless lizard and coast horned lizard may occur throughout the central coastal scrub on the Project site. Figure B-18 in the HMP also identifies this habitat type as potential habitat for the Monterey ornate shrew. Special-status raptor and bat species may also forage within this habitat type, including white-tailed kite, Townsend's big-eared bat, and hoary bat. The CTS may use the central coastal scrub as upland and dispersal habitat. Additionally, most of the central coastal scrub within the project site is within the known dispersal range of the CTS and may be used as upland aestivation and dispersal habitat for this species.

4.1.4 Non-Native Grassland

- ***A Manual of California Vegetation*** **classification:** annual brome grasslands (*Bromus diandrus-Avena* spp. Association)

Throughout California, non-native 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). Non-native grasslands are often dominated by non-native annual grasses and forbs along with scattered native grasses and wildflowers. The dominant species observed in this habitat within the Project site (**Figure 6**) include

slender oat, ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), rat-tail fescue (*Festuca myuros*), slender wild oat (*Avena barbata*), and long-beaked filaree (*Erodium botrys*). Additional species found within this habitat include needlegrass (*Stipa* sp.), sky lupine (*Lupinus nanus*), California poppy (*Eschscholzia californica*), wedge-leaved horkelia (*Horkelia cuneata*), sheep sorrel, and telegraphweed (*Heterotheca grandiflora*).

Non-native grasslands provide habitat to a number of common wildlife species. Botta's pocket gopher (*Thomomys bottae*), California ground squirrel, American badger, and several rodent species use non-native grasslands for foraging and cover. Raptors are also known to forage in this habitat, including red-tailed hawk. Reptiles, such as northern pacific rattlesnake, gopher snake, and coast range fence lizard, are also common non-native grassland species. Avian species that may be found within the non-native grassland habitat include grasshopper sparrow (*Ammodramus savannarum*), savannah sparrow (*Passerculus sandwhicheneis*), western kingbird (*Tyrannus verticalis*), and red-tailed hawk. Additional avian species are presented in **Appendix D**.

Monterey spineflower, Kellogg's horkelia, and sandmat manzanita were identified within non-native grassland habitat, within the area surveyed in 2016 (**Figure 7**). Additionally, special-status plant species that may occur or are assumed present within this habitat type, outside of the surveyed area, include: Point Reyes horkelia, woodland woolythreads, Santa Cruz microseris, Santa Cruz clover, and Pacific Grove clover.

No special-status wildlife was observed within the non-native grassland during field visits. However, special-status raptor and bat species may forage within this habitat type, including white-tailed kite, Townsend's big-eared bat, and hoary bat. Additionally, burrowing owl and California horned lark may nest and forage within the non-native grassland habitat. The American badger and Northern California legless lizard may use this habitat type for foraging and cover while coast horned lizard may utilize open, sandy areas within the non-native grassland for basking. Figure B-18 in the HMP also identifies this habitat type as potential habitat for the Monterey ornate shrew. Additionally, most of the non-native grassland within the project site is within the known dispersal range of the CTS and may be used as upland aestivation and dispersal habitat for this species.

4.1.5 Ruderal/Disturbed

- ***A Manual of California Vegetation* classification:** none

Ruderal, disturbed areas are those areas which have been disturbed by human activities and are dominated by non-native annual grasses and other "weedy" species. Ruderal areas within the project site includes areas around the developed areas that are regularly disturbed and other areas of historic disturbance (**Figure 6**). The ruderal areas include vegetation dominated by hottentot fig, ripgut grass, slender oat, cut-leaved plantain (*Plantago coronopus*), English plantain (*P. lanceolata*), sand mat (*Cardionema ramosissimum*), long-beaked filaree, and telegraphweed.

Common wildlife species which do well in urbanized and disturbed areas can utilize this habitat, such as the American crow (*Corvus brachyrhynchos*), California ground squirrel, raccoon, striped skunk (*Mephitis mephitis*), western scrub jay, European starling (*Sturnus vulgaris*), coast range fence lizard, and rock pigeon (*Columba livia*). This habitat type is considered to have low biological value, as it generally dominated by

non-native plant species and consists of relatively low-quality habitat from a wildlife perspective. Additional avian species are presented in **Appendix D**.

Two special-status plant species were observed within ruderal habitat in the area surveyed in 2016: Monterey spineflower and sandmat manzanita (**Figure 7**). Additionally, special-status plant species that may occur or are assumed present within this habitat type, outside of the surveyed area, include: Monterey spineflower, sandmat manzanita, Monterey ceanothus, Eastwood's goldenbush, sand-loving wallflower, sand gilia, Kellogg's horkelia, woodland woolythreads, and Yadon's piperia.

No special-status wildlife species were observed within the ruderal areas; however, some special-status wildlife species may occur. Coast horned lizards often occupy open, sandy areas and may be present within this habitat type. The presence of shrubs throughout may provide habitat for the Northern California legless lizard. American badgers may also forage within portions of this habitat type in proximity to more commonly used habitat types, such as non-native grassland. A portion of the ruderal areas within the project site is also within the known dispersal range of the CTS and may be used as upland aestivation and dispersal habitat for this species.

4.1.6 Developed

- ***A Manual of California Vegetation*** **classification:** none

Developed areas comprise the majority of the project site (**Figure 6**). These areas include paved roads and parking lots, structures, and landscaping. Very little natural vegetation is present within these areas and they are considered to have little biological value. However, some common wildlife species that do well in urbanized areas may be found foraging within the developed areas, including American crow, California ground squirrel, raccoon, striped skunk, western scrub jay, European starling, and rock pigeon.

No special-status plant species were identified within the developed areas within the areas surveyed in 2016 and none are expected to occur within developed areas outside of the survey area.

No special-status wildlife species were observed within the developed areas of the Project; however, raptors, other migratory birds, and Townsend's big-eared bat may nest/roost within the abandoned buildings or mature trees within the developed areas.

### 4.2 Special-Status Species

Published occurrence data within the Project area and surrounding USGS Quads were evaluated to compile a table of special-status species known to occur in the vicinity of the Project site (please refer to **Section 3 "Methods"** and **Appendix A**). Each of these species was evaluated for their likelihood to occur within and immediately adjacent to the Project site (**Appendix A**).[9] The special-status species that are known to or have been determined to have a moderate or high potential to occur within or immediately adjacent the Project site are discussed below. 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. Please note that only those species that are known or have a moderate or high potential to occur within the proposed Project site are discussed in the impacts and mitigation section of this document.

[9] Please see **Appendix A** for the evaluation standards for the potential for species to occur.

4.2.1 Special-Status Wildlife Species

The Project site and adjacent areas were evaluated for the presence or potential presence of a variety of special-status wildlife species (**Appendix A**). The following species are discussed due to their moderate or high potential to occur or known presence within the Project site and potential to be impacted by the Project. **Table 4-2** summarizes the potential for these species to occur within the Project site. Although the likelihood for CRLF to occur within the Project site is unlikely, a discussion of this species is included below as this is a federally listed species that is known to occur in other portions of the former Fort Ord.

**Table 4-2. Potential for Special-Status Wildlife Species Presence within the Project Site**

| Species | Potential Occurrence within Project Site | Potential Occurrence within Near-Term Development Sites | | | | |
|---|---|---|---|---|---|---|
| | | *Student Housing Phase III* | *Academic IV Building* | *Student Recreation Center* | *Student Housing Phase IIB* | *Academic V Building* |
| Townsend's big-eared bat | Moderate | Unlikely | Moderate | Moderate | Moderate | Unlikely |
| Hoary bat | Moderate | Unlikely | Unlikely | Moderate | Moderate | Unlikely |
| Monterey dusky-footed woodrat | Present | Unlikely | Unlikely | Moderate | Unlikely | Unlikely |
| **Monterey ornate shrew** | High | Unlikely | Unlikely | Unlikely | Unlikely | Unlikely |
| American badger | High | Unlikely | Unlikely | Unlikely | Unlikely | Unlikely |
| **California tiger salamander** | Present | Unlikely | Unlikely | Unlikely | Unlikely | Unlikely |
| **Northern California legless lizard** | High | Moderate | Moderate | Moderate | Moderate | Unlikely |
| Coast horned lizard | High | Low | Low | Low | Low | Unlikely |
| **California red-legged frog** | Unlikely | Unlikely | Unlikely | Unlikely | Unlikely | Unlikely |
| **Smith's blue butterfly** | Moderate | Not Present | Moderate | Not Present | Not Present | Not Present |
| Obscure bumble bee | Moderate | Unlikely | Unlikely | Unlikely | Unlikely | Unlikely |
| Western bumble bee | Moderate | Unlikely | Unlikely | Unlikely | Unlikely | Unlikely |
| Burrowing owl | Moderate | Unlikely | Unlikely | Unlikely | Unlikely | Unlikely |
| Nesting Raptors, Migratory Birds, & Other Protected Avian Species | Moderate - High | Moderate | Moderate | Moderate | Moderate | Moderate |

[3] **Bold** indicates Fort Ord HMP Species.

*Special-Status Bat Species*

Special-status bat species with the potential to occur in the vicinity that use oak woodland, central coastal scrub, and central maritime chaparral habitats and abandoned buildings as either maternity, migratory, or foraging roosts include the Townsends's big-eared bat and hoary bat.

These species may utilize some of the coast live oak trees within the Project site for night roosts and may forage over all undeveloped areas of the Project site. Any abandoned buildings within the Project site may also provide day roost or maternity roost habitat for Townsends's big-eared bat. Special-status bat species have a moderate potential to occur within these areas at the Project site.

*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 and other forest types throughout California. Dusky-footed woodrats are frequently found in forest habitats with moderate canopy cover and a moderate to dense understory, including riparian forests; however, they may also be found in

chaparral 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 CNDDB does not report any occurrences of Monterey dusky-footed woodrat within the seven quadrangles reviewed. However, this species is known to occur throughout the former Fort Ord and woodrat nests were observed within the Project site during field surveys. Therefore, the Monterey dusky-footed woodrat is assumed present within suitable habitat areas.

*Monterey Ornate Shrew*

The Monterey ornate shrew, also known as the Salinas ornate shrew, is a CDFW species of special concern and HMP species. In general, this shrew is common in the southern two-thirds of California west of the Sierra Nevada, from Mendocino to Butte counties, south to the Mexican border. It occupies a variety of mostly moist or riparian woodland habitats and also occurs within chaparral, grassland, and emergent wetland habitats where there is thick duff or downed logs. The breeding season is long; while most pregnancies occur in March and April, they may occur from February through October. The litter size is about six and females may have more than one litter per year. Most individuals do not live to breed a second year. Foraging occurs under logs rocks and leaf litter, and prey items are mostly insects and some other invertebrates.

The CNDDB does not report any occurrences of the Monterey ornate shrew within the seven quadrangles reviewed; however, Figure B-18 in the HMP identifies the project site as containing potential habitat for this species (ACOE, 1997). As with most shrews, little is known about their ecology since they are hard to locate and do not survive well in traps due to very high metabolic rates. However, field surveys on the UC Fort Ord Natural Reserve found that habitats within the Project site (e.g., non-native grassland, coast live oak woodland, central coastal scrub, central maritime chaparral, riparian, and mixes of these habitats) are likely considered suitable habitat for the shrew. Therefore, there is a high potential for the Monterey ornate shrew to occur within these habitats in the project site.

*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 of burrowing rodents, such as gophers, squirrels, mice, and kangaroo rats, as well as some insects and reptiles. Badgers also break open beehives 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 dug in relatively dry, often sandy soil, usually with sparse overstory cover.

The CNDDB reports eight occurrences of American badger within the seven quadrangles reviewed, the nearest of which located within the eastern portion of the project site, near Inter-Garrison Road. Additionally, this species is known to occur throughout the former Fort Ord. Suitable habitat is present

within the non-native grassland, central maritime chaparral/non-native grassland mix, and central coastal scrub/non-native grassland mix, and within ruderal habitat in close proximity to the aforementioned more commonly used habitats within the project site. As such, the American badger has a high potential to occur within suitable habitat areas.

*California Tiger Salamander*

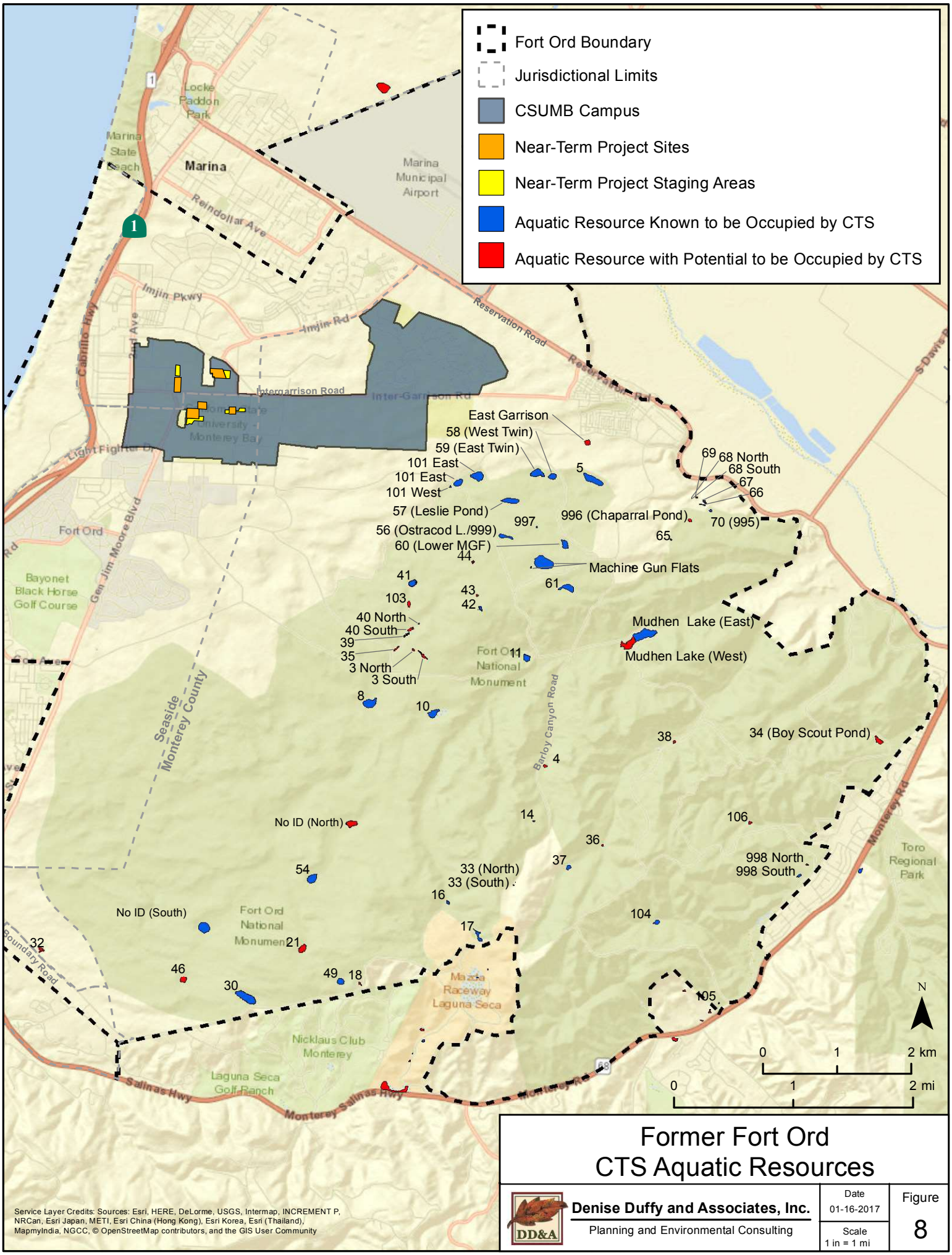
The CTS was listed as a federally threatened species on August 4, 2004 (69 FR 47211-47248). Critical habitat was designated for CTS on August 23, 2005 (70 FR 49379-49458), and went into effect on September 22, 2005. Additionally, CTS was listed as a state threatened species on March 3, 2010.

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, 2004). Adults spend most of their lives underground, typically in burrows of ground squirrels and other animals (Service, 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 (Service, 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 (Service, 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 (Service, 2004).

The project site is not located within designated critical habitat for CTS. The CNDDB reports 49 occurrences of CTS within the seven quadrangles evaluated, 25 of which occur within the former Fort Ord. Extensive surveys have been conducted within the former Fort Ord to determine the aquatic resources that are known or have the potential to be occupied by CTS (**Figure 8**). No potential or known CTS breeding (aquatic) habitat is present within the Project site. The nearest known CTS-occupied pond is 0.4 mile (0.6 km) from the project site (Pond 101 East).

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). Portions of the




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

# Former Fort Ord
# CTS Aquatic Resources

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

Date: 01-16-2017
Scale: 1 in = 1 mi
Figure: 8

Path: C:\GIS\GIS_Projects\2017-15 CSUMB Master Plan Bio\Final Products\Figure 9 - CTS Aquatic Resources.mxd

Project site are within two kilometers of several aquatic resources known or with the potential to be occupied by CTS. **Figure 9** and **Table 4-3** present the area of habitats within the Project site assumed by the Service as occupied by CTS in the absence of protocol-level surveys. Please note that areas designated as "developed" are not included in these calculations as it is assumed these areas do not provide CTS upland habitat.

The CDFW uses a four-zone methodology to determine the relative impact of a project to CTS. The zones are as follows:

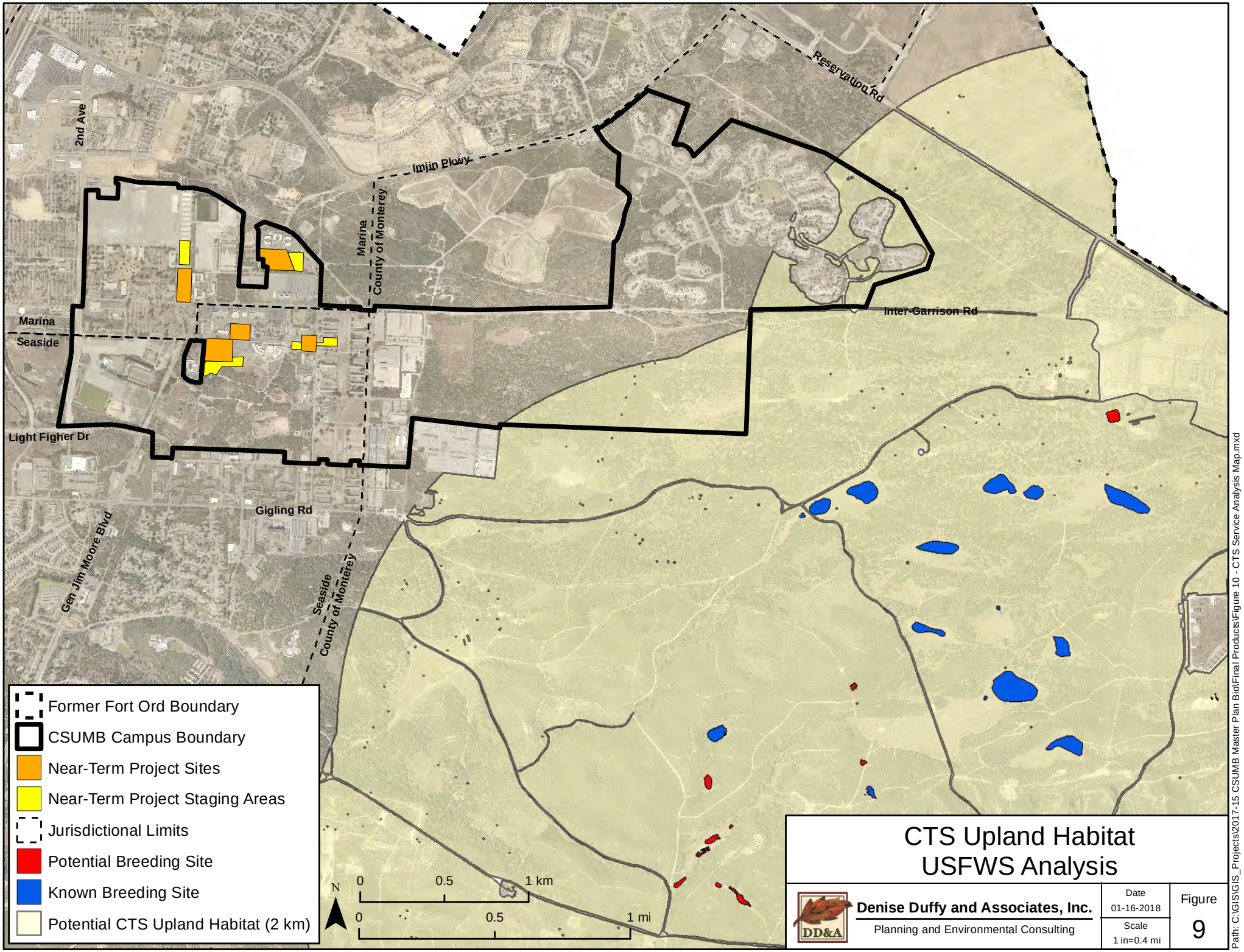
- Zone 1: 380 meters (0.24 mile) –the distance that greater than 50% of dispersing CTS adults and approximately 50% of dispersing CTS sub-adults will travel from the breeding pond;
- Zone 2: 630 meters (0.39 mile) – the distance within which greater than 95% of dispersing CTS are found;
- Zone 3: 1 km (0.62 mile) – the distance that ongoing studies have shown that adults and juveniles routinely move; and
- Zone 4: 2.2 km (1.3 miles) – the greatest distance adults have been found to move from a breeding site.

Portions of the Project site fall within the Zone 2, Zone 3, and Zone 4 distances from aquatic resources known or with the potential to be occupied by CTS. **Figure 10** and **Table 4-3** present the area of habitats within the Project site that fall within these zones. Please note that areas designated as "developed" are not included in these calculations as it is assumed these areas do not provide CTS upland habitat. Additionally, none of the Near-Term Development sites fall within potential CTS Habitat.

**Table 4-3. Area of Potential CTS Habitat within the Project Site**

| Habitat | *Service (2km)* | *DFW Zone 2 (630 m)* | *DFW Zone 3 (1km)* | *DFW Zone 4 (2.2km)* |
|---|---|---|---|---|
| *Coast Live Oak Woodland* | 89.1 | 0.9 | 19.4 | 236.1 |
| *Central Maritime Chaparral* | 31.6 | 0 | 0 | 65.4 |
| *Central Coastal Scrub* | 7.8 | 0 | 4.8 | 3.1 |
| *Non-native Grassland* | 18.0 | 0 | 14.4 | 18.0 |
| *Central Coastal Scrub/ Non-Native Grassland Mix* | 4.5 | 0 | 0 | 4.5 |
| *Central Maritime Chaparral/ Coast Live Oak Woodland Mix* | 19.9 | 0 | 0 | 45.8 |
| *Central Coastal Scrub/ Coast Live Oak Woodland Mix* | 5.1 | 0 | 2.7 | 7.5 |
| *Non-Native Grassland/ Coast Live Oak Woodland Mix* | 11.9 | 0 | 0 | 18.2 |
| *Ruderal* | 10.5 | 0 | 0 | 35.9 |
| ***Total*** | **198.4** | **0.9** | **41.3** | **434.5** |

In addition to the potential CTS upland habitat within the Project site, DD&A biologists encountered an individual CTS within the compound used for the Army's Munitions and Explosives of Concern (MEC) remediation project, located immediately adjacent to the Project site (ITSI Gilbane Company, 2014). In the absence of protocol-level surveys, it is assumed that CTS are present within suitable upland habitat within the Project site.

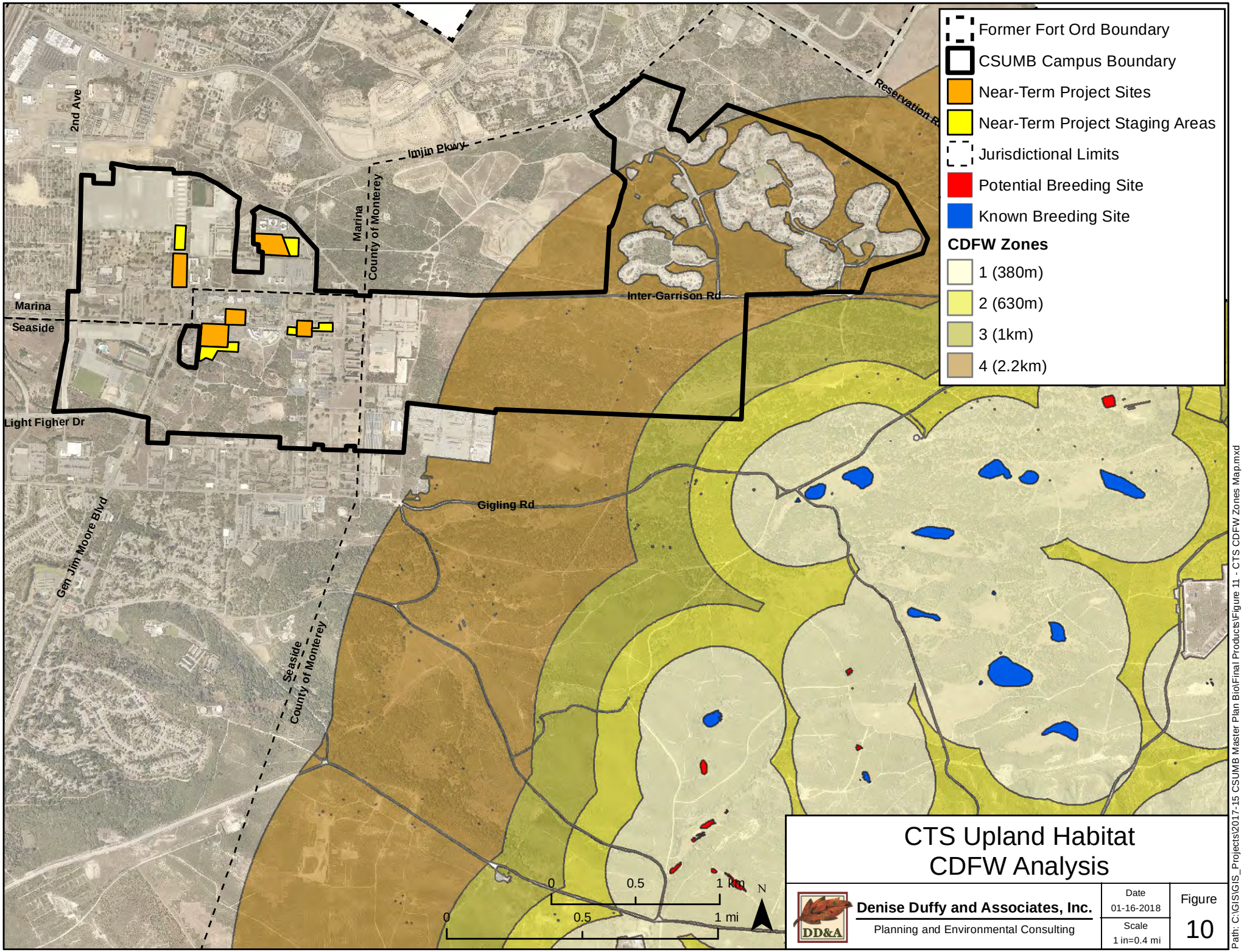



# CTS Upland Habitat
# USFWS Analysis

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

Date: 01-16-2018
Scale: 1 in=0.4 mi
Figure: 9

Path: C:\GIS\GIS_Projects\2017-15 CSUMB Master Plan Bio\Final Products\Figure 10 - CTS Service Analysis Map.mxd




# CTS Upland Habitat
# CDFW Analysis

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

Date: 01-16-2018
Scale: 1 in=0.4 mi
Figure: 10

Path: C:\GIS\GIS_Projects\2017-15 CSUMB Master Plan Bio\Final Products\Figure 11 - CTS CDFW Zones Map.mxd

*Northern California Legless Lizard*

The Northern California legless lizard is a CDFW species of special concern, as well as an HMP species.[10] This fossorial (burrowing) species typically inhabits sandy or loose (friable) soils. Habitats known to support Northern California legless lizard include (but are not limited to) coastal dunes, valley and foothill grasslands, chaparral, and coastal scrub at elevations from near sea level to approximately 1,800 meters (6,000 feet). The Northern California legless lizard forages on invertebrates beneath the leaf litter or duff layer at the base of bushes and trees or under wood, rocks, and slash in appropriate habitats. The diet of this species likely overlaps to some extent with that of juvenile alligator lizards and perhaps some other salamanders. This species may be preyed upon by alligator lizards, snakes, birds, and small mammals. Little is known about the specific habitat requirements for courtship and breeding; however, the mating season for this species is believed to begin late spring or early summer, with one to four live young born between September and November.

The CNDDB reports 38 occurrences of Northern California legless lizard within the seven quadrangles reviewed, including one occurrence that includes the northeastern portion of the Project site. An additional CNDDB occurrence is located immediately north of the western portion of the Project site. Suitable habitat for Northern California legless lizard is present throughout all undeveloped areas of the Project site where appropriate cover conditions occur. Therefore, the Northern California legless lizard has a high potential to occur within the project site.

*Coast Horned Lizard*

The coast horned lizard is a CDFW species of special concern. Horned lizards occur in valley-foothill hardwood, conifer, and riparian habitats, as well as in pine-cypress, juniper, chaparral, and annual grass habitats. This species generally inhabits open country, especially sandy areas, washes, flood plains, and wind-blown deposits in a wide variety of habitats. Coast horned lizards rely on camouflage for protection and will often lay motionless when approached. Horned lizards often bask in the early morning on the ground or on elevated objects such as low boulders or rocks. Predators and extreme heat are avoided by burrowing into loose soil. Periods of inactivity and winter hibernation are spent burrowed into the soil or under surface objects. Little is known about the habitat requirements for breeding and egg-laying of this species. Prey species include ants, beetles, wasps, grasshoppers, flies, and caterpillars.

The CNDDB reports five occurrences of the coast horned lizard within the seven quadrangles reviewed, one occurrence within the northeastern portion of the Project site. Additionally, this species has been observed throughout Fort Ord by DD&A biologists. Suitable habitat for this species is present within the Project site within the central maritime chaparral and central coastal scrub habitats, including the mixed

[10] The HMP identifies this species as black-legless lizard (*Anniella pulchra* ssp. *nigra*) in order to differentiate it from the previously identified silvery-legless lizard (*A. p.* ssp. *pulchra*). These subspecies are based primarily on phenotypic differences (black-legless lizard being much darker, having fewer scales on the back, and a relatively shorter tail) and very limited genetic work. Further, the range of the black-legless lizard has historically been classified as "restricted to coastal and interior dune sand other areas of sandy soils in the vicinity of Monterey Bay and the Monterey Peninsula" (Service, 1998), while the range of silvery-legless lizard has been classified as widespread throughout central California (Parham and Papenfuss, 2008). However, recent genetic studies have revealed five lineages of this species that correspond with different geographic areas of California (Parham and Papenfuss, 2008). These studies do not, however, identify the legless lizards occurring on the coast of Monterey Bay (i.e. the currently designated black-legless lizard) as a separate lineage. Currently, CDFW identifies both subspecies as the Northern California legless lizard and this document, therefore, follows the current regulatory identification.

habitats, and may utilize open sandy areas of the non-native grassland and ruderal habitats. Therefore, there is a high potential for the coast horned lizard to occur within these habitats within the Project site.

*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. 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). 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, Central Valley, and much of southern California (Service, 1996).

The project site is not located within designated critical habitat for CRLF. The CNDDB reports 52 occurrences of CRLF within the seven quadrangles reviewed, the nearest of which is located approximately three miles north of the Project site, within the Salinas River riparian corridor. No aquatic breeding, aquatic non-breeding, or optimal dispersal habitat is present within the Project site. The nearest known breeding

pond on former Fort Ord is approximately 4.7 miles southeast of the Project site (**Figure 11**). The Project site is within one mile (1.6 km) of several potential CRLF breeding ponds, the general distance provided by the Service for CRLF site assessments (Service and CDFW, 2005). These ponds are located east and south of the Project site, no potential breeding ponds are present north or west of the Project site on Fort Ord, and the availability of non-breeding aquatic resources to the north and west of the Project site is little to none. The nearest potential breeding pond to the Project site is 0.4 mile (0.6 km) away (Pond 101 East). As such, there is a very low potential for CRLF to disperse through the Project site. As noted above, CRLF may move up to 300 feet from aquatic habitats into surrounding uplands (Bulger et al., 2003); however, no aquatic resources are present within 300 feet of the Project site. Additionally, CRLF have not been observed breeding in this pond since the initial detection and there have been recent observations of large goldfish in the pond, which may inhibit further use by CRLF. Therefore, this species is unlikely to occur within the Project site.

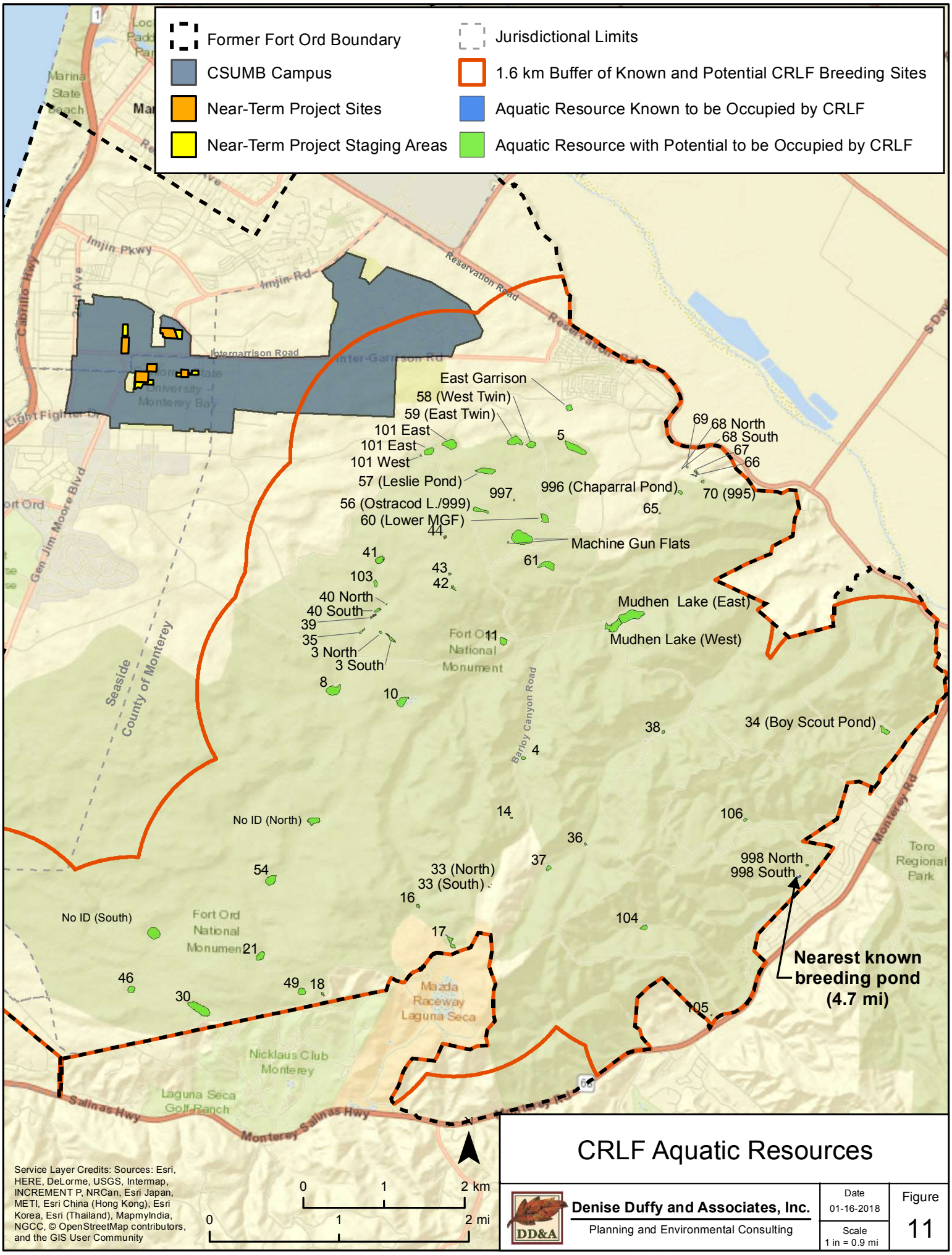
*Smith's Blue Butterfly*

The SBB was listed as a federally Endangered species on June 1, 1976 (41 FR 22041-22044). This species historically ranged along the California coast from Monterey Bay south through Big Sur to near Point Gorda, occurring in scattered populations in association with coastal dune, coastal scrub, chaparral, and grassland vegetation types. The primary limiting factor for SBB populations is the occurrence of their host plants, dune buckwheat (*Eriogonum parvifolium*) and coast buckwheat (*E. latifolium*), in which they are associated with for their entire life span. There is also a potential for SBB to use naked buckwheat (*E. nudum*) within a range of the obligate host species (pers. comm. Dave Dixon, State Parks).

The presence of the host plant, however, is not always an indication of the occurrence of the butterfly, as the host plant distribution is much more extensive than that of the butterfly.

Individual adult males and females live approximately one week. Adult emergence and seasonal activity are synchronized with the blooming period of the particular buckwheat used at a given site. Dispersal data from capture-recapture studies (Arnold, 1983) indicate that most adults are quite sedentary, with home ranges no more than a few acres. The SBB has only one generation per year. Females lay single eggs into buckwheat flower heads, which hatch in approximately one week. Caterpillars mature over a span of approximately three to four weeks, feeding on petals and seeds of the buckwheat plant. Chrysalis formation then takes place in the buckwheat flower head and the chrysalis eventually falls into the leaf litter and topsoil beneath the plant where it remains for approximately 47 weeks until the cycle begins again (Dixon, 1999).

The CNDDB reports 17 occurrences of SBB within the quadrangles reviewed, the nearest of which is located approximately 0.7 mile from the Project site, within the Monterey Dunes State Park. Small areas of dune buckwheat were identified within the survey area near the intersection of 6$^{th}$ Avenue and Butler Street (0.1 ac and 6 individuals) and the intersection of 6$^{th}$ Avenue and A Street (23 individuals). Additionally, a small area of dune buckwheat (0.02 ac and 1 individual) is known from previous surveys conducted for the Fort Ord HCP, along Inter-Garrison Road near the main campus quad. Four dune buckwheat individuals were identified within the Academic IV project site. These areas may provide habitat for SBB (**Figure 12**). Host plant species for SBB may also occur within the unsurveyed areas of the Project site. Therefore, this species has a moderate potential to occur within the Project site. No buckwheat plant



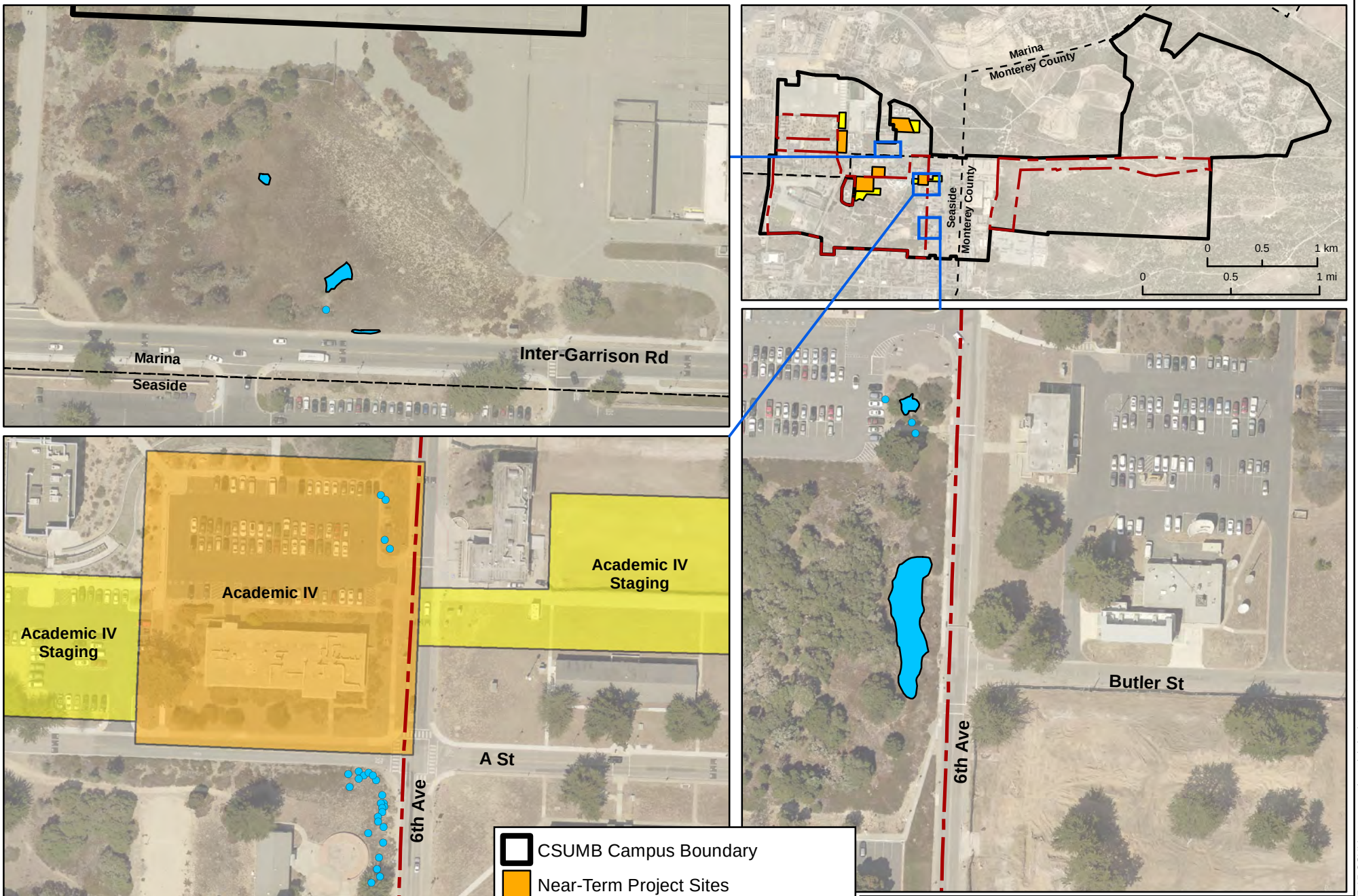

Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

# CRLF Aquatic Resources

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

Date: 01-16-2018
Scale: 1 in = 0.9 mi
Figure: 11

Path: C:\GIS\GIS_Projects\2017-15 CSUMB Master Plan Bio\Final Products\Figure 12 - CRLF Aquatic Resources.mxd




# Smith's Blue Butterfly Potential Habitat Observed

Denise Duffy and Associates, Inc.
Planning and Environmental Consulting

Date: 03-13-2019
Scale: 1 in=0 mi
Figure: 12

Path: C:\GIS\GIS_Projects\2017-15 CSUMB Master Plan Bio\Final Products\Figure 13 - SBB Habitat.mxd

species suitable for SBB habitat were observed within the other Near-Term Development sites or proposed staging areas.

*Obscure Bumble Bee*

The obscure bumble bee occurs in Mediterranean California and along the Pacific Coast from southern California to southern British Columbia in Canada (Williams et. al., 2014). This species occurs primarily along the coast in grassy prairies and meadows. Select food genera include *Baccharis, Cirsium, Lupinus, Lotus, Grindelia*, and *Phacelia* (Pollinator Partnership and U.S. Forest Service [USFS], 2012). The obscure bumble bee nests both underground and above ground (abandoned bird nests are often utilized).

The CNDDB reports four occurrences of the obscure bumble bee within the quads evaluated. The nearest CNDDB occurrence of obscure bumble bee is approximately 5.8 miles from the Project site. Suitable habitat for this species may be present within the non-native grassland, non-native grassland mix habitats, and portions of the ruderal habitat within the Project site. This species has a moderate potential to occur within suitable habitat at the Project site.

*Western Bumble Bee*

The western bumble bee was formerly common from the Pacific coast to the Colorado Rocky Mountains; however, populations from central California to southern British Columbia, Canada and west of the Sierra-Cascade Ranges have declined sharply since the late 1990s (Pollinator Partnership and USFS, 2012; Williams et. al., 2014). Select food genera include *Melilotus, Cirsium, Trifolium, Centaurea, Chrysothamnus*, and *Eriogonum* (Pollinator Partnership and USFS, 2012). The western bumble bee generally nests underground.

The CNDDB reports six occurrences of the western bumble bee within the quads evaluated. The nearest CNDDB occurrence of this species is approximately 4.6 miles from the Project site. Suitable habitat for this species may be present within the non-native grassland, non-native grassland/coast live oak woodland mix, non-native grassland/central coastal scrub, and portions of the ruderal areas within the Project site. This species has a moderate potential to occur within suitable habitat at the Project site.

*Nesting Raptors, Migratory Birds, and Other Protected Avian Species*

Raptors and their nests and migratory birds are protected under FGC and the MBTA. While the life histories of these species vary, overlapping nesting and foraging similarities (approximately February through August) allow for their concurrent discussion. Most raptors 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. Various species of raptors (such as red-tailed hawk, red-shouldered hawk [*Buteo lineatus*], great horned owl, American kestrel, and turkey vulture [*Cathartes aura*]) have a potential to nest within any of the large coast live oak, Monterey pine, or Monterey cypress trees present within the Project site. Additionally, migratory bird species that may be present within the Project site include, but is not limited to, common poorwill, blue-gray gnatcatcher, Townsend's warbler (*Setophaga townsendii*), western tanager (*Piranga ludoviciana*),

savannah sparrow, ash-throated fly catcher (*Myiarchus cinerascens*), and violet-green swallow (*Tachycineta thalassina*).

Avian species identified as CDFW species of special concern or Fully Protected Species (such as the white-tailed kite, western burrowing owl, and California horned lark) have the potential to occur within the Project site. Suitable nesting habitat for the white-tailed kite is present within the coast live oak woodland habitat. This species may also forage over any of the undeveloped areas within the Project site. In addition, marginally suitable nesting and foraging habitat for the western burrowing owl and California horned lark is present within the non-native grassland habitat. Therefore, nesting raptors, migratory birds, and other protected avian species have a moderate to high potential to occur within the Project site.

### 4.2.2 Special-Status Plant Species

The Project site and adjacent areas were evaluated for the presence or potential presence of a variety of special-status plant species (**Appendix A**). Focused surveys were conducted within a portion of the Project site; this area is identified as the "survey area" on **Figure 6**. The following special-status plant species are discussed due to their known presence within the Project site, as observed during the focused botanical surveys (**Figure 7**), or for their moderate to high potential to occur in the un-surveyed areas of the Project site, based on known occurrences in the vicinity and presence of suitable habitat. **Table 4-4** summarizes the potential for these species to occur within the Project site. **Figure 7** and **Table 4-5** identifies the area of each of species observed within the survey area. All other species presented in **Appendix A** are assumed "unlikely to occur" based on the lack of suitable habitat within un-surveyed portions of the Project site and/or the results of the focused surveys within the survey area, or have a low potential to occur but are unlikely to be impacted. Please note that only those special-status plant species that are known or have the potential to occur within the Project site are discussed in the impacts and mitigation section of this document.

**Table 4-4. Potential for Special-Status Plant Species Presence within the Project Site**

| Species | Potential Occurrence within Project Site | Potential Occurrence within Near-Term Development Component Sites and Staging Areas | | | | |
|---|---|---|---|---|---|---|
| | | *Student Housing Phase III* | *Academic IV Building*[11] | *Student Recreation Center* | *Student Housing Phase IIB* | *Academic V Building* |
| **Hooker's manzanita** | Moderate | Not Present | Not Present | Not Present | Not Present | Not Present |
| **Toro manzanita** | Present | Not Present | Not Present | Not Present | Not Present | Not Present |
| Pajaro manzanita | Moderate | Not Present | Not Present | Not Present | Not Present | Not Present |
| **Sandmat manzanita** | Present | Not Present | Not Present | Not Present | Not Present | Not Present |
| **Monterey ceanothus** | Present | Not Present | Not Present | Not Present | Not Present | Not Present |
| Fort Ord spineflower | Moderate | Unlikely | Unlikely | Not Present | Unlikely | Unlikely |
| **Monterey spineflower** | Present | Low | Low | Present | Low | Unlikely |
| **Seaside bird's-beak** | High | Unlikely | Unlikely | Not Present | Unlikely | Unlikely |
| **Eastwood's goldenbush** | High | Not Present | Not Present | Not Present | Not Present | Not Present |
| **Sand-loving wallflower** | High | Unlikely | Unlikely | Not Present | Unlikely | Unlikely |

[11] The Academic IV Building site and a portion of the staging area was included in the survey area for botanical surveys conducted in 2017; however, a portion of the staging area was not included. Therefore, special-status plant species listed with potential to occur for this site may occur only within the unsurveyed portions of the staging area. No special-status plant species were observed within the surveyed areas of the Academic IV Building site in 2017.

| Species | Potential Occurrence within Project Site | Potential Occurrence within Near-Term Development Component Sites and Staging Areas | | | | |
|---|---|---|---|---|---|---|
| | | *Student Housing Phase III* | *Academic IV Building*[11] | *Student Recreation Center* | *Student Housing Phase IIB* | *Academic V Building* |
| **Sand gilia** | High | Low | Low | Not Present | Low | Unlikely |
| Kellogg's horkelia | Present | Not Present | Not Present | Not Present | Not Present | Not Present |
| Point Reyes horkelia | Moderate | Unlikely | Unlikely | Not Present | Unlikely | Unlikely |
| Marsh microseris | Moderate | Unlikely | Unlikely | Not Present | Unlikely | Unlikely |
| Northern curly-leaved monardella | Moderate | Unlikely | Unlikely | Not Present | Unlikely | Unlikely |
| Woodland woolythreads | Moderate | Unlikely | Unlikely | Not Present | Unlikely | Unlikely |
| **Yadon's piperia** | High | Unlikely | Unlikely | Not Present | Low | Unlikely |
| Santa Cruz microseris | Moderate | Unlikely | Unlikely | Not Present | Unlikely | Unlikely |
| Santa Cruz clover | Moderate | Unlikely | Unlikely | Not Present | Unlikely | Unlikely |
| Pacific Grove clover | Moderate | Unlikely | Unlikely | Not Present | Unlikely | Unlikely |

[3] **Bold** indicates Fort Ord HMP Species.

**Table 4-5. Area of Special-Status Plant Species within the Survey Area[12]**

| Species | Area (acres) | | | Individuals |
|---|---|---|---|---|
| | Low | Medium | High | |
| **Toro Manzanita** | 0 | 0 | 0 | 1 |
| **Sandmat Manzanita** | 0.01 | 0.02 | 0.3 | 30 |
| **Monterey Ceanothus** | 0 | 0 | 0 | 2 |
| **Monterey Spineflower** | 16.5 | 1.1 | 0.1 | 120 |
| Kellogg's Horkelia | 0.03 | 0.003 | 0 | 48 |

*Hooker's Manzanita*

Hooker's manzanita is a CNPS CRPR 1B and HMP species in the Ericaceae family. This evergreen shrub is associated with closed-cone coniferous forest, chaparral, cismontane woodland and coastal scrub habitats on sandy soils at a range of 85-536 meters in elevation. The blooming period is from January to June.

The CNDDB reports 19 occurrences of this species within the quads evaluated, the nearest of which is located approximately 0.2 mile south of the Project site. This species was not observed within the survey area during surveys in 2016; however, suitable habitat for this species is present within the unsurveyed portions of the Project site. Therefore, this species has a moderate potential to occur within the Project site.

*Toro Manzanita*

Toro manzanita (also often referred to as Monterey manzanita) is a CNPS CRPR 1B and HMP species. This evergreen shrub in the Ericaceae family blooms from February-March. Toro manzanita is associated with maritime chaparral, cismontane woodland, and coastal scrub on sandy soils at elevations of 30-730 meters.

[12] Please note that the areas presented in Table 4-4 only represent the areas of the Project site where focused special-status plant surveys were completed in 2016. **Bold** indicates Fort Ord HMP Species.

The CNDDB reports an occurrence of this species within the project site (**Figure 14**). One individual Toro manzanita was identified within the survey area during the 2016 botanical surveys (**Figure 7**). This species may also occur within the unsurveyed portions of the Project site.

*Pajaro Manzanita*

Pajaro manzanita is a CNPS CRPR 1B species in the Ericaceae family. This evergreen shrub is associated with chaparral on sandy soils at a range of 30-760 meters in elevation. The blooming period is December to March.

The CNDDB reports 18 occurrences of this species within the quads evaluated, the nearest of which includes a very small portion of the southwestern corner of the Project site (**Figure 13**). This occurrence is associated with the main entrance to Fort Ord and the Highway 1 overpass, and is, therefore, unlikely within the Project site. This species was not observed within the survey area during surveys in 2016; however, Pajaro manzanita is known to occur in other areas of the Former Fort Ord and suitable habitat is present within the unsurveyed portions of the Project site. Therefore, this species has a moderate potential to occur within the Project site.

*Sandmat Manzanita*

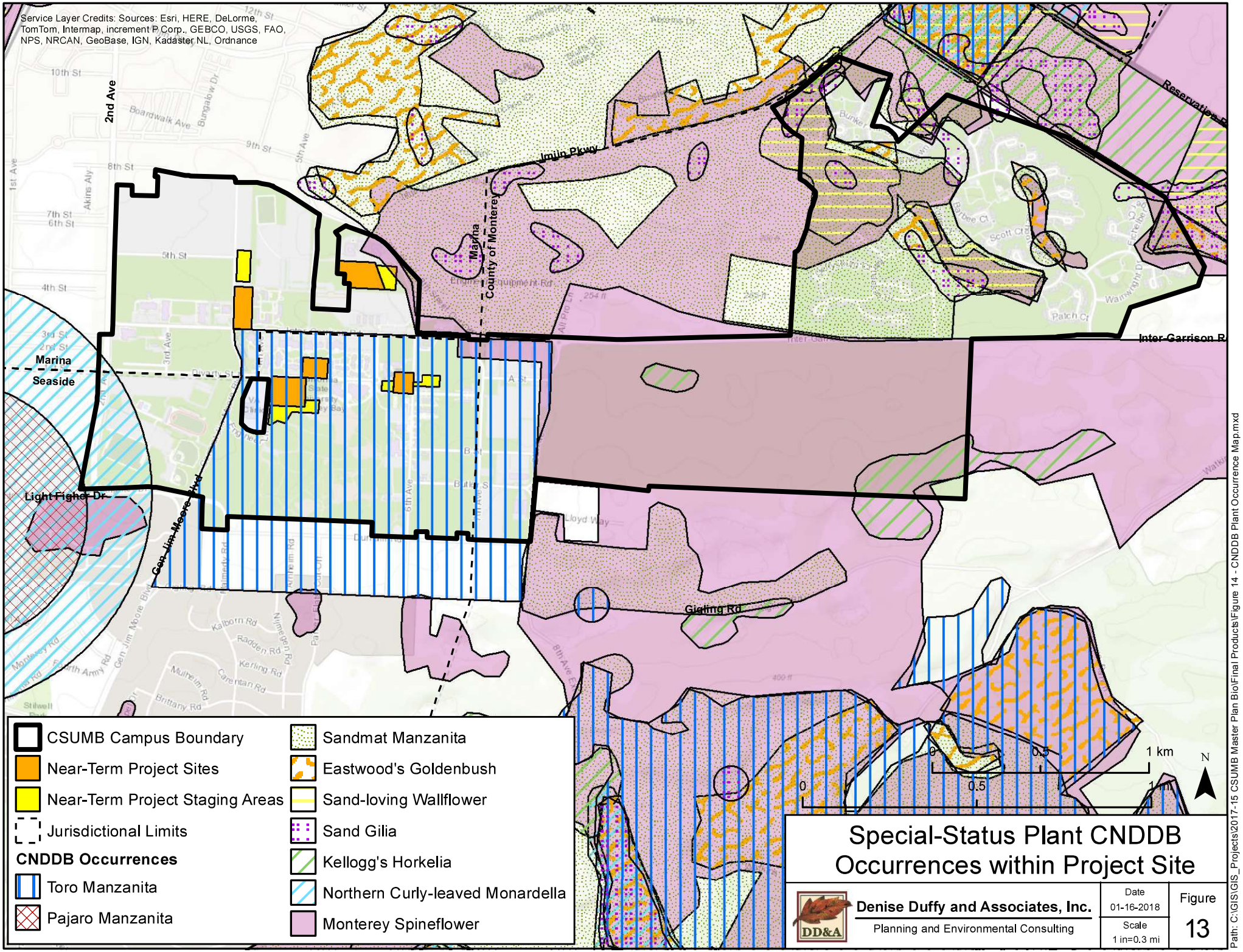
Sandmat manzanita is a CNPS CRPR 1B and HMP species. This evergreen shrub in the Ericaceae family blooms from February to May. Sandmat manzanita is associated with openings in chaparral, coastal scrub, closed cone coniferous forest, coastal dunes, and cismontane woodland habitats on sandy soils at elevations between 3-205 meters.

The CNDDB reports 17 occurrences of this species within the quads evaluated, including two specific occurrences within project site (**Figure 13**). Sandmat manzanita was identified within the survey area during the 2016 botanical surveys (**Figure 7**). This species may also occur within the unsurveyed portions of the Project site.

*Monterey Ceanothus*

Monterey ceanothus is a CNPS CRPR 4 and HMP species. This evergreen shrub in the Rhamnaceae family blooms from February to April (sometimes through June). This species is associated with closed-cone coniferous forests, chaparral, and coastal scrub on sandy soils at elevations between 3-550 meters.

The CNDDB does not report any occurrences of this species; however, it is known to occur throughout the former Fort Ord. Two individual Monterey ceanothus were identified within the survey area during the 2016 botanical surveys (**Figure 7**). This species may also occur within the unsurveyed portions of the Project site.


Service Layer Credits: Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance
2nd Ave
Imjin Pkwy
Marina
County of Monterey
Marina
Seaside
Light Fighter Dr
Gen Jim Moore Blvd
Gigling Rd
Inter-Garrison R
CSUMB Campus Boundary
Near-Term Project Sites
Near-Term Project Staging Areas
Jurisdictional Limits
CNDDB Occurrences
Toro Manzanita
Pajaro Manzanita
Sandmat Manzanita
Eastwood's Goldenbush
Sand-loving Wallflower
Sand Gilia
Kellogg's Horkelia
Northern Curly-leaved Monardella
Monterey Spineflower
0
0.5
1 km
N
Special-Status Plant CNDDB Occurrences within Project Site
Denise Duffy and Associates, Inc.
Planning and Environmental Consulting
Date
01-16-2018
Scale
1 in=0.3 mi
Figure
13
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*Fort Ord Spineflower*

Fort Ord spineflower is a CNPS CRPR 1B species. This annual herb in the Polygonaceae family is associated with sandy openings of maritime chaparral and coastal scrub at elevations of 55-150 meters. The blooming period is April to July.

The CNDDB reports five occurrences of this species within the quads evaluated, the nearest of which is located 0.3 mile south of the Project site. This species was not observed within the survey area during surveys in 2016; however, Fort Ord spineflower is known to occur in other areas of the Former Fort Ord and suitable habitat is present within the unsurveyed portions of the Project site. Therefore, this species has a moderate potential to occur within the Project site.

*Monterey Spineflower*

Monterey spineflower and is a federally threatened, CNPS CRPR 1B, and HMP species. It is a small, prostrate annual herb in the Polygonaceae family that blooms from April to June. The white to rose floral tube of Monterey spineflower distinguishes it from the more common, but closely related, diffuse spineflower (*Chorizanthe diffusa*), which has a lemon-yellow floral tube. Monterey spineflower typically occurs on open sandy or gravelly soils on relic dunes in coastal dune, coastal scrub, and maritime chaparral habitats, though it can also be associated with cismontane woodlands and valley and foothill grasslands, within a range of 3-450 meters in elevation.

The CNDDB reports an occurrence of this species that includes the majority of Project site (**Figure 13**). Monterey spineflower was identified within the survey area during the 2016 botanical surveys, including a small population that overlaps with the Student Recreation Center proposed staging area (**Figure 7**). This species may also occur within the unsurveyed portions of the Project site.

*Seaside Bird's-Beak*

Seaside bird's-beak is a state endangered, CNPS CRPR 1B, and HMP species. It is a hemiparasitic annual in the Scrophulariaceae family and blooms April through October. Seaside bird's-beak is typically associated with closed-cone coniferous forest, chaparral, cismontane woodlands, coastal dunes, and coastal scrub in sandy soils and often in disturbed areas, within the range of 0-425 meters in elevation.

The CNDDB reports 17 occurrences of this species within the quads evaluated, the nearest of which is located approximately 0.3 mile from the Project site (**Figure 13**). This species was not observed within the survey area during surveys in 2016; however, seaside bird's-beak is known to occur in other areas of the Former Fort Ord and suitable habitat is present within the unsurveyed portions of the Project site. Therefore, this species has a high potential to occur within the Project site.

*Eastwood's Goldenbush*

Eastwood's goldenbush (also often referred to as Eastwood's goldenfleece) is a CNPS CRPR 1B and HMP species. This evergreen shrub in the Asteraceae is associated with openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 30-275 meters. The blooming period is from July-October.

The CNDDB reports 17 occurrences of this species within the quads evaluated, including a specific occurrence in the northeastern portion of the Project site (**Figure 13**). This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the Project site. Based on this information, Eastwood's goldenbush has a high potential to occur within the Project site, outside of the survey area.

*Sand-loving Wallflower*

Sand-loving wallflower is a CNPS CRPR 1B and HMP species in the Brassicaceae family. This perennial herb is associated with openings in maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 0-60 meters. The blooming period is February to June.

The CNDDB reports 16 occurrences of this species within the quads evaluated, including a specific occurrence in the northeastern portion of the Project site (**Figure 13**). This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the Project site. Based on this information, sand-loving wallflower has a high potential to occur within the Project site, outside of the survey area.

*Sand Gilia*

Sand gilia is a federally Endangered, state Threatened, CNPS CRPR 1B, and HMP species. This annual herb in the Polemoniaceae blooms from April through June and is found in sandy openings of maritime chaparral, cismontane woodland, coastal dune and coastal scrub habitats within the range of 0-45 meters in elevation.

The CNDDB reports 30 occurrences of this species within the quads evaluated, including a specific occurrence in the northeastern portion of the Project site (**Figure 13**). This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the Project site. Based on this information, sand gilia has a high potential to occur within the Project site, outside of the survey area.

*Kellogg's Horkelia*

Kellogg's horkelia is a CNPS CRPR 1B species. It is a perennial herb in the Rosaceae family and blooms April through June. Kellogg's horkelia is typically associated with openings in closed cone coniferous forest, maritime chaparral, and coastal scrub in sandy or gravelly soils on relic dunes, within a range of 10 to 200 meters in elevation.

The CNDDB reports three occurrences of this species that overlap with the Project site (**Figure 13**). This species was identified within the survey area during the 2016 botanical surveys (**Figure 7**). This species may also occur within the unsurveyed portions of the Project site.

*Point Reyes Horkelia*

Point Reyes horkelia is a CNPS CRPR 1B species. It is a perennial herb in the Rosaceae family and blooms May through September. Point Reyes horkelia is typically associated with coastal dunes, coastal prairie, and coastal scrub in sandy soils, within a range of 5-755 meters in elevation.

The CNDDB reports one occurrence of this species within the quads evaluated, located approximately 1.5 miles northwest of the Project site. This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the Project site. Based on this information, Point Reyes horkelia has a moderate potential to occur within the Project site.

*Marsh Microseris*

Marsh microseris is a CNPS CRPR 1B species in the Asteraceae family. This rhizomatous, perennial herb is found in closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland habitats at elevations from 5-300 meters. The blooming period is from April through July.

The CNDDB reports 10 occurrences of this species within the quads evaluated, the nearest of which is located approximately 0.9 mile southeast of the Project site. This species was not observed within the survey area during surveys in 2016; however, suitable habitat may be present within the unsurveyed portions of the Project site. Therefore, marsh microseris has a moderate potential to occur within the Project site.

*Northern Curly-leaved Monardella*

Northern curly-leaved monardella is a CNPS CRPR 1B species in the Lamiaceae family. This annual herb is found in chaparral, coastal dunes, and coastal scrub at elevations of 0-300 meters. This species may also be found in ponderosa pine sandhills in Santa Cruz County and valley and foothill grassland habitats at elevations from 5-300 meters. The blooming period is from April through September.

The CNDDB reports eight occurrences of this species within the quads evaluated, the nearest of which is includes a portion of the southwestern corner of the Project site (**Figure 13**). This occurrence is a non-specific occurrence based on collections from 1908 to 1919 and the exact location is unknown. This species was not observed within this portion of the project site or any other portions of the survey area during surveys in 2016. However, Northern curly-leaved monardella is known to occur in other areas of the Former Fort Ord and suitable habitat is present within the unsurveyed portions of the Project site. Therefore, this species has a moderate potential to occur within the Project site.

*Woodland Woolythreads*

Woodland woolythreads is a CNPS CRPR 1B species. It is an annual herb in the Asteraceae family and blooms between March and July. This species is typically associated with openings in broadleaved upland forest, chaparral, cismontane woodland, north coast coniferous forest and valley and foothill grasslands on serpentine soils, within a range of 100-1,200 meters in elevation. This species may occur within the non-native grassland habitat on the Project site.

The CNDDB reports two occurrences of this species within the quads evaluated, the nearest of which is located approximately 5.1 miles southwest of the Project site. This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the Project site. Based on this information, woodland woolythreads has a moderate potential to within the Project site.

*Yadon's Piperia*

Yadon's piperia is a federally endangered, CNPS CRPR 1B, and HMP species. This perennial herb in the Orchidaceae family blooms from May to August and is found in closed-cone coniferous forest, maritime chaparral on sandy soils, and coastal bluff scrub at elevations from 10-510 meters. Overall, this species favors a well-drained, sandy soil substrate with podzolic conditions, and areas that retain moisture during the rainy season but are not subject to inundation (V.Yadon in litt. 2002). As in some other plant taxa, individual orchids that flower in one year may not have the necessary energy reserves to flower in the following year. As a result, an unknown proportion of a population may be dormant in any given year, thus making it difficult to track population dynamics through monitoring of population size (Wells, 1981; Rasmussen, 1995; A. Graff in litt., 2002). However, it would be expected that some percentage of a resident population would flower in any given year. As a result, while it may be difficult to track population dynamics in any given year, determining presence or absence for a specific area is not.

The CNDDB reports 22 occurrences of this species within the quads evaluated, the nearest of which is located approximately 0.9 mile north of the Project site. DD&A biologists have also found Yadon's piperia approximately 0.1 mile west of the Project site on 1st Street. This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the Project site and this species is known to occur within other portions of the Former Fort Ord. Based on this information, Yadon's piperia has a high potential to within the Project site.

*Santa Cruz Microseris*

Santa Cruz microseris is a CNPS CRPR 1B species. This annual herb in the Asteraceae family is found in broadleaved upland forest, closed cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grasslands in open areas, sometimes on serpentinite soils. The elevation range for Santa Cruz microseris is 10-500 meters and the blooming period is from April to May.

The CNDDB reports two occurrences of this species within the quads evaluated, the nearest of which is located approximately 4.6 miles south of the Project site. This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the Project site. Based on this information, Santa Cruz microseris has a moderate potential to within the Project site.

*Santa Cruz Clover*

Santa Cruz clover is a CNPS CRPR 1B species in the Fabaceae family. This annual herb is associated with broad-leaved upland forest, cismontane woodland, and margins of coastal prairie on gravelly soils, at elevations of 105-610 meters. The blooming period is from April-October.

The CNDDB reports four occurrences of this species within the quads evaluated, the nearest of which is located approximately 0.5 miles southeast of the Project site. This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the Project site. Based on this information, Santa Cruz clover has a moderate potential to within the Project site.

*Pacific Grove Clover*

Pacific Grove clover is a CNPS CRPR 1B species in the Fabaceae family. This annual herb is found in closed-cone coniferous forest, coastal prairie, meadows, seeps, and mesic areas in valley and foothill grassland at elevations of 5-120 meters. The blooming period is from April-June.

The CNDDB reports 12 occurrences of this species within the quads evaluated, the nearest of which is located approximately 4.9 miles south of the Project site. This species was not observed within the survey area during surveys in 2016; however, suitable habitat may be present within the unsurveyed portions of the Project site. Based on this information, Pacific Grove clover has a moderate potential to within the Project site.

## 4.3 Sensitive Habitats

One sensitive habitat was identified within the Project site: central maritime chaparral (which includes the central maritime chaparral mix habitats).

### 4.3.1 Central Maritime Chaparral

Central maritime chaparral habitat (**Figure 6**), including the central maritime chaparral/central coastal scrub and central maritime chaparral/coast live oak woodland mix habitats, is identified as a sensitive habitat on the CDFW's *Natural Communities List* (CDFW, 2010). Central maritime chaparral is also identified as a sensitive habitat in the HMP. Approximately 124.3 acres of central maritime chaparral habitat, including mix habitats, occurs within the Project site. No central maritime chaparral or mix habitats occur within the Near-Term Development sites.

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# 5.0 IMPACTS AND MITIGATION

## 5.1 Impact Analysis Approach

The biological analysis herein includes two levels of analysis: program-level for the Master Plan (**Section 5.2 "Impacts and Mitigation Measures – Master Plan"**), and project-level for the Near-Term Development Components (**Section 5.3 "Impacts and Mitigation Measures – Near-Term Development Components"**). Specific subsequent projects, their associated locations, and physical effects on the environment from the implementation of the proposed Master Plan are not known at this time. Thus, this analysis uses a programmatic approach to evaluating potential impacts to sensitive biological resources that may result from implementation of the proposed Master Plan, commensurate with the conceptual level of project information available and the approval being considered (i.e., CSU BOT approval of the proposed Master Plan).

A project-level approach was used to evaluate the potential impacts to sensitive biological resources that may result from implementation of the proposed Near-Term Developments, commensurate with the site- and project-specific detail available. The Proposed Master Plan Project and Mitigation Measures identified in **Section 5.2** for the Master Plan remain applicable and are not repeated. Additional mitigation measures also are included, where warranted, to respond to project-specific impacts.

### 5.1.1 HMP Species and Habitat Impact Analysis

The entire proposed Project site is located within parcels designated by the HMP as "development" and no uses beyond what is permissible by the HMP are proposed with the Project. As described above, parcels designated as "development" do not have management requirements. However, CSUMB is required to implement Borderlands requirements within the East Campus Open Space parcel and required to identify sensitive biological resources within development parcels that may be salvaged for use in restoration activities in habitat reserve areas. Through implementation of the HMP, impacts to HMP species and habitats occurring within the designated development parcels were anticipated and mitigated off campus through the establishment of habitat reserves and corridors and the implementation of habitat management requirements within habitat reserve parcels on former Fort Ord.

The HMP species known or with the potential to occur within the Project site include: Monterey spineflower, sand gilia, sandmat manzanita, Hooker's manzanita, Toro manzanita, Monterey ceanothus, seaside bird's-beak, sand-loving wallflower, Eastwood's goldenbush, Yadon's piperia, CTS, SBB, Northern California legless lizard, and Monterey ornate shrew (Appendix A). With the designated off campus habitat reserves and corridors and habitat management requirements of the HMP in place, the loss of these species associated with development in the Fort Ord area is not expected to jeopardize the long-term viability of these species and their populations on the former Fort Ord (Service, 1993). This is such because the recipients of disposed land with habitat management requirements and development restrictions designated by the HMP will be obligated to implement those specific measures through the HMP and deed covenants.

In addition to the HMP species identified, impacts to sensitive central maritime chaparral habitat are also addressed in the HMP and, therefore, impacts to this habitat are also considered mitigated through the implementation of the HMP based on the same conclusions: because the Project is: 1) only proposing

development activities within designated development parcels; 2) required to comply with the HMP; and 3) would not result in any additional impacts to HMP species and habitats beyond those anticipated in the HMP, no additional mitigation measures for these HMP species or central maritime chaparral habitat are required. Impacts to these special-status species and central maritime chaparral are considered less than significant.

The HMP, as well as the BO, require the identification of sensitive biological resources within development parcels that may be salvaged for use in restoration activities in habitat reserve areas. In addition, CSUMB is required to implement Borderlands requirements in the East Campus Open Space parcel. CSUMB is required to implement HMP requirements in accordance with the deed covenants, which apply to all parcels within the campus boundaries. Therefore, this analysis assumes that salvage of HMP species will be conducted in accordance with this requirement.

However, as described earlier in this report, the HMP does not exempt existing or future land recipients from the federal and state requirements of ESA and CESA. Of the 14 HMP species known or with the potential to occur within the Project site, there are six federal and/or state listed species that have the potential to be impacted by the Project and may require take authorization from the resource agencies (Service and/or CDFW): Monterey spineflower, federally threatened; sand gilia, federally endangered and state threatened; seaside bird's-beak, state endangered; Yadon's piperia, federally endangered; CTS, federal and state threatened; and SBB, federally endangered. Therefore, although these species are HMP species, the take of these species is prohibited under the ESA and/or CESA. Development resulting in take of these species would need to be authorized by the Service and/or CDFW through the issuance of incidental take permits from the applicable agency to avoid violation of the ESA and/or CESA.

It is also important to note that these four species are currently being considered for take coverage under a base-wide Draft HCP. The Project is included in the Draft HCP as a covered activity, and, therefore, the incidental take of these four species would be authorized under the base-wide Incidental Take Permits issued by the Service and CDFW once the HCP and IA are approved. In the event that the HCP and IA are approved prior to construction of the Project, no additional mitigation measures would be required. However, if specific projects under the proposed Master Plan are initiated prior to HCP and IA approval, implementation of the specific projects may require take authorization from the Service and/or CDFW at an individual project level to avoid violation of the ESA and/or CESA.

### 5.1.2 Applicable Project Design Features

The PDFs drawn from the Master Plan Guidelines identify numerous measures that would reduce impacts to sensitive biological resources (see CSUMB Master Plan Draft EIR Chapter 3, Project Description). The impact analysis assumes that these measures will be implemented; however, additional mitigation measures are identified to reduce impacts to sensitive biological resources identified herein to a less-than-significant level, where necessary.

### 5.1.3 Thresholds of Significance

Based on the significance criteria contained in Appendix G of the CEQA Guidelines, a project may have a significant adverse impact on the environment if it will:

(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service;

(c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

## 5.2 Impacts and Mitigation Measures – Master Plan

**Impact BIO-1: Impacts to Special-Status Species and Habitat.** *Implementation of the proposed Master Plan could result in removal of special-status plant and wildlife species and their habitat. This is a potentially significant impact that can be reduced to a less-than-significant level with the implementation of the mitigation measures identified below.*

Future development on the CSUMB campus could result in direct loss of individuals and habitat for a number of special-status wildlife species, including special-status bat species, Monterey dusky-footed woodrat, Monterey ornate shrew, American badger, Northern California legless lizard, coast horned lizard, CTS, SBB, obscure bumble bee, western bumble bee, and nesting raptors and other protected avian species. In addition, future development within the Project site could also result in direct loss of individuals and habitat for a number of special-status plant species, including Toro manzanita, Hooker's manzanita, Pajaro manzanita, sandmat manzanita, Monterey ceanothus, Fort Ord spineflower, Monterey spineflower, seaside bird's beak, Eastwood's goldenbush, sand-loving wallflower, sand gilia, Kellogg's horkelia, Point Reyes horkelia, marsh microseris, Northern curly-leaved monardella, woodland woolythreads, Yadon's piperia, Santa Cruz microseris, Santa Cruz clover, and Pacific Grove clover.

As described in the Impact Analysis Approach section above, impacts to HMP plant and wildlife species are considered less than significant. These species include: CTS, SBB, Northern California legless lizard, Monterey ornate shrew, Monterey spineflower, sand gilia, sandmat manzanita, Hooker's manzanita, Toro manzanita, Monterey ceanothus, seaside bird's-beak, sand-loving wallflower, Eastwood's goldenbush and Yadon's piperia (Appendix A). While not required to reduce a significant impact, Mitigation BIO-1.1 will be implemented to further reduce the less-than-significant impact. This measure would ensure that sensitive biological resources are identified on development sites in advance of construction and that take authorization is obtained, were needed. Per the HMP and the BO requirements in deed covenants**,** **Mitigation BIO-1.1** acknowledges that CSUMB will identify sensitive biological resources within all development parcels prior to any future construction to determine whether salvage is feasible and if so, seed and topsoil salvage would occur to support reseeding and restoration efforts on- or off-site. In addition, CSUMB is required to implement Borderlands requirements in the East Campus Open Space parcel. Implementation of these requirements are included in **Mitigation BIO-1d**, which includes measures to avoid and minimize impacts to biological resources in adjacent open space areas. Additionally, in the absence of an approved based-wide incidental take permit, Project impacts to species listed as threatened or endangered by CDFW and/or the Service may also require agency consultation and/or incidental take permits. These species include: Monterey spineflower, federally threatened; sand gilia, federally endangered and state threatened; seaside bird's-beak, state endangered; Yadon's piperia, federally endangered; CTS, federal and state threatened; and SBB, federally endangered. Therefore, although these species are HMP species, the take of these species is prohibited under the ESA and/or CESA. Impacts resulting in take of these species would need to be authorized by the Service and/or CDFW through the issuance of incidental take permits from the applicable agency to avoid violation of the ESA and/or CESA.

If a project would result in impacts to special-status species not included in the HMP, such impacts would be potentially significant and mitigation will be required. Special-status species not included in the HMP that would require mitigation include: Kellogg's horkelia, Pajaro manzanita, Fort Ord spineflower, Point Reyes horkelia, marsh microseris, Northern curly-leaved monardella, woodland woolythreads, Santa Cruz microseris, Santa Cruz clover, Pacific Grove Clover, special-status bat species, Monterey dusky-footed woodrat, American badger, coast horned lizard, western bumble bee, and obscure bumble bee (Appendix A). These species are not listed under ESA or CESA and take authorization from the Service or CDFW is not required; however, impacts to these species would be considered potentially significant under CEQA. This potentially significant impact can be reduced to a less-than-significant level with implementation of **Mitigation Measure BIO-1.2** provided below, which includes project-specific biological assessments for future development to determine presence/absence of special-status species and identification of measures necessary to avoid, minimize, and/or compensate for any identified impacts.

The MBTA protects the majority of migrating birds breeding in the U.S., regardless of their official federal or state listing status under the ESA or CESA. The law applies to the disturbance or removal of active nests occupied by migratory birds during their breeding season. It is specifically a violation of the MBTA to directly kill or destroy an occupied nest of any bird species covered by the MBTA. CDFW Code Section 3503 protects the nest and eggs of native non-game birds. Under this law, it is unlawful to take, possess, or destroy any such birds or to take, possess, or destroy the nests or eggs of any such bird. FGC Section 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Most of the birds observed or with the potential to occur within the Project site are protected under both the MBTA and FGC Section 3503, and, in addition, birds may be designated as California species of special

concern. Construction-related activities (e.g., trimming and removal of vegetation, and equipment noise, vibration, and lighting) that result in harm, injury, or death of individuals, or abandonment of an active nest is a potentially significant impact that can be reduced to a less-than-significant level with implementation of **Mitigation Measure BIO-1.3** identified below, which includes surveys to identify the presence of active nests prior to construction and measures to avoid active nests if found.

New development proposed adjacent to open space areas has the potential to adversely affect special-status species and natural communities within the open space areas. Damaging effects may include vandalism, dumping of trash, trampling, mountain bike use, equestrian use, and off-road vehicle use; runoff from adjacent streets and landscaped areas containing lawn fertilizer, pesticides, and vehicle waste (petroleum byproducts); introduction of invasive non-native species; off-trail activity resulting in habitat destruction and/or fragmentation and spread of invasive species; lights and noise from nearby development; unregulated movement of domestic animals; and a lack of barriers to special-status species that may enter developed areas, which may result in individual mortality. These adverse effects may be the result of activities occurring within development areas and indirectly affecting the adjacent habitat areas (e.g., water runoff), or result of increased public access and use of the open space areas due to the increase in local population and availability of open space recreational amenities. This is considered a potentially significant impact that can be reduced to a less-than-significant level with implementation of **Mitigation Measure BIO-1.4** provided below, which includes implementation of open space requirements.

Mitigation Measures for Impacts to Special-Status Species

Implementation of the following mitigation measures will reduce the potentially significant impacts to special-status species to a less-than-significant level. Mitigation measures may be refined as part of EIR preparation. Additionally, although impacts to HMP plant and wildlife species are considered less than significant, **Mitigation BIO-1.1** below will be implemented to further reduce the less-than-significant impact consistent with the HMP and the BO requirements in deed covenants.

**BIO-1.1:** **Project-Specific Biological Assessments (HMP Species).** The CSUMB CPD Department shall require that a biological survey of development sites be conducted by a qualified biologist to determine if the development could potentially impact HMP species of potential habitat. A report describing the results of the surveys will be provided to the CSUMB CPD Department prior to any ground disturbing activities. The report will include, but not be limited to: 1) a description of the biological conditions at the site; 2) identification of the potential for HMP species to occur or HMP species observed, if any; and 3) maps of the locations of HMP species or potential habitat, if observed.

If HMP species that do not require take authorization from the Service or CDFW are identified within the development site, salvage efforts for these species will be evaluated by a qualified biologist in coordination with CSUMB CPD Department to further reduce impacts per the requirements of the HMP and BO. Where salvage is determined feasible and proposed, seed collection should occur from plants within the development site and/or topsoil should be salvaged within occupied areas to be disturbed. Seeds should be collected during the appropriate time of year for each species by qualified biologists. The collected seeds and topsoil should be used to revegetate temporarily disturbed construction areas and reseeding and restoration efforts on- or off-site, as determined appropriate by the qualified biologist and CSUMB CPD Department.

If HMP species that require take authorization from the Service and/or CDFW are identified within the development site, the CSUMB CPD Department will comply with ESA and CESA and obtain necessary permits prior to construction.

**BIO-1.2:** **Project-Specific Biological Assessments (Non-HMP Species).** The CSUMB CPD Department shall require that a biological survey of development sites be conducted by a qualified biologist to determine if the development could potentially impact a special-status species or their habitat. A report describing the results of the surveys will be provided to the CSUMB CPD Department prior to any ground disturbing activities. The report will include, but not be limited to: 1) a description of the biological conditions at the site; 2) identification of the potential for special-status species to occur or special-status species observed, if any; 3) maps of the locations of special-status species or potential habitat, if observed; and 4) recommended mitigation measures, if applicable.

If special-status species are determined not to occur at the development site, no additional mitigation is necessary.

If special-status species are observed or determined to have the potential to occur, the project biologist shall recommend measures necessary to avoid, minimize, and/or compensate for identified impacts. Measures may include, but are not limited to, revisions to the project design and project modifications, pre-construction surveys, construction buffers, construction best management practices, monitoring, non-native species control, restoration and preservation, and salvage and relocation.

**BIO-1.3:** **Pre-Construction Surveys for Protected Avian Species.** Construction activities that may directly (e.g., vegetation removal) or indirectly (e.g., noise/ground disturbance) affect protected nesting avian species will be timed to avoid the breeding and nesting season. Specifically, vegetation and/or tree removal can be scheduled after September 16 and before January 31. Alternatively, a qualified biologist will be retained by the CSUMB CPD Department to conduct pre-construction surveys for nesting raptors and other protected avian species within 500 feet of proposed construction activities if construction occurs between February 1 and September 15. 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, surveys for nesting birds may be required to continue during construction to address new arrivals, and because some species breed multiple times in a season. The necessity and timing of these continued surveys will be determined by the qualified biologist based on review of the final construction plans and in coordination with the Service and CDFW, as needed.

If raptors or other protected avian species nests are identified during the pre-construction surveys, the qualified biologist will notify the CSUMB CPD Department and an appropriate no-disturbance buffer will be imposed within which no construction activities or disturbance shall take place (generally 500 feet in all directions for raptors; other avian species may have species-specific requirements) 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.

**BIO-1.4:** **Implement Open Space Protection Requirements.** For open space areas adjacent to the campus development, the following measures shall be implemented:

- Conduct an access assessment to identify necessary access controls. In some cases, structures including fences or other appropriate barriers may be required within the new development parcel to control access into the habitat areas. An assessment of access issues and necessary controls will be completed as part of planning for the development and submitted to the CSUMB CPD Department for review and approval, prior to development.

- Signs, interpretive displays, trailhead markers, or other information will be installed and maintained at identified urban/wildland interface that illustrate the importance of the adjacent habitat area and prohibit trespass, motor vehicle entry, dumping of trash or yard wastes, pets off-leash, capture or harassment of wildlife, impacts to special-status species, and other unauthorized activities.

- Incorporate non-native species control features into site design. Detention ponds or other water features associated with new development will be sited as far from the urban/wildland interface as possible. Suitable barriers will be located between these features and the habitat area boundary to prevent these features from becoming "sinks" for special-status wildlife species, as well as sources for invasive non-natives that could then move into the adjacent habitat area.

  If detention ponds or other waterbodies must be located at the urban/wildland interface, a specific management program addressing control of non-native animals (e.g., bullfrogs) must be prepared and submitted for review and approval by the CSUMB CPD Department, prior to development.

- Landscaping within the areas adjacent to open space areas will consist of native or non-native plant species that will not colonize reserve areas in the former Fort Ord

outside the campus boundaries. Any landscaping or replanting required for the project will not use species listed as noxious by the CDFA. All landscape plans will be reviewed by the CSUMB CPD Department.

- Limit artificial lighting at the urban/wildland interface. Outdoor lighting associated with new development will be low intensity, focused, and directional to preclude night illumination of the adjacent habitat area. Outdoor lighting will be placed as far from the urban/wildland interface as possible given safety constraints. Facilities such as ball parks and fields that require high intensity night lighting (i.e., flood lights) will be sited as far from the urban/wildland interface as possible. High-intensity lighting facing the habitat areas will be directional and as low to the ground as possible to minimize long distance glare.

- Develop and implement erosion control measures to prevent sediment transport into and within habitat areas. Erosion control measures will be required where vegetation removal or soil disturbance occurs as a result of all facility construction and maintenance, including trail, road, or fuelbreak construction/maintenance, access controls, or stormwater management, consistent with existing stormwater management plans. Specific measures to be implemented shall be detailed in an erosion control plan. The erosion control plan will include, at a minimum, the following measures.
    - Re-contour eroded areas.
    - Maintain and grade areas along the reserve perimeter and main roads as appropriate to avoid washouts. Gullies will be repaired as needed.
    - Install drainage features such as outlet ditches, rolling dips (similar to waterbars), and berms as needed to facilitate the proper drainage of storm runoff.
    - Add soil amendments such as fertilizers and gypsum for designated development areas only.
    - Prevent sediments from entering basins or swales that could be used by HCP species during erosion control activities.
    - Design and conduct erosion control measures to minimize the footprint of the structures and repairs, and design structures to minimize potential impacts on CTS that may be moving between breeding and upland habitats.
    - Use weed-free mulch, weed-free rice, sterile barley straw, or other similar functioning product where needed for erosion control. Seed native plant species to stabilize soils disturbed by erosion control activities and prevent colonization by invasive weeds. Incorporate native plant species to the extent practicable.

**Impact BIO-2: Impacts to Riparian Habitat, State or Federally Protected Wetlands, or other Sensitive Natural Community.** *Implementation of the proposed Master Plan could result in removal of riparian habitat or other sensitive community as identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service, or state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. This is a potentially significant impact that can be reduced to a less-than-significant level with implementation of the mitigation measures below.*

Vegetation types occurring within the Project site that are listed as sensitive on the CDFW's *Natural Communities List* (CDFW, 2010) include central maritime chaparral and central maritime chaparral mix types. Approximately 124.3 acres of central maritime chaparral (including central maritime chaparral mix types) are present within the Project site. The proposed Master Plan does not site new development in the areas where central maritime chaparral is located; however, these sensitive vegetation types could be impacted if trail or other similar development occurs in the East Campus Housing or East Campus Open Space areas.

As described in the Impact Analysis Approach, the implementation of the HMP mitigates for the loss of central maritime chaparral by preserving the same habitat within the habitat reserve areas on the former Fort Ord. Therefore, impacts to central maritime chaparral are considered less than significant with the implementation of the HMP.

Although not observed on the Project site during the surveys in 2016 and 2017, there is a low potential for future establishment of riparian habitat, state or federally protected wetlands, and/or other sensitive communities within the campus boundaries. Development that occurs within or adjacent to sensitive natural communities may result in a significant impact. The presence of sensitive natural communities on a development site must be evaluated prior to approval of the development. Any impacts to sensitive natural communities are considered a significant impact that can be reduced to a less-than-significant level with implementation of **Mitigation Measure BIO 1.5** identified below, which includes project-specific biological assessments for future development to determine presence/absence of sensitive habitats and identification of measures necessary to avoid, minimize, and/or compensate for any identified impacts.

Mitigation Measures for Impacts to Sensitive Natural Communities

Implementation of the following mitigation measure will reduce the potentially significant impacts to sensitive natural communities to a less-than-significant level. Mitigation measures may be refined as part of EIR preparation.

**BIO-1.5:** **Project-Specific Sensitive Natural Community Assessments.** The CSUMB CPD Department shall require that any development that could potentially impact a sensitive natural community shall be required to conduct a survey of the site by a qualified biologist. A report describing the results of the survey will be provided to the CSUMB CPD Department prior to any ground disturbing activities. The report will include, but is not limited to: 1) a description of the biological conditions at the site; 2) identification of the potential for sensitive habitats or sensitive habitats observed, if any; 3) maps of the locations of sensitive habitats or potential sensitive habitat, if observed; and 4) recommended avoidance and minimization measures, if applicable. If a potential state or

federally protected wetland is newly identified to be present on the site, a formal wetland delineation will be conducted in accordance to ACOE methodology.

If a proposed development cannot avoid impacts to sensitive habitat areas, the CSUMB CPD Department shall require a compensatory habitat-based mitigation to reduce impacts. Compensatory mitigation must involve the preservation, restoration, or purchase of off-site mitigation credits for impacts to sensitive habitats. Mitigation must be conducted in-kind or within an approved mitigation bank in the region. The specific mitigation ratio for habitat-based mitigation will be determined through consultation with the appropriate agency (i.e., CDFW, Service, or ACOE) on a project-by-project basis.

Impacts to sensitive habitats, including but not limited to, vernal pools, streambeds, waterways, or riparian habitat, protected under Section 1600 of Fish and Wildlife Code and Sections 401 and 404 of the CWA, require regulatory permitting to reduce impacts. Acquisition of permits and implementation of the approved mitigation strategy would ensure impacts are fully mitigated and "no net loss" of wetland habitat would occur.

**Impact BIO-3: Impacts to Movement of Wildlife.** *Implementation of the proposed Master Plan would not result in interference with wildlife migration or corridors. No impact will occur.*

Wildlife movement corridors are pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or man-made factors, such as urbanization. The fragmentation of natural habitat creates isolated "islands" of vegetation that may not provide sufficient area or resources to accommodate sustainable populations for a number of species, and therefore, adversely affect both genetic and species diversity. Corridors often partially or largely mitigate the adverse effects of fragmentation by: 1) allowing animals to move between remaining habitats to replenish depleted populations and increase the gene pool available; 2) providing escape routes from fire, predators, and human disturbances, thus, reducing the risk that catastrophic events (e.g., fire and disease) will result in population or species extinction; and 3) serving as travel paths for individual animals moving throughout their home range in search of food, water, mates, and other needs, or for dispersing juveniles in search of new home ranges.

The East Campus Open Space connects with other planned habitat areas to the east, south, and north and is considered an important area for wildlife movement. The majority of the area is proposed to be retained in Open Space and the remainder of the area is designated as a Development Reserve and is not proposed for development as part of the proposed Master Plan, thus maintaining wildlife movement through this area. No other areas of the campus contain significant open space areas that would support wildlife movement. Therefore, no impacts to movement of wildlife would result from implementation of the proposed Master Plan.

Mitigation Measures for Impacts to Movement of Wildlife

As no impacts to movement of wildlife resulting from implementation of the proposed Master Plan would occur, no additional mitigation measures are required.

**Impact BIO-4: Conflicts with Local Biological Policies and Ordinances.** *Implementation of the proposed Master Plan would not conflict with local policies and ordinances protecting biological resources, including tree preservation policies. This is a less-than-significant impact.*

Implementation of the proposed Master Plan may result in impacts to trees within the campus boundaries. However, CSUMB has established a tree restoration program for impacts to coast live oak and other trees resulting from projects that take place on campus. This program requires that for every tree greater than 4" dbh removed, a minimum of two coast live oak trees would be replanted in the identified restoration area on campus. The implementation of this program is required for all development that would result in impacts to trees at least 4" dbh. The replanting specifications would be required in subsequent project plans and permits. Proposed PDF OS-4, continues and expands this program to maximize the health and stability of existing and replacement trees. Therefore, implementation of the proposed Master Plan would not conflict with the CSUMB tree restoration program and the impact would be less than significant.

Mitigation Measures for Impacts Related to Conflict with Local Policies

As impacts related to conflicts with local policies would be less than significant, no additional mitigation measures are required.

**Impact BIO-5: Conflicts with any Adopted HCP, NCCP, or Other Approved Conservation Plan.** *Implementation of the proposed Master Plan would not conflict with any adopted HCP, NCCP, or other approved conservation plan. No impact will occur.*

As described in **Section 3.5.3**, the Project site is not located within an approved HCP or NCCP area. However, the Project site is located within the approved Fort Ord HMP area. The entire Project site is located within parcels designated by the HMP as "development." As described above in the Regulatory section, parcels designated as "development" do not have habitat requirements. Additionally, a portion of the campus, along the southeastern boundary of the East Campus Open Space parcel (Army parcel number S1.3.2), is designated in the HMP as having Borderlands requirements. Borderlands are designated development parcels or habitat reserve parcels at the urban/wildland interface where specific design considerations and management activities are required to minimize effects of development on HMP species and natural communities.

CSUMB is required to implement HMP requirements in accordance with the deed covenants, which apply to all parcels within the campus boundaries. Therefore, although impacts to HMP plant and wildlife species are considered less than significant, **Mitigation BIO-1.1** will be implemented to further reduce the less-than-significant impact Therefore, implementation of the proposed Master Plan would not conflict with the approved HMP and no impact would occur.

Mitigation Measures for Impacts Related to Conflict with an Adopted HCP

As no impacts related to conflicts with an adopted HCP would occur, no additional mitigation measures are required. However, although impacts to HMP plant and wildlife species are considered less than significant, **Mitigation BIO-1.1** (see above) will be implemented to further reduce the less-than-significant impact consistent with the HMP and the BO requirements in deed covenants.

## 5.3 Impacts and Mitigation Measures – Near-Term Development Components

**Impact BIO-1: Impacts to Special-Status Species and Habitat.** *Implementation of the proposed near-term development components could result in removal of special-status plant and wildlife species and their habitat. This is a potentially significant impact that can be reduced to a less-than-significant level with the implementation of the mitigation measures identified below.*

The proposed near-term development components are generally located on disturbed and mostly developed sites. However, the construction of the near-term development components may result in direct loss of individuals and habitat for a number of special-status wildlife species, including special-status bat species, Monterey dusky-footed woodrat, SBB, Northern California legless lizard, and nesting raptors and other protected avian species. In addition, construction of the near-term development components may also result in direct loss of individuals and habitat for Monterey spineflower. The known and potential special-status species and habitat within each of the near-term development component sites are described below.

1. Near-Term Development Component #1 (Student Housing Phase III)

   This development site is primarily developed, but the site does contain some suitable habitat for the Northern California legless lizard. In addition, trees within and adjacent to the site may provide nesting habitat for raptors, migratory birds, and other protected avian species.

2. Near-Term Development Component #2 (Academic IV Building)

   This development site contains mostly developed areas with some ruderal/disturbed areas and would require building demolition. Four dune buckwheat individuals were identified within this site. These areas may provide habitat for this species (**Figure 12**). Therefore, this species has a moderate potential to occur within the Project site. In areas not surveyed (i.e., the staging area, see Figure 6), the ruderal/disturbed habitat may provide suitable habitat for Northern California legless lizard. In addition, mature trees and existing buildings within and adjacent to the site may provide nesting habitat for raptors, migratory birds, and other protected avian species and Townsend's big-eared bat. No special-status plant species were observed within the development site and staging area, and none are expected to occur in these areas.

3. Near-Term Development Component #3 (Student Recreation Center)

   The ruderal/disturbed habitat within the site may provide suitable habitat for Northern California legless lizard. In addition, mature trees and existing buildings within and adjacent to the site may provide nesting habitat for raptors, migratory birds, and other protected avian species, as well as the Townsend's big-eared bat and hoary bat. Although the hoary bat may roost and forage within some of the oak trees during the winter, they are not known to breed in California. Therefore, impacts to hoary bat are unlikely. The oak trees may provide suitable habitat for the Monterey dusky-footed woodrat. Additionally, approximately 0.01 acre of Monterey spineflower was observed within the development site.

4. Near-Term Development Component #4 (Student Housing Phase IIB)

   This development site is primarily developed with some ruderal/disturbed areas. The ruderal/disturbed habitat within the site may provide suitable habitat for Northern California legless lizard. In addition, mature trees within and adjacent to the site may provide nesting habitat for raptors, migratory birds, and other protected avian species, as well as the Townsend's big-eared bat and hoary bat. However, for the same reasons as identified for Near-Term Development #3, impacts to hoary bat are unlikely.

5. Near-Term Development Component #5 (Academic V Building)

   This development site is completely developed; however, trees within and adjacent to the site may provide nesting habitat for raptors, migratory birds, and other protected avian species.

As described in the Impact Analysis Approach section above, impacts to HMP plant and wildlife species are considered less than significant unless take authorization is required from the Service and/or CDFW. Since impacts to the Northern California legless lizard and Monterey spineflower would not require take authorization from the Service and/or CDFW, no additional mitigation is required for these two species. However, near-term development component #2 has the potential to impact SBB habitat, which would require take authorization from the Service to avoid violation of ESA. Implementation of **Mitigation Measure BIO-1.6** identified below would reduce the potential impacts to SBB to a less-than-significant level by avoiding SBB habitat if possible, and if not possible, requiring compliance with ESA in advance of construction.

Per the discussions above, near-term development components #1-5 have the potential to impact nesting habitat for raptors, migratory birds, and other protected avian species. Implementation of **Mitigation Measure BIO-1.3** identified in **Section 5.2** above would reduce the potential impacts to nesting raptors, migratory birds, and other protected avian species to a less-than-significant level. No additional project-specific mitigation is required.

Near-term development components #3, 4, and 5 have the potential to impact Townsend's big-eared bat. Implementation of **Mitigation Measures BIO-1.2** and **BIO-1.4** identified above and **Mitigation Measure BIO-1.7** identified below would reduce the potential impacts to Townsend's big-eared bat to a less-than-significant level by conducting pre-constructions survey and implementing avoidance and minimization measures if any Townsend's big-eared bats or their roosts are found. No additional project-specific mitigation is required.

Near-term development component #3 has the potential to impact Monterey dusky-footed woodrat. Implementation of **Mitigation Measures BIO-1.2** and **BIO-1.4** identified above and **Mitigation Measure BIO-1.8** identified below would reduce the potential impacts to Monterey dusky-footed woodrat to a less-than-significant level by conducting pre-constructions survey and implementing avoidance and minimization measures if any Monterey dusky-footed woodrats or their nests are found. No additional project-specific mitigation is required.

Mitigation Measures for Impacts to Special-Status Species

Implementation of **Mitigation Measures BIO-1.2** through **BIO-1.4** and the following mitigation measures will reduce the potential impacts to special-status species associated with the near-term development components to a less-than-significant level.

**BIO-1.6:** **Smith's Blue Butterfly Habitat Avoidance/ESA Compliance.** SBB habitat (i.e. dune buckwheat) shall be avoided to the greatest extent feasible. SBB habitat that will not be impacted by the project shall be protected prior to and during construction to the maximum possible through the use of exclusionary fencing and/or flagging. A biological monitor will supervise the installation of protective fencing/flagging and monitor at least once per week until construction is complete to ensure that the protective fencing/flagging remains intact.

If all SBB habitat is avoided, no additional mitigation is necessary. If the project will impact SBB habitat, CSUMB will comply with the FESA and obtain necessary authorizations prior to construction due to the assumed presence of the Federally listed SBB. CSUMB shall be required to initiate consultation with the Service to receive take authorization. Take authorization would be granted through the issuance of an individual, project-specific incidental take permit. Mitigation for take likely would require restoration at a 3:1 ratio of impacted habitat. Dune buckwheat plants and/or seed salvage may also be required prior to ground disturbing activities.

**BIO-1.7:** **Pre-Construction Bat Assessment and Surveys.** To avoid and reduce impacts to Townsend's big-eared bat, a qualified bat specialist or wildlife biologist shall conduct site surveys during the reproductive season (May 1 through September 15) to characterize bat utilization of the site and potential species present (techniques utilized to be determined by the biologist) prior to structure removal. Based on the results of these initial surveys, one or more of the following will occur:

- If it is determined that bats are not present at the site, no additional mitigation is required.
- If it is determined that bats are utilizing the site and may be impacted by the development, pre-construction surveys will be conducted no more than 30 days prior to any structure removal. If, according to the bat specialist, no bats or bat signs are observed in the course of the pre-construction surveys, structure removal may proceed. If bats and/or bat signs are observed during the pre-construction surveys, the biologist will determine if disturbance will jeopardize the roost (i.e., maternity, day, or night).
- If a single bat and/or only adult bats are roosting, removal of buildings may proceed after the bats have been safely excluded from the roost. Exclusion techniques will be determined by the biologist and depend on the roost type; the biologist will prepare a mitigation plan for provision of alternative habitat to be approved by the CDFW.
- If an active maternity roost is detected, avoidance is preferred. Work in the vicinity of the roost (buffer to be determined by biologist) will be postponed until

the biologist monitoring the roost(s) determines that the young are no longer dependent on the roost. The monitor will ensure that all bats have left the area of disturbance prior to initiation of structure removal. If avoidance is not possible and a maternity roost must be disrupted, a depredation permit would be required prior to removal of the roost.

**BIO-1.8:** **Pre-Construction Monterey Dusky-Footed Woodrat Surveys.** Not more than thirty (30) days prior to the start of construction (including vegetation removal), a qualified biologist shall conduct a survey of the development sites to locate existing Monterey dusky-footed woodrat nests. All Monterey dusky-footed woodrat nests shall be mapped and flagged for avoidance. Graphics depicting all Monterey dusky-footed woodrat nests shall be provided to CSUMB and the construction contractor. Any Monterey dusky-footed woodrat nests that cannot be avoided shall be relocated according to the following procedures.

Each active nest shall be disturbed by the qualified biologist to the degree that the woodrats leave the nest and seek refuge elsewhere. After the nests have been disturbed, the nest sticks shall be removed from the impact areas and placed outside of areas planned for impacts. Nests shall be dismantled during the non-breeding season (between October 1 and December 31), if possible. If a litter of young is found or suspected, nest material shall be replaced and the nest left alone for 2-3 weeks, after this time the nest will be rechecked to verify that young are capable of independent survival before proceeding with nest dismantling.

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**Impact BIO-2: Impacts to Riparian Habitat, State or Federally Protected Wetlands, or other Sensitive Natural Community.** *Implementation of the proposed near-term development components would not result in removal of riparian habitat or other sensitive community as identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service, or state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. No impact would occur.*

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The proposed near-term development components are generally located on sites that have been disturbed and are mostly developed. No sensitive communities occur within the near-term development component sites; therefore, no impacts would occur.

**Impact BIO-3: Impacts to Movement of Wildlife.** *Implementation of the proposed near-term development components would not result in interference with wildlife migration or corridors. No impacts would occur.*

The proposed near-term development components are generally located on sites that have been disturbed and are mostly developed. These sites do not contain significant wildlife habitat used for migration or movement corridor; therefore, no impacts would occur.

**Impact BIO-4: Conflicts with Local Biological Policies and Ordinances.** *Implementation of the proposed near-term development components would not conflict with local policies and ordinances protecting biological resources, including tree preservation policies. This is a less-than-significant impact.*

Implementation of the proposed near-term development component #3 (Student Recreation Center) may result in impacts to trees within the campus boundaries; other near-term developments would not result in tree removal. However, CSUMB has established a tree restoration program for impacts to coast live oak and other trees resulting from projects that take place on campus. This program requires that for tree 4" dbh or greater removed, a minimum of two coast live oak trees would be replanted in the identified restoration area on campus. The implementation of this program is required for all projects that would result in impacts to trees. Further, proposed PDF OS-4 continues and expands this program to maximize the health and stability of existing and replacement tree species, including replacement of all removed trees 4" dbh or greater at a minimum 2:1 ratio. Therefore, as a feature of the project design, two coast live oak trees would be replanted for every tree greater than 4" dbh removed. The replanting specifications would be required in final project plans. Therefore, the potential to conflict with the CSUMB tree restoration program is less than significant.

**Impact BIO-5: Conflicts with any Adopted HCP, NCCP, or Other Approved Conservation Plan.** *Implementation of the proposed near-term development components would not conflict with any adopted HCP, NCCP, or other approved conservation plan. No impact will occur.*

As described in **Section 3.5.3**, the campus is not located within an approved HCP or NCCP area. However, the campus is located within the approved Fort Ord HMP area. All of the proposed near-term development component sites are located within parcels designated by the HMP as "development." CSUMB is required to implement HMP requirements, applicable to all parcels within the campus boundaries, which is acknowledged and described in Mitigation BIO-1.1 (see Impact BIO-1). Therefore, as described above in **Section 5.2**, implementation of the proposed near-term development components would not conflict with the approved HMP and no impact would occur.

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# APPENDIX A.

Table of Special-Status Species Known or With the Potential to Occur in the vicinity of the Monterey Downs Specific Plan Project Site

(CNDDB Rare Plant Report from the Marina quadrangle and the six surrounding quadrangles [Monterey, Moss Landing, Prunedale, Salinas, Seaside, and Spreckels])

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# Special-Status Species Known or With the Potential to Occur in the Vicinity of the CSUMB Proposed Master Plan Project

| Species | Status (Service/ CDFW/CNPS) | General Habitat | Potential Occurrence within Project Vicinity |
|---|---|---|---|
| **MAMMALS** | | | |
| *Corynorhinus townsendii* 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. | **Moderate:** The abandoned buildings within the Project site may provide low quality day roost or maternity roost habitat. Additionally, this species may forage over all other areas of the Project site. The nearest CNDDB occurrence is approximately 1.2 miles east of the Project site within the East Garrison development area. |
| *Enhydra lutris nereis* Southern sea otter | FT / CFP / -- | Found in nearshore marine habitats environments of California from Ano Nuevo to Point Sal. Often associated with giant kelp and bull kelp, these opportunistic foragers eat mainly abalones, sea urchins, crabs, and clams. | **Not Present:** No suitable habitat present within Project site. |
| *Lasiurus cinereus* Hoary bat | -- / CNDDB / -- | Prefers open habitats or habitat mosaics with access to trees for cover and open areas or edge for feeding. Generally roost 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. | **Moderate:** May roost within some of the trees within the oak woodland habitat and may forage over all undeveloped areas of the Project site. However, while the species may utilize the Project site as winter grounds, they are unlikely to occur during the summer months and it is unlikely that birth and rearing occur on the site. The nearest CNDDB occurrence is approximately 5.0 miles southwest of the Project site. |
| *Neotoma macrotis luciana* Monterey dusky-footed woodrat | -- / CSC / -- | Forest and oak woodland habitats of moderate canopy with moderate to dense understory. Also occurs in chaparral habitats. | **Present:** Numerous woodrat nests were observed throughout the Project site. This species is known to occur throughout Fort Ord. Therefore, this species is assumed present within the Project site. |
| *Reithrodontomys megalotis distichlis* Salinas harvest mouse | -- / CNDDB / -- | 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. | **Unlikely:** No suitable habitat present within Project site. |
| ***Sorex ornatus salarius** * **Monterey ornate shrew** | -- / CSC / -- | Mostly moist or riparian woodland habitats and within chaparral, grassland, and emergent wetland habitats where there is a thick duff or downed logs. | **High:** Suitable habitat is present within the Project site. The CNDDB does not report any occurrences of this species; however Figure B-18 in the HMP identifies the Project site as containing potential habitat for this species and recent studies on the Fort Ord Natural Reserve have identified Monterey ornate shrew in the same habitat types on the former Fort Ord. |
| *Taxidea taxus* 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. | **High:** The CNDDB reports one occurrence of this species within the eastern portion of the Project site, near Inter-Garrison Rd. Suitable habitat for this species is present within the non-native grassland habitat on the Project site. |
| **BIRDS** | | | |
| *Agelaius tricolor* Tricolored blackbird (nesting colony) | -- / SC&CSC / -- | Nest in colonies in dense riparian vegetation, along rivers, lagoons, lakes, and ponds. Forages over grassland or aquatic habitats. | **Unlikely:** No suitable nesting habitat is present within the Project site. |

| Species | Status (Service/ CDFW/CNPS) | General Habitat | Potential Occurrence within Project Vicinity |
|---|---|---|---|
| *Asio flammeus*<br>Short-eared owl<br>(nesting) | -- / 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. | **Unlikely:** No suitable nesting habitat is present within the Project site. |
| *Athene cunicularia*<br>Burrowing owl<br>(burrow sites & some wintering sites) | -- / 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. | **Moderate:** Marginally suitable habitat is present within the Project site within the non-native grassland habitat and some portions of the ruderal areas. The nearest CNDDB occurrence is 0.6 miles north of the Project site. |
| *Brachyramphus marmoratus*<br>Marbled murrelet | 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. Require dense old growth forests of redwood and/or Douglas-fir in higher elevations for breeding and nesting. | **Not Present:** No suitable habitat is present within the Project site. |
| *Buteo regalis*<br>Ferruginous hawk<br>(wintering) | -- / CNDDB / -- | 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. | **Low:** Only poor quality wintering habitat present within Project site. No breeding habitat present within Project site. The nearest CNDDB occurrence is 2.0 miles north of the Project site at the Armstrong Ranch. |
| ***Charadrius nivosus***<br>**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. | **Not Present:** No suitable habitat present within Project site. |
| *Cypseloides niger*<br>Black swift<br>(nesting) | -- / 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. | **Not Present:** No suitable nesting habitat present within Project site. |
| *Elanus leucurus*<br>White-tailed kite<br>(nesting) | -- / CFP / -- | Open groves, river valleys, marshes, and grasslands. Prefer such area with low roosts (fences etc.). Nest in shrubs and trees adjacent to grasslands. | **High: S**uitable nesting and foraging habitat present within Project site. The nearest CNDDB occurrence is 10 miles north of the Project site; however, this species has also been observed by DD&A biologists 0.5 mile east of the Project site, on the north side of Reservation Road. |
| *Empidonax traillii extimus*<br>Southerwestern willow flycatcher | FE / SE /-- | Dense willow thickets are required for nesting and roosting. Low, exposed branches are used for singing posts and hunting perches. Open, cup nest is placed in an upright fork of willow or other shrub, or occasionally on a horizontal limb. Most numerous where extensive thickets of low, dense willows edge on wet meadows, ponds, or backwaters. | **Not Present:** No suitable habitat present within Project site. |
| *Eremophila alpestris actia*<br>California horned lark | -- / CNDDB / -- | 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. | **High:** Suitable habitat is present within the non-native grassland habitat on the Project site. The nearest CNDDB occurrence is 1.0 mile from the Project site. This species has also been observed by DD&A biologists 3.5 miles south of the Project site, within the Former Fort Ord Impact Area. |

| Species | Status (Service/ CDFW/CNPS) | General Habitat | Potential Occurrence within Project Vicinity |
|---|---|---|---|
| *Falco mexicanus*<br>Prairie falcon<br>(nesting) | -- / CNDDB / -- | Associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areasNests in open terrain with canyons, cliffs, escarpments, and rock outcrops. | **Low:** Although this species may forage within the Project site, no suitable nesting habitat present. |
| *Falco peregrinus anatum*<br>American peregrine falcon | -- / CFP / -- | Forages for other birds over a variety of habitats. Breeds primarily on rocky cliffs. | **Low:** Although this species may forage within the Project site, no suitable nesting habitat present. |
| *Gymnogyps californianus*<br>California condor | FE / SE /-- | Roosting sites in isolated rocky cliffs, rugged chaparral, and pine covered mountains 2000-6000 ft 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, and potholes. | **Not Present:** No suitable habitat present within Project site. |
| *Laterallus jamaicensis coturniculus*<br>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. | **Not Present:** No suitable habitat present within Project site. |
| *Pelecanus occidentalis californicus*<br>California brown pelican<br>(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. | **Not Present:** No suitable habitat present within Project site. |
| *Rallus obsoletus obsoletus*<br>California Ridgeway's rail | FE / SE&CFP / -- | Salt and brackish marshes. | **Not Present:** No suitable habitat present within Project site. |
| *Riparia riparia*<br>Bank swallow<br>(nesting) | -- / ST / -- | Nest colonially in sand banks. Found near water; fields, marshes, streams, and lakes. | **Not Present:** No suitable habitat present within Project site. |
| *Sterna antillarum browni*<br>California least tern | FE / SE /-- | Prefers undisturbed nest sites on open, sandy/gravelly shores near shallow-water feeding areas in estuaries. Sea beaches, bays, large rivers, bars. | **Not Present:** No suitable habitat present within Project site. |
| *Vireo bellii pusillus*<br>Least Bell's vireo | FE / SE /-- | Riparian areas and drainages. Primarily found in Southern California. | **Not Present:** No suitable habitat present within Project site. |
| **REPTILES AND AMPHIBIANS** | | | |
| ***Ambystoma californiense***<br>**California tiger salamander** | FT / ST /-- | Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Need underground refuges and vernal pools or other seasonal water sources. | **Present:** No aquatic breeding habitat is present within the Project site; however, potential upland habitat (i.e., suitable habitat within 2.2 km of known and potential breeding ponds) is present. The nearest CNDDB occurrence is within the eastern portion of the Project site. Additionally, DD&A biologists encountered this species immediately adjacent to the Project site, and relocated the individual to the nearest suitable upland habitat, which was located within the Project site. |

| Species | Status (Service/ CDFW/CNPS) | General Habitat | Potential Occurrence within Project Vicinity |
|---|---|---|---|
| *Ambystoma macrodactylum croceum*<br>Santa Cruz long-toed salamander | FE / SE&CFP /-- | Preferred habitats include ponderosa pine, montane hardwood-conifer, mixed conifer, montane riparian, red fir and wet meadows. Occurs in a small number of localities in Santa Cruz and Monterey Counties. Adults spend the majority of the time in underground burrows and beneath objects. Larvae prefer shallow water with clumps of vegetation. | **Unlikely:** Project site is outside of the known range for this species. |
| ***Anniella pulchra***<br>**Northern California legless lizard**<br>(includes *A. p. nigra* as recognized by the HMP) | -- / CSC / -- | 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. | **High:** Suitable habitat is present within the Project site. The CNDDB an occurrence that includes the eastern portion of the Project site and an occurrence immediately north of the western portion of the Project site. This species has been observed in several areas of Fort Ord. |
| *Emys marmorata*<br>Western pond turtle | UR / CSC / -- | 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. | **Not Present:** No suitable habitat present within Project site. |
| *Phrynosoma blainvillii*<br>Coast horned lizard | -- / CSC / -- | Associated with open patches of sandy soils in washes, chaparral, scrub, and grasslands. | **High:** Suitable habitat is present within the coastal scrub, maritime chaparral, grassland, and ruderal habitats within the Project site. This species is known to occur and has been observed by DD&A biologists throughout Fort Ord. The CNDDB also reports an occurrence of this species within the northeastern portion of the Project site. |
| *Rana boylii*<br>Foothill yellow-legged frog | -- / SC / -- | 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. | **Unlikely:** Project site is outside of the known range for this species. |
| ***Rana draytonii***<br>**California red-legged frog** | FT / CSC / -- | 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. | **Unlikely:** No breeding habitat is present within the Project site; however, portions of the Project site are within 1.6 km of potential breeding ponds. The nearest CNDDB occurrence is approximately 3.0 miles north of the Project site at the Salinas River. The nearest known breeding pond on Fort Ord is 4.7 miles, and the nearest potential breeding pond is 0.4 mile from the Project site. Although the species has the potential to spread to the ponds near the Project site, the potential for CRLF to occur within the Project site at this time is unlikely based on the proximity to the known breeding locations. |
| *Taricha torosa torosa*<br>Coast Range newt<br>(Monterey County south only) | -- / CSC / -- | Occurs 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 reservoir. | **Low:** No suitable breeding habitat within the Project site. Although suitable upland habitat for this species is present within the Project site, this species has only been documented to breed within one pond on Fort Ord, located approximately 2.2 miles south of the Project site within the Former Fort Ord Impact Area. The nearest CNDDB occurrence is approximately 10 miles from the Project site at Palo Corona Regional Park. |
| *Thamnophis hammondii*<br>Two-striped garter snake | -- / CSC / -- | Associated with permanent or semi-permanent bodies of water bordered by dense vegetation in a variety of habitats from sea level to 2400m elevation. | **Not Present:** No suitable habitat present within Project site. |

| Species | Status (Service/ CDFW/CNPS) | General Habitat | Potential Occurrence within Project Vicinity |
|---|---|---|---|
| **FISH** | | | |
| *Eucyclogobius newberryi* Tidewater goby | FE / CSC / -- | Brackish water habitats, found in shallow lagoons and lower stream reaches. | **Not Present:** No suitable habitat present within Project site. |
| *Oncorhynchus mykiss irideus* Steelhead (South/Central California Coast ESU) | FT / -- / -- | Coastal perennial and near perennial streams, with suitable spawning and rearing habitat and no major barriers. | **Not Present:** No suitable habitat present within Project site. |
| *Spirinchus thaleichtys* Longfin smelt | FC / ST / -- | Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefers salinities of 15-30 PPT, but can be found in completely freshwater to almost pure seawater. | **Not Present:** No suitable habitat present within Project site. |
| **INVERTEBRATES** | | | |
| *Bombus caliginosus* Obscure bumble bee | -- / CNDDB / -- | 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:** Marginally suitable habitat is present within the Project site within the non-native grassland habitat and some portions of the ruderal areas. The nearest CNDDB occurrence is 5.8 miles west of the Project site. |
| *Bombus occidentalis* Western bumble bee | -- / CNDDB / -- | Occurs in open grassy areas, urban parks, urban gardens, chaparral, and meadows. This species generally nest underground. | **Moderate:** Marginally suitable habitat is present within the Project site within the non-native grassland and chaparral habitats, and some portions of the ruderal areas. The nearest CNDDB occurrence is 4.6 miles east of the Project site. |
| *Brachninecta lynchi* Vernal pool fairy shrimp | FT / -- /-- | Require ephemeral pools with no flow. Associated with vernal pools/grasslands from near Red Bluff (Shasta County), through the central valley, and into the south Coast Mountains region. | **Not Present:** No suitable habitat present within Project site. |
| *Coelus globosus* Globose dune beetle | -- / CNDDB / -- | Coastal dunes. These beetles are primarily subterranean, tunneling through sand underneath dune vegetation. | **Not Present:** No suitable habitat present within Project site. |
| *Danaus plexippus* Monarch butterfly | -- / CNDDB / -- | 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. | **Low:** Although a small grove of Eucalyptus trees are present within the western portion of the Project site, no occurrences of this species are known to use these trees. The density of the Eucalyptus trees are unlikely to provide suitable wintering habitat for this species, and While a few individuals may occur within the Project site during the overwintering season, aggregations of monarch butterfly are unlikely to occur. |
| ***Euphilotes enoptes smithi*** **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 *Eriogonum latifolium* and *E. parvifolium*. | **Moderate:** *E. parvifolium* is present at three locations within the Project site and may occur in other unsurveyed areas. This species may provide suitable habitat for Smith's blue butterfly. |
| ***Linderiella occidentalis*** **California linderiella** | -- / CNDDB / -- | Ephemeral ponds with no flow. Generally associated with hardpans. | **Unlikely:** No suitable habitat present within Project site. |
| *Tryonia imitator* Mimic tryonia (California brackishwater snail) | -- / CNDDB / -- | Inhabits coastal lagoons, estuaries and salt marshes. Found only in permanently submerged areas in a variety of sediment types. Tolerant of a wide range of salinities. | **Not Present:** No suitable habitat present within Project site. |

| Species | Status (Service/ CDFW/CNPS) | General Habitat | Potential Occurrence within Project Vicinity |
|---|---|---|---|
| **PLANTS** | | | |
| *Agrostis lacuna-vernalis*<br>Vernal pool bent grass | -- / -- / 1B | Vernal pools (mima mounds) at elevations of 115-145 meters. Annual herb in the Poaceae family; blooms April-May. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site. |
| *Allium hickmanii*<br>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. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site. |
| ***Arctostaphylos hookeri* ssp. *hookeri***<br>**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. | **Moderate:** Not identified within survey area in 2016; however, this species may occur within the Project site, outside of the survey area. |
| ***Arctostaphylos montereyensis***<br>**Toro mazanita** | -- / -- / 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. | **Present:** Identified within survey area in 2016. May also occur within the Project site, outside of survey area. |
| *Arctostaphylos pajaroensis*<br>Pajaro manzanita | -- / -- / 1B | Chaparral on sandy soils at elevations of 30-760 meters. Evergreen shrub in the Ericaceae family; blooms December-March. | **Moderate:** Not identified within survey area in 2016; however, this species may occur within the Project site, outside of the survey area. |
| ***Arctostaphylos pumila***<br>**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. | **Present:** Identified within survey area in 2016. May also occur within the Project site, outside of survey area. |
| *Arenaria paludicola*<br>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. Stoloniferous perennial herb in the Caryophyllaceae family; blooms May-August. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site. Project site is outside of the currently known range for this species. |
| *Astragalus tener* var. *tener*<br>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. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site. |
| *Astragalus tener* var. *titi*<br>Coastal dunes milk-vetch | FE / SE / 1B | Vernally 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. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site. |
| *Bryoria spiralifera*<br>Twisted horsehair lichen | -- / -- / 1B | California North Coast coniferous forest at elevations of 0–30 meters. Often found on conifers, including *Picea sitchensis*, *Pinus contorta* var. *contorta*, *Pseudotsuga menziesii*, *Abies grandis*, and *Tsuga heterophylla*. Fruticose lichen in the Parmeliaceae family. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site. |
| *Castilleja ambigua ssp. insalutata*<br>Pink johnny-nip | -- / -- / 1B | Coastal prairie and coastal scrub at elevations of 0-100 meters. Annual herb in the Orobanchaceae family; blooms May-August. | **Low:** Not identified within survey area during in 2016. Low quality habitat present within the coastal scrub habitat within the Project site, outside of the survey area. The CNDDB reports a non-specific occurrence within the Project site; however, the CNDDB identifies that the species was found in the "mima mounds" area of Fort Ord, which does not occur within the Project site. |

| Species | Status (Service/ CDFW/CNPS) | General Habitat | Potential Occurrence within Project Vicinity |
|---|---|---|---|
| ***Ceanothus cuneatus* ssp. *rigidus***<br>**Monterey ceanothus** | -- / -- / List 4 | Closed cone coniferous forest, chaparral, and coastal scrub on sandy soils at elevations of 3-550 meters. Evergreen shrub in the Rhamnaceae family, blooms February-June. | **Present:** Identified within survey area in 2016. May also occur within the Project site, outside of survey area. |
| *Centromadia parryi* ssp. *congdonii*<br>Congdon's tarplant | -- / -- / 1B | Mesic areas of valley and foothill grassland on alkaline soils at elevations of 0-230 meters. Annual herb in the Asteraceae family; blooms May-November. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of survey area. |
| *Chorizanthe minutiflora*<br>Fort Ord spineflower | -- / -- / 1B | Sandy openings of maritime chaparral and coastal scrub at elevations of 55-150 meters. Annual herb in the Polygonaceae family; blooms April-July. | **Moderate:** Suitable habitat for this species is present within the maritime chaparral and coastal scrub habitats within Project site[1]. |
| ***Chorizanthe pungens* var. *pungens***<br>**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. | **Present:** Identified within survey area in 2016. May also occur within the Project site, outside of survey area. |
| ***Chorizanthe robusta* var. *robusta***<br>**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. | **Unlikely:** Not identified during surveys in 2016. Although suitable habitat is present within the Project site, outside of survey area, the Project site is outside of the currently known range for this species. |
| *Clarkia jolonensis*<br>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. | **Low:** Not identified during surveys in 2016. Low quality habitat present within the coast live oak woodland and coastal scrub habitats within the Project site, outside of the survey area. No occurrences of this species are known on the Former Fort Ord. |
| *Collinsia multicolor*<br>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. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of survey area. |
| ***Cordylanthus rigidus* ssp. *littoralis***<br>**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. | **High:** Not identified within survey area in 2016; however, this species may occur within the Project site, outside of the survey area. The nearest CNDDB occurrence is approximately 0.3 mile from the Project site. |
| *Delphinium californicum ssp. interius*<br>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. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site. Project site is below the known elevation range for this species. |
| *Delphinium hutchinsoniae*<br>Hutchinson's 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. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of the survey area. |
| ***Ericameria fasciculata***<br>**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. | **High:** Not identified within survey area in 2016; however, the CNDDB reports and occurrence of this species outside of the survey area and suitable habitat is present. |
| ***Erysimum ammophilum***<br>**Sand-loving 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. | **High:** Not identified within survey area in 2016; however, this species may occur within the Project site, outside of the survey area. |

[1] Occurrences of this species were not identified in the CNDDB search conducted prior to the surveys in 2016. Therefore, this species was not included in the 2016 surveys.

| Species | Status (Service/ CDFW/CNPS) | General Habitat | Potential Occurrence within Project Vicinity |
|---|---|---|---|
| *Erysimum menziesii* Menzies' wallflower | FE / SE / 1B | Coastal dunes at elevations of 0-35 meters. Perennial herb in the Brassicaceae family; blooms March-June. | **Unlikely:** Not identified during surveys in 2016. No suitable habitat present within Project site. |
| *Fritillaria liliacea* Fragrant fritillaria | -- / -- / 1B | Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland, often serpentinite, at elevations of 3-410 meters. Bulbiferous perennial herb in the Liliaceae family; blooms February-April. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of the survey area. |
| ***Gilia tenuiflora* ssp. *arenaria*** **Sand gilia** | FE / ST / 1B | Sandy openings of maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub at elevations of 0-45 meters. Annual herb in the Polemoniaceae family; blooms April-June. | **High:** Not identified within survey area in 2016; however, however, the CNDDB reports and occurrence of this species outside of the survey area and suitable habitat is present. |
| *Hesperocyparis goveniana* 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. | **Not Present:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of the survey area. Project site is outside of the highly endemic range for this species. |
| *Hesperocyparis macrocarpa* 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. | **Not Present:** Although Monterey cypress trees are present within the Project site, these individuals were planted and are from unknown genetic stock. The Project site is outside of the known native range for this species, and thus the individuals within the Project site are not considered special-status species. |
| *Holocarpha macradenia* Santa Cruz tarplant | FT / SE / 1B | Coastal prairies and valley foothill grasslands, often clay or sandy soils, at elevations of 10-220 meters. Annual herb in the Asteraceae family; blooms June-October. | **Unlikely:** Not identified during surveys in 2016. Although suitable habitat is present within the Project site, outside of survey area, the Project site is outside of the currently known range for this species. |
| *Horkelia cuneata* ssp. *sericea* Kellogg's horkelia | -- / -- / 1B | Openings of closed-cone coniferous forests, maritime chaparral, coastal dunes, and coastal scrub on sandy or gravelly soils at elevations of 10-200 meters. Perennial herb in the Rosaceae family; blooms April-September. | **Present:** Identified within survey area in 2016. May also occur within the Project site, outside of survey area |
| *Horkelia marinensis* 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. | **Moderate:** Not identified within survey area in 2016; however, this species may occur within the Project site, outside of the survey area. |
| *Lasthenia conjugens* 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. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of the survey area; this species is only known to occur within a few vernal pools on the Former Fort Ord. |
| *Layia carnosa* 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. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of the survey area. |
| *Legenere limosa* Legenere | -- / -- / 1B | Vernal pools at elevations of 1-880 meters. Annual herb in the Campanulaceae family; blooms April-June. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of the survey area. |
| *Lupinus tidestromii* Tidestrom's lupine | FE / SE / 1B | Coastal dunes at elevations of 0-100 meters. Perennial rhizomatous herb in the Fabaceae family; blooms April-June. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of the survey area. |

| Species | Status (Service/ CDFW/CNPS) | General Habitat | Potential Occurrence within Project Vicinity |
|---|---|---|---|
| *Malacothamnus palmeri* var. *involucratus*<br>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. | **Unlikely:** Not identified within survey area in 2016. Although suitable habitat for this species is present within the Project site, outside of the survey area, all known CNDDB occurrences are located south of the Former Fort Ord and the Project site is likely outside of the range for this species. |
| *Malacothrix saxatilis* var. *arachnoidea*<br>Carmel Valley macothrix | -- / -- / 1B | Chaparral and coastal scrub on rocky soils at elevations of 25-1036 meters. Perennial rhizomatous herb in the Asteraceae family; blooms June-December. | **Unlikely:** Not identified within survey area in 2016. Although suitable habitat for this species is present within the Project site, outside of the survey area, all known CNDDB occurrences are located south of the Former Fort Ord and the Project site is likely outside of the range for this species. |
| *Meconella oregana*<br>Oregon meconella | -- / -- /1B | Coastal prairie and coastal scrub at elevations of 250-620 meters. Annual herb in the Papaveraceae Family; blooms March-April. | **Unlikely:** Not identified within survey area in 2016. Although suitable habitat for this species is present within the Project site, outside of the survey area, the Project site is below the known elevation range for this species. |
| *Microseris paludosa*<br>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-July. | **Moderate:** Not identified within survey area in 2016; however, this species may occur within the Project site, outside of the survey area. |
| *Monardella sinuata* ssp. *nigrescens*<br>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. | **Moderate:** Not identified within survey area in 2016; however, this species may occur within the Project site, outside of the survey area. |
| *Monolopia gracilens*<br>Woodland wollythreads | -- / -- / 1B | Openings of broadleaved upland forest, chaparral, cismontane woodland, North Coast coniferous forest, and valley and foothill grassland on serpentinite soils at elevations of 100-1200 meters. Annual herb in the Asteraceae family; blooms February-July. | **Moderate:** Not identified within survey area in 2016; however, this species may occur within the Project site, outside of the survey area. |
| *Pinus radiata*<br>Monterey pine | -- / -- / 1B | Closed-cone coniferous forest and cismontane woodland 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. | **Not Present:** Although Monterey pine trees are present within the Project site, these individuals were planted and are from unknown genetic stock. The Project site is outside of the known native range for this species, and thus the individuals within the Project site are not considered special status species. |
| ***Piperia yadonii***<br>**Yadon's piperia** | 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. | **High:** Not identified within survey area in 2016; however, this species may occur within the Project site, outside of the survey area. |
| *Plagiobothrys chorisianus* var. *chorisianus*<br>Choris' popcornflower | -- / -- / 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. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of the survey area; this species is only known to occur within a few vernal pools on the Former Fort Ord. |
| *Potentilla hickmanii*<br>Hickman's cinquefoil | FE / SE / 1B | Coastal bluff scrub, closed-cone coniferous forests, vernally mesic meadows, and freshwater marshes and swamps at elevations of 10-149 meters. Perennial herb in the Rosaceae family; blooms April-August. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of the survey area. |

| Species | Status (Service/ CDFW/CNPS) | General Habitat | Potential Occurrence within Project Vicinity |
|---|---|---|---|
| *Ramalina thrausta* 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 *Alnus rubra*, *Calocedrus decurrens*, *Pseudotsuga menziesii*, *Quercus garryana*, and *Rubus spectabilis*. In Sonoma County it grows on and among dangling mats of *R. menziesii* and *Usnea* spp. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of the survey area. |
| *Rosa pinetorum* Pine rose | -- / -- / 1B | Closed-cone coniferous forest at elevations of 2-300 meters. Perennial shrub in the Rosaceae family; blooms May-July. Possible hybrid of *R. spithamea*, *R. gymnocarpa*, or others; further study needed. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of the survey area. |
| *Stebbinsoseris decipiens* 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 serpentinite, at elevations of 10-500 meters. Annual herb in the Asteraceae family; blooms April-May. | **Moderate:** Not identified within survey area in 2016; however, this species may occur within the Project site, outside of the survey area. |
| *Trifolium buckwestiorum* 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. | **Moderate:** Not identified within survey area in 2016; however, this species may occur within the Project site, outside of the survey area. |
| *Trifolium hydrophilum* Saline clover | -- / -- / 1B | Marshes and swamps, mesic and alkaline valley and foothill grassland, and vernal pools at elevations of 0-300 meters. Annual herb in the Fabaceae family; blooms April-June. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of the survey area. |
| *Trifolium polyodon* Pacific Grove clover | -- / SR / 1B | Mesic areas of closed-cone coniferous forest, coastal prairie, meadows and seeps, and valley and foothill grassland at elevations of 5-120 meters. Annual herb in the Fabaceae family; blooms April-June. | **Moderate:** Not identified within survey area in 2016; however, this species may occur within the Project site, outside of the survey area. |
| *Trifolium trichocalyx* 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. | **Unlikely:** Not identified within survey area in 2016. No suitable habitat present within Project site, outside of the survey area. |

| Species | Status (Service/ CDFW/CNPS) | General Habitat | Potential Occurrence within Project Vicinity |
|---|---|---|---|

**STATUS DEFINITIONS:**

**Federal**

FE = listed as Endangered under the federal Endangered Species Act
FT = listed as Threatened under the federal Endangered Species Act
FC = Candidate for listing under the federal Endangered Species Act
UR = Species that have been petitioned for listing under the ESA and for which a 90 day and/or 12 Month finding has not been published in the Federal Register, as well as species being reviewed through the candidate process but the CNOR has not yet been signed
-- = no listing

**State**

SE = listed as Endangered under the California Endangered Species Act
ST = listed as Threatened under the California Endangered Species Act
SC = Candidate for listing under the California Endangered Species Act
SR = listed as Rare under the California Endangered Species Act
CFP = California Fully Protected Species
CSC = California Department of Fish and Wildlife Species of Concern
CNDDB = This designation is being assigned to animal species that are not assigned any of the other status designations defined in this table. These animal species are included in CDFW's CNDDB "Special Animals" list (2017b), which includes all taxa the CNDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of "species at risk" or "special-status species." The California Department of Fish and Wildlife considers the taxa on this list to be those of greatest conservation need.
-- = no listing

**California Native Plant Society**

1B = California Rare Plant Rank 1B species; plants rare, threatened, or endangered in California and elsewhere
2B = California Rare Plant Rank 2B species; plants rare, threatened, or endangered in California, but more common elsewhere
-- = no listing

***Bold font indicates Fort Ord HMP Species**

**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 CNDDB or other documentation; presence of suitable habitat conditions
Moderate – known occurrence of species in the vicinity from the CNDDB or other documentation; presence of marginal habitat conditions
Low – species known to occur in the vicinity from the CNDDB or other documentation; presence of low quality habitat conditions
Unlikely – species not known to occur in the vicinity from the CNDDB or other documentation; no suitable habitat is present
Not Present – species not observed during surveys

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# APPENDIX B.

CNDDB Occurrence Report

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# Selected Elements by Scientific Name

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Quad IS (Seaside (3612157) OR Monterey (3612158) OR Marina (3612167) OR Spreckels (3612156) OR Salinas (3612166) OR Moss Landing (3612177) OR Prunedale (3612176))<br /> AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Agelaius tricolor***<br>tricolored blackbird | ABPBXB0020 | None | Candidate Endangered | G2G3 | S1S2 | SSC |
| ***Agrostis lacuna-vernalis***<br>vernal pool bent grass | PMPOA041N0 | None | None | G1 | S1 | 1B.1 |
| ***Allium hickmanii***<br>Hickman's onion | PMLIL02140 | None | None | G2 | S2 | 1B.2 |
| ***Ambystoma californiense***<br>California tiger salamander | AAAAA01180 | Threatened | Threatened | G2G3 | S2S3 | WL |
| ***Ambystoma macrodactylum croceum***<br>Santa Cruz long-toed salamander | AAAAA01082 | Endangered | Endangered | G5T1T2 | S1S2 | FP |
| ***Anniella pulchra***<br>northern California legless lizard | ARACC01020 | None | None | G3 | S3 | SSC |
| ***Arctostaphylos hookeri ssp. hookeri***<br>Hooker's manzanita | PDERI040J1 | None | None | G3T2 | S2 | 1B.2 |
| ***Arctostaphylos montereyensis***<br>Toro manzanita | PDERI040R0 | None | None | G2G3 | S2S3 | 1B.2 |
| ***Arctostaphylos pajaroensis***<br>Pajaro manzanita | PDERI04100 | None | None | G1 | S1 | 1B.1 |
| ***Arctostaphylos pumila***<br>sandmat manzanita | PDERI04180 | None | None | G1 | S1 | 1B.2 |
| ***Asio flammeus***<br>short-eared owl | ABNSB13040 | None | None | G5 | S3 | SSC |
| ***Astragalus tener var. tener***<br>alkali milk-vetch | PDFAB0F8R1 | None | None | G2T2 | S2 | 1B.2 |
| ***Astragalus tener var. titi***<br>coastal dunes milk-vetch | PDFAB0F8R2 | Endangered | Endangered | G2T1 | S1 | 1B.1 |
| ***Athene cunicularia***<br>burrowing owl | ABNSB10010 | None | None | G4 | S3 | SSC |
| ***Bombus caliginosus***<br>obscure bumble bee | IIHYM24380 | None | None | G4? | S1S2 | |
| ***Bombus occidentalis***<br>western bumble bee | IIHYM24250 | None | None | G2G3 | S1 | |
| ***Bryoria spiralifera***<br>twisted horsehair lichen | NLTEST5460 | None | None | G3 | S1S2 | 1B.1 |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Buteo regalis*** ferruginous hawk | ABNKC19120 | None | None | G4 | S3S4 | WL |
| ***Castilleja ambigua var. insalutata*** pink Johnny-nip | PDSCR0D403 | None | None | G4T2 | S2 | 1B.1 |
| ***Centromadia parryi ssp. congdonii*** Congdon's tarplant | PDAST4R0P1 | None | None | G3T2 | S2 | 1B.1 |
| ***Charadrius alexandrinus nivosus*** western snowy plover | ABNNB03031 | Threatened | None | G3T3 | S2S3 | SSC |
| ***Chorizanthe minutiflora*** Fort Ord spineflower | PDPGN04100 | None | None | G1 | S1 | 1B.2 |
| ***Chorizanthe pungens var. pungens*** Monterey spineflower | PDPGN040M2 | Threatened | None | G2T2 | S2 | 1B.2 |
| ***Chorizanthe robusta var. robusta*** robust spineflower | PDPGN040Q2 | Endangered | None | G2T1 | S1 | 1B.1 |
| ***Clarkia jolonensis*** Jolon clarkia | PDONA050L0 | None | None | G2 | S2 | 1B.2 |
| ***Coelus globosus*** globose dune beetle | IICOL4A010 | None | None | G1G2 | S1S2 | |
| ***Collinsia multicolor*** San Francisco collinsia | PDSCR0H0B0 | None | None | G2 | S2 | 1B.2 |
| ***Cordylanthus rigidus ssp. littoralis*** seaside bird's-beak | PDSCR0J0P2 | None | Endangered | G5T2 | S2 | 1B.1 |
| ***Corynorhinus townsendii*** Townsend's big-eared bat | AMACC08010 | None | None | G3G4 | S2 | SSC |
| ***Cypseloides niger*** black swift | ABNUA01010 | None | None | G4 | S2 | SSC |
| ***Danaus plexippus pop. 1*** monarch - California overwintering population | IILEPP2012 | None | None | G4T2T3 | S2S3 | |
| ***Delphinium californicum ssp. interius*** Hospital Canyon larkspur | PDRAN0B0A2 | None | None | G3T3 | S3 | 1B.2 |
| ***Delphinium hutchinsoniae*** Hutchinson's larkspur | PDRAN0B0V0 | None | None | G2 | S2 | 1B.2 |
| ***Delphinium umbraculorum*** umbrella larkspur | PDRAN0B1W0 | None | None | G3 | S3 | 1B.3 |
| ***Elanus leucurus*** white-tailed kite | ABNKC06010 | None | None | G5 | S3S4 | FP |
| ***Emys marmorata*** western pond turtle | ARAAD02030 | None | None | G3G4 | S3 | SSC |
| ***Eremophila alpestris actia*** California horned lark | ABPAT02011 | None | None | G5T4Q | S4 | WL |
| ***Ericameria fasciculata*** Eastwood's goldenbush | PDAST3L080 | None | None | G2 | S2 | 1B.1 |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Erysimum ammophilum*** sand-loving wallflower | PDBRA16010 | None | None | G2 | S2 | 1B.2 |
| ***Erysimum menziesii*** Menzies' wallflower | PDBRA160R0 | Endangered | Endangered | G1 | S1 | 1B.1 |
| ***Eucyclogobius newberryi*** tidewater goby | AFCQN04010 | Endangered | None | G3 | S3 | SSC |
| ***Euphilotes enoptes smithi*** Smith's blue butterfly | IILEPG2026 | Endangered | None | G5T1T2 | S1S2 | |
| ***Falco mexicanus*** prairie falcon | ABNKD06090 | None | None | G5 | S4 | WL |
| ***Falco peregrinus anatum*** American peregrine falcon | ABNKD06071 | Delisted | Delisted | G4T4 | S3S4 | FP |
| ***Fritillaria liliacea*** fragrant fritillary | PMLIL0V0C0 | None | None | G2 | S2 | 1B.2 |
| ***Gilia tenuiflora ssp. arenaria*** Monterey gilia | PDPLM041P2 | Endangered | Threatened | G3G4T2 | S2 | 1B.2 |
| ***Hesperocyparis goveniana*** Gowen cypress | PGCUP04031 | Threatened | None | G1 | S1 | 1B.2 |
| ***Hesperocyparis macrocarpa*** Monterey cypress | PGCUP04060 | None | None | G1 | S1 | 1B.2 |
| ***Holocarpha macradenia*** Santa Cruz tarplant | PDAST4X020 | Threatened | Endangered | G1 | S1 | 1B.1 |
| ***Horkelia cuneata var. sericea*** Kellogg's horkelia | PDROS0W043 | None | None | G4T1? | S1? | 1B.1 |
| ***Horkelia marinensis*** Point Reyes horkelia | PDROS0W0B0 | None | None | G2 | S2 | 1B.2 |
| ***Lasiurus cinereus*** hoary bat | AMACC05030 | None | None | G5 | S4 | |
| ***Lasthenia conjugens*** Contra Costa goldfields | PDAST5L040 | Endangered | None | G1 | S1 | 1B.1 |
| ***Laterallus jamaicensis coturniculus*** California black rail | ABNME03041 | None | Threatened | G3G4T1 | S1 | FP |
| ***Layia carnosa*** beach layia | PDAST5N010 | Endangered | Endangered | G2 | S2 | 1B.1 |
| ***Legenere limosa*** legenere | PDCAM0C010 | None | None | G2 | S2 | 1B.1 |
| ***Linderiella occidentalis*** California linderiella | ICBRA06010 | None | None | G2G3 | S2S3 | |
| ***Lupinus tidestromii*** Tidestrom's lupine | PDFAB2B3Y0 | Endangered | Endangered | G1 | S1 | 1B.1 |
| ***Malacothamnus palmeri var. involucratus*** Carmel Valley bush-mallow | PDMAL0Q0B1 | None | None | G3T2Q | S2 | 1B.2 |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Malacothrix saxatilis var. arachnoidea*** Carmel Valley malacothrix | PDAST660C2 | None | None | G5T2 | S2 | 1B.2 |
| ***Meconella oregana*** Oregon meconella | PDPAP0G030 | None | None | G2G3 | S2 | 1B.1 |
| ***Microseris paludosa*** marsh microseris | PDAST6E0D0 | None | None | G2 | S2 | 1B.2 |
| ***Monardella sinuata ssp. nigrescens*** northern curly-leaved monardella | PDLAM18162 | None | None | G3T2 | S2 | 1B.2 |
| ***Monolopia gracilens*** woodland woollythreads | PDAST6G010 | None | None | G3 | S3 | 1B.2 |
| ***Oncorhynchus mykiss irideus*** steelhead - south-central California coast DPS | AFCHA0209H | Threatened | None | G5T2Q | S2 | |
| ***Pelecanus occidentalis californicus*** California brown pelican | ABNFC01021 | Delisted | Delisted | G4T3 | S3 | FP |
| ***Phrynosoma blainvillii*** coast horned lizard | ARACF12100 | None | None | G3G4 | S3S4 | SSC |
| ***Pinus radiata*** Monterey pine | PGPIN040V0 | None | None | G1 | S1 | 1B.1 |
| ***Piperia yadonii*** Yadon's rein orchid | PMORC1X070 | Endangered | None | G1 | S1 | 1B.1 |
| ***Plagiobothrys chorisianus var. chorisianus*** Choris' popcornflower | PDBOR0V061 | None | None | G3T2Q | S2 | 1B.2 |
| ***Potentilla hickmanii*** Hickman's cinquefoil | PDROS1B0U0 | Endangered | Endangered | G1 | S1 | 1B.1 |
| ***Rallus obsoletus obsoletus*** California Ridgway's rail | ABNME05016 | Endangered | Endangered | G5T1 | S1 | FP |
| ***Ramalina thrausta*** angel's hair lichen | NLLEC3S340 | None | None | G5 | S2? | 2B.1 |
| ***Rana boylii*** foothill yellow-legged frog | AAABH01050 | None | Candidate Threatened | G3 | S3 | SSC |
| ***Rana draytonii*** California red-legged frog | AAABH01022 | Threatened | None | G2G3 | S2S3 | SSC |
| ***Reithrodontomys megalotis distichlis*** Salinas harvest mouse | AMAFF02032 | None | None | G5T1 | S1 | |
| ***Riparia riparia*** bank swallow | ABPAU08010 | None | Threatened | G5 | S2 | |
| ***Rosa pinetorum*** pine rose | PDROS1J0W0 | None | None | G2 | S2 | 1B.2 |
| ***Sidalcea malachroides*** maple-leaved checkerbloom | PDMAL110E0 | None | None | G3 | S3 | 4.2 |
| ***Spirinchus thaleichthys*** longfin smelt | AFCHB03010 | Candidate | Threatened | G5 | S1 | SSC |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Stebbinsoseris decipiens*** Santa Cruz microseris | PDAST6E050 | None | None | G2 | S2 | 1B.2 |
| ***Taricha torosa*** Coast Range newt | AAAAF02032 | None | None | G4 | S4 | SSC |
| ***Taxidea taxus*** American badger | AMAJF04010 | None | None | G5 | S3 | SSC |
| ***Thamnophis hammondii*** two-striped gartersnake | ARADB36160 | None | None | G4 | S3S4 | SSC |
| ***Trifolium buckwestiorum*** Santa Cruz clover | PDFAB402W0 | None | None | G2 | S2 | 1B.1 |
| ***Trifolium hydrophilum*** saline clover | PDFAB400R5 | None | None | G2 | S2 | 1B.2 |
| ***Trifolium polyodon*** Pacific Grove clover | PDFAB402H0 | None | Rare | G1 | S1 | 1B.1 |
| ***Trifolium trichocalyx*** Monterey clover | PDFAB402J0 | Endangered | Endangered | G1 | S1 | 1B.1 |
| ***Tryonia imitator*** mimic tryonia (=California brackishwater snail) | IMGASJ7040 | None | None | G2 | S2 | |

**Record Count: 89**

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# APPENDIX C.

IPAC Resources List for CSUMB Campus

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# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
Phone: (805) 644-1766 Fax: (805) 644-3958

In Reply Refer To: August 04, 2017
Consultation Code: 08EVEN00-2017-SLI-0573
Event Code: 08EVEN00-2017-E-01268
Project Name: CSUMB Master Plan

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed list identifies species listed as threatened and endangered, species proposed for listing as threatened or endangered, designated and proposed critical habitat, and species that are candidates for listing that may occur within the boundary of the area you have indicated using the U.S. Fish and Wildlife Service's (Service) Information Planning and Conservation System (IPaC). The species list fulfills the requirements under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the species list should be verified after 90 days. We recommend that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists following the same process you used to receive the enclosed list. Please include the Consultation Tracking Number in the header of this letter with any correspondence about the species list.

Due to staff shortages and excessive workload, we are unable to provide an official list more specific to your area. Numerous other sources of information are available for you to narrow the list to the habitats and conditions of the site in which you are interested. For example, we recommend conducting a biological site assessment or surveys for plants and animals that could help refine the list.

If a Federal agency is involved in the project, that agency has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the project is a major construction project*, the Federal agency has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species or critical habitat. If the Federal agency determines that a listed species or critical habitat is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species or their critical habitat prior to a

written request for formal consultation. During this review process, the Federal agency may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

Federal agencies are required to confer with the Service, pursuant to section 7(a)(4) of the Act, when an agency action is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10(a)). A request for formal conference must be in writing and should include the same information that would be provided for a request for formal consultation. Conferences can also include discussions between the Service and the Federal agency to identify and resolve potential conflicts between an action and proposed species or proposed critical habitat early in the decision-making process. The Service recommends ways to minimize or avoid adverse effects of the action. These recommendations are advisory because the jeopardy prohibition of section 7(a)(2) of the Act does not apply until the species is listed or the proposed critical habitat is designated. The conference process fulfills the need to inform Federal agencies of possible steps that an agency might take at an early stage to adjust its actions to avoid jeopardizing a proposed species.

When a proposed species or proposed critical habitat may be affected by an action, the lead Federal agency may elect to enter into formal conference with the Service even if the action is not likely to jeopardize or result in the destruction or adverse modification of proposed critical habitat. If the proposed species is listed or the proposed critical habitat is designated after completion of the conference, the Federal agency may ask the Service, in writing, to confirm the conference as a formal consultation. If the Service reviews the proposed action and finds that no significant changes in the action as planned or in the information used during the conference have occurred, the Service will confirm the conference as a formal consultation on the project and no further section 7 consultation will be necessary. Use of the formal conference process in this manner can prevent delays in the event the proposed species is listed or the proposed critical habitat is designated during project development or implementation.

Candidate species are those species presently under review by the Service for consideration for Federal listing. Candidate species should be considered in the planning process because they may become listed or proposed for listing prior to project completion. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required for candidate species. If early evaluation of your project indicates that it is likely to affect a candidate species, you may wish to request technical assistance from this office.

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Wildlife's Natural Diversity Data Base. You can contact the California Department of Fish and Wildlife at (916) 324-3812 for information on other sensitive species that may occur in this area.

[*A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.]

Attachment(s):

- Official Species List

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Ventura Fish And Wildlife Office**
2493 Portola Road, Suite B
Ventura, CA 93003-7726
(805) 644-1766

# Project Summary

Consultation Code: 08EVEN00-2017-SLI-0573

Event Code: 08EVEN00-2017-E-01268

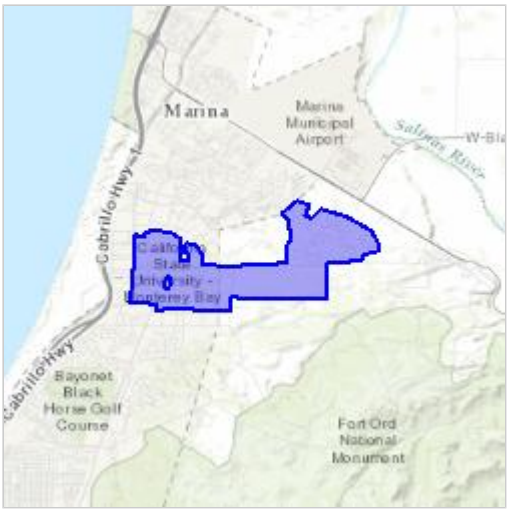
Project Name: CSUMB Master Plan

Project Type: ** OTHER **

Project Description: Master Plan for California State University Monterey Bay

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/36.65656217050322N121.7652391355764W




Counties: Monterey, CA

# Endangered Species Act Species

There is a total of 19 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

## Mammals

| NAME | STATUS |
| --- | --- |
| Southern Sea Otter *Enhydra lutris nereis* | Threatened |

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/8560

## Birds

| NAME | STATUS |
|---|---|
| California Condor *Gymnogyps californianus*<br>Population: U.S.A. only, except where listed as an experimental population<br>There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/8193 | Endangered |
| California Least Tern *Sterna antillarum browni*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/8104 | Endangered |
| Least Bell's Vireo *Vireo bellii pusillus*<br>There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/5945 | Endangered |
| Marbled Murrelet *Brachyramphus marmoratus*<br>Population: U.S.A. (CA, OR, WA)<br>There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/4467 | Threatened |
| Southwestern Willow Flycatcher *Empidonax traillii extimus*<br>There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/6749 | Endangered |
| Western Snowy Plover *Charadrius alexandrinus nivosus*<br>Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast)<br>There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/8035 | Threatened |

## Amphibians

| NAME | STATUS |
|---|---|
| California Red-legged Frog *Rana draytonii*<br>There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/2891 | Threatened |
| California Tiger Salamander *Ambystoma californiense*<br>Population: U.S.A. (Central CA DPS)<br>There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/2076 | Threatened |
| Santa Cruz Long-toed Salamander *Ambystoma macrodactylum croceum*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/7405 | Endangered |

## Fishes

| NAME | STATUS |
|---|---|
| Tidewater Goby *Eucyclogobius newberryi*<br>There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/57 | Endangered |

## Insects

| NAME | STATUS |
|---|---|
| Smith's Blue Butterfly *Euphilotes enoptes smithi*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/4418 | Endangered |

## Crustaceans

| NAME | STATUS |
|---|---|
| Vernal Pool Fairy Shrimp *Branchinecta lynchi*<br>There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/498 | Threatened |

## Flowering Plants

| NAME | STATUS |
|---|---|
| Contra Costa Goldfields *Lasthenia conjugens*<br>There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/7058 | Endangered |
| Marsh Sandwort *Arenaria paludicola*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/2229 | Endangered |
| Menzies' Wallflower *Erysimum menziesii*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/2935 | Endangered |
| Monterey Gilia *Gilia tenuiflora ssp. arenaria*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/856 | Endangered |
| Monterey Spineflower *Chorizanthe pungens var. pungens*<br>There is a **final** critical habitat designated for this species. Your location overlaps the designated critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/396 | Threatened |
| Yadon's Piperia *Piperia yadonii*<br>There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/4205 | Endangered |

## Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

| NAME | STATUS |
|---|---|
| Monterey Spineflower *Chorizanthe pungens var. pungens*<br>https://ecos.fws.gov/ecp/species/396#crithab | Final designated |

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# APPENDIX D.

The Birds of Fort Ord East of Route 1

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# THE BIRDS OF FORT ORD EAST OF ROUTE 1

Revised 5 Feb 07

David Styer with historic data provided by Don Roberson

An asterisk (*) after a bird's name means that the species was probably breeding, or confirmed breeding on Fort Ord east of Route 1. This list is based almost entirely on my own inventories. These have taken place during the following time periods: 25 Feb - 16 Jun 96, 9 Jul - 16 Aug 97, 27 Jun - 16 Aug 98, 27 Jul - 19 Aug 99, 7 Jun - 28 Jun 00, 5 Feb 01 - 3 Mar 01, 17 Sep 01 - 2 Nov 01, 13 Dec - 31 Dec 01, and most of 2002 and 2003. In 2004–2006 only the more outstanding sightings were noted. The few records based on other people's sightings are noted. All collective references to Christmas Bird Counts (CBCs) refer to the nine Monterey CBCs provided by Roberson. This count takes place in a 15-mile diameter circle that includes the southwest portion of Ft. Ord.

| | | |
|---|---|---|
| 1. | Cackling Goose | 1 record: 1 seen by D. Roberson's CBC group on 29 Dec 00. |
| 2. | Canada Goose* | Seen in small numbers. Nested, but unsuccessfully in 2002. Successfully nested at Machine Gun Flats in 2005. |
| 3. | Wood Duck | The first record was 5 males at Boy Scout Lake on 12 Oct 05. Some were seen there until 7 Dec 05. |
| 4. | Gadwall* | The first record was five seen on 8 Aug 98 on a vernal pond. Expected in small numbers. In 2002 there were 3 records from 12 Mar to 24 Mar, and 5 records from 29 Aug to 29 Oct, all at Mudhen Lake. Seen in January and December in 2003.Nested on Machine Gun Flats in 2005; young noted on 22 May 05. |
| 5. | American Wigeon | Winter visitor. A pair was on Mudhen Lake on 18 Feb 01; 3 were there on 23 Mar 02, and 1 to 2 pairs were there from 23 Nov 02 through 31 Jan 03. Seen regularly at the vernal pools 29 Jan 05 through 2 Apr 05. Also, seen regularly at Boy Scout Lake Nov and Dec 05, with approximately 10 there on 13 Dec. |
| 6. | Mallard* | Seen on ponds through year. Young seen on Mudhen Lake 6 Jun 96 and on Boy Scout Pond on 2 Jun 96. Young seen on several ponds in 1998. One hundred to three hundred regularly visited Mudhen Lake in the fall of 2001. There were 87 visiting the vernal pool at Machine Gun Flats on 2 Mar 04. Bill Collins saw around 500 on the pond behind Range 37 in the fall of 2000. Ronnie L. Ryno found young at Mudhen Lake on 9 Jun 89 during the Monterey County Breeding Bird Atlas project. |
| 7. | Cinnamon Teal | First record: 1 male on the pond behind Range 37 on 31 Mar 96. Two spent most of Aug 99 on Fox Pond. There were several records in Mar 05, and 3 were on Mudhen Lake on 21 Jul 05.In early 2006 they were seen on Boy Scout Lake:2 on 24 Jan and 4 on 21 Feb. |
| 8. | Northern Shoveler | A pair was at Mudhen Lake on 29 Oct 01, 6 were there 6 Oct 02 and 3 were there on 25 Oct 05. |
| 9. | Northern Pintail | First record: 3 females on Mudhen Lake on 22 Oct 01. Six were there, including a male, on 2 Nov 01, 2 were there on 22 Oct 02, and a pair was at Boy Scout Lake on 13 Dec 05. |

| | | |
|---|---|---|
| 10. | Green-winged Teal | A pair was at Mudhen Lake from 30 Mar to 7 Apr 96. They visited Mudhen Lake in early Nov 02, and 20 were there on 5 Nov 02. On 12 Dec 05 19 males were on Mudhen Lake. The next day a flock of 35 (males and females) were on Boy Scout Lake. They were seen there in dwindling numbers up until 21 Feb 06. |
| 11. | Redhead | A male was seen at Mudhen Lake from 13 Dec 01 through 4 Feb 02. |
| 12. | Ring-necked Duck | An occasional fall and winter visitor. 1st record: 1 male in holding pond near west end of Eucalyptus Rd. on 28 Jun 98.There were 5 females on Mudhen Lake on 20 and 27 Nov, and 1 male there on 1 Dec 06. Notably, Bill Collins saw around 35 in the pond behind Range 37 in the fall of 2000. |
| 13. | Greater Scaup | 1 record: 1 female in the holding pond at the west end of Eucalyptus Road on 26 Oct 01. |
| 14. | Bufflehead | One female spent the entire summer of 1998 on the same pond (see ring-necked Duck). 2 females were on the same pond in Jan 03. A pair was on Machine Gun Flats on 22 Feb 05. |
| 15. | Common Goldeneye | Seen in winter 1996 on above-mentioned pond before inventory started, and in Dec 01. |
| 16. | Hooded Merganser | 2 records: One immature male on Mudhen Lake 25 Feb - 24 Mar 96, and 1 female on Mudhen Lake on 24 Nov 06. |
| 17. | Common Merganser | 1 record: seen in the Salinas River on 30 Apr 05. |
| 18. | Ruddy Duck | Occasional visitor. 2 males on the vernal pool on Machine Gun Flats on 17 Jul 98, and 1 female on the Catfish Pond on 18 Oct 02.Two females spent much of Dec 05 on Mudhen Lake. A resident of Mudhen Lake beginning 9 Oct 06. |
| 19. | Wild Turkey* | Seen irregularly during the inventory. Dick Pitschka and I saw 3 adult females and 7 young across Jacks Road from Mudhen Lake on 21 Jun 00. Noticeably more common by 2001 than in the past. In 2003 and 2004, 2 or 3 flocks of up to 20 were seen, and they continue to have young. |
| 20. | California Quail* | Seen, except in the most open grassland, throughout Ft. Ord, throughout the inventory. Possibly increasing: in 1996 most coveys with 10 or fewer birds. In 2001 many coveys with 10 to 20 birds. They continue roughly the same size through 2006. I have been told that coveys with a 100 California Quail were common in the past. |
| 21. | Loon species | 2 flew over the BLM office area on 2 Nov 01. |
| 22. | Pied-billed Grebe* | Seen throughout the year on permanent ponds. In 1996 and 1997 young produced only on Mudhen Lake. In 1998 young were produced on at least four vernal ponds. |
| 23. | Eared Grebe | 2 records: 1 stayed at the holding pond on the west end of Eucalyptus Road from 4 Oct to 11 Oct 01, and 1 was on Mudhen lake from 15 Nov 05 through 29 Nov 05. |

| | | |
|---|---|---|
| 24. | Double-crested Cormorant | Winter visitor to Mudhen Lake. Seen late December through March, irregularly until May. Up to 5 have been seen at once. On 30 Nov 06 30 flew over Mudhen Lake. |
| 25. | American Bittern | 1 record: 1 seen at Mudhen Lake on and around 7 Aug 99. |
| 26. | Great Blue Heron | One or two regularly visit the permanent ponds. |
| 27. | Great Egret | Occasional visitor to the permanent ponds. 1 frequently seen at the dwindling Mudhen Lake in 2003. One at a puddle in East Garrison on 22 Mar 05 was a surprise. |
| 28. | Green Heron | 4 records prior to 2006: 1 seen by Sam Fitton on 6 Apr 98, 1 seen at Mudhen Lake 11 Jun 02, 1 seen by Steve Moore at the pond on Crescent Bluff Road on 25 Apr 03, and 1 flew from Toro Creek Pond on 7 Jul 05. Bruce Gerow saw them regularly at the mouth of El Toro Creek, just off Ft. Ord. There were 5 records at Mudhen Lake and Boy Scout Lake in 2006. |
| 29. | Turkey Vulture | Seen throughout Ft. Ord throughout the year, although uncommon in the backcountry in the fall. Possibly breeding, but not confirmed, although evidence continues to build. Numbers on CBCs have increased almost steadily from 1 in 1984 to 17 in 2001. |
| 30. | Osprey | 1st record: 1 eating on top of high-tension tower by Range 45 on 6 Apr 96. 1 flew over Mudhen Lake on 19 Oct 01. In 2002 Osprey were seen on 4 Jan, 8 Jan, and 11 Apr. In 2003 there were 3 records: 1 on 3 Jan at Mudhen Lake, 1 in April flying over Ingman Court, and 1 on 3 May at El Toro Creek. Again, one was seen at Mudhen Lake on 3 Jan 04. |
| 31. | White-tailed Kite* | Seen in small numbers (1 or 2) over grasslands and vernal pools. In the spring of 1998 Roberto Maceira saw approximately 10 spending the day by one pool, and in the summer of 2006 Tim Buhl saw a group of 11, including young. |
| 32. | Bald Eagle | An immature bird was seen at Mudhen Lake in the spring of 1999. On 4 Mar 02 Bill Collins saw 1 subadult on Machine Gun Flats. |
| 33. | Northern Harrier | A winter resident on the grasslands, and an occasional migrant elsewhere. 1 to 3 are usually seen in grasslands. One summer record: 1 on 8 Jul 98. |
| 34. | Sharp-shinned Hawk | Fairly common fall migrant, arriving in Sep, and uncommon spring migrant. Also seen on 1 and 2 Aug 99. A winter resident in 2003 and 2004. |
| 35. | Cooper's Hawk* | Seen throughout the inventory, and widely, but thinly spread over Ft. Ord. |
| 36. | Red-shouldered Hawk* | Common year-round in the "front" of Ft. Ord, near housing. Seen less in other locations. Ronnie L Ryno observed an occupied nest near Mudhen Lake 16 Apr 86. |

| | | |
|---|---|---|
| 37. | Red-tailed Hawk* | Seen throughout Ft. Ord throughout the year. Eleven Red-tailed Hawks wheeling over the BLM office on 25 Jul 98 was an extraordinary sight. Nests are seen regularly; for example, Ronnie L. Ryno saw on occupied nest on 16 Apr 86. Usually around 10 are seen on CBCs, but on 28 Dec 84 there were 25 counted. |
| 38. | Ferruginous Hawk | 2 records: Don Roberson saw one in the Grasslands on 28 Dec 84, and I saw 1 near Imjin Rd. on 14 Apr 02. |
| 39. | Golden Eagle | 1st record: 1 over grassland, Oil Well Rd., on 6 Apr 96. An uncommon fall migrant, rare in other seasons. Seen in February, March, and September in 2003. One was seen on the CBC on 29 Dec 00, and on Lightfighter Road during the CBC on 27 Dec 05. |
| 40. | Crested Caracara | 1 record: Tim Buhl saw 1 fly across Highway 1 on 11 Sep 06. |
| 41. | American Kestrel* | Seen throughout the year. Perhaps 4 to 8 pairs breed on Ft. Ord. Especially visible on the grasslands. On the 9 CBCs the low count was 4 and the high count was 14. |
| 42. | Merlin | Uncommon migrant or winter visitor:1 was seen near Laguna Seca during the CBC on 27 Dec 89. 1 at Machine Gun Flats on 9 Mar 96 and on 11 Jan 02, 1 on First Ave. on 19 Oct 01, 1 at Parker Flats on 30 Dec 03, and 1 by Fox Pond on 9 Dec 04. 1 was seen at El Toro Creek on 26 Feb 05, and another was seen at Machine Gun Flats on 25 Mar 05. |
| 43. | Peregrine Falcon | One seen circling over First Ave. on 4 Oct 01. |
| 44. | Prairie Falcon | 3 records: 1 seen at Machine Gun Flats on 19 Oct 01, 1 seen by Bill Reese on 27 Dec 04, and 1 was seen flying over Old Reservation Rd. on 30 Aug 06. |
| 45. | Virginia Rail | 1 record: 1 first heard on 28 Oct responded repeatedly to a taped call on 30 Oct 06. |
| 46. | Sora | Few records: 1 on pond behind Range 37 on 31 Mar 96; 1 seen on Mudhen Lake on 1 and 2 Mar 01, and 1 was at the Catfish Pond much of Oct 04. They were heard from 21 Oct to 13 Nov 06 on Mudhen Lake, with a maximum of 3 heard on 26 Oct. |
| 47. | Common Moorhen | 2 records of single individuals on Mudhen Lake: on 23 Oct 01, and seen from16 Oct to 23 Oct 06. |
| 48. | American Coot* | In 1996 common through April, then most gone. Approximately 2 young produced in 1996 and 1997. In 1998 seen in summer on at least 6 ponds, with at least 25 young produced. In the dry year, 2001, only a pair at the Catfish Pond produced young (5). By summer 2004 all ponds except the Catfish Pond had dried, so Coots could only be seen there. Coots returned to the refilled Mudhen Lake by 25 Mar 05, and approximately 40 were seen there on 14 Nov 06. |

| | | |
|---|---|---|
| 49. | Killdeer | Seen at Mudhen Lake through Mar 96, but not later that year. Up to 8 seen at the vernal pool behind the BLM buildings in July and August of 1998. Larger numbers, e.g., 26 on 11 Dec 02, seen in fall or winter in fields such as Parker Flats. |
| 50. | Spotted Sandpiper | 1 record: 2 in breeding plumage at Fox Pond on 4 Jul 98. |
| 51. | Solitary Sandpiper | 3 records: 1 bird at vernal pond behind BLM headquarters on 1 Aug 98, 1 at the Catfish Pond on 29 Jul 03, and there was also 1 on the Salinas River at the mouth of El Toro Creek on 3 May 03. |
| 52. | Greater Yellowlegs | 2 March records in 1996: 6 on Reserve 12 on 9 Mar and 1 heard at Mudhen Lake on 24 Mar. Seen visiting the mud-flats behind the BLM buildings in July and August of 1998, at Fox Pond in Aug 99, 3 on Machine Gun Flats on 11 Jan 02. Visited Mudhen Lake and Machine Gun Flats in March, April, October, and November in 2003. There were 14 on Machine Gun Flats on 2 Mar 04, and 22 on 14 Mar 05.1 flew over South Boundary Road during the CBC on 29 Dec 00. |
| 53. | Whimbrel | 1 record: on 29 Jul 03 one flew over me on Parker Flats Road, and circled around and called. |
| 54. | Western Sandpiper | 1 record: 1 at Fox Pond on 14 Aug 99. |
| 55. | Least Sandpiper | 1 stayed at Fox Pond in 1999. First record: 31 Jul 99. Mary Paul saw 2 at Boy Scout Lake on19 Dec 05, and 1 was seen at the pond by Riso Ridge Road on 13 Nov 06. |
| 56. | Long-billed Dowitcher | Visitors to Fox Pond in 1999. I saw 1 on 5 Aug, the first record, and 10 or more on 18 Aug. |
| 57. | Wilson's Snipe | Steve Moore and Suzy Worcester have seen several at vernal pools; e.g., they saw 1 at Twin Pond on 6 Apr 03. In 2004 there was 1 at Machine Gun Flats on 22 Apr, and there were 2 at the Catfish Pond on 16 and 21 Oct. 3 records in 2005: 10 were counted at Machine Gun Flats on 29 Jan, 2 at Mudhen Lake on 29 Oct, and 1 at Toro Creek Pond on23 Nov. One was at Machine Gun Flats on 23 Jan 06. |
| 58. | Wilson's Phalarope | First record: 1 immature bird on pond behind BLM office on 2 Aug 98.There were 3 on Fox Pond in Aug 99. |
| 59. | Red-necked Phalarope | 3 on the pond on Reserve 5 on 26 Jul 97, up to 19 on Fox Pond in Aug 99, and up to 6 on Mudhen Lake in Aug 06. |
| 60. | Red Phalarope | 1 record: 1 seen by Bill Reese's CBC group on Mudhen Lake on 27 Dec 05. |
| 61. | Mew Gull | 1 record: a large and varied group of gulls were on top of the Commissary building during the CBC count on 28 Dec 84, when Ft. Ord was an active military base. There were 130 of these gulls. |
| 62. | California Gull | Several are regularly seen flying over Ft. Ord and visiting such places as Burger King in fall and winter. Don Roberson saw 1105 on the commissary roof during the CBC on 28 Dec 84. |
| 63. | Herring Gull | 1 record: 38 on 28 Dec84 (see comment at Mew Gull). |

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| 64. | Thayer's Gull | 1 record: 1 adult on 28 Dec84 (see comment at Mew Gull). |
| 65. | Western Gull | 2 records: Don Roberson counted 159 on the Commissary roof during the 28 Dec 84 CBC, and a flock of approximately 6 were seen flying over CSUMB on 19 Jul 98. |
| 66. | Glaucous-winged Gull | 1 record: 1 on 28 Dec84 (see comment at Mew Gull). |
| 67. | Black-legged Kittiwake | 1 record: an exhausted individual found by Shirley Tudor in the Inland Ranges on 25 Feb 11. |
| 68. | Elegant Tern | 2 records: Sam Fitton heard 1 on 26 Jul 97, and Bruce Gerow heard 1 on 1 Aug 98. |
| 69. | Rock Pigeon* | In spite of being common in the housing areas of Ft. Ord, they are infrequently seen in the interior backcountry. There are a few records each year. |
| 70. | Band-tailed Pigeon | Chuck Haugen had seen them along El Toro Creek. Charlie Saunders and I saw 5 on 18 Mar 03 flying over Trail 22. Following that, I saw 24 on 9 May, 7 on 16 Jun, and 3 on 11 Nov 03. In 2006 there were 6 at the BLM Offices on 4 Jan, 10 at Engineer Canyon Road on 8 Mar, and 30 down from Mudhen Lake on 5 Apr. Fifteen were seen on the CBC on 27 Dec 96. |
| 71. | Eurasian Collared-Dove | |
| 72. | Mourning Dove* | Seen, usually 1 to 4 at a time, throughout the inventory and in all areas. On 24 Jul 97, Robin Whatley and I counted over 60 in one spot along Oil Well Road, and I saw approximately 60 by Eucalyptus Road on 15 Oct 06. Less common in the dry years of 2002 and 2003, but a flock of 30 was seen in the grasslands on 2 Dec 03. |
| 73. | Greater Roadrunner* | Few records: near Mudhen Lake: 1 heard on 6 Apr 96 and 1 heard on 2 Nov 01. Also seen by Barloy Canyon Road and Trail 22 in the spring of 2002. People have said they see them down Crescent Bluff Road, and Engineering Canyon Road. Steve Moore and Eric Morgan independently saw 1 at Machine Gun Flats on 19 Apr 03, our only 2003 record. A Roadrunner on Eucalyptus Road entertained the volunteers on 18 May 04. Tammy Jakl saw 1 on Trail 10 on 26 Oct 05. Ronnie Ryno saw 1 near Mudhen Lake on16 Apr 89. Don Roberson saw 2 on the CBC on 28 Dec 84, and 1 on the CBC on 28 Dec 99. |
| 74. | Barn Owl* | Resident, but few seen. In Aug 98 they were found to come out at dusk over the grasslands at Skyline and Oil Well Roads, and hover like Red-tailed Hawks. [Id. aided by Sam Fitton.] In Jul 06 Wendi Wendt showed us a cliff-side nest with 4 young. |
| 75. | Western Screech-Owl* | Resident. Seen once or twice each year, including an adult and 1 young on 26 Jul 97. |
| 76. | Great Horned Owl* | A permanent resident, and breeding bird, seen throughout Ft. Ord. At least 5 pairs live in the vicinity of Eucalyptus Road. Mark Littlefield observed a nest with young on25 Feb 91. |

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| 77. | Burrowing Owl | Jack Massera reported that they used to live in the grasslands. Bruce Delgado saw 2 in Nov 97. The Fittons and I looked for them on 15 Aug 98, and we found pellets that were no more than a week old [*fida* Sam Fitton]. The volunteer group saw 1 on 4 Feb 03 near the corner of Skyline and Guidotti Roads. In late Oct 05 Jessie Quinn saw 3 or 4, and Phil Smith found 1 that stood by its hole under a Coyote Brush bush. Smith reported at least 12 on a subsequent trip that winter (2005-06). Observed on the 1993, 1994, 1998, 2005, and 2006 CBCs. |
| 78. | Common Poorwill* | In the chaparral throughout the inventory. Infrequently calls in July and August. Heard calling as early as 31 Jan 03. In fall they are seen but not heard. Late records: 6 on 20 Oct 01, and 4 on 28 Oct 06. |
| 79. | Vaux's Swift | |
| 80. | White-throated Swift | Appears to be nesting under the highway bridges adjacent to Ft. Ord. Seen widely over Ft. Ord on 19 Feb 01, as in a migration. Seen throughout the year, but usually scarce in winter. One was seen on the CBC of 29 Dec 94. They were common on the Reservation Road bridge over El Toro Creek in the fall of 2006, with at least 28 seen on 16 Nov, and seen until my last trip to the area on 24 Dec. |
| 81. | Anna's Hummingbird* | One to several seen everywhere except pure grassland throughout the year. Most actively breeding in winter. Ronnie Ryno saw an occupied nest on 8 May 89, and I watched nest activity at the BLM office area from 5 Jan to 16 Feb 06. Usually between 40 and 70 individuals have been counted on the CBCs, but 179 were noted on the 1984 CBC. |
| 82. | Rufous Hummingbird | Bruce Gerow said that a big migratory wave of Rufous Hummingbirds passed through Ft. Ord in April 1989. |
| 83. | Allen's Hummingbird* | Seen at BLM compound in 1996 and at the Catfish Pond from 16 Mar to 8 Jun 03, and again in 2004, starting 15 Feb. In 2004, also noted in the BLM office area on 11 Feb, and along El Toro Creek on 10 Mar. |
| 84. | Belted Kingfisher | One or two seem to visit Ft. Ord regularly, except during the breeding season. Seen most regularly at Mudhen Lake. They are more regular, and possibly nesting, in the Salinas River area, a region not inventoried prior to 2006. |
| 85. | Lewis's Woodpecker | From 20 Dec 93 to 6 May 94 there were "dozens" on eastern Ft. Ord. For example, 5 were seen on the CBC on 28 Dec 93. [See Don Roberson, *Monterey Birds,* 2nd Edition, 2002.] Tim Buhl saw 1 at the Catfish Pond on 2 Oct 03. It was still there the next day. |
| 86. | Acorn Woodpecker* | In 1996 most individuals were along El Toro Creek. In 1998 there was a small colony next to Mudhen Lake. In the falls of 2001 and 2005, strong acorn years, Acorn Woodpeckers were widely distributed all over Ft. Ord. One to five could be seen in many places. By the end of the dry, low yield year, 2002, Acorn Woodpeckers were again scarce on Ft. Ord, with a total of 2 at Mudhen Lake. |

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| 87. | Red-breasted Sapsucker | 3 records of 1 near Mudhen Lake: 7 Apr 96, 12 Nov 02, and 21 Oct 06. In 2003 there were 3 records of 1 in the BLM office area: 4 Mar, 18 Mar, and 31 Dec. Not seen on CBCs. |
| 88. | Nuttall's Woodpecker* | Seen in oak trees throughout the year. Usually just 1 or 2 seen. Perhaps more easily seen in sycamore trees along El Toro Creek. Anywhere from 1 to 8 have been seen on CBCs. |
| 89. | Downy Woodpecker* | Thinly spread over riparian locations throughout the year. At most 2 have been seen on any CBC, but the count circle excludes most of the riparian areas of Ft. Ord. |
| 90. | Hairy Woodpecker* | Widely distributed on Ft. Ord in very small numbers. For example, a pair can usually be seen at Mudhen Lake. Much more widely distributed in the fall of 2001. At most 3 have been noted on any CBC. |
| 91. | Northern Flicker* | Seen throughout oak savannah throughout the inventory. Up to 10 seen per field trip. From 10 to 20 have been noted on most CBCs. |
| 92. | Olive-sided Flycatcher* | Uncommon spring migrant; 3 records of 1 each: on Crescent Bluff Rd. on 28 Apr 96, at El Toro Creek on 7 May 02, and Machine Gun Flats on 14 May 03. In 2004 through 2006 a pair nested in the BLM office area. On 13 Jul 04 an adult was seen with 2 fledglings. |
| 93. | Western Wood-Pewee | 4 records: 1 seen at the camp ground by West Camp Street on 15 Aug 99, and 1 May 03 (singing), 2 at the BLM office area on 8 May 03, and Bruce Gerow saw 1 at Mudhen Lake on 21 Apr 04. |
| 94. | Gray Flycatcher | 1 record: Jane Styer and I saw one near Skyline Road on 2 May 03. |
| 95. | Pacific-slope Flycatcher* | Summer resident in trees in riparian locations. First spring record: 17 Mar 04. In 1998 nested under eaves at front entrance to BLM main building. The latest annual record was 1 seen 27 Sep 01. Early arrival in 2004 with 3 March records; and in 2005 with arrival noted on 25 Mar. |
| 96. | Black Phoebe* | 1 or 2 pairs are seen at most riparian locations throughout the year. On CBCs prior to 1999 fewer than 8 individuals were noted per count; from 1999 on 10 or more have been noted per count |
| 97. | Say's Phoebe | Winter resident on grasslands: last seen on 7 May 02. First fall record: 10 Sep 02. Usually fewer than 5 seen on one field trip. Usually 5 to 15 individuals have been seen per CBC. |
| 98. | Ash-throated Flycatcher* | Summer resident throughout oak-chaparral. First spring record: 2 Apr 05. Infrequently seen in August. Latest record: 13 Aug 02. |
| 99. | Cassin's Kingbird | Bruce Gerow saw 1 very vocal bird on Ft. Ord near the Toro Estates Entrance from 19 to 21 May 01. Another vocal bird was seen at Boy Scout Lake on 19 Aug 05. |

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| 100. | Western Kingbird* | 1 or 2 pairs breed on the grasslands near El Toro Creek. The 1st spring records are usually in early April. Seen on 27 Mar 04. A "fall" migrant was on Machine Gun Flats on 2 Aug 99. Bruce Gerow confirmed breeding in 2001. |
| 101. | Loggerhead Shrike | Not seen in 1996. Uncommon, but widely distributed in somewhat open areas since then. |
| 102. | Hutton's Vireo* | Year-round resident in the Coast Live Oaks. When they are singing I can usually detect 1 to 4 individuals in one place. Most CBCs have recorded between 2 and 7 individuals. |
| 103. | Warbling Vireo* | Likely breeding in dense willow locations. Seen only in spring, and in drier years likely only a migrant. Earliest records: 27 Apr 02, 21 Apr 04, and 18 Apr 05. I was surprised that there was one at the Dam Crossing on 22 Jun 04. |
| 104. | Steller's Jay | Usually associated with El Toro Creek community, first recorded on Ft. Ord on 27 Jul 97. Widely distributed over Ft. Ord in the fall of 2001, a good acorn year. Noted around Mudhen Lake in November and December 05. |
| 105. | Western Scrub-Jay* | Highly visible common bird throughout the oak-chaparral throughout the inventory. The CBCs have recorded between 32 and 90 individuals. |
| 106. | American Crow* | Although abundant in the housing areas on Ft. Ord, it is uncommon in the backcountry. The CBCs have recorded between 16 and 90 individuals. |
| 107. | Common Raven | Infrequent visitor. Bruce Gerow saw two fly over the vicinity of Mudhen Lake in the spring of 1999. From then through 2003 I have widely scattered records: 10 Jun 00, 21 Oct 01, 3 May 02, 8 Aug 02, 17 Nov 02, 21 May 03, and 11 Sep 03. The six records in 2004 of up to 5 individuals suggest a population increase. In 2005 there were 4 records, and in 2006 there were 11 records of 1 to 4 individuals. |
| 108. | Horned Lark* | Seen in high grassland throughout the year. Young birds observed in June and July. They appear to be much more common in winter. They were uncommon in 2002. Five of the 9 CBCs have recorded no Horned Larks. The 28 Dec 93 CBC recorded 69 larks, far more than any other Ft. Ord count. |
| 109. | Purple Martin | 1 record: four flew west over Mudhen Lake on 14 Aug 99. |
| 110. | Tree Swallow* | Seen at ponds in small numbers. In 1996 first seen on 9 Mar, in 2001 on 12 Feb, in 2002 on 8 Feb, and in 2003 on 9 Mar. In July/August inventories, not seen in 1997, and last seen on 12 Jul 98, 1 Oct 01, 15 Jun 02, and 8 Jun 03. A possible migration peak in April. Three were seen on the 29 Dec 98 CBC. |

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| 111. | Violet-green Swallow* | At ponds in small numbers during the winter/spring inventory of 1996. Early record: 10 Feb 01. Around 60 birds seen on 2 Mar 01. Rarely seen in summer. In 2002 seen regularly from 6 Mar until 11 Jun, but not otherwise. In 2003 and 2004 seen until mid-June, probably nesting in a cliff face on Barloy Canyon Road. Also, 4 seen on the 29 Dec 98 CBC, and 3 were at Mudhen Lake on 30 Dec 03. |
| 112. | Northern Rough-winged Swallow | Seen in small numbers from early March (5 Mar 02) to early July (8 Jul 98). Seen as early as 12 Feb 01. |
| 113. | Cliff Swallow* | Summer resident. Until 2003 the early inventory date was 2 May 02. In 2003 approximately 50 were flying along El Toro Creek on 6 Apr, and in 2004 they were seen as early as 15 Mar. The most common swallow into August. Not seen in Sep 01, and last seen on 7 Aug 02, 12 Aug 03, and 19 Aug 05. |
| 114. | Barn Swallow* | Summer resident with nests observed. Usually first seen in March. One individual was seen on 20 Jan 06. Seen over the grasslands as well as over ponds. The 20 Barn Swallows seen over the vernal pond behind the BLM office appeared migratory. In Aug 04 a flock settled around the corner of Eucalyptus and Parker Flats Roads. Approximately 60 were seen there on the 20th. Some last records for the year are: 22 Sep 01, 12 Sep 02, and 12 Aug 03. One was seen on the 29 Dec 98 CBC. |
| 115. | Chestnut-backed Chickadee* | Seen throughout the inventory in scattered localities where there are oak trees. Up to 10 may be seen in a given location. The 1993 CBC reported 43 individuals, but the count has usually seen fewer than 15. |
| 116. | Oak Titmouse* | Common in the oaks and riparian woods throughout the year. Usually fewer than 10 are seen. The 1993 CBC reported 54 titmice, all other CBCs found 17 or fewer individuals. |
| 117. | Bushtit* | Common throughout the year wherever there are trees or chaparral. Usually seen in flocks (of up to 30 birds). Usually 100–200 are seen during CBCs, but 326 were counted on 28 Dec 84. |
| 118. | Red-breasted Nuthatch | Infrequent winter resident, noted on several CBCs.: 1 in '96, 2 on the golf course in '98, 3 in '00, and 1 seen near BLM office on 28 Dec 01. A small "wave" came through in the fall of 2004, with the 1st heard in Coast Live Oaks on 29 Sep., and one wintered in the BLM office area and was last seen on 30 Apr 05. |
| 119. | White-breasted Nuthatch | 5 records: 1 or 2 in the Valley Oaks near El Toro Creek on 27 Jul 97, 15 Aug 99, and 28 Oct 03; one was seen near El Toro Creek on 18 Sep 01. One was in the Coast Live Oaks at Boy Scout Lake on 16 Nov 05 |
| 120. | Pygmy Nuthatch* | 1 record prior to 2006: Don Roberson saw 2 on the golf course on the CBC on 28 Dec 99. On 6 Mar 06 a pair was seen mating in the pine planting along South Boundary Road. On 5 Jun they were seen feeding fledglings in the same location. |

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| 121. | Brown Creeper | Uncommon winter resident. They have been seen at the golf course on several CBCs: 1998. 2000, and 2005. There was 1 at BLM offices from 11 Dec 02 until 28 Jan 03. |
| 122. | Rock Wren | One was in an eroded area not far from the top of Oil Well Road, seen on 21 and 27 Oct 01. |
| 123. | Bewick's Wren* | Common in the trees, brush, and chaparral throughout the inventory. During the height of song one may hear roughly 10 singing. On CBCs anywhere from the teens to the 30s have usually been recorded. On 28 Dec 93 52 were counted. |
| 124. | House Wren* | Seen in riparian locations from March until July. Latest records: 19 Aug 99, 13 Oct 02, and 17 Oct 06. Less frequent, and last noted on 17 May, in the dry year 2004. |
| 125. | Marsh Wren | One singing on Mudhen Lake 25 Feb to 2 Mar 01, and 1 at the Catfish Pond in the fall (8 Oct) of 2002, in Mar 03, and Oct 04. Previously seen by Bill Collins in the pond near Range 36. They were seen at Mudhen Lake from 26 Oct to 15 Dec 06, with a maximum of 4 seen on 13 Dec. |
| 126. | Golden-crowned Kinglet | Few winter records. There were 2 noted on the golf course on the 1998 CBC. Seen in Dec 01 until 10 Mar 02. Not seen again until 12 Dec 02. |
| 127. | Ruby-crowned Kinglet | Winter resident in trees. Last seen on 6 Apr 96, 12 Apr 02, and 6 Apr 03. Main fall arrival in early October, *e.g.* 3 Oct 02, 6 Oct 03. Usually fewer than 10 are seen, but in the fall of 2006 up to 30 could be seen at a single place. Usually 15–30 are seen on the CBCs. |
| 128. | Blue-gray Gnatcatcher* | Recorded from 30 Mar 96 and 10 Mar 02 through spring in oak-chaparral areas. Last records: 7 Jul 98, 19 Aug 99, 2 seen in chapparal on the 2001 CBC, and 20 Aug 02. Robert Horn saw 1 near Creekside on 1 Nov 03. |
| 129. | Western Bluebird* | Seen throughout the year, although recorded on a minority of the stops. The flocks usually have 5 or fewer individuals. Bluebirds may have become more common on Ft. Ord between 1996 and 2006. |
| 130. | Mountain Bluebird | 7 seen on Camp Ord on 3 Jan 37. [See Don Roberson, *Monterey Birds,* 2nd Edition, 2002.] |
| 131. | Townsend's Solitaire | 1 record: 1 seen and photographed by the BLM Office on 22 Oct 07. |
| 132. | Swainson's Thrush | First heard singing in dense willows along Crescent Bluff Road on 4 May 96. Heard singing on 8 and 16 Jun 96 near Guidotti Gate. Migrant heard singing on 14 May 02. In 2003 a May migrant. Noted 23 to 30 Apr 05. Just 1 or 2 seen per day. |
| 133. | Hermit Thrush | Widely spread fall records of 1 to 3 birds starting 18 Oct 01, 13 Oct 02, and 14 Oct 03. A winter resident; most have left by the end of February. Sporadic records up to 6 Apr (2003). A surprising 9 seen at once at the Huffman Tank on 23 Nov 02.On the 9 CBCs a high of 22 were counted on 28 Dec 99 and a low of 3 were noted on 27 Dec 96. |

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| 134. | American Robin* | A few present in certain locations, e.g. Mudhen Lake, and the BLM compound. Seen throughout the year. On 15 Aug 98 there was a "fall" flock of ten by the BLM office. Only 1 record from 18 Sep through 18 Oct 01. After that, more frequently seen. In 2003 seen on 6 Jun, and not again until 7 Nov. On 3 Feb 04 there was a winter flock of 32 at the corner of Eucalyptus and Barloy Canyon Roads. An outstanding record was the 1190 counted on the 1994 CBC. |
| 135. | Varied Thrush | Seen by Don Roberson at Lower Pilarcitos Pond on 2 CBCs: 1 seen on 28 Dec 92 and 3 seen on 28 Dec 99. Also seen, 1 each, on 24 Nov and 25 Dec 06 at the BLM office area, and on 1 Dec 06 near Lower Pilarcitos Pond. The 24 Nov and 1 Dec birds were singing. |
| 136. | Wrentit* | Seen (heard) throughout the chaparral throughout the year. |
| 137. | Northern Mockingbird* | Small numbers usually seen near housing areas, but also seen around trees or shrubs in the grasslands. |
| 138. | Brown Thrasher | 1 seen near Mudhen Lake on 14 Oct 84. [See Don Roberson, *Monterey Birds,* 2nd Edition, 2002.] |
| 139. | California Thrasher* | Seen (heard) throughout the chaparral throughout the year, but with lower frequency than the Wrentit. |
| 140. | European Starling | Seen in many locations throughout the year. Common along El Toro Creek; however, infrequently seen at many places. In 2006 they were more common throughout Ft. Ord. |
| 141. | American Pipit | Winter visitor: 7 at Fox Pond on 14 Feb 01; 39 not far from the top of Oil Well Road on 17 Feb 01. In 2003 last seen on 21 Mar, and in 2004 on 12 Apr. |
| 142. | Cedar Waxwing | Winter resident. First fall record: 10 seen on 3 Oct 01. On 26 Feb 01 there were 44 by El Toro Creek. Late records: on 7 May 02 there were about 10 by El Toro Creek, and on 25 May 03 there were 32 in the same location; in 2004 there were 50 seen on 19 May and 7 seen on 4 Jun. In 2005 seen mainly in April. Seen just 3 times in 2006. |
| 143. | Phainopepla | 2 seen along Crescent Bluff Road on 12 Apr 02. Reported by Chuck Haugen in July 2002. Up to 3 seen visiting elderberries along El Toro Creek on 25 and 26 Jul 02. Next seen 28 and 29 Sep 06, when 2 visited an elderberry on the corner of Eucalyptus and Barloy Canyon Roads. Previously reported by Bruce Gerow as a non-breeding visitor during the Monterey Breeding Bird Atlas project. |
| 144. | Orange-crowned Warbler* | First annual records: 9 Mar 96, 1 Mar 01, 9 Mar 03, 15 Feb 04, 18 Feb 05. On 9 Mar 03, 16 were heard singing. Frequently recorded in chaparral/oaks from 14 Apr on. Infrequently recorded in July and August. In 2001 a noticeable fall migration in September and October, and 2 were seen on 1 Nov. In 2003 later individuals included 1 on 22 Oct and 1 on 4 Dec, both near water. They have been seen on approximately half of the CBCs. |
| 145. | Nashville Warbler | Migrant. 1st record: 1 at El Toro Creek on 17 Sep 01. Other records of 1 individual from 6 to 9 Oct 01, 11 Mar 03, and 21 Apr 03. |

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| 146. | Northern Parula | 1 sure record: 1 on 5 Oct 01 on 7th Street. Also, likely an immature female seen on Parker Flats Cutoff on 27 Oct 02. |
| 147. | Yellow Warbler | Spring records: 1 heard near Mudhen Lake on 21 Apr 96, and ones seen on 14 May and16 May 02, 17 Apr 03, and 17 and 25 Apr 04. In 2001 one to three were regularly seen from mid-September to mid-October. |
| 148. | Yellow-rumped Warbler | Winter resident. Peak on 6 Apr 96, and last seen on 20 Apr 96 and 12 Apr 02. First seen on 27 Sep 01, 1 Oct 02, and 26 Sep 06. Also, there was an isolated record of 1 on Ingman Ct. on 15 Aug 02. Nearly all are of the Audubon's race. I saw 1 bird of the Myrtle race on 2 Nov 01, and 2 on 19 Nov 03. On 9 CBCs a low of 27 were seen in 1989 and a high of 104 were seen in 1993. The 1993 CBC count included 12 of the Myrtle race. |
| 149. | Black-throated Gray Warbler | 4 spring records: 20 Apr, 28 Apr, 4 May 96, and 28 Apr 03. A female was seen on the golf course during the CBC on 29 Dec 98. |
| 150. | Townsend's Warbler | Winter resident. Earliest fall record 20 Sep 01. Seen through February in 2001. Six or fewer seen per field trip. Spring records: a female seen on 1 Jun 96 and 3 males on 23 Mar 02; in 2003 seen from 9 Mar until 8 May. On 9 CBCs fewer than 10 were noted on 4 years, and more than 10 on 5 years, with a maximum of 33 in1993. |
| 151. | Hermit Warbler | 3 records, all at the BLM office area: 1 on 5 May 03, 5 seen on 8 May 03, and 1 on 28 Apr 05. |
| 152. | Black-and-white Warbler | 1 record: 1 seen by Don Roberson on the 28 Dec 84 CBC. |
| 153. | MacGillivray's Warbler | In the spring of 1999 Bruce Gerow encountered a singing male in the chaparral on Crescent Bluff. |
| 154. | Common Yellowthroat* | Probably to be found all year at the corner of Barloy Canyon and Eucalyptus Roads and/or Mudhen Lake prior to the 2003 burn. In 2003 not seen in these areas following the July fire. In the dry year of 2004, just a few records from 21 Apr to 30 Jun. Mainly noted around Mudhen Lake in 2006. |
| 155. | Wilson's Warbler* | Summer resident some years along upper El Toro Creek. Earliest records: 7 Apr 96 and 27 Mar 04. Latest record: 2 Aug 97. A migratory flock of 10 at the BLM office on 8 May 03 was unusual. |
| 156. | Yellow-breasted Chat | 1 record: 1 heard singing in a tangle along Crescent Bluff Rd. on |
| 157. | Western Tanager | Spring migrants recorded on 4 May and 1 Jun 96, and from 1 to 8 May 03. In 2005 the early record was 24 Apr, and by 30 Apr a flock of 3 was seen. Two flocks noted in May 03, with a maximum of 10 at the BLM office on the 8th. Fall migrants on 25 Jul to 2 Aug 98, and until 20 Sep 01. A late bird was seen near Parker Flats Cut-off on 29 Oct 05. |
| 158. | [Green-tailed Towhee | 1 seen on 28 Feb 02 on Parker Flats Road near Eucalyptus Road. Efforts to find the bird later failed.] |

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| 159. | Spotted Towhee* | A permanent resident seen throughout the chaparral. In comparison with the California Towhee, this bird is more restricted in habitat and fewer are seen. |
| 160. | California Towhee* | Common throughout the year, and widely distributed. Seen on virtually all trips, although not in large flocks. On 9 CBCs a low of 18 were seen in 1989 and a high of 63 were noted in1993. |
| 161. | Rufous-crowned Sparrow* | In April of 2000 Sam Fitton found 2 singing by the big washout into Mudhen Lake. One was still there at least as late as 21 Jun 00. Seen along Barloy Canyon Road on 9 and 14 May 02, and from 13 Feb until 18 Mar in 2003. |
| 162. | Chipping Sparrow* | 1 record prior to 2004: 2 at the campground on Watkins Gate Rd. on 11 May 03. Regularly seen in the burn area in the spring of 2004, with nesting probable. Seen there again in 2005. |
| 163. | Lark Sparrow* | Seen all year, but infrequently in the winter. Most commonly seen in the grasslands, but also apparently breeding in or near the chaparral areas. Regularly seen at the BLM compound. |
| 164. | (Bell's) Sage Sparrow* | Resident. Thinly spread over the burned chaparral areas. I likely overlooked them before Bruce Gerow pointed out that they were there. My first record: 4 Jul 98. Birds with young fledgling seen on 3 Jul 06. Don Roberson noted between 1 and 4 individuals on the CBCs in11993, 1996, 1998, and 2000. |
| 165. | Savannah Sparrow | Winter resident in the grasslands. Approximately 60 seen high in the grasslands on 17 Dec 06. Last spring record: 28 Apr 96. First fall records: 26 Sep 01, and 22 Oct 02. |
| 166. | Grasshopper Sparrow* | Breeding bird of the grasslands. First seen on 14 Apr 96, on 27 Apr 02, on 21 Mar 03, on 9 Mar 04, and 16 Mar 05. Approximately 30 singing birds detected in 1996, 5 or 6 of these were on Machine Gun Flats. Bird in juvenal plumage seen on 16 Jun 96. Seen until the end of the inventory in 1996. There were 35 or more singing birds on Ft. Ord in Jun 00. There were likely as many in Jun 02, but likely fewer in 2003. |
| 167. | Fox Sparrow | Winter resident, but much more common in fall. First noted in chaparral on 5 Oct 01, 1 Oct 02, 30 Sep 03, and 29 Sep 05. Last seen on 25 Jan 02 and 14 Mar 03. Usually 1 or 2 seen, but 10 to 20 were at the Huffman Tank on 29 Oct 02. 84 were seen on the 28 Dec 84 CBC. All Fox Sparrows seen have been of the 'Sooty' race. |
| 168. | Song Sparrow* | There are 2 to 6 individuals at nearly every pond throughout the inventory. |
| 169. | Lincoln's Sparrow | Mostly a spring and fall migrant, but few recorded per year. The 2 that Sam Fitton and I saw at Fox Pond on 11 Aug 99 were unusually early. |
| 170. | White-throated Sparrow | 1 record: 1, perhaps immature, at Mudhen Lake 15 Oct 01. |
| 171. | Harris's Sparrow | One immature seen on Trail 22 on 16 Jan and 25 Jan 02. |

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| 172. | White-crowned Sparrow | Winter resident in backcountry Ft. Ord. Last seen on 29 Apr 05. Earliest fall record: 2 at Fox Pond on 13 Aug 99. In the fall of 2001 the main migration arrived by 26 Sep. I usually record fewer than 10, but I saw approximately 50 along El Toro Creek on 30 Nov 03. |
| 173. | Golden-crowned Sparrow | Common winter resident, October through April. Last seen on 21 Apr 96, and on 2 May 02. Seen in good numbers, around 20, by 5 Oct 01 (and 6 Oct 03). First noted in fall on 1 Oct 02 and 30 Sep 03. |
| 174. | Dark-eyed Junco* | Common breeding bird in oak woods and at the BLM compound. Seen throughout the year. In 2003 flocks of 50 were seen in October, but in other seasons 20 or fewer were seen. |
| 175. | Black-headed Grosbeak* | Summer resident near Guidotti Gate. Seen as early as 16 Apr 02 and 7 Apr 03, and as late as 1 Aug 99. |
| 176. | Lazuli Bunting* | 4 records prior to 2002: 28 Apr 96, 4 May 96, and 28 Jun 98, 1 Aug 99. The June record was of a singing male at Mudhen Lake. Strong migration in 2002, seen from 23 Apr to 25 May, with a peak of around 15 seen on 7 May. Weak migration in 2003, seen from 1 May until 6 Jun. A strong migration again in 2004; noted 19 Apr to 30 Jun, with around 30 individuals in the burn area alone. Probable breeding in the burn area followed the migration. In 2006 they probably bred in the 2005 burn area off Parker Flats Road. |
| 177. | Red-winged Blackbird* | Concentrated near ponds and also seen elsewhere throughout the year, although scarce in August, except, possibly, at the roost at the pond on Watkins Gate Road near West Camp Street. |
| 178. | Tricolored Blackbird* | The known colony on Oil Well Road has been active most years. The colony has maintained over 50 birds. On 26 Jul 98 I watched them come to feed at the play fields of El Toro Creek community. Ten or more visit the Equestrian Center in winter. They were seen there up to 28 Feb 02. 120 were counted on the 27 Dec 89 CBC, and 200 on the 28 Dec 93 CBC. |
| 179. | Western Meadowlark* | Small numbers on grassland and Machine Gun Flats in the spring and summer. Larger, more widespread groups of up to 50 seen in the fall and winter. Usually seen in double digits on the CBCs; a low of 8 was seen on the 29 Dec 01 count, and a high of 323 on 28 Dec 93. |
| 180. | Brewer's Blackbird* | Present throughout the inventory. Especially common at the BLM compound, prior to the fall of 2001. Common in residential areas. 850 were noted on the 27 Dec 89 CBC. |
| 181. | Brown-headed Cowbird | 5 records: 22 Mar 96, 30 May 02, 23 May 03, 29 Apr and 30 Apr 05. |
| 182. | Hooded Oriole* | Added to inventory on 11 Jul 98. Sam Fitton pointed out that they were near El Toro Creek. I found at least 3 pairs breeding in Fan Palms in El Toro community, and using Ft. Ord to feed. They continue to be seen only in this area. |

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| 183. | Bullock's Oriole* | Summer resident. Earliest records: 20 Apr 02 and 2 Apr 03. Breeding along El Toro Creek, and possibly other riparian areas with tall (Eucalyptus) trees. Not seen after mid-August. Bruce Gerow noted especially large numbers of both oriole species nesting in the El Toro Creek area in 2001. |
| 184. | Purple Finch* | Present in the oaks and at the BLM compound throughout the inventory. Usually no more than 5, but sometimes 10 or 20 are in a flock. |
| 185. | House Finch* | Seen in small numbers throughout Ft. Ord throughout the inventory. Seen at the BLM compound in larger numbers. Abundant in the housing areas of Ft. Ord. |
| 186. | Pine Siskin* | At BLM compound from first inventory until 2001. However, not encountered in the fall (inventory in 2001). Seen Jan 02 through 23 Apr 02, and then gone: perhaps sensitive to drought. In the drought year of 2003 seen only from 23 Jan to 28 Apr. No Siskins noted in the dry year of 2004, and a few were noted in 2005 or 2006. |
| 187. | Lesser Goldfinch* | Seen throughout the inventory wherever there are trees. Uncommon in the backcountry in the dry season of 2002. Hardly seen after Jul 03, another dry season, and in2006 not noted after 7 Dec. |
| 188. | Lawrence's Goldfinch* | Seen at the BLM compound and in riparian locations in the chaparral. First seen on 24 Mar 96. Not seen at all in 1998. In 2000 last seen on 15 Jun. The 2002 records span 14 Apr to 20 Aug. In 2003 just 2 records of 2 each on 23 May and 16 Jun. The year 2004 was a strong one with records regularly from 19 Apr to 10 Sep, especially in the burn area where they probably bred. Two fall records: 2 near El Toro Creek on 27 Oct 01, and 1 at recent burn on 19 Oct 06. |
| 189. | American Goldfinch | Fall and winter resident. 1st record: approximately 50 near El Toro Creek on 9 Feb 01. Smaller numbers seen in fall starting 24 Oct 01, 22 Oct 03, and 1 Nov 05. Usually the first fall records are in October. |
| 190. | House Sparrow* | Common in the housing areas on Ft. Ord. Barely seen in Backcountry Ft. Ord. |