EASTSIDE PARKWAY PROJECT

DRAFT
BIOLOGICAL RESOURCES REPORT

JANUARY 2012

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INTRODUCTION

DENISE DUFFY & ASSOCIATES, Inc. (DD&A) was contracted by Whitson Engineers to prepare a Biological Resources Report for the Eastside Parkway Project (project), located within the former Fort Ord military base, in Monterey County, California (Figure 1). The emphasis of this study is to describe existing biological resources within and surrounding the project, identify any special-status species and sensitive habitats within the project, assess potential impacts that may occur to biological resources, and recommend appropriate avoidance, minimization, and mitigation measures necessary to reduce those impacts in accordance with the California Environmental Quality Act (CEQA).

Project Description

The Eastside Parkway Project consists of the construction of approximately three miles of new roadway through the former Fort Ord extending from Eucalyptus Road, where it intersects Parker Flats Cut-off, northeast to Inter-Garrison Road (Figure 2). The project also includes approximately one mile of road expansion along the existing Inter-Garrison Road from its intersection with the new Eastside Parkway to the East Garrison Project site, and an extension of approximately 0.25 mile of Gigling Road to intersect the new Eastside Parkway.

Two alternative Eastside Parkway alignments were considered for this biological study. On June 10, 2011, the current alignment was approved at the Fort Ord Reuse Authority (FORA) board meeting. However, this report includes an analysis of both alternatives. As such, the "project site" or "survey area" includes both alternative alignments, the Inter-Garrison Road expansion, the Gigling Road extension, a 100-foot buffer for each road improvement (i.e., a 200-foot corridor), and an expanded area for the proposed Eastside Parkway and Inter-Garrison Road intersection (as shown in Figure 2). A regional aerial map showing the area and proposed grading within the 200-foot corridor was provided by Whitson Engineers on October 31, 2011 (Figure 3).

Summary of Results

The following habitat types were observed within the survey area: corridor includes

- Coast live oak woodland – 76 acres,
- Non-native grassland – 29 acres,
- Maritime chaparral – 20 acres,
- Ruderal/Developed – 12 acres, and
- Coastal scrub – 6 acres.

Special-status wildlife species that are known or have the potential to occur at the project site based on the observations, habitats present, and known occurrences within the quadrangles evaluated include:

- Hoary bat (*Lasiurus cinereus*) – CNDDB[1],
- Monterey dusky-footed woodrat (*Neotoma macrotis fuscipes*) – CSC,
- Monterey shrew (*Sorex ornatus salarius*) – CSC/HMP,
- American badger (*Taxidea taxus*) – CSC,

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

Title: Project Vicinity Map

File: ESP Vicinity Map.mxd

Date: 12-06-11

Scale: 1 inch = 1.32 miles

Project: 2010-14 Eastside Pkwy

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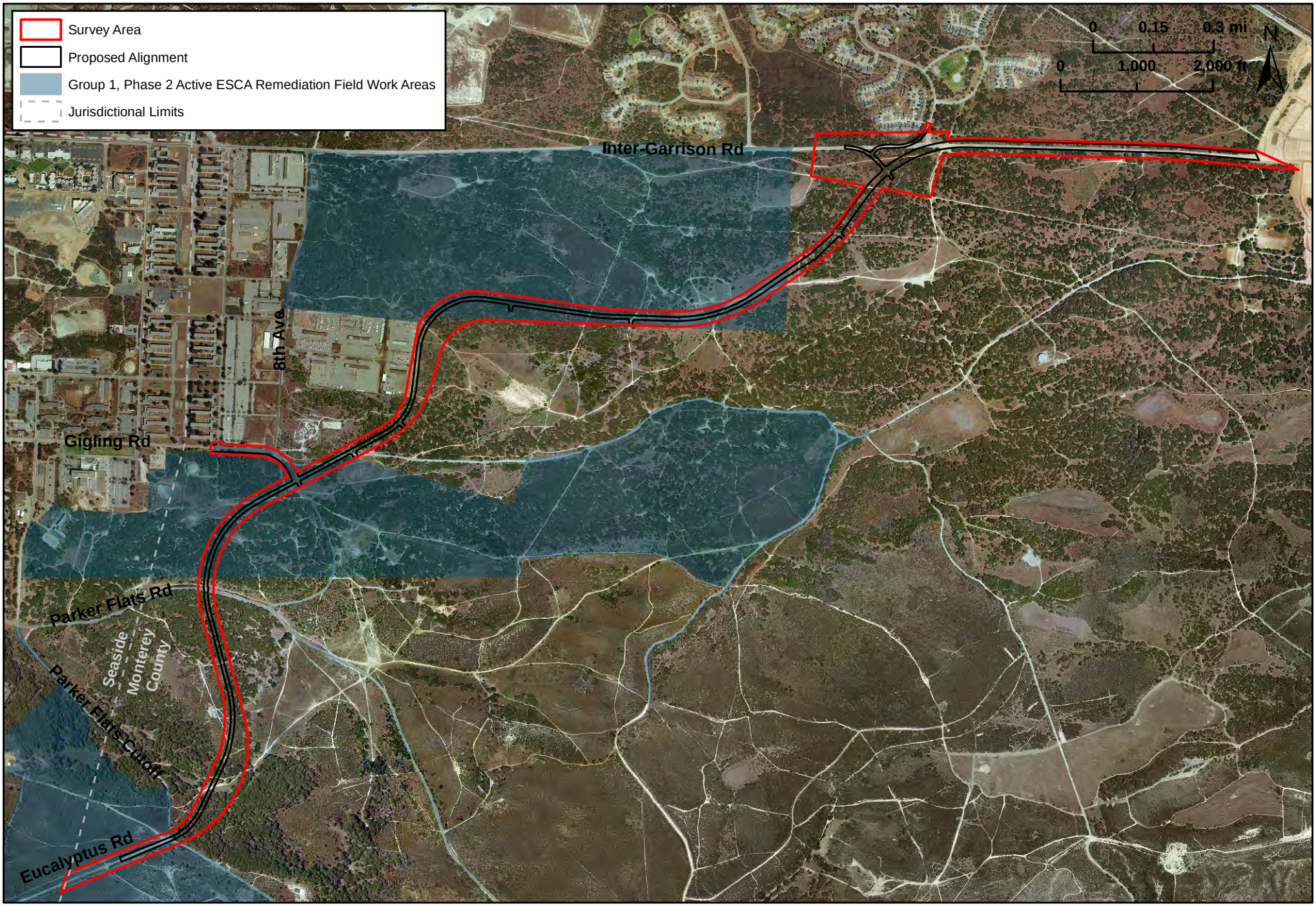
Figure 1



Title: Project Location Map

File: ESP Project Location Map.mxd

Date: 12-06-11

Scale: 1 inch = 0.31 miles

Project: 2010-14 Eastside Pkwy

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Figure 2

Source:
Whitson Engineers, 2011

Title: Proposed Project Plans

File: Fig 3 - Project Plans.pdf

Date: 12-06-11

Scale: N/A

Project: 2010-14 Eastside Parkway

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Figure 3

- Nesting raptors and other protected avian species, including, but not limited to:
  - Cooper's hawk (*Accipiter cooperii*) – CNDDB,
  - Burrowing owl (*Athene cunicularia*) – CSC,
  - White-tailed kite (*Elanus leucurus*) – CFP,
  - California horned lark (*Eremophila alpestris actia*) – CNDDB,
- California tiger salamander (*Ambystoma californiense*) – FT/ST/HMP,
- California legless lizard (*Anniella pulchra*) – CSC/HMP,
- Coast horned lizard (*Phrynosoma blainvillii*)– CSC, and
- California red-legged frog (*Rana draytonii*) – FT/CSC/HMP.

Several special-status plant species were identified within the project site during focused rare plant surveys in the summer of 2010 and the spring and summer of 2011:

- Hooker's manzanita (*Arctostaphylos hookeri*) – List 1B/HMP,
- Toro manzanita (*Arctostaphylos montereyensis*) – List 1B/HMP,
- Sandmat manzanita (*Arctostaphylos pumila*) – List 1B/HMP,
- Monterey ceanothus (*Ceanothus cuneatus* ssp. *rigidus*) – List 4/HMP,
- Monterey spineflower (*Chorizanthe pungens* var. *pungens*) – FT/List 1B/HMP, and
- Eastwood's goldenbush (*Ericameria fasciculata*) – List 1B/HMP.

Additionally, three sensitive habitats are present within the project site:

- Maritime chaparral (listed on the California Department of Fish and Game's [DFG's] California Natural Diversity DataBase [CNDDB] working list of high priority and rare natural communities and a Fort Ord HMP species),
- Monterey spineflower critical habitat (Federal Register 73 FR 1525),
- Coast live oak woodland habitat, (coast live oak trees are protected by Monterey County Code and the Oak Woodland Management Act [PRC code Section 21083.4]).

No other special-status wildlife or plant species or sensitive habitats are known or expected to occur within the project site.

METHODS

Personnel and Survey Dates

Multiple biological surveys were conducted at the project site in 2010 and 2011 by DD&A biologists, Josh Harwayne (Senior Environmental Scientist), Matthew Johnson (Associate Environmental Scientist), and Jami Davis (Assistant Environmental Scientist). Reconnaissance-level wildlife surveys and focused spring-flowering plant species surveys were conducted on April 11, 13, 15, and 18, 2011. Focused summer-flowering plant species surveys were conducted on July 20 and 29, 2010, and July 5, 2011. The areas surveyed include two proposed alignments for the future Eastside Parkway, Inter-Garrison Road (from Eastside Parkway to the East Garrison Project site), and an expanded area for the proposed Eastside Parkway and Inter-Garrison Road intersection (Figure 1). A 200-foot wide corridor was surveyed for proposed road improvements; in areas where alternatives were proposed, the survey corridor was expanded to include the alternatives. The project site was defined by applying a 100-foot buffer to the centerline of the proposed alignment, which was provided by Whitson Engineers in May, July, and September 2010, and updated July 2011. Since July 2011, Whitson Engineers has been working on refining the project design and an updated proposed alignment was provided to DD&A on October 31, 2011 as part of the 30% improvement plans. DD&A reviewed the alignment and confirmed that the alignment remained within the original survey corridor. No additional biological survey work was required as a result of the revisions.

Survey methods included walking the survey area and using aerial maps to identify general habitat types and potential sensitive habitats, and conducting a focused survey of appropriate habitat for special-status plant species. Concurrently, a reconnaissance-level wildlife habitat and special-status species survey was conducted to identify suitable habitat and any special-status wildlife species observed. Available reference materials were reviewed prior to conducting the field surveys, including the DFG's CNDDB occurrence reports (DFG, 2011), the U.S. Fish and Wildlife Service (Service) list of Federally Listed Threatened and Endangered Species that May Occur in Monterey County (Service, 2011), aerial photographs of the project site, and numerous biological reports prepared for Fort Ord (see "Data Sources" below). 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.

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 federal Endangered Species Act (ESA) or the California Endangered Species Act (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 DFG'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 DFG also includes some animal species that are not assigned any of the other status designations in the CNDDB "Special Animals" list. The DFG 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 on California Native Plant Society (CNPS) lists are also treated as special-status species in accordance with CEQA Guidelines Section 15380. In general, DFG considers plant species on List 1 (List 1A [Plants Presumed Extinct in California] and List 1B [Plants Rare, Threatened, or Endangered in California and Elsewhere]), or List 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere) of the CNPS

Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2010) as qualifying for legal protection under this CEQA provision.[2] In addition, species of vascular plants, bryophytes, and lichens listed as having special-status by DFG are considered special-status plant species (DFG, 2011).

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 DFG Code 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 DFG Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy the nest or eggs of any such bird except otherwise provided by this code or any regulation adopted pursuant thereto." In addition, fully protected species under the DFG Code Section 3511 (birds), Section 4700 (mammals), Section 5515 (fish), and Section 5050 (reptiles and amphibians) are also considered special-status animal species. Species with no formal special-status designation but thought by experts to be rare or in serious decline are also considered special-status animal species (DFG, 2011).

After careful consideration, the DFG has removed the Service's federal species of concern designation from the CNDDB. The federal species of concern list was an internal Service list maintained by some of the field offices comprised of taxa that were formerly designated as Candidate categories C1 and C2 plus some other miscellaneous taxa. This list is no longer updated within the Ventura Service office. As a result, the federal species of concern designation is not considered an indicator of special-status species status in this analysis.

Sensitive Habitats

Sensitive habitats include riparian corridors, wetlands, habitats for legally protected species, areas of high biological diversity, areas supporting rare or special-status wildlife habitat, and unusual or regionally restricted habitat types. Habitat types considered sensitive include those listed on the CNDDB's working list of high priority and rare natural communities (i.e., those habitats that are Rare or Endangered within the borders of California) (DFG, 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 CWA and Executive Order 11990 – Protection of Wetlands), state regulations (such as CEQA and the DFG Streambed Alteration Program), or local ordinances or policies (such as city or county tree ordinances and general plan policies).

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 DFG for species listed, proposed for listing, or candidates for listing as threatened or endangered under ESA or CESA, and those considered DFG "species of special concern" (2010 and 2011); the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2010); CNDDB occurrence reports (2010 and 2011); *Flora and Fauna Baseline Study of Fort Ord* (ACOE, 1992); and the *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord* (ACOE, 1997). The Marina and Salinas quadrangles and the eight surrounding quadrangles (Chualar, Monterey, Moss Landing, Natividad, Prunedale, San Juan Bautista, Seaside, and Spreckels) from the CNDDB were also reviewed for documented special-status species occurrences in the vicinity of the project site.

[2] Species on CNPS List 3 (Plants About Which We Need More Information - A Review List) and List 4 (Plants of Limited Distribution - A Watch List) may, but generally do not, qualify for protection under this provision. This analysis considers species on CNPS Lists 1 or 2 as special-status species, and species on CNPS List 4 when the species is also a HMP species.

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.

Botany

The generalized vegetation classification schemes for California described by Holland (1986) and Sawyer et.al. (2009) were consulted in classifying the vegetation of the project site. The final classification and characterization of the vegetation of the project site is based on field observations and the List of Vegetation Alliances and Associations (or Natural Communities List) (Sawyer et.al., 2009). Although this list replaces all other lists of terrestrial natural communities and vegetation types developed for the CNDDB, the more commonly used terrestrial communities derived from Holland are used in this report for ease of reference.

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; Hickman, 1993; Matthews, 1997; Jepson Flora Project, 2010). All plants observed within the project site were identified to species or intraspecific taxon using keys and descriptions in Hickman (1993) and Matthews (2006). Scientific nomenclature for plants in this report follows Hickman (1993) and common names follow Matthews (2006).

The entire project site was surveyed for botanical resources following the applicable guidelines outlined in: *Guidelines for Conducting and Reporting Botanical Inventories for Federally listed, Proposed and Candidate Plants* (Service, 2000), *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (DFG, 2009), and *CNPS Botanical Survey Guidelines* (CNPS, 2001).

Wildlife

The following literature and data sources were reviewed: DFG reports on special-status wildlife (Remsen, 1978; Williams, 1986; Jennings and Hayes, 1994; Thelander, 1994); California Wildlife Habitat Relationships Program species-habitat models (DFG, 2008; Zeiner et al., 1988; and Zeiner et al., 1990); and general wildlife references (Stebbins, 1985).

Regulatory Setting

The following regulatory discussion describes the major laws that may be applicable to the Eastside Parkway Project.

Federal Regulations

Federal Endangered Species Act

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

Migratory Bird Treaty Act

The MBTA 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.

Executive Order 13112-Invasive Species

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

State Regulations

California Environmental Quality Act

The CEQA was enacted in 1970 and was modeled after the NEPA. CEQA encourages the protection of all aspects of the environment, requiring state and local agencies to prepare multi-disciplinary environmental impact analyses and make decisions based on those studies’ findings regarding the environmental effects of the proposed action. CEQA applies to all discretionary activities proposed to be carried out or approved by California public agencies, including state, regional, county, and local agencies, unless an exemption applies. CEQA also applies to private activities that require discretionary government approvals.

California Endangered Species Act

The CESA was enacted in 1984. The California Code of Regulations (Title 14, §670.5) lists animal species considered endangered or threatened by the state. Section 2090 of CESA requires state agencies to comply with endangered species protection and recovery and to promote conservation of these species. Section 2080 of the DFG Code prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. "Take" is defined in Section 86 of the DFG Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." It does not include habitat destruction in the definition of take. A Section 2081 Incidental Take Permit from the DFG may be obtained to authorize "take" of any state listed species.

California Department of Fish and Game Code

Birds: Section 3503 of the DFG Code prohibits the killing, possession, or destruction of bird eggs or bird nests. Section 3503.5 and 3513 prohibit the killing, possession, or destruction of all nesting birds (including raptors and passerines). 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." 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 (§5515), mammals (§4700), amphibians and reptiles (§5050), and birds (§3511). Most fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations. Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Lake or Streambed Alteration: Sections 1600-1607 of the DFG Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the DFG before beginning construction. If the DFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. The DFG jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider.

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

Native Plant Protection Act

The CNPPA of 1977 directed the DFG 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 DFG Commission to designate endangered, threatened and rare species and to regulate the taking of these species (§2050-2098, DFG Code). Plants listed as rare under the CNPPA are not protected under CESA.

Local Regulations

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 a 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 species and 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 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 guidelines," or "habitat reserves with some development allowed." 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 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 special-status species and 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.

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, 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 DFG, 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 HCP 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 DFG in 2012.

Monterey County Code

Title 16, Chapter 16.60, Monterey County Code, provides for the preservation of oaks and other protected tree species within the unincorporated areas of the County. As defined in Chapter 16.60.040 C, removal of more than three protected trees on a lot in a one-year period requires a Forest Management Plan (FMP) and approval of a Use Permit by the Monterey County Planning Commission. The FMP must be prepared by a qualified forester selected from the County's list of consultants. Chapter 16.060.040 D requires that the applicant relocate or replace each removed tree on a one-to-one ratio. This ratio may be varied upon showing that such a requirement will create a special hardship in the use of the site or such a replacement would be detrimental to the long-term health and maintenance of the remaining habitat.

Although the County of Monterey is not acting as the lead agency for this project, the project lies within their jurisdiction and is required to comply with County code.

PRC Section 21083.4

Senate Bill 1334 enacted a CEQA provision, California Public Resources Code (PRC) Section 21083.4, which was effective January 1, 2005, that requires counties acting as lead agencies to consider the possible impacts of oak woodland conversion as part of the CEQA review for all projects. According to PRC 21083.4, if the County determines that there may be a significant impact on oak woodlands, the County must require one or more of the following oak woodlands mitigation alternatives:

1. Conserve oak woodlands, through the use of conservation easements.
2. (A) Plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees.
   (B) The requirement to maintain trees pursuant to this paragraph terminates seven years after the trees are planted.
   (C) Mitigation pursuant to this paragraph shall not fulfill more than one-half of the mitigation requirement for the project.
   (D) The requirements imposed pursuant to this paragraph also may be used to restore former oak woodlands.
3. Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. A project applicant that contributes funds under this paragraph shall not receive a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project.
4. Other mitigation measures developed by the County.

As mentioned above, the County of Monterey is not acting as the lead agency for this project as FORA will be funding and constructing the project. However, the County will ultimately own, operate, and maintain the roadway. It is uncertain at this time whether future project approvals by the County will be required, and if so, whether they will be subject to CEQA. Therefore, in order to insure that all potentially applicable regulations are adequately addressed in accordance with CEQA, this biological analysis assumes that the project will need to comply with the requirements of this CEQA provision.

Habitat Conservation Plans or NCCP

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

RESULTS

Habitat Types

The survey results include mapping and quantification of the acreage of five habitat types within the project site (Figure 3):

- Coast live oak woodland – 76 acres,
- Non-native grassland – 29 acres,
- Maritime chaparral – 20 acres,
- Ruderal/Developed – 12 acres, and
- Coastal scrub – 6 acres.

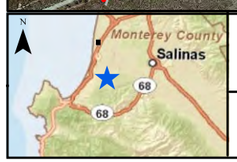
A brief description of each of these habitats can be found below along with identification of the presence or potential presence of special-status species within each habitat.

Coast Live Oak Woodland

Coast live oak (*Quercus agrifolia*) woodland (*Quercus agrifolia*/*Toxicodendron diversilobum*/grass Association) is the dominant habitat type on the project site (Figure 3). The canopy is quite dense in many areas with an understory dominated by poison oak (*Toxicodendron diversilobum*). However, within the Group 1, Phase 2 Active Environmental Services Cooperative Agreement (ESCA) Remediation Field Work Areas (Figure 2), most of the understory has been cleared and a thick layer of woodchips covers the ground. Other plant species present within the oak woodland include hedge-nettle (*Stachys* sp.), slender oat (*Avena barbata*), sheep sorrel (*Rumex acetosella*), and scattered shrubs such as shaggy-bark manzanita (*Arctostaphylos tomentosa* ssp. *tomentosa*), fuchsia-flowered gooseberry (*Ribes speciosum*), and sticky monkey flower (*Mimulus aurantiacus*). Approximately 76 acres of oak woodland habitat occur within the project site (Figure 3).

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 (*Perognathus californicus*). Acorns provide an important food source for acorn woodpecker (*Melanerpes formicivorus*), scrub jay (*Aphelocoma californica*), and black-tailed deer (*Odocoileus hemionus columbianus*). Other common wildlife species found in the oak woodland are raccoon (*Procyon lotor*), Nuttall's woodpecker (*Picoides nuttallii*), bobcat (*Felis 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.

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 woodrat within the project site. The California legless lizard may use this habitat type for foraging and cover and white-tailed kite and other raptor species may nest within the coast live oak trees. The HMP also identifies this habitat type as potential habitat for the Monterey ornate shrew. Additionally, the CTS may use the oak woodland as upland aestivation and dispersal habitat. There are approximately 58.1 acres of potential upland habitat for CTS within the oak woodland on the project site (Figure 4). Monterey spineflower and sandmat manzanita were identified in some grassy openings within this habitat type (Figure 5).



Title: Habitat Map

File: ESP Habitat Map.mxd

Date: 12-06-11

Scale: 1 inch = 0.21 miles

Project: 2010-14 Eastside Parkway

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Figure 4

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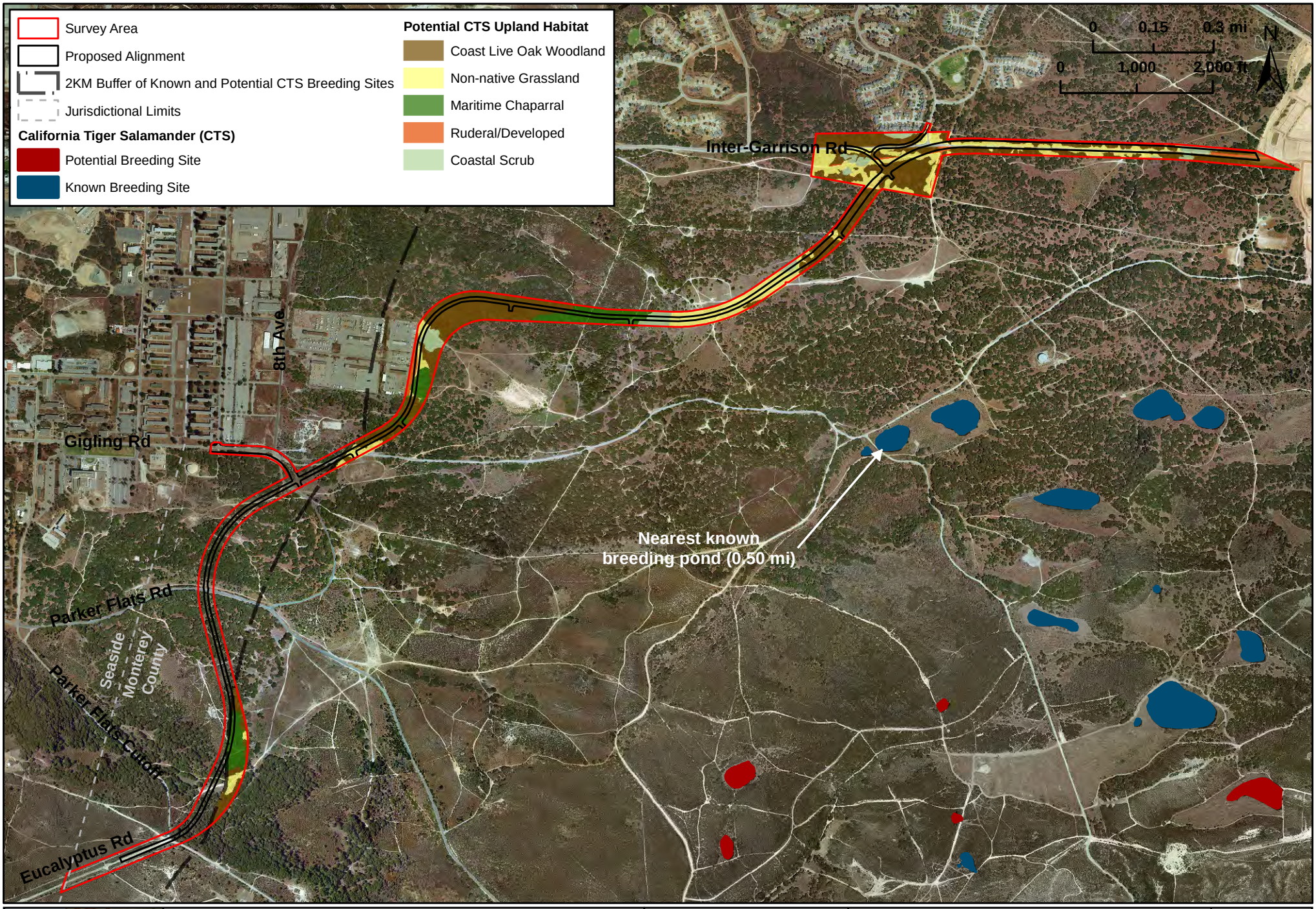

Title: CTS Occurrence Data on Former Fort Ord

File: ESP CTS Habitat Map.mxd

Date: 12-06-11

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Figure 5

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0 0.2 0.4 0.8 mi

0 0.2 0.4 0.8 km

N

Inter-Garrison Rd

Survey Area

Proposed Alignment

Jurisdictional Limits

Rare Plant Observations

< or = 6 individuals

- Toro Manzanita
- Sandmat Manzanita
- Monterey Spineflower
- Eastwood's Goldenbush

> 6 individuals (Density)

- Hooker's Manzanita (High)
- Sandmat Manzanita (Low)
- Sandmat Manzanita (Medium)
- Sandmat Manzanita (High)
- Monterey Ceanothus (Low)
- Monterey Spineflower (Low)
- Monterey Spineflower (High)

Title: Rare Plant Map

File: ESP Rare Plant Map.mxd

Date: 12-06-11

Scale: 1 inch = 0.15 miles

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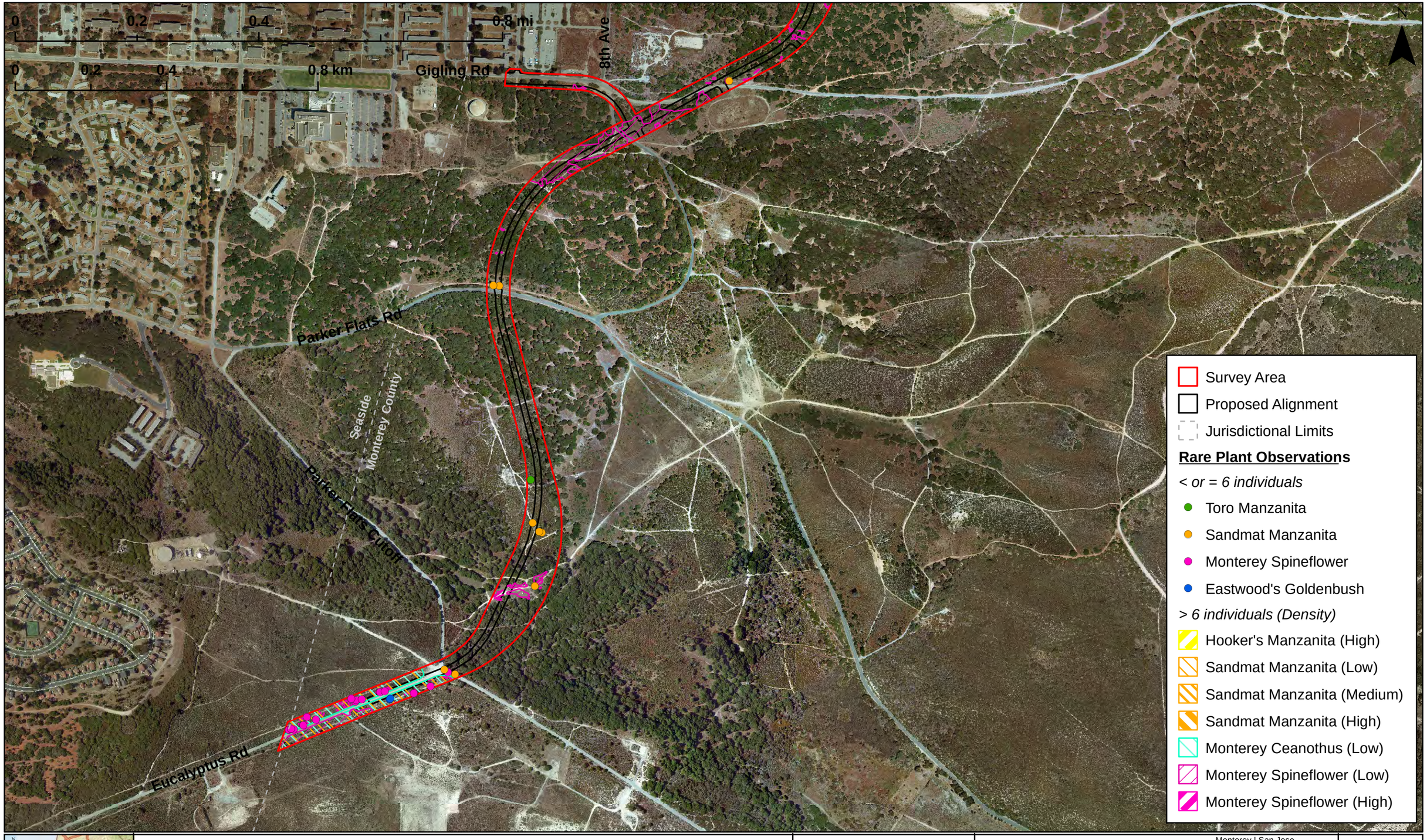
Figure 6a



Title: Rare Plant Map

File: ESP Rare Plant Map2.mxd

Date: 12-06-11

Scale: 1 inch = 0.15 miles

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Figure 6b

Non-Native Grassland

Throughout California, non-native grasslands (annual brome grasslands; *Bromus diandrus-Avena* spp. Association) 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 within the project site include slender oat, ripgut brome (*Bromus diandrus*), rattail fescue (*Vulpia myuros*), and long-beaked filaree (*Erodium botrys*). Additional species found within this habitat include needlegrass (*Nassella* sp.), sky lupine (*Lupinus nanus*), California poppy (*Eschscholzia californica*), wedge-leaved horkelia (*Horkelia cuneata*), sheep sorrel, and telegraphweed (*Heterotheca grandiflora*). Approximately 29 acres of annual grassland habitat occur within the project site (Figure 3).

Annual grasslands provide habitat to a number of wildlife species. Botta's pocket gopher (*Thomomys bottae*), California ground squirrel, American badger, and several rodent species use annual grasslands for foraging and cover. Raptors are also known to forage in this habitat, including red-tailed hawk (*Buteo jamaicensis*). Reptiles, such as western rattlesnakes (*Crotalus oreganus* ssp. *oreganus*), gopher snakes (*Thamnophis* sp.), and western fence lizards (*Sceloporus occidentalis*), are also common annual grassland species.

No special-status wildlife was observed within the non-native grassland during field visits; however, this habitat may provide upland aestivation and dispersal habitat for CTS which may use small mammal burrows for cover. There are approximately 22.1 acres of potential upland habitat for CTS within the non-native grassland in the project site (Figure 4). Special-status raptor and bat species may forage within this habitat type, including Cooper's hawk, ferruginous hawk, white-tailed kite, and hoary bat. Additionally, burrowing owl and California horned lark may nest and forage within the non-native grassland habitat. The American badger and California legless lizard may use this habitat type for foraging and cover while coast horned lizard may utilize open, sandy areas within the grassland for basking. The HMP also identifies this habitat type as potential habitat for the Monterey ornate shrew. Three special-status plant species (i.e., Monterey spineflower, sandmat manzanita, and Hooker's manzanita) were identified within this habitat type (Figure 5).

Maritime Chaparral

Maritime chaparral habitat (brittle leaf – wooly leaf manzanita chaparral and sandmat manzanita chaparral) within the project site is dominated by shaggy-bark manzanita, sandmat manzanita, Monterey ceanothus, dwarf ceanothus (*Ceanothus dentatus*), coyote bush (*Baccharis pilularis*), chamise (*Adenostoma fasciculata*), and sticky monkey flower. Additional species within this habitat type include California coffeeberry (*Rhamnus californica*), fuchsia-flowered gooseberry, chaparral currant (*Ribes malvaceum*), poison oak, black sage (*Salvia mellifera*), coast live oak, sticky cinquefoil (*Potentilla glandulosa*), and creeping snowberry (*Symphoricarpos mollis*). Approximately 20 acres of maritime chaparral habitat occur within the project site (Figure 3).

Common wildlife species that occur within central maritime chaparral habitat include California quail (*Callipepla californica*), California towhee (*Pipilo crissalis*), California thrasher (*Toxostoma redivivum*), scrub jay, western fence lizard, gopher snakes, and brush rabbit (*Sylvilagus bachmani*).

Monterey spineflower, sandmat manzanita, Hooker's manzanita, Toro manzanita, Monterey ceanothus, and Eastwood's goldenbush were identified within this habitat type (Figure 5). No special-status wildlife species were observed within the maritime chaparral habitat; however, the presence of several large woodrat nests indicates the presence of Monterey dusky-footed woodrat within the project site. California legless lizards and coast horned lizards may occur throughout this habitat type. The HMP also identifies this habitat type as potential habitat for the Monterey ornate shrew. The CTS may use the

maritime chaparral as upland aestivation and dispersal habitat. There are approximately 11.3 acres of potential upland habitat for CTS within the maritime chaparral in the project site (Figure 4).

Ruderal/Developed

Ruderal/developed areas are those areas which have been developed and disturbed by human activities (e.g., creating roads or structures) that are dominated by non-native annual grasses and other "weedy" species. Within the project site, the majority of this habitat includes paved and dirt roads; however, the associated disturbed non-native vegetation that immediately surrounds these roads is also included. Approximately 12 acres of ruderal/developed areas occur within the project site (Figure 3).

Dirt roads within in the project site are nearly to completely devoid of vegetation. Other ruderal areas include vegetation dominated by ripgut brome, slender oat, cut-leaved plantain (*Plantago coronopus*), English plantain (*P. lanceolata*), sandmat (*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, skunk (*Mephitis mephitis*), scrub jay, European starling (*Sturnus vulgaris*), western fence lizard, and rock dove (*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.

However, some special-status species may occur within this habitat type. Coast horned lizards often occupy open, sandy areas and may be present within this habitat type. The presence of shrubs throughout may also provide habitat for the California legless lizard. The CTS may use the ruderal areas as upland and dispersal habitat. There are approximately 3.3 acres of potential upland habitat for CTS within the ruderal areas (not including paved roads) of the project site (Figure 4). Additionally, Monterey spineflower and sandmat manzanita were identified within the ruderal areas of the project site (Figure 5).

Central Coastal Scrub

Holland (1986) describes central coastal scrub (coyote brush scrub and black sage 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. Coastal scrub habitats provide cover and food for a number of wildlife species, including songbirds, snakes, lizards, rodents, and other small mammals. Dominant shrub species in the coastal scrub habitat include black sage, coyote bush, poison oak, and California sagebrush (*Artemisia californica*). There are approximately 6 acres of central coastal scrub within the project site (Figure 3), including an approximately ½-acre area near Inter-Garrison road that is highly disturbed, likely due to the proximity of the California State University Monterey Bay (CSUMB) housing.

Monterey spineflower was identified throughout the central coastal scrub habitat in the project site (Figure 5). Additionally, one sandmat manzanita was identified within the disturbed central coastal scrub near the CSUMB apartments. No special-status wildlife species were observed within this habitat type; however, California legless lizards and coast horned lizards may occur throughout the central coastal scrub on the project site. The HMP also identifies this habitat type as potential habitat for the Monterey ornate shrew. The CTS may use the coastal scrub as upland and dispersal habitat. There is approximately 5.8 acres of potential upland habitat for CTS within the coastal scrub habitat in the project site (Figure 4).

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 (Appendix A). Each of these species was evaluated for their likelihood to occur within and immediately adjacent to the project site. The special-status wildlife species that are known to or have been determined to have the potential to occur within or immediately adjacent the project site are discussed below. All other species

within the table are assumed "unlikely to occur" on the project site for the species-specific reason presented in the table. Although the likelihood for CRLF to occur within the project site is considered low, a discussion of this species is included below due to a recent observation in a pond on the southeastern portion of the former Fort Ord.

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 potential or known presence within the project site and potential to be impacted by the project. All other species presented in Appendix A are assumed "unlikely to occur" and/or "unlikely to be impacted" for the species-specific reasons presented. Please note that only those species that are known or have the potential to occur within the proposed project site are discussed in the impacts and mitigation section of this document.

Hoary Bat

The hoary bat is included on the DFG's CNDDB "Special Animals" list. They may be found at any location in California, although distribution may be patchy in southeastern deserts. This common, solitary species winters along the coast and in southern California, breeding inland and north of the winter range. There is evidence that the sexes separate during the warm months, females being more abundant in the northeastern U.S. and males in the west. Hoary bats generally roost in dense foliage of medium to large trees, preferring sites that are hidden from above with few branches below and have ground cover of low reflectivity. Numerous studies have shown that hoary bats feed primarily on moths, although various flying insects are taken. These nocturnal animals emerge late in the evening, with peak activity usually occurring three to five hours after sunset. Copulation occurs in autumn during migration or on the wintering grounds. Mating is followed by delayed fertilization. The young are born from mid-May through early July, most often in litters of two, but one to four may be born. Based on the distribution of female hoary bats during this time, it is unlikely that birth and rearing occur in California (Cryan, 2003).

The CNDDB reports three occurrences of hoary bat within the 10 quadrangles reviewed, the nearest of which is approximately five miles from the project site. The hoary bat may roost within some of the coast live oak trees within the project site and may forage over all undeveloped areas of the project site. However, while this species may use suitable roosting and foraging habitat within the project site as winter grounds, the hoary bat is unlikely to occur during the summer months and it is unlikely that birth and rearing occur on the project site (Cryan, 2003). Therefore, there is a moderate potential for hoary bat to occur to forage and roost within the project site, but maternity roosts are unlikely to occur.

Monterey Dusky-Footed Woodrat

The Monterey dusky-footed woodrat is a DFG 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 10 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 visits. Therefore, the Monterey dusky-footed woodrat is assumed present within the project site.

Monterey Ornate Shrew

The Monterey ornate shrew, also known as the Salinas ornate shrew, is a DFG 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 10 quadrangles reviewed; however, Figure B-18 in the HMP identifies the project site as containing potential habitat for this species. 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, recent field surveys on the UC Fort Ord Natural Reserve found that habitats within the project site (e.g., non-native grassland, oak woodland, coastal scrub, and maritime chaparral) are likely considered suitable habitat for the shrew. Therefore, there is a moderate potential for the Monterey ornate shrew to occur within the project site.

American Badger

The American badger is a DFG 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 bee hives to eat both the brood and honey. They are active all year long and are nocturnal and diurnal. Mating occurs in summer and early fall and two to five young are born in burrows dug in relatively dry, often sandy soil, usually with sparse overstory cover.

The CNDDB reports 10 occurrences of American badger within the 10 quadrangles reviewed, one of which includes a 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 and ruderal habitats within the project site. As a result, the American badger has a high potential to occur within the project site.

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 California tiger salamander has been eliminated from an estimated 55 percent of its documented historic breeding sites. Currently, about 150 known populations of California tiger salamanders 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 CNDDB reports 56 occurrences of CTS within the 10 quadrangles evaluated, the nearest of which includes a portion of the project site near Inter-Garrison Road. However, this is a non-breeding occurrence (i.e., CTS was found in an upland location, not within an aquatic resource containing larvae). No potential or known breeding sites occur within the project site. The nearest known breeding pond is 0.5 mile and the nearest potential breeding pond is 0.3 mile from project site. Approximately 100.6 acres of potential CTS upland habitat (i.e., habitats within 2 km of known and potential breeding ponds) is present within the project site. Suitable upland aestivation habitat within 2 km of known or potential breeding locations for CTS is typically considered occupied habitat by the Service unless protocol-level surveys are conducted 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 DFG, 2003) and results are negative. As a result, this species has a high potential to occur within the project site.

California Legless Lizard

The DFG has recognized two subspecies of the California legless lizard as species of special concern, the black-legless lizard (*Anniella pulchra* ssp. *nigra*) and silvery-legless lizard (*A. p.* ssp. *pulchra*). (The black-legless lizard is listed as a HMP species, and the silvery-legless lizard is not). These subspecies are based primarily on phenotypic differences (black-legless lizards 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 which 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. As such, for the purposes of this report, the California legless lizard will be discussed on a species level and not at the DFG-recognized subspecies level. Additionally, both subspecies and all lineages will be considered DFG species of special concern, as well as HMP species.

The California legless lizard is a fossorial (burrowing) species that typically inhabits sandy or loose (friable) soils. Habitats known to support this species include (but are not limited to) coastal dunes,

valley and foothill grasslands, chaparral, and coastal scrub at elevations from near sea level to approximately 1800 meters (6000 feet). The 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. 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 diet of this species likely overlaps to some extent with that of juvenile alligator lizards and perhaps some other salamanders. California legless lizards eat insect larvae, small adult insects, and spiders. This species may be preyed upon by alligator lizards, snakes, birds, and small mammals.

The CNDDB reports 37 occurrences of California legless lizard within the 10 quadrangles reviewed. The CNDDB reports non-specific location occurrences of this species within five of the 10 quadrangles, including the Marina and Salinas quadrangles. Additionally, the CNDDB reports a specific occurrence of this species approximately two miles from the project site. Suitable habitat for California legless lizard is present throughout the project site where appropriate cover conditions occur. Therefore, the California legless lizard has a high potential to occur within the project site.

Coast Horned Lizard

The coast horned lizard is a DFG 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 10 quadrangles reviewed, the nearest of which is less than one mile from 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 maritime chaparral and coastal scrub habitats. Therefore, there is a high potential for the coast horned lizard to occur 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 DFG 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).

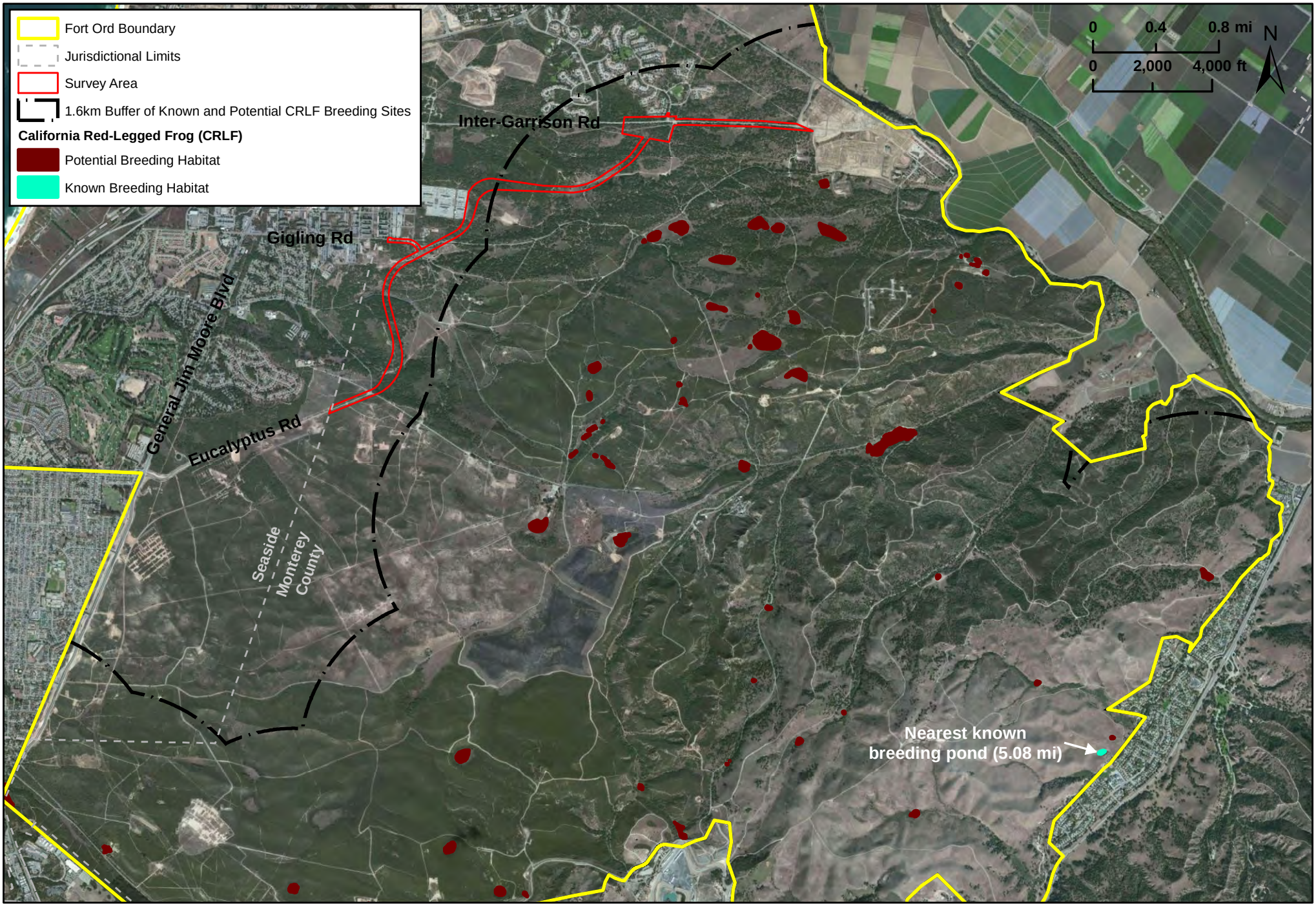
It has been shown that occurrences of CRLF are negatively correlated with presence of non-native bullfrogs (Moyle, 1973; Jennings and Hayes, 1986 and 1988), although both species are able to persist at certain locations, particularly in the coastal zone. It is estimated that CRLF has disappeared from 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 CNDDB reports 58 occurrences of CRLF within the 10 quadrangles reviewed, the nearest of which is located approximately 3.6 miles from the project site within the Salinas River riparian corridor. No aquatic breeding, aquatic non-breeding, or optimal dispersal (e.g., riparian) habitat is present within the project site. The nearest known breeding pond on Fort Ord is 5.1 miles and the nearest potential breeding pond is 0.3 mile from the project site (Figure 6). These ponds, and several other potential breeding ponds, are located southeast of the project site. No potential breeding ponds are present northwest of the project site on Fort Ord and the availability of non-breeding aquatic resources northwest of the project site is little to none. As such, there is a very low potential for CRLF to disperse through the project site. Additionally, 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. Therefore, this species has a low potential to occur within the project site.

Nesting Raptors and Other Protected Avian Species

Raptors and their nests are protected under DFG Code 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 trees present within the project site.

Additionally, avian species identified as DFG species of special concern or Fully Protected Species (such as the white-tailed kite, Cooper's hawk, burrowing owl, and California horned



Title: CRLF Occurrence Data on Former Fort Ord

File: ESP CRLF Habitat Map.mxd

Date: 12-06-11

Scale: 1 inch = 0.79 miles

Project: 2010-14 Eastside Pkwy

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Figure 7

lark) have the potential to occur within the project site. Suitable habitat nesting and foraging habitat for the white-tailed kite and Cooper's hawk is present within the coast live oak woodland habitat on 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 on the project site.

Special-Status Plant Species

The project site and adjacent areas were evaluated and surveyed for the presence or potential presence of a variety of special-status plant species (Appendix A). The following special-status plant species are discussed due to their known presence within the project site as observed during the focused botanical surveys. All other species presented in Appendix A are assumed "not present" based on the results of the focused special-status plant surveys. Please note that only those special-status plant species that are known to occur within the proposed project site are discussed in the impacts and mitigation section of this document.

Hooker's Manzanita

Hooker's manzanita is a CNPS List 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 13 occurrences of Hooker's manzanita in the 10 quadrangles reviewed, the nearest of which is located approximately 0.1 mile from the project site. This species was identified during the 2011 botanical surveys within the project site, covering approximately 348.5 square feet (Figure 5).

Toro Manzanita

Toro manzanita (also often referred to as Monterey manzanita) is a CNPS List 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. The CNDDB reports 13 occurrences of Hooker's manzanita in the 10 quadrangles reviewed, the nearest of which is located approximately 0.1 mile from the project site. This species was identified during the 2011 botanical surveys within the project site, covering approximately 4.0 square feet (Figure 5).

Sandmat Manzanita

Sandmat manzanita is a CNPS List 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 12 occurrences of this species in the 10 quadrangles reviewed, one of which includes the majority of the project site. This species was identified within the project site during the 2011 botanical surveys, covering approximately 5.7 acres (Figure 5).

Monterey Ceanothus

Monterey ceanothus is a CNPS List 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. Monterey ceanothus was identified within the project site during the 2011 botanical surveys, covering approximately 5.6 acres (Figure 5).

Monterey Spineflower

Monterey spineflower and is a federally Threatened, CNPS List 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 20 occurrences of this species in the 10 quadrangles reviewed, one of which includes the majority of the project site. This species was identified within the project site during the focused botanical surveys in 2011, covering approximately 11.7 acres (Figure 5).

Eastwood's Goldenbush

Eastwood's goldenbush (also often referred to as Eastwood's goldenfleece) is a CNPS List 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 16 occurrences of this species in the 10 quadrangles reviewed, one of which includes portions of the project site. This species was identified within the project site during the focused botanical surveys in 2011, covering approximately 2.0 square feet (Figure 5).

Sensitive Habitats

Three sensitive habitats were identified within the project site: maritime chaparral, Monterey spineflower critical habitat, and coast live oak woodland.

Maritime Chaparral

As identified above, approximately 20 acres of central maritime chaparral habitat are present within the project site (Figure 3). This habitat type is identified as a sensitive habitat on the CNDDB's working list of high priority and rare natural communities (DFG, 2010).

Coast Live Oak Woodland

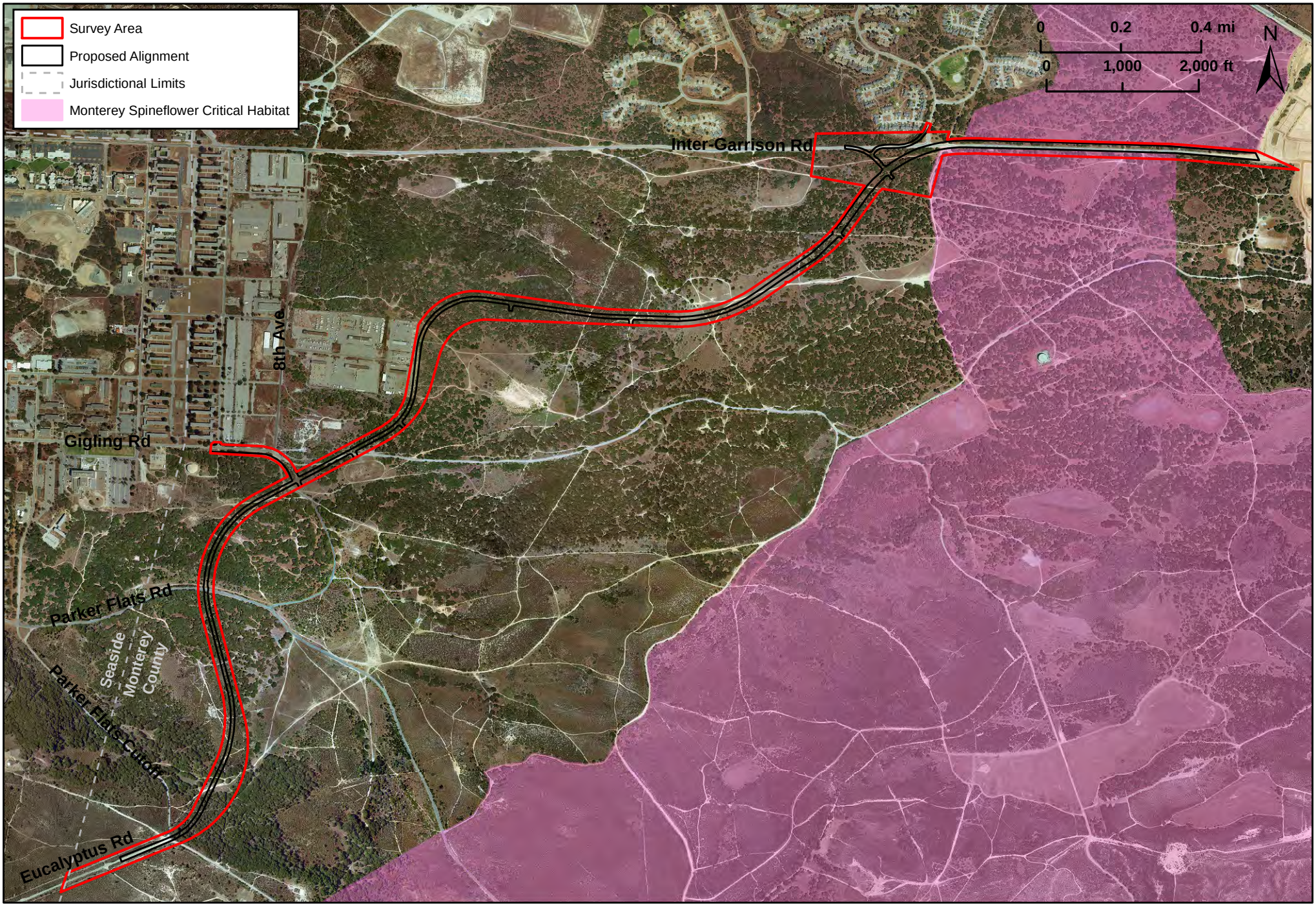
As identified above, approximately 76 acres of coast live oak woodland is present within the project site (Figure 3). Coast live oak trees and oak woodland habitat is protected under Chapter 16.60 of the Monterey County Code and PRC 21083.4. Oak woodlands are considered important natural communities 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; however, coast live oak woodlands are not considered sensitive habitats by DFG (DFG, 2010).

Monterey Spineflower Critical Habitat

Portions of the project site along Inter-Garrison Road totaling approximately 7.7 acres are within areas designated as critical habitat for Monterey spineflower (73 FR 1525) (Figure 8).

The primary constituent elements of critical habitat for Monterey spineflower are:

- Sandy soils associated with active coastal dunes, coastal bluffs with a deposition of windblown sand, inland sites with sandy soils, and interior floodplain dunes;



Title: Monterey Spineflower Critical Habitat

File: ESP Monterey Spineflower CH Map.mxd

Date: 12-06-11

Scale: 1 inch = 0.31 miles

Project: 2010-14 Eastside Pkwy

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Figure 8

- Plant communities that support associated species, including coastal dune, coastal scrub, grassland, maritime chaparral, oak woodland, and interior floodplain dune communities, and have a structure with openings between the dominant elements (e.g., scrub, shrub, oak trees, clumps of herbaceous vegetation);
- No or little cover by non-native species which compete for resources available for growth and reproduction of Monterey spineflower; and
- Physical processes, such as occasional soil disturbance, that support natural dune dynamics along coastal areas.

Some of these constituent elements are present within the designated critical habitat area within the project site; however, Monterey spineflower was not identified in that area.

IMPACTS AND MITIGATION

Approach to Analysis

The proposed Eastside Parkway alignment is primarily located within designated "development" parcels, as designated by the HMP, with the exception of the portion associated with Inter-Garrison Road, which includes approximately one mile of road expansion along Inter-Garrison Road from its intersection with the new Eastside Parkway to the East Garrison Project site.

For the remaining portion of the proposed project located within development parcels, impacts to HMP species and habitats occurring within the those parcels were anticipated and mitigated through the establishment of habitat reserves and corridors, and assignment of management requirements for other parcels on former Fort Ord. The HMP species known or with the potential to occur within these parcels include Monterey ornate shrew, CTS, California legless lizard, Hooker's manzanita, sandmat manzanita, Toro manzanita, Monterey ceanothus, Monterey spineflower, and Eastwood's goldenbush. With the designated habitat reserves and corridors and habitat management requirements of the HMP in place, the loss of these species 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 restrictions or management guidelines 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 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. Therefore, because this portion of the proposed project are located within designated development parcels and would not result in any additional impacts to HMP species and habitats beyond those anticipated in the HMP, no additional mitigation for these species or maritime chaparral are required for that portion. Impacts to these special-status species and maritime chaparral are considered less-than-significant where the project is located in designated development parcels.

However, for the portion of the proposed project along Inter-Garrison Road, impacts to HMP species and habitats would be considered potentially significant where they occur in the designated habitat reserve or corridor parcels (i.e., Habitat Corridor/Youth Camp and East Garrison North Habitat Management Areas). No HMP species or habitats were observed within the designated habitat reserve or corridor parcels. Additionally, no HMP species or habitats were observed within the adjacent designated development parcels along Inter-Garrison Road. As a result, no impacts to HMP species or habitats are expected to occur within this portion of the proposed project. Monterey spineflower critical habitat does occur within the designated habitat reserve and corridor parcels, and the proposed alignment does encroach into critical habitat. This potentially significant impact is addressed below.

Where suitable habitat exists within the entire project site, the proposed project has the potential to impact special-status species that were not addressed in the HMP. The non-HMP species that are known or have the potential to occur within the project site include: the hoary bat; Monterey dusky-footed woodrat; American badger; nesting raptors and other protected avian species, including, but not limited to, the white-tailed kite, Cooper's hawk, California horned lark, and burrowing owl; and coast horned lizard. Potentially significant impacts to special-status wildlife species are addressed below.

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. There is only one species that is considered known or with the potential to occur within the project site that would require take authorization from the resource agencies: CTS, which is listed under both federal and state ESAs. Therefore, although CTS is a HMP species, the take of this species is prohibited under the ESA and CESA. Impacts resulting in take of CTS

would need to be authorized by the Service and DFG through the issuance of incidental take permits from each agency to avoid violation of the ESA and CESA.

The project survey area contains approximately 76 acres of coast live oak woodland. It is anticipated that the project may result in impacts to up to 65 acres of coast live oak woodland habitat, which is protected by Monterey County Code and the Oak Woodland Management Act (PRC code Section 21083.4). However, the project designs are at 30% complete at the time of this report, and the exact quantity of woodland that may be impacted is unknown. Please refer to the Forest Resource Evaluation prepared for the project for specific tree data (Staub Forestry and Environmental Consulting, 2011).

Potentially significant impacts to biological resources are identified below as well as mitigation measures to avoid, minimize, and reduce impacts.

Special-Status Wildlife Species

Impact 1: *Construction activities within the project site may result in impacts to special-status wildlife species, including the hoary bat, Monterey dusky-footed woodrat, American badger, coast horned lizard, and nesting raptors and other protected avian species including, but not limited to: white-tailed kite, Cooper's hawk, California horned lark, and burrowing owl. Impacts to these species may include direct mortality of individuals, destruction of nests or dens, and loss of habitat as a result of vegetation removal and grading.*

Mitigation 1a: Prior to construction activities, the project proponent shall retain a qualified biologist to monitor construction. The biological monitor shall conduct an Employee Education Program for the construction crew. The biologist shall meet with the construction crew at the project site at the onset of construction to educate the construction crew on the following: 1) a review of the project boundaries; 2) all special-status species that may be present, their habitat, and proper identification; 3) the specific mitigation measures that will be incorporated into the construction effort; 4) the general provisions and protections afforded by the Service and DFG; and 5) the proper procedures if a special-status animal is encountered within the project site.

Mitigation 1b: The biological monitor shall be on-site during initial grading and vegetation removal activities to protect any special-status species encountered. The qualified biologist shall identify and explain the protection methods during the Employer Education Program as described in Mitigation 1a. These methods could include, but are not limited to, stopping work in the area where the animal is encountered until it has moved on its own outside of the project site or moving individuals outside of the project site to adjacent appropriate habitat.

Mitigation 1c: To avoid and reduce impacts to the Monterey dusky-footed woodrat, the project proponent shall retain a qualified, DFG-approved biologist to conduct pre-construction surveys within three days prior to construction for woodrats nests within the project area and in a buffer zone 100 feet out from the limit of disturbance. All woodrat nests should be flagged for avoidance of direct construction impacts, where feasible. All nests within 25 feet of the project site shall be avoided and protected during project activities. Nests that cannot be avoided shall be manually deconstructed prior to land clearing activities to allow animals to escape harm. If a litter of young is found or suspected, nest material shall be replaced, and the nest left alone for 2-3 weeks before a re-check to verify that young are capable of independent survival before proceeding with nest dismantling.

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

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

Mitigation 1e: To avoid and reduce impacts to nesting raptors and other protected avian species (including, but not limited to, the white-tailed kite and Cooper's hawk), construction activities can be timed to avoid the nesting season period. Specifically, tree removal can be scheduled after September 1 and before January 31 to avoid impacts to these species. Alternatively, if avoidance of the nesting period is not feasible, pre-construction surveys shall be conducted for nesting raptors within 300 feet of proposed construction activities if construction is to be initiated between February 1 and August 31. Pre-construction surveys shall be conducted no more than 30 days prior to the start of construction. If nesting raptors are identified during the pre-construction surveys, the DFG shall be contacted and an appropriate no-disturbance buffer imposed within which no construction activities or disturbance shall take place (generally 300 feet in all directions for raptors) 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 and the DFG.

Mitigation 1f: A qualified biologist shall conduct preconstruction surveys to locate active breeding or wintering burrowing owls no more than 30 days prior to the start of construction. If ground disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be resurveyed. The survey shall conform to the DFG 1995 Staff Report protocol. If no burrowing owls are found, no further mitigation is required. If burrowing owls are found, impact avoidance shall occur and if avoidance is not possible, then mitigation measures shall be implemented as described below.

a) Complete impact avoidance shall be pursued to the extent possible by compliance with the following provisions:

Breeding season: If active nests are found, then no ground-disturbing activities will be permitted within 250 feet of an active burrow during the breeding season (February 1 to August 31).

Winter Season: If active burrows are found during winter months (September 1 through January 31), ground disturbing activities can proceed no closer than 160 feet from active burrows.

Avoidance also requires that a minimum of 6.5 acres of foraging habitat be permanently reserved contiguous with occupied burrow sites for each pair of breeding burrowing owls (with or without dependent young) or single unpaired resident bird.

b) If active nests or burrows are found that cannot be avoided, the following mitigation measures would apply:

<u>On-Site.</u> On-site passive relocation shall be implemented if the above avoidance measures cannot be met. Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are beyond 160 feet from the impact zone, and that are within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls. The land utilized for relocation shall be acquired and permanently protected at a location acceptable to the DFG. Existing unsuitable burrows shall be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on the protected lands site. Relocation of owls shall only be implemented during the non-breeding season. A time period of at least one or more weeks is necessary to accomplish the passive relocation methods, and allow the owls to move and acclimate to alternative burrows.

Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the DFG verified through non-invasive methods that either: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

The Project Proponent shall provide funding for long-term management and monitoring of the protected lands. The monitoring plan shall include success criteria, remedial measures, and an annual report to the DFG.

Off-site. If the project will reduce suitable habitat on-site below the threshold level of 6.5 acres per relocated pair or single bird, the habitat shall be replaced off-site. Off-site habitat must be suitable burrowing owl habitat, as defined in the Burrowing Owl Survey Protocol, and the site approved by the DFG. Land shall be purchased and/or placed in a conservation easement in perpetuity and managed to maintain suitable habitat. The land shall be funded by the project proponent for long-term management and monitoring of the protected lands. The monitoring plan shall include success criteria, remedial measures, and an annual report to the DFG. Off-site mitigation shall use one of the following ratios:

- Replacement of occupied habitat with occupied habitat: 1.5 times 6.5 (9.75) acres per pair or single bird.
- Replacement of occupied habitat contiguous to currently occupied habitat: 2 times 6.5 (13.0) acres per pair or single bird.
- Replacement of occupied habitat with suitable occupied habitat: 3 times 6.5 (19.5) acres per pair or single bird.

Impact 2: *CTS (a federally and state threatened species) has the potential to occur in within the project site. Impacts may include direct mortality of individuals as a result of construction activities, such as removal of vegetation, construction equipment traffic, or holes/ditches left uncovered overnight. Therefore, the project may adversely affect individual CTS and its upland habitat. Mitigation Measures 1a and 1b above are recommended in addition to the mitigation measures identified below.*

Mitigation 2a: Ground disturbing construction activities will be limited to the period from May 1 through October 31.

Mitigation 2b: A Service-approved biologist shall survey appropriate areas of the project site no more than 48 hours before the onset of work activities for the presence of CTS. If CTS are found, the approved biologist shall move them from the site before work activities begin. The Service-approved biologist shall relocate the animal the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with the project. The Service-approved biologist shall maintain detailed records of any individuals that are moved (e.g., size, coloration, any distinguishing features, photographs [digital preferred]) to assist him or her in determining whether translocated animals are returning to the original point of capture. Ground disturbance shall not begin until written approval is received from the Service that the biologist is qualified to conduct the work. Only Service-approved biologists shall participate in activities associated with the capture, handling, and monitoring of CTS.

Mitigation 2c: Prior to use of heavy equipment and any surface-disturbing activities, the work area shall be cleared under the direction of a Service-approved biologist. Vegetation shall initially be removed by hand (brush-cutters, weed whackers, and chainsaws). Piles of woody debris shall be

cleared by hand. Larger debris will only be moved after being inspected by the Service-approved biologist. If CTS are observed during vegetation and debris removal activities, the Service-approved biologist shall stop work in that area and shall relocate the animal the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with the project.

Mitigation 2d: A Service-approved biologist shall be present at the work site until all ground disturbing activities are completed. After this time, the Service-approved biologist will designate a person to monitor on-site compliance with all avoidance and minimization measures. The Service-approved biologist shall ensure that this monitor receives the sufficient training in the identification of CTS. The monitor or the Service-approved biologist can stop work because the avoidance and/or minimization measures are not being followed. If work is stopped, the Service shall be notified.

Mitigation 2e: To prevent inadvertent entrapment of CTS during the proposed project, all excavated, steep-walled holes or trenches more than two feet deep will be covered at the close of each working day with plywood or similar materials. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals.

Mitigation 2f: If silt fencing is required per erosion control best management practices, only high-quality reinforced silt fencing shall be used and efforts shall be made to install it in a way that does not inhibit movements of CTS. Openings shall be created approximately every 100 feet.

Mitigation 2g: Cleaning and refueling of equipment and vehicles shall occur only within designated staging areas. No maintenance, cleaning or fueling of equipment shall occur within wetland or riparian areas, or within 20 feet of such areas and, at a minimum, all equipment and vehicles will be checked and maintained on a daily basis to ensure proper operation and avoid potential leaks or spills. During construction, all project-related spills of hazardous materials within or adjacent to project sites will be cleaned up immediately. Spill prevention and clean-up materials shall be onsite at all times during construction. Construction materials/debris will also be stored within the designated staging areas. No debris, soil, silt, sand, oil, petroleum products, cement, concrete, or washings thereof shall be allowed to enter into, or be placed where they may be washed by rainfall or runoff, into wetland habitats.

Mitigation 2h: All trash that may attract predators shall be properly contained, removed from the project site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

Mitigation 2i: The project shall comply with the ESA and CESA and obtain authorization from the Service and DFG for the incidental take of CTS prior to the initiation of any ground-disturbing activities, including vegetation removal and grading. Alternatively, the project proponent can wait to implement the project, including ground-disturbing activities, until the Fort Ord HCP is finalized and base-wide federal and state incidental take permits are issued. If the project proponent chooses this alternative, project-specific, individual incidental take permits will not be necessary; however, all applicable requirements of the HCP shall be followed.

Sensitive Habitats

Impact 3: *Approximately 76 acres of coast live oak woodland occur within the project survey area. A maximum of 65 acres of oak woodland habitat may be impacted as a result of construction activities. Coast live oak trees and oak woodland habitat are protected under Chapter 16.60 of the Monterey County Code and PRC 21083.4. In addition to obtaining a tree permit from Monterey County and complying with permit requirements, the following mitigation measures are recommended.*

Mitigation 3a: The project shall comply with California Public Resources Code Section 21083.4. An Oak Woodland Mitigation Plan outlining a strategy for compliance shall be prepared and approved by the County prior to project construction. The plan shall include, but is not limited to, the following:

- Mitigation strategy outlining number of trees to be transplanted and planted, including size of relocated trees and trees to be planted;
- Discussion of potential mitigation sites, including an analysis of suitability and determination of preferred mitigation site;
- Identification of performance standards and monitoring program; and
- Timeline for implementing tree transplanting and planting.

Mitigation 3b: Avoidance, minimization, and mitigation measures included in the Forest Resource Evaluation prepared for the Eastside Parkway Project by Registered Professional Foresters Steve Staub and Bill Ruskin shall be implemented (see Appendix B). The maximum amount of native oak trees shall be retained as feasible for screening and habitat purposes in coordination with a qualified arborist and project engineer.

Mitigation 3c: A Forest Resource Plan shall be used to prepare a Forest Management Plan, as described in Chapter 16.60 of Monterey County Code. The plan shall be revised, as needed, to meet permit issuance requirements.

Impact 4: *Approximately 7.7 acres of Monterey spineflower critical habitat are located within designated habitat reserve and corridor parcels within the proposed project alignment. A portion or all of this acreage may be impacted temporarily or permanently by the construction and operation of the proposed project.*

Mitigation 3a: Based on final design plans, the extent of impacts, temporary and permanent, shall be determined and described in the final biological report. The final biological report will describe the mitigation required based on final impacts.

Invasive Plants

Impact 4: *Construction of the project has the potential to introduce non-native, invasive plant species into the area.*

Mitigation 4a: In compliance with Executive Order 13112 on Invasive Species, the landscaping for the project will not use species listed as noxious by the California Department of Food and Agriculture (CDFA). In areas of particular sensitivity, extra precautions shall be taken if invasive species are found in or adjacent to the projectsite. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

Mitigation 4b: Bare and disturbed soil shall be landscaped with CDFA recommended seed mix or plantings from locally adopted species to preclude the invasion on noxious weeds in the project site.

Mitigation 4c: Construction equipment shall be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds, before mobilizing to arrive at the construction site and before leaving the construction site.

Mitigation 4d: All non-native, invasive plant species shall be removed from disturbed areas prior to replanting.

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APPENDIX A.

Table of Special-Status Species Known or With the Potential to Occur in the vicinity of the Eastside Parkway Project Site

(CNDDB Rare Plant Report from the Marina and Salinas Quadrangles and the eight surrounding Quadrangles [Chualar, Monterey, Moss Landing, Natividad, Prunedale, San Juan Bautista, Seaside, and Spreckels])

Table of Special-Status Species Known or With the Potential to Occur in the Vicinity of the Eastside Parkway Project Site

Species	Status (USFWS/ CDFG/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
MAMMALS			
Antrozous pallidus Pallid bat	-- / CSC / --	A wide variety of habitats are utilized including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. Most common in open, dry habitats with rocky areas for roosting. Also relatively common on bridges.	**Unlikely:** No suitable day root or maternity colony habitat is present within the project site. The nearest CNDDB occurrence is approximately 16 miles from the 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 five miles from 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.	**Moderate:** Marginal quality 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.

Species	Status (USFWS/ CDFG/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
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 project site near Inter-Garrison Rd. Suitable habitat for this species is present within the non-native grassland habitat on the project site.
BIRDS			
Accipiter cooperii Cooper's hawk (nesting)	-- / CNDDB / --	Resident throughout most of the wooded portion of the state. Dense stands of live oak, riparian deciduous, or other forest habitats near water used most frequently. Seldom found in areas without dense tree stands, or patchy woodland habitats.	**High:** Suitable nesting habitat is present within the oak woodland habitat on the project site. The nearest CNDDB occurrence of this species is approximately eight miles from the project site.
Agelaius tricolor Tricolored blackbird (nesting colony)	-- / 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 present within project site.
Aquila chrysaetos Golden eagle (nesting & wintering)	-- / CFP / --	Use rolling foot-hills, mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, cliffs, and rocky outcrops. Nest in secluded cliffs with overhanging ledges as well as large trees.	**Unlikely:** No suitable nesting habitat present within project site.
Asio flammeus Short-eared owl (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.

Species	Status (USFWS/ CDFG/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Athene cunicularia Burrowing owl (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. The nearest CNDDB occurrence is approximately 1.5 miles from the project site.
Buteo regalis Ferruginous hawk (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 approximately 2.5 miles from the project site at Armstrong Ranch.
Charadrius nivosus **Western snowy plover (nesting)**	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.	**Unlikely:** No suitable habitat present within project site.
Cypseloides niger Black swift (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.	**Unlikely:** No suitable nesting habitat present within project site.
Elanus leucurus White-tailed kite (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.	**Moderate:** Marginally suitable habitat present within project site. The nearest CNDDB occurrence is approximately 12 miles from the project site; however this species has also been observed by DD&A biologists approximately 0.5 miles from the project site, north of Reservation Road.

Species	Status (USFWS/ CDFG/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Eremophila alpestris actia 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 approximately 1.5 miles from the project site.
Falco mexicanus Prairie falcon (nesting)	-- / CNDDB / --	Associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areas. Uses open terrain for foraging; nests in open terrain with canyons, cliffs, escarpments, and rock outcrops.	**Unlikely:** No suitable nesting habitat present within project site.
Pelecanus occidentalis californicus California brown pelican (nesting colony & communal roosts)	-- / CFP / --	Found in estuarine, marine subtidal, and marine pelagic waters along the California coast. Usually rests on water or inaccessible rocks, but also uses mudflats, sandy beaches, wharfs, and jetties.	**Unlikely:** No suitable habitat present within project site.
Rallus longirostris obsoletus California clapper rail	FE / SE&CFP /--	Occur within a range of salt and brackish marshes.	**Unlikely:** No suitable habitat present within project site.
Riparia riparia Bank swallow (nesting)	-- / ST / --	Nest colonially in sand banks. Found near water; fields, marshes, streams, and lakes.	**Unlikely:** No suitable habitat present within project site.
REPTILES AND AMPHIBIANS			
***Ambystoma californiense* 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.	**High:** No breeding habitat is present within the project site; however, 100.6 acres of potential upland habitat (ie., within two km of potential breeding ponds) is present. The nearest CNDDB occurrence is within project site; however this is a non-breeding occurrence (i.e., CTS was found in an upland location, not within an aquatic resource containing larvae). The nearest known breeding pond is 0.5 mile and the nearest potential breeding pond is 0.3 mile from project site.

Species	Status (USFWS/ CDFG/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Ambystoma macrodactylum croceum 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 **California legless lizard** (includes *A. p. nigra* and *A. p. pulchra* as recognized by the DFG)	-- / 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 reports occurrences in 5 of 10 quads analyzed and the nearest specific occurrence is reported approximately two miles from the project site.
Emys marmorata Western pond turtle (includes *E. m. pallida* and *E. m. marmorata* as recognized by the DFG)	-- / 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.	**Unlikely:** No suitable habitat present within project site.
Phrynosoma blainvillii 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 and maritime chaparral habitats within the project site. This species is known to occur throughout Fort Ord and was observed less than one mile from the project site in 2011. The CNDDB also reports two occurrences of this species less than one mile from the project site.

Species	Status (USFWS/ CDFG/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Rana draytonii **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.	**Low:** 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 3.6 miles from the project site at the Salinas River. The nearest known breeding pond on Fort Ord is 5.1 miles, and the nearest potential breeding pond is 0.3 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 low based on the proximity to the known breeding locations.
Taricha torosa torosa Coast Range newt (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.	**Unlikely:** No suitable breeding habitat within the project site. Although suitable upland habitat for this species is present within the project site, this species has not been documented on Fort Ord. The nearest CNDDB occurrence is approximately 13 miles from the project site.
Thamnophis hammondii 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.	**Unlikely:** No suitable habitat present within project site.
FISH			
Eucyclogobius newberryi Tidewater goby	FE / CSC / --	Brackish water habitats, found in shallow lagoons and lower stream reaches.	**Unlikely:** 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.	**Unlikely:** No suitable habitat present within project site.
INVERTEBRATES			
Coelus globosus Globose dune beetle	-- / CNDDB / --	Coastal dunes. These beetles are primarily subterranean, tunneling through sand underneath dune vegetation.	**Unlikely:** No suitable habitat present within Project site.

Species	Status (USFWS/ CDFG/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
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.	**Unlikely:** No suitable habitat present within project site.
***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*.	**Unlikely:** No suitable habitat present within project site.
Helminthoglypta sequoicola consors Redwood shoulderband snail	-- / CNDDB / --	known only from the south slope of San Juan grade, near foot, 8 miles northwest of Salinas.	**Unlikely:** No suitable habitat present within project site.
***Linderiella occidentalis* California linderiella**	-- / CNDDB / --	Ephemeral ponds with no flow. Generally associated with hardpans.	**Unlikely:** No suitable habitat present within project site.
Optioservus canus Pinnacles optioservus riffle beetle	-- / CNDDB / --	Species of this genus generally prefer gravelly or rocky streams and some often occur on moss covered rocks. Both adults and larvae crawl on rocks and gravel mostly in riffle areas.	**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.	**Unlikely:** No suitable habitat present within project site.
PLANTS			
Allium hickmanii 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.	**Not Present:** Not identified during surveys in Spring 2011.
***Arctostaphylos hookeri* ssp. *hookeri* 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.	**Present:** Identified within the project site during surveys in Spring 2011. The nearest CNDDB occurrence is approximately 0.10 mile from the project site.

Species	Status (USFWS/ CDFG/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Arctostaphylos montereyensis **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 the project site during surveys in Spring 2011. The nearest CNDDB occurrence is approximately 0.1 miles from the project site.
Arctostaphylos pajaroensis Pajaro manzanita	-- / -- / 1B	Chaparral on sandy soils at elevations of 30-760 meters. Evergreen shrub in the Ericaceae family; blooms December-March.	**Not Present:** Not identified during surveys in Spring 2011.
Arctostaphylos pumila **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 the project site during surveys in Spring 2011. The CNDDB reports an occurrence of this species that covers most of the project site.
Astragalus tener var. *tener* 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.	**Not Present:** Not identified during surveys in Spring 2011. No suitable habitat present within project site.
Astragalus tener var. *titi* Coastal dunes milk-vetch	FE / SE / 1B	Often found in 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.	**Not Present:** Not identified during surveys in Spring 2011. No suitable habitat present within project site.
California macrophylla Round-leaved filaree	-- / -- / 1B	Cismontane woodland and valley and foothill grassland on clay soils at elevations of 15-1200 meters. Annual herb in the Geraniaceae family; blooms March-May.	**Not Present:** Not identified during surveys in Spring 2011.
Castilleja ambigua ssp. insalutata Pink johnny-nip	-- / -- / 1B	Coastal prairie and coastal scrub at elevations of 0-100 meters. Annual herb in the Orobanchaceae family; blooms May-August.	**Not Present:** Not identified during surveys in Summer 2010 or 2011. No suitable habitat within project site. 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.
Ceanothus cuneatus **ssp. *rigidus*** **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 the project site during surveys in Spring 2011. The CNDDB does not report any occurrences of this species within the quadrangles reviewed; however, this species is known to occur throughout Fort Ord.

Species	Status (USFWS/ CDFG/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Centromadia parryi ssp. *congdonii* Congdon's tarplant	-- / -- / 1B	Valley and foothill grassland on alkaline soils at elevations of 0-230 meters. Annual herb in the Asteraceae family; blooms May-November.	**Not Present:** Not identified during surveys in Summer 2010 or 2011.
Chorizanthe pungens* var. *pungens **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 the project site during surveys in Spring 2011. The CNDDB reports an occurrence of this species that includes most of the project site.
Chorizanthe robusta* var. *robusta **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.	**Not Present:** Not identified during surveys in Spring 2011. The CNDDB reports a non-specific occurrence of this species that includes portions of the project site; however, this species is not known to occur on Fort Ord.
Clarkia jolonensis 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.	**Not Present:** Not identified during surveys in Spring 2011.
Collinsia multicolor 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.	**Not Present:** Not identified during surveys in Spring 2011.
Cordylanthus rigidus* ssp. *littoralis **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.	**Not Present:** Not identified during surveys in Summer 2010 or 2011.
Delphinium californicum ssp. interius 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.	**Not Present:** Not identified during surveys in Spring 2011.

Species	Status (USFWS/ CDFG/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Delphinium hutchinsoniae 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.	**Not Present:** Not identified during surveys in Spring 2011.
Ericameria fasciculata **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.	**Present:** Identified within the project site during surveys in Summer 2010 or 2011. The CNDDB reports an occurrence of this species that includes portions of the project site.
Eriogonum nortonii Pinnacles buckwheat	-- / -- / 1B	Chaparral and valley and foothill grassland on sandy soils, often on recent burns, at elevations of 300-975 meters. Annual herb in the Polygonaceae family; blooms May-September.	**Not Present:** Not identified during surveys in Summer 2010 or 2011.
Erysimum ammophilum **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.	**Not Present:** Not identified during surveys in Spring 2011.
Erysimum menziesii ssp. *menziesii* Menzies' wallflower	FE / SE / 1B	Coastal dunes at elevations of 0-35 meters. Perennial herb in the Brassicaceae family; blooms March-June.	**Not Present:** Not identified during surveys in Spring 2011.
Erysimum menziesii ssp. *yadonii* Yadon's wallflower	FE / SE / 1B	Coastal dunes at elevations of 0-10 meters. Perennial herb in the Brassicaceae family; blooms May-September.	**Not Present:** Not identified during surveys in Summer 2010 or 2011.
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.	**Not Present:** Not identified during surveys in Spring 2011.
Gilia tenuiflora **ssp. *arenaria*** **Sand gilia**	FE / ST / 1B	Openings in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils at elevations of 0-45 meters. Annual herb in the Polemoniaceae family; blooms April-June.	**Not Present:** Not identified during surveys in Spring 2011.

Species	Status (USFWS/ CDFG/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
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 during surveys in Spring 2011. Project site is outside of the known 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:** Not identified during surveys in Spring 2011. Project site is outside of the known range for this 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.	**Not Present:** Not identified during surveys in Summer 2010 or 2011.
Horkelia cuneata ssp. sericea Kellogg's horkelia	-- / -- / 1B	Closed-cone coniferous forests, maritime chaparral, and openings in coastal scrub on sandy or gravelly soils at elevations of 10-200 meters. Perennial herb in the Rosaceae family; blooms April-September.	**Not Present:** Not identified during surveys in Spring 2011.
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.	**Not Present:** Not identified during surveys in Spring 2011.
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.	**Not Present:** Not identified during surveys in Spring 2011. No suitable habitat within project site.
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.	**Not Present:** Not identified during surveys in Spring 2011. No suitable habitat within project site.
Malacothamnus palmeri var. *involucratus* 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.	**Not Present:** Not identified during surveys in Spring 2011.
Malacothamnus palmeri var. *palmeri* Santa Lucia bush-mallow	-- / -- / 1B	Chaparral on rocky soils at elevations of 60-360 meters. Deciduous shrub in the Malvaceae family; blooms May-July.	**Not Present:** Not identified during surveys in Spring 2011.

Species	Status (USFWS/ CDFG/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Malacothrix saxatilis var. *arachnoidea* 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.	**Not Present:** Not identified during surveys in Summer 2010 or 2011.
Microseris paludosa Marsh microseris	-- / -- /1B	Closed- cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grasslands at elevations of 3-300 meters. Perennial herb in the Asteraceae family; blooms April-June (July).	**Not Present:** Not identified during surveys in Summer 2010 or 2011.
Monolopia gracilens Woodland wollythreads	-- / -- / 1B	Chenopod scrub and valley and foothill grassland on sandy soils at elevations of 60-800 meters. Annual herb in the Asteraceae family; blooms: February-May.	**Not Present:** Not identified during surveys in Spring 2011.
Pinus radiata Monterey pine	-- / -- / 1B	Closed-cone coniferous forest at elevations of 25-185 meters. Evergreen tree in the Pinaceae family. Only three native stands in CA, at Ano Nuevo, Cambria, and the Monterey Peninsula; introduced in many areas.	**Not Present:** Not identified during surveys in Spring 2011. Project site is outside of the known native range of this species.
Piperia yadonii **Yadon's rein orchid**	FE / -- / 1B	Sandy soils in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral at elevations of 10-510 meters. Annual herb in the Orchidaceae family; blooms May-August.	**Not Present:** Not identified during surveys in Summer 2010 or 2011.
Potentilla hickmanii 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.	**Not Present:** Not identified during surveys in Spring 2011.
Rosa pinetorum Pine rose	-- / -- / 1B	Closed-cone coniferous forest at elevations of 2-300 meters. Shrub in the Rosaceae family; blooms May-July. Possible hybrid of *R. spithamea*, *R. gymnocarpa*, or others; further study needed.	**Not Present:** Not identified during surveys in Spring 2011.
Sidalcea malachroides Maple-leaved checkerbloom	-- / -- / List 4	Broadleaved upland forest, coastal prairie, coastal scrub, north coast coniferous forest, and riparian woodlands, often in disturbed areas, at elevations of 2-700 meters. Perennial herb in the Malvaceae family; blooms April-August.	**Not Present:** Not identified during surveys in Spring 2011.

Species	Status (USFWS/ CDFG/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
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.	**Not Present:** Not identified during surveys in Spring 2011.
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.	**Not Present:** Not identified during surveys in Spring 2011.
Trifolium hydrophilum Saline clover	-- / -- / 1B	Marshes and swamps, valley and foothill grassland (mesic, alkaline), and vernal pools at elevations of 0-300 meters. Annual herb in the Fabaceae family; blooms April-June.	**Not Present:** Not identified during surveys in Spring 2011.
Trifolium polyodon Pacific Grove clover	-- / SR / 1B	Closed-cone coniferous forest, coastal prairie, meadows and seeps, and mesic areas in valley and foothill grassland at elevations of 5-120 meters. Annual herb in the Fabaceae family; blooms April-June.	**Not Present:** Not identified during surveys in Spring 2011.
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.	**Not Present:** Not identified during surveys in Spring 2011.

STATUS DEFINITIONS

Federal

FE = listed as Endangered under the federal Endangered Species Act
FT = listed as Threatened under the federal Endangered Species Act
-- = no listing

State

SE = listed as Endangered under the California Endangered Species Act
ST = listed as Threatened under the California Endangered Species Act
SR = listed as Rare under the California Endangered Species Act
CSC = California Department of Fish and Game Species of Concern
CFP = California Fully Protected Animal
-- = no listing

California Native Plant Society

1B = List 1B species; rare, threatened or endangered in California and elsewhere
List 4 = Limited distribution (CNPS Watch List)
-- = no listing

*** Bold** 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 within the site
Low = species known to occur in the vicinity from the CNDDB or other documentation; lack of suitable habitat or poor quality
Unlikely = species not known to occur in the vicinity from the CNDDB or other documentation, no suitable habitat is present within the site
Not Present = species was not observed during surveys