4.3 BIOLOGICAL RESOURCES

This section of the Draft EIR presents an analysis of the potential biological resources impacts associated with the development and implementation of the proposed Master Plan, including five near-term development components (Project). This section presents the environmental setting, regulatory framework, impacts of the Project on the environment, and proposed measures to mitigate significant or potentially significant impacts. The information in this section is based, in part, on a Biological Resources Report prepared for the Project (see Appendix E).

Agency comments related to biological resources were received during the public scoping period in response to the original Notice of Preparation (NOP) and address the protection of native oak woodland habitat on the CSUMB campus as part of contiguous areas of native oak woodland habitat on the former Fort Ord.

No additional public and agency comments related to biological resources were received during the public scoping period in response to the Revision to Previously Released NOP. For a complete list of public comments received during the public scoping periods, refer to Appendix B.

4.3.1 Environmental Setting

4.3.1.1 Study Area

The study area for the evaluation of impacts on biological resources encompasses the 1,396-acre CSUMB campus, located in the northwestern portion of the former Fort Ord military base. The botanical and wildlife survey areas for the Biological Resources Report (Appendix E) are shown in Figure 4.3-1. Section 4.3.3.2, Analytical Methods provides additional information about how biological resources in the study area were identified and evaluated in this section of the EIR.

4.3.1.2 Campus Setting

Habitat Types

The CSUMB campus contains five natural vegetation community/habitat types: coast live oak woodland, central maritime chaparral, central coastal scrub, non-native grassland, and ruderal/disturbed. Several areas of the campus contain a mixture of the five vegetation types. Additionally, some areas of the campus are developed with campus facilities. The vegetation communities and their approximate acreages found on the campus are shown on Figure 4.3-2 and listed in Table 4.3-1 and are described below. A summary description of each habitat type on campus is provided below. Appendix E contains additional details about these habitat types.

Table 4.3-1
Vegetation Types within the CSUMB Campus

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

Bold indicates sensitive habitat addressed in the Fort Ord HMP.

Coast live oak woodland is the dominant habitat type within the undeveloped portion of the campus. Coast live oak woodland is an open-canopied to nearly-closed-canopied community with a grass or sparsely scattered shrub understory. Three distinct coast live oak communities are located on the former Fort Ord: coastal coast live oak woodland, inland coast live oak woodland, and coast live oak savannah. The campus contains coastal coast live oak woodland, based on its proximity to the coast. In coastal coast live oak woodland, coast live oaks grow on unprotected sites and are exposed to the combined stresses of strong winds, salt spray, and sterile, sandy soils, which are often referred to as "sand hills." These environmental factors create an oak woodland characterized by short, wind-pruned trees that intergrade with the surrounding coastal scrub and maritime chaparral communities. On campus, the coast live oak (*Quercus agrifolia*) canopy is quite dense in many areas with an understory dominated by poison oak or, in some areas, non-native ice plant. Other plant species observed within the coast live oak woodland include hedge-nettle (*Stachys* sp.), slender wild oat (*Avena barbata*), sheep sorrel (*Rumex acetosella*), fiesta flower (*Pholistoma auritum*), and scattered shrubs such as fuchsia-flowered gooseberry (*Ribes speciosum*), California coffeeberry (*Frangula californica*), and sticky monkey flower (*Mimulus aurantiacus*).

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

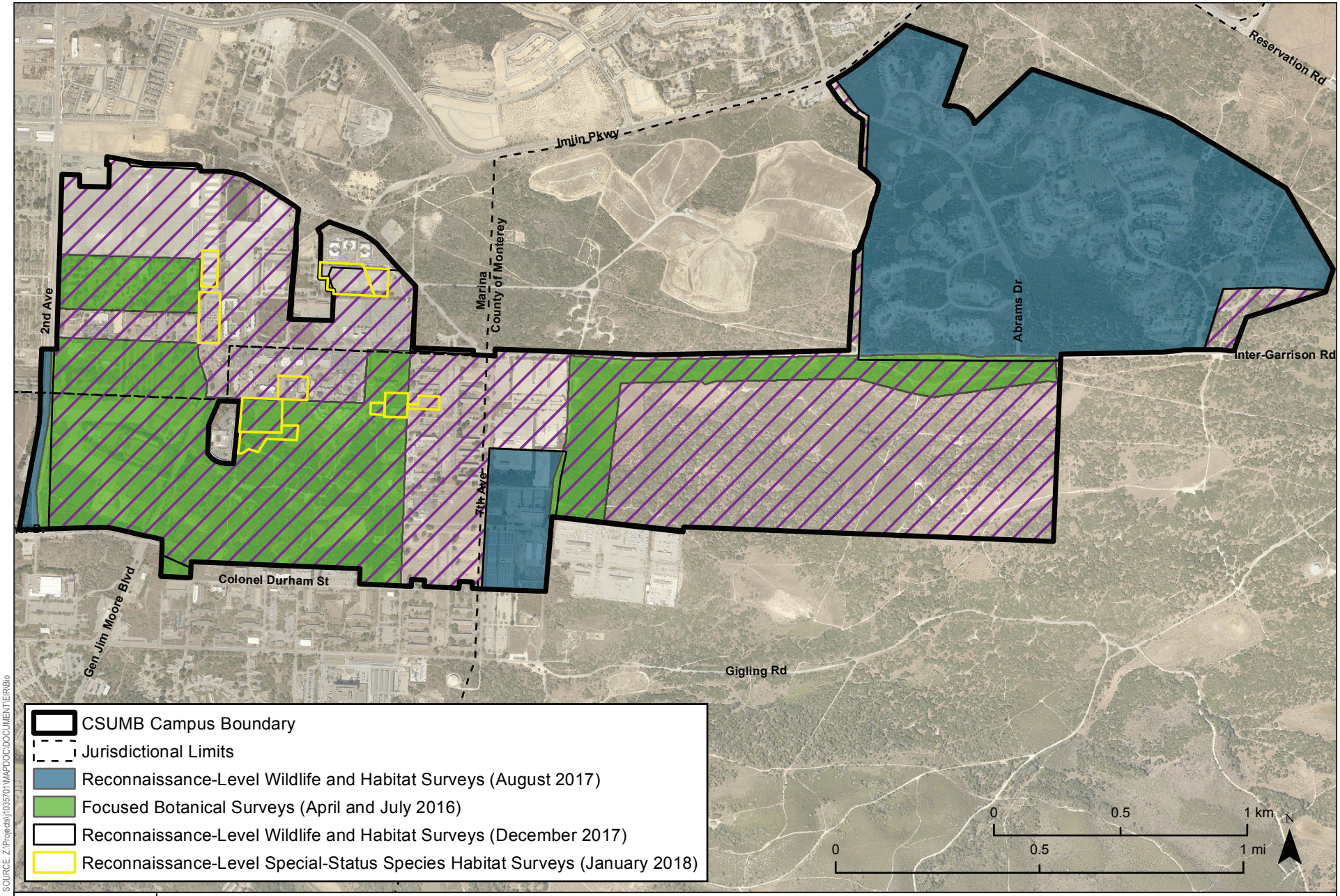

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FIGURE 4.3-1

Survey Areas

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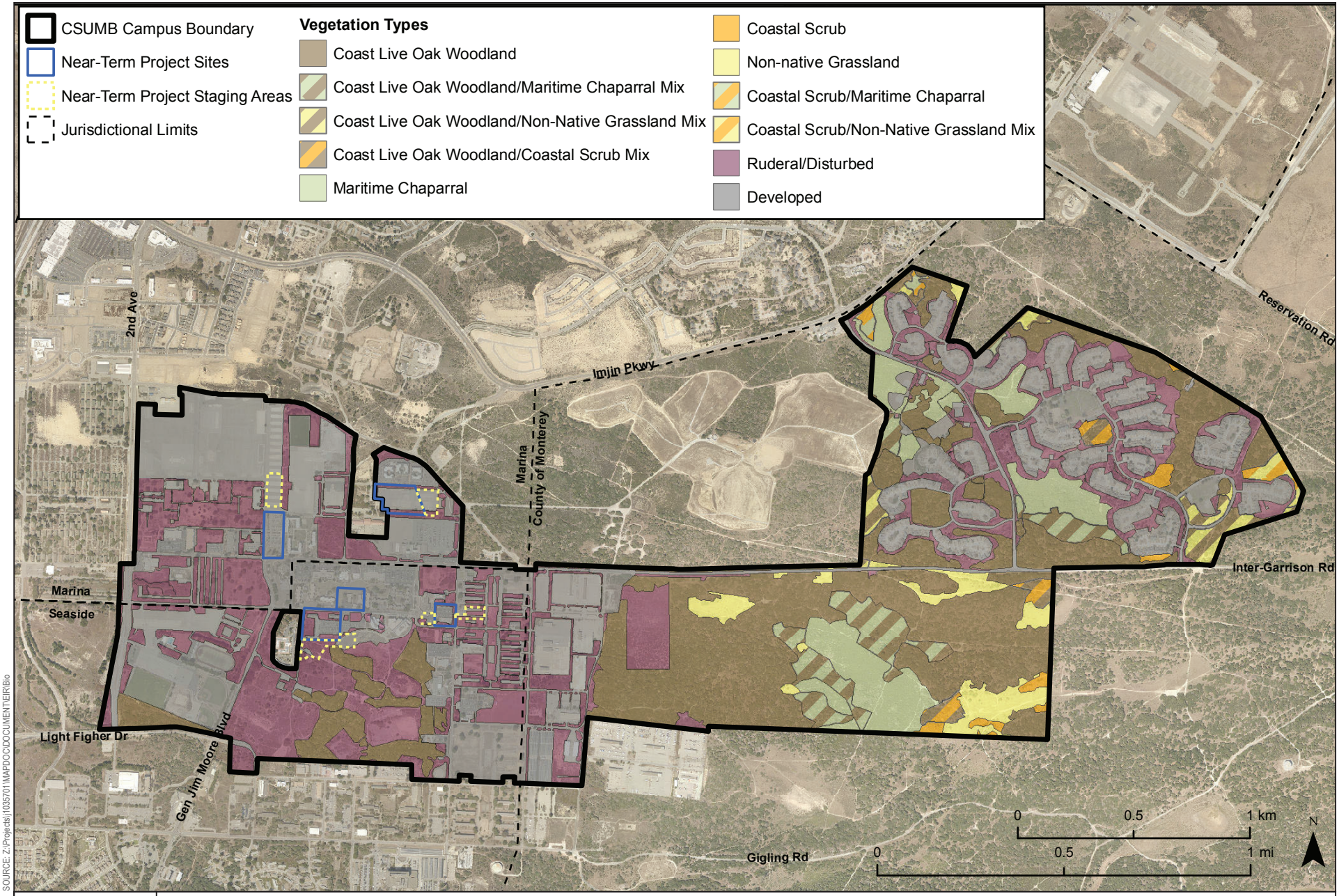

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FIGURE 4.3-2

Vegetation Types

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

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

Central coastal scrub contains dense shrubs, lacks grassy openings, and is often integrated with other habitat types. Dominant shrub species in the central coastal scrub habitat within the campus include black sage, coyote brush, poison oak, sticky monkey flower, and coast sagebrush (*Artemisia californica*).

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

Non-native grassland is often dominated by non-native annual grasses and forbs along with scattered native grasses and wildflowers. The dominant species in this habitat within the campus include slender oat, ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), rat-tail fescue (*Festuca myuros*), slender wild oat (*Avena barbata*), and long-beaked filaree (*Erodium botrys*). Additional species found within this habitat include needlegrass (*Stipa* sp.), sky lupine (*Lupinus nanus*), California poppy (*Eschscholzia californica*), wedge-leaved horkelia (*Horkelia cuneata*), sheep sorrel, and telegraphweed (*Heterotheca grandiflora*).

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

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

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

Developed areas comprise the majority of the Main Campus. These areas are characterized by buildings and other structures, paved roads and parking lots, and ornamental landscaping. Very little natural vegetation is present within these areas and they are considered to have low habitat value. However, some common wildlife species that thrive in urbanized areas may be found foraging within the developed areas, including American crow, California ground squirrel, raccoon, striped skunk, western scrub jay, European starling, and rock pigeon.

Sensitive Habitats

One sensitive habitat type was identified within the campus: central maritime chaparral, which includes central maritime chaparral mix habitats. Central maritime chaparral habitat, including the central maritime chaparral/central coastal scrub and central maritime chaparral/coast live oak woodland mix habitats, is identified as a sensitive habitat on the CDFW's *Natural Communities List* (CDFW, 2010). Central maritime chaparral is also identified as a sensitive habitat in the *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord* (HMP) (ACOE 1997) (See Section 4.3.2.4, for information about the HMP). Approximately 124.3 acres of central maritime chaparral habitat, including mixed habitats, occurs within the campus, as shown in Table 4.3-1 above.

Special-Status Species

Special-status species include those plants and animals that have been formally listed or proposed for listing as endangered or threatened under either the state or federal Endangered Species Acts; candidates for either state or federal listing; species that meet the definition of rare or endangered under CEQA Guidelines Section 15380; animals on the CDFW's list of "species of special concern" and "special animals" list; plants listed as rare under the California Native Plant Protection Act (CNPPA) or included in the CNPS California Rare Plant Ranks (CRPR) 1A, 1B,

2A, and 2B; plant species listed as having special status by CDFW; and raptors (e.g., eagles, hawks, and owls) and their nests protected under both the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (FGC) Section 3513, as described in Section 4.3.2, Regulatory Framework. Section 4.3.3.2, Analytical Methods describes the literature and data sources reviewed and the surveys conducted to identify the known and potential for occurrence of the identified special-status wildlife and plant species.

The following species are considered in the Biological Resources Report and this section of the EIR due to their moderate or high potential to occur or known presence within the CSUMB campus and potential to be impacted by the Project. Other wildlife and plant species that are unlikely to occur based on a lack of suitable habitat, or have a low potential to occur but are unlikely to be impacted, are identified in Appendix E.

Special-Status Wildlife Species

The campus was evaluated for the presence or potential presence of a variety of special-status wildlife species. Table 4.3-2 summarizes the potential for these species to occur within the campus. Appendix E contains additional details about these species. See also Appendix E for a discussion of California red-legged frog, a federally listed species, which is unlikely to occur within the campus.

Table 4.3-2
Potential for Special-Status Wildlife Species Presence within the Campus

Species	Potential Occurrence within Campus	Potential Occurrence within Near-Term Development Component Sites				
		Student Housing Phase III	Academic IV Building	Student Recreation Center	Student Housing Phase IIB	Academic V Building
Townsend's big-eared bat	Moderate	Unlikely	Moderate	Moderate	Moderate	Unlikely
Hoary bat	Moderate	Unlikely	Unlikely	Moderate	Moderate	Unlikely
Monterey dusky-footed woodrat	Present	Unlikely	Unlikely	Moderate	Unlikely	Unlikely
Monterey ornate shrew	High	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
American badger	High	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
California tiger salamander	Present	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
Northern California legless lizard	High	Moderate	Moderate	Moderate	Moderate	Unlikely
Coast horned lizard	High	Low	Low	Low	Low	Unlikely
Smith's blue butterfly	Moderate	Not Present	Moderate	Not Present	Not Present	Not Present
Obscure bumble bee	Moderate	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely

Table 4.3-2
Potential for Special-Status Wildlife Species Presence within the Campus

Species	Potential Occurrence within Campus	Potential Occurrence within Near-Term Development Component Sites				
		Student Housing Phase III	Academic IV Building	Student Recreation Center	Student Housing Phase IIB	Academic V Building
Western bumble bee	Moderate	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
Burrowing owl	Moderate	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
Nesting Raptors, Migratory Birds, & Other Protected Avian Species	Moderate-High	Moderate	Moderate	Moderate	Moderate	Moderate

Bold indicates Fort Ord HMP Species.

Special-Status Bat Species

Special-status bat species with the potential to occur in the vicinity that use oak woodland, central coastal scrub, and central maritime chaparral habitats as either maternity, migratory, or foraging roosts include the Townsends's big-eared bat and hoary bat. These species may utilize some of the coast live oak trees within the campus for night roosts and may forage over all undeveloped areas of the campus. Any future vacant buildings within the campus may also provide day roost or maternity roost habitat for Townsends's big-eared bat. Special-status bat species have a moderate potential to occur within these areas at the campus.

Monterey Dusky-Footed Woodrat

The Monterey dusky-footed woodrat is a CDFW species of special concern, 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, where such materials are available, and are built in protected spots, such as rocky outcrops or dense brambles of blackberry and/or poison oak. Within suitable habitat, nests are often found in close proximity to each other. This species is known to occur throughout the former Fort Ord and woodrat nests were observed within the campus during field surveys. Therefore, the Monterey dusky-footed woodrat is assumed present within suitable habitat areas.

Monterey Ornate Shrew

The Monterey ornate shrew, also known as the Salinas ornate shrew, is a CDFW species of special concern and HMP species. In general, this shrew is common in the southern two-thirds of California west of the Sierra Nevada, from Mendocino to Butte counties, south to the Mexican

border. It occupies a variety of mostly moist or riparian woodland habitats and also occurs within chaparral, grassland, and emergent wetland habitats where there is thick duff or downed logs.

Figure B-18 in the HMP identifies the campus as containing potential habitat for this species (ACOE, 1997). Additionally, field surveys on the UC Fort Ord Natural Reserve found that habitats within the campus (e.g., non-native grassland, coast live oak woodland, central coastal scrub, central maritime chaparral, riparian, and mixes of these habitats) are likely considered suitable habitat for the shrew. Therefore, there is a high potential for the Monterey ornate shrew to occur within these habitats in the campus.

American Badger

The American badger is a CDFW species of special concern. Badgers occupy a diversity of habitats within California; grasslands, savannas, and mountain meadows near timberline are preferred. The CNDDB reports eight occurrences of American badger within the Project region, the nearest of which located within the eastern portion of the campus, near Inter-Garrison Road. Additionally, this species is known to occur throughout the former Fort Ord. Suitable habitat is present within the non-native grassland, central maritime chaparral/non-native grassland mix, and central coastal scrub/non-native grassland mix, and within ruderal habitat in close proximity to the aforementioned more commonly used habitats within the campus. As such, the American badger has a high potential to occur within suitable habitat areas.

California Tiger Salamander

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

This species is 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 (U.S. Fish and Wildlife Service [USFWS] 2004). This species 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.

The campus is not located within designated critical habitat for CTS. The CNDDB reports 49 occurrences of California tiger salamander within the seven quadrangles evaluated, 25 of which occur within the former Fort Ord. Extensive surveys have been conducted within the former

Fort Ord to determine the aquatic resources that are known or have the potential to be occupied by this species (see Figure 4.3-3). No potential or known breeding (aquatic) habitat for this species is present within the campus. The nearest known California tiger salamander-occupied pond is 0.4 mile (0.6 km) from the campus (Pond 101 East).

The USFWS considers suitable upland aestivation habitat within two kilometers (1.2 miles) of known or potential breeding locations for this species as occupied habitat unless protocol-level surveys are conducted with negative results (USFWS and CDFW, 2003). Portions of the campus are within two kilometers of several aquatic resources known or with the potential to be occupied by this species. Figure 4.3-4 presents the area of habitats within the campus assumed by the USFWS as occupied by this species in the absence of protocol-level surveys. Areas designated as "developed" are not included in these calculations as it is assumed these areas do not provide California tiger salamander upland habitat.

The CDFW uses a four-zone methodology to determine the relative impact of a project to California tiger salamander (see Appendix E for the definition of each zone). Portions of the campus fall within Zone 2, Zone 3, and Zone 4 distances from aquatic resources known or with the potential to be occupied by this species. Figure 4.3-5 present the area of habitats within the campus that fall within these zones. Areas designated as "developed" are not included in these calculations as it is assumed these areas do not provide CTS upland habitat. In the absence of protocol-level surveys, it is assumed that California tiger salamander are present within suitable upland habitat within the campus.

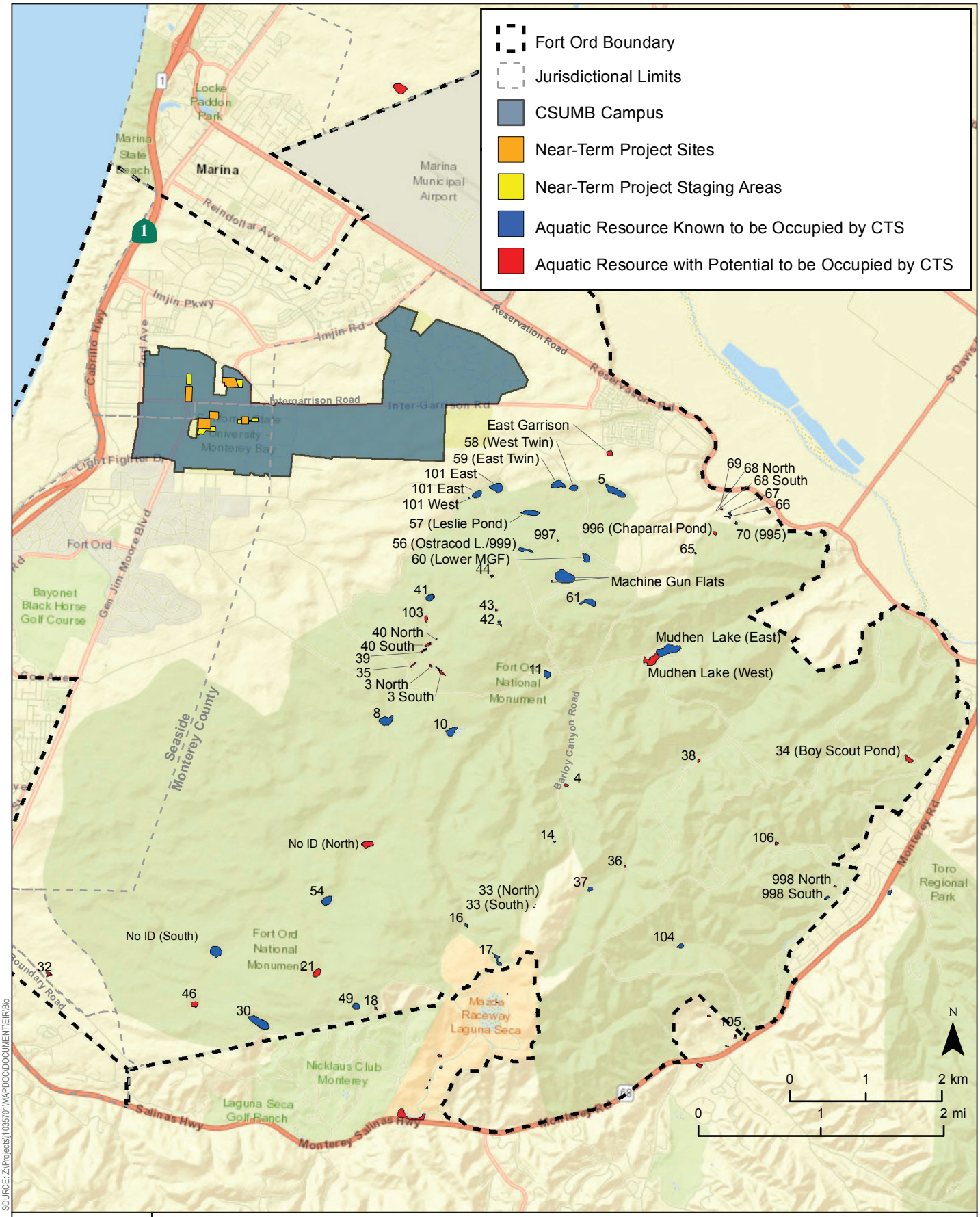

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FIGURE 4.3-3

Former Fort Ord CTS Aquatic Resources

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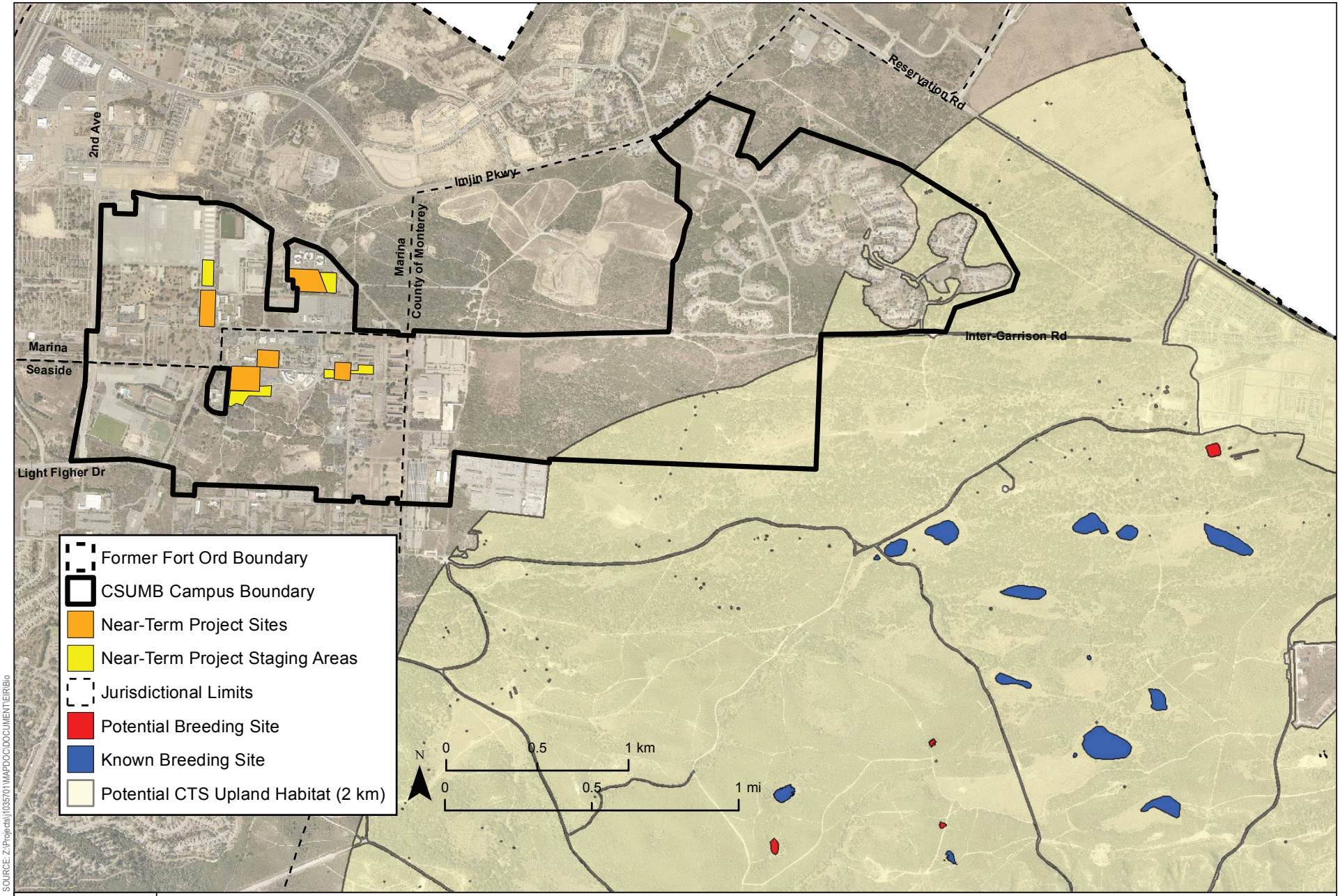

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FIGURE 4.3-4

CTS Service Analysis

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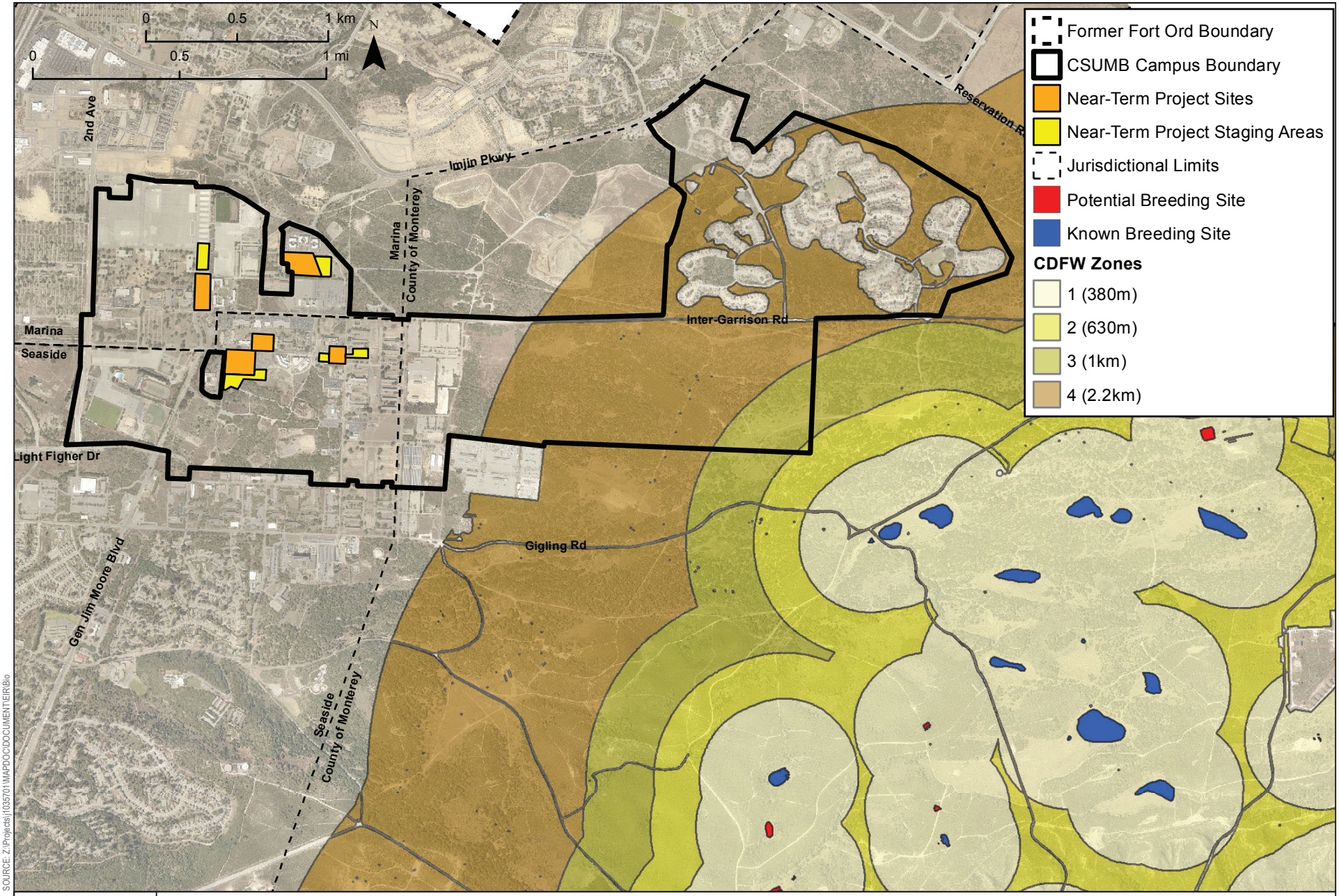

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FIGURE 4.3-5

CTS CDFW Analysis

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Northern California Legless Lizard

The Northern California legless lizard is a CDFW species of special concern, as well as a HMP species. This fossorial (burrowing) species typically inhabits sandy or loose (friable) soils. Habitats known to support Northern California legless lizard include, but are not limited to, coastal dunes, valley and foothill grasslands, chaparral, and coastal scrub at elevations from near sea level to approximately 1,800 meters (6,000 feet). The CNDDB reports 38 occurrences of Northern California legless lizard within the Project region, including one occurrence that includes the northeastern portion of the campus. An additional CNDDB occurrence is located immediately north of the western portion of the campus. Suitable habitat for Northern California legless lizard is present throughout all undeveloped areas of the campus where appropriate cover conditions occur. Therefore, the Northern California legless lizard has a high potential to occur within the campus.

Coast Horned Lizard

The coast horned lizard is a CDFW species of special concern. Horned lizards occur in valley-foothill hardwood, conifer, and riparian habitats, as well as in pine-cypress, juniper, chaparral, and annual grass habitats. This species generally inhabits open country, especially sandy areas, washes, flood plains, and wind-blown deposits in a wide variety of habitats. The CNDDB reports five occurrences of the coast horned lizard within the Project region, one occurrence within the northeastern portion of the campus. Additionally, this species has been observed throughout Fort Ord. Suitable habitat for this species is present within the campus within the central maritime chaparral and central coastal scrub habitats, including the mixed habitats, and may utilize open sandy areas of the non-native grassland and ruderal habitats. Therefore, there is a high potential for the coast horned lizard to occur within these habitats within the campus.

Smith's Blue Butterfly

The Smith's blue butterfly was listed as a federally endangered species on June 1, 1976 (41 FR 22041-22044). This species historically ranged along the California coast from Monterey Bay south through Big Sur to near Point Gorda, in association with coastal dune, coastal scrub, chaparral, and grassland vegetation types. The primary limiting factor for populations of this species is the occurrence of their host plants, dune buckwheat (*Eriogonum parvifolium*) and coast buckwheat (*E. latifolium*), in which they are associated with for their entire life span.

The CNDDB reports 17 occurrences of this species within the Project region, the nearest of which is located approximately 0.7 mile from the campus, within the Monterey Dunes State Park. Small areas of dune buckwheat were identified within the survey area near the intersection of 6th Avenue and Butler Street (0.1 acre and 6 individuals) and the intersection of 6th Avenue and A Street (23 individuals). Additionally, a small area of dune buckwheat (0.02 acre and 1 individual)

is known from previous surveys conducted for the Fort Ord Habitat Conservation Plan (HCP),[1] along Inter-Garrison Road near the Main Campus quad. Four dune buckwheat individuals were identified within the Academic IV site. These areas may provide habitat for this species (Figure 4.3-6). Host plant species for this butterfly may also occur within the unsurveyed areas of the campus. Therefore, this species has a moderate potential to occur within the campus. No buckwheat plant species suitable for Smith's blue butterfly habitat were observed within the other Near-Term Development sites.

Obscure Bumble Bee

The obscure bumble bee occurs in Mediterranean California and along the Pacific Coast from southern California to southern British Columbia in Canada (Williams et. al., 2014). This species occurs primarily along the coast in grassy prairies and meadows. The CNDDB reports four occurrences of the obscure bumble bee within the Project region. The nearest CNDDB occurrence of obscure bumble bee is approximately 5.8 miles from the campus. Suitable habitat for this species may be present within the non-native grassland, non-native grassland mix habitats, and portions of the ruderal habitat within the campus. This species has a moderate potential to occur within suitable habitat at the campus.

Western Bumble Bee

The western bumble bee was formerly common from the Pacific coast to the Colorado Rocky Mountains; however, populations from central California to southern British Columbia, Canada and west of the Sierra-Cascade Ranges have declined sharply since the late 1990s (Pollinator Partnership and USFS, 2012; Williams et. al., 2014). The CNDDB reports six occurrences of the western bumble bee within the Project region. The nearest CNDDB occurrence of this species is approximately 4.6 miles from the campus. Suitable habitat for this species may be present within the non-native grassland, non-native grassland/coast live oak woodland mix, non-native grassland/central coastal scrub, and portions of the ruderal areas within the campus. This species has a moderate potential to occur within suitable habitat at the campus.

[1] The Fort Ord HCP was prepared but not adopted by the Fort Ord Reuse Authority prior to its dissolution. Therefore, there are no adopted HCPs that apply to the CSUMB campus.

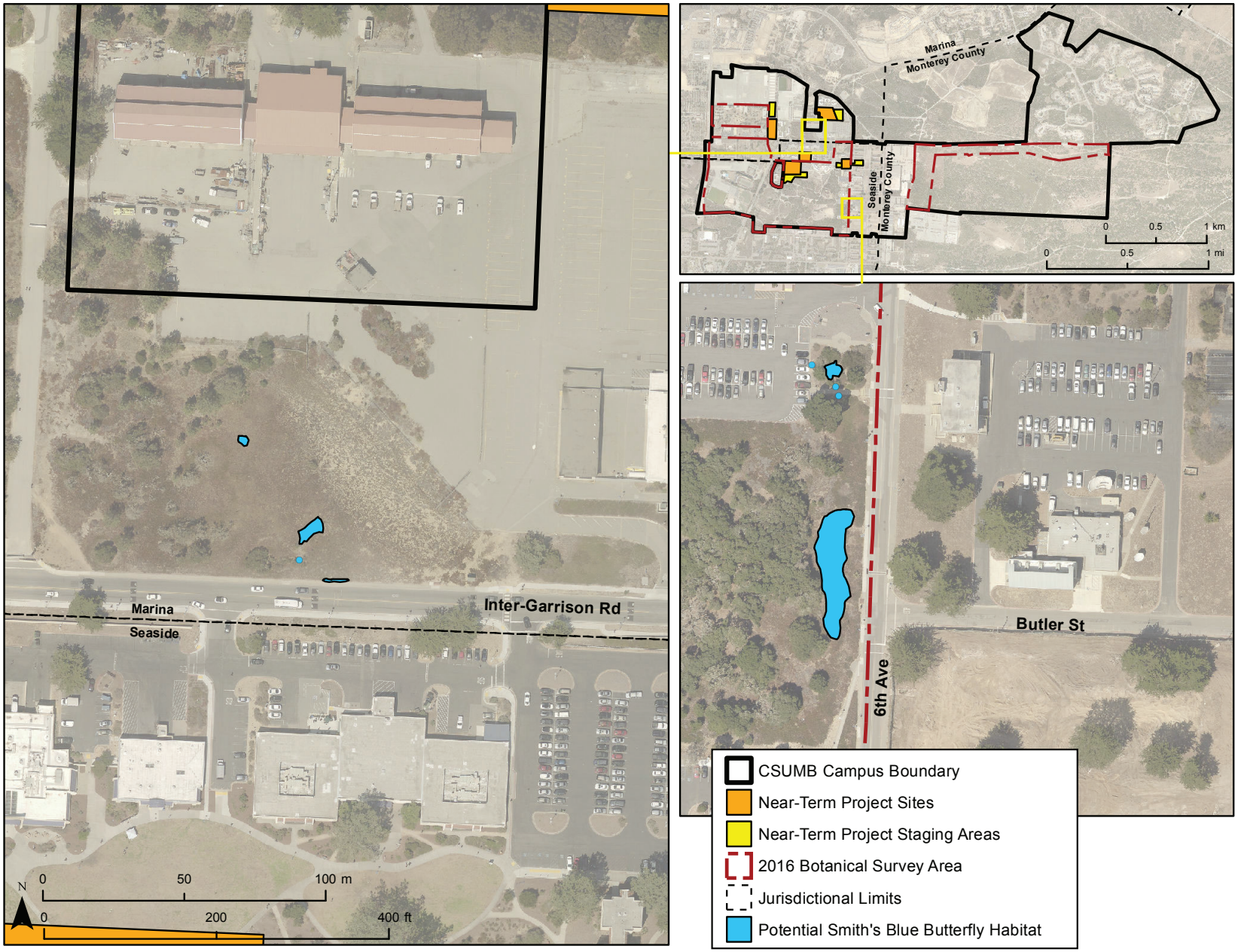

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FIGURE 4.3-6

Smith's Blue Butterfly Habitat

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Nesting Raptors, Migratory Birds, and Other Protected Avian Species

Raptors and their nests and migratory birds are protected under FGC and the MBTA (see Section 4.3.2, Regulatory Framework). 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. Many raptor species hunt in open woodland and habitat edges. Various species of raptors (such as red-tailed hawk, red-shouldered hawk [*Buteo lineatus*], great horned owl, American kestrel, and turkey vulture [*Cathartes aura*]) have a potential to nest within any of the large coast live oak, Monterey pine, or Monterey cypress trees present within the campus. Additionally, migratory bird species that may be present within the campus include, but is not limited to, common poorwill, blue-gray gnatcatcher, Townsend's warbler (*Setophaga townsendii*), western tanager (*Piranga ludoviciana*), savannah sparrow, ash-throated fly catcher (*Myiarchus cinerascens*), and violet-green swallow (*Tachycineta thalassina*).

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

Special-Status Plant Species

The campus and adjacent areas were evaluated for the presence or potential presence of a variety of special-status plant species. Focused surveys were conducted within a portion of the campus; this area is identified as the "survey area" on Figure 4.3-1. The following special-status plant species are discussed due to their known presence within the campus, as observed during the focused botanical surveys (Figure 4.3-7), or for their moderate to high potential to occur in the un-surveyed areas of the campus, based on known occurrences in the vicinity and presence of suitable habitat. Table 4.3-3 summarizes the potential for these species to occur within the campus. Figure 4.3-7 and Table 4.3-4 identifies the area of each of species observed within the survey area. Appendix E provides additional details about these species. All other species are assumed "unlikely to occur" based on the lack of suitable habitat within un-surveyed portions of the campus and/or the results of the focused surveys within the survey area, or have a low potential to occur but are unlikely to be impacted, as identified in Appendix E.

Table 4.3-3
Potential for Special-Status Plant Species Presence within the Campus

Species	Potential Occurrence within Campus	Potential Occurrence within Near-Term Development Component Sites				
		Student Housing Phase III	Academic IV Building[1]	Student Recreation Center	Student Housing Phase IIB	Academic V Building
Hooker's manzanita	Moderate	Not Present	Not Present	Not Present	Not Present	Not Present
Toro manzanita	Present[2]	Not Present	Not Present	Not Present	Not Present	Not Present
Pajaro manzanita	Moderate	Not Present	Not Present	Not Present	Not Present	Not Present
Sandmat manzanita	Present	Not Present	Not Present	Not Present	Not Present	Not Present
Monterey ceanothus	Present	Not Present	Not Present	Not Present	Not Present	Not Present
Fort Ord spineflower	Moderate	Unlikely	Unlikely	Not Present	Unlikely	Unlikely
Monterey spineflower	Present	Low	Low	Present	Low	Unlikely
Seaside bird's-beak	High	Unlikely	Unlikely	Not Present	Unlikely	Unlikely
Eastwood's goldenbush	High	Not Present	Not Present	Not Present	Not Present	Not Present
Sand-loving wallflower	High	Unlikely	Unlikely	Not Present	Unlikely	Unlikely
Sand gilia	High	Low	Low	Not Present	Low	Unlikely
Kellogg's horkelia	Present[2]	Not Present	Not Present	Not Present	Not Present	Not Present
Point Reyes horkelia	Moderate	Unlikely	Unlikely	Not Present	Unlikely	Unlikely
Marsh microseris	Moderate	Unlikely	Unlikely	Not Present	Unlikely	Unlikely
Northern curly-leaved monardella	Moderate	Unlikely	Unlikely	Not Present	Unlikely	Unlikely
Woodland woolythreads	Moderate	Unlikely	Unlikely	Not Present	Unlikely	Unlikely
Yadon's piperia	High	Unlikely	Unlikely	Not Present	Low	Unlikely
Santa Cruz microseris	Moderate	Unlikely	Unlikely	Not Present	Unlikely	Unlikely
Santa Cruz clover	Moderate	Unlikely	Unlikely	Not Present	Unlikely	Unlikely
Pacific Grove clover	Moderate	Unlikely	Unlikely	Not Present	Unlikely	Unlikely

Bold indicates Fort Ord HMP Species.

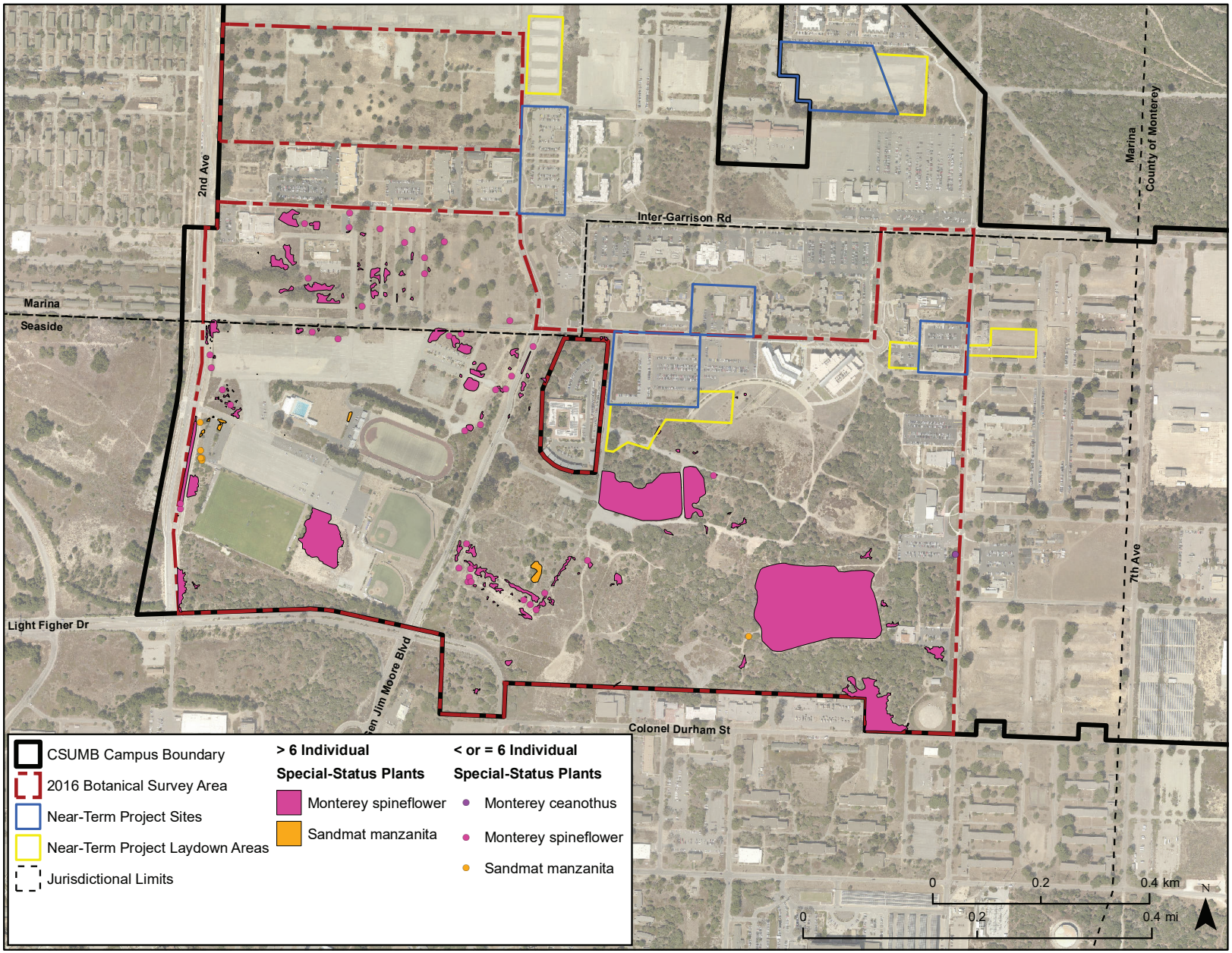
Notes:

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

Table 4.3-4
Area of Special-Status Plant Species within the Survey Area

Species	Area (acres)			Individuals
	Low	Medium	High	
Toro manzanita	0	0	0	1
Sandmat manzanita	0.01	0.02	0.3	30
Monterey ceanothus	0	0	0	2
Monterey spineflower	16.5	1.1	0.1	120
Kellogg's Horkelia	0.03	0.003	0	48

Bold indicates Fort Ord HMP Species.



SOURCE: Z:\Projects\10357011\MAPDOC\DOCUMENT\EIR\Bio

SOURCE: Denise Duffy and Associates, Inc. 2018

DUDEK

FIGURE 4.3-7a

Special-Status Plants Observed

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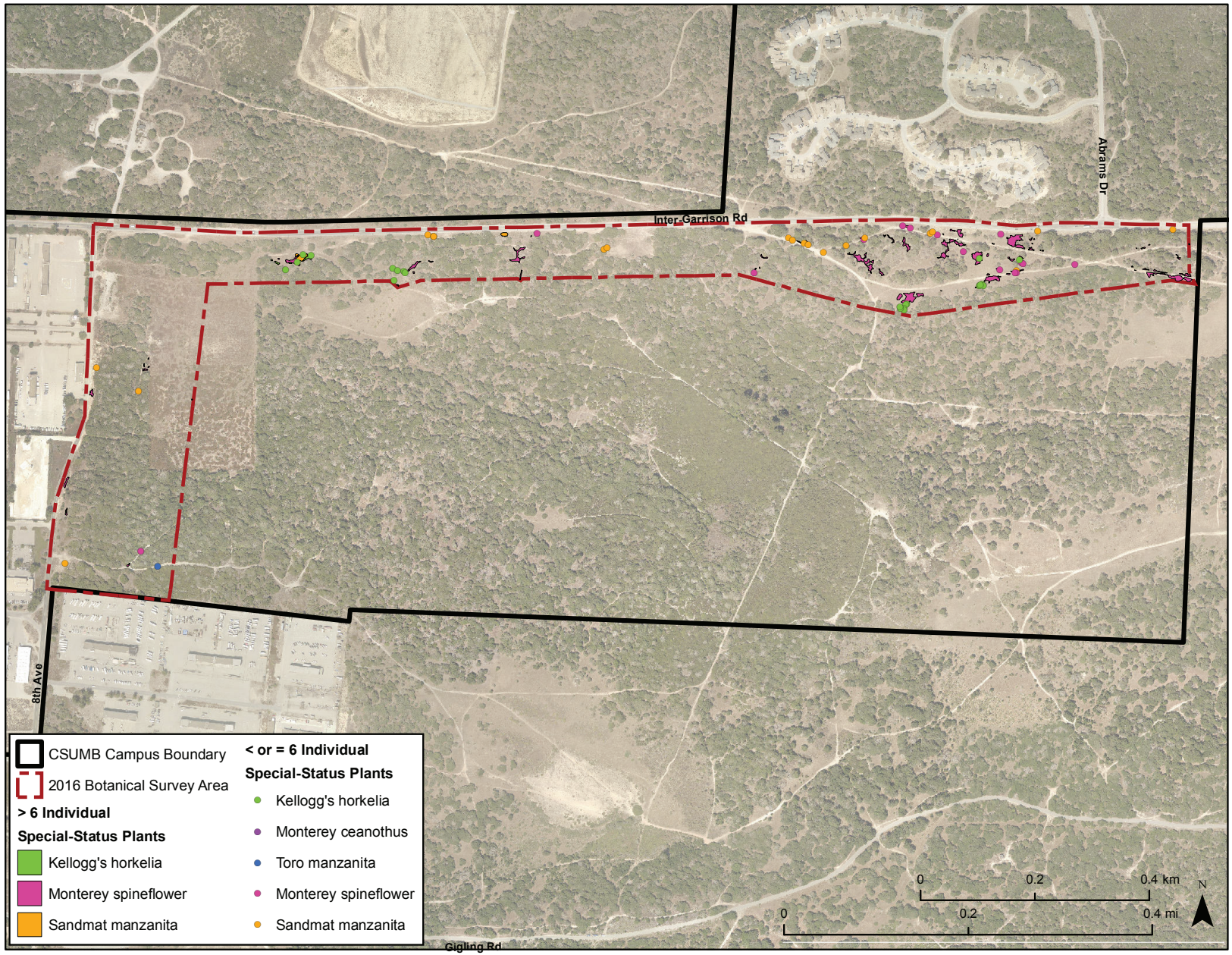

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SOURCE: Denise Duffy and Associates, Inc. 2018

DUDEK

FIGURE 4.3-7b

Special-Status Plants Observed

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Hooker's Manzanita

Hooker's manzanita is a CNPS CRPR 1B and HMP species. This evergreen shrub is associated with closed-cone coniferous forest, chaparral, cismontane woodland and coastal scrub habitats on sandy soils at a range of approximately 85-536 meters (280-1,760 feet) in elevation. The CNDDB reports 19 occurrences of this species within the Project region, the nearest of which is located approximately 0.2 mile south of the campus. This species was not observed within the survey area during surveys in 2016; however, suitable habitat for this species is present within the unsurveyed portions of the campus. Therefore, this species has a moderate potential to occur within the campus.

Toro Manzanita

Toro manzanita (also often referred to as Monterey manzanita) is a CNPS CRPR 1B and HMP species. Toro manzanita is associated with maritime chaparral, cismontane woodland, and coastal scrub on sandy soils at elevations of approximately 30-730 meters (100-2,400 feet). The CNDDB reports an occurrence of this species within the campus (Figure 4.3-8). One individual Toro manzanita was identified within a portion of the survey area in East Campus Open Space during the 2016 botanical surveys (Figure 4.3-1). This species may also occur within the unsurveyed portions of the campus.

Pajaro Manzanita

Pajaro manzanita is a CNPS CRPR 1B species. This evergreen shrub is associated with chaparral on sandy soils at a range of approximately 30-760 meters (100-2,500 feet) in elevation. The CNDDB reports 18 occurrences of this species within the Project region, the nearest of which includes a very small portion of the southwestern corner of the campus (Figure 4.3-8). This occurrence is associated with the main entrance to Fort Ord and the Highway 1 overpass, and is, therefore, unlikely within the campus. This species was not observed within the survey area during surveys in 2016; however, Pajaro manzanita is known to occur in other areas of the Former Fort Ord and suitable habitat is present within the unsurveyed portions of the campus. Therefore, this species has a moderate potential to occur within the campus.

Sandmat Manzanita

Sandmat manzanita is a CNPS CRPR 1B and HMP species. 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 approximately 3-205 meters (10-675 feet). The CNDDB reports 17 occurrences of this species within the Project region, including two specific occurrences within campus (Figure 4.3-8). Sandmat manzanita was identified within the survey area during the 2016 botanical surveys (Figure 4.3-1). This species may also occur within the unsurveyed portions of the campus.

Monterey Ceanothus

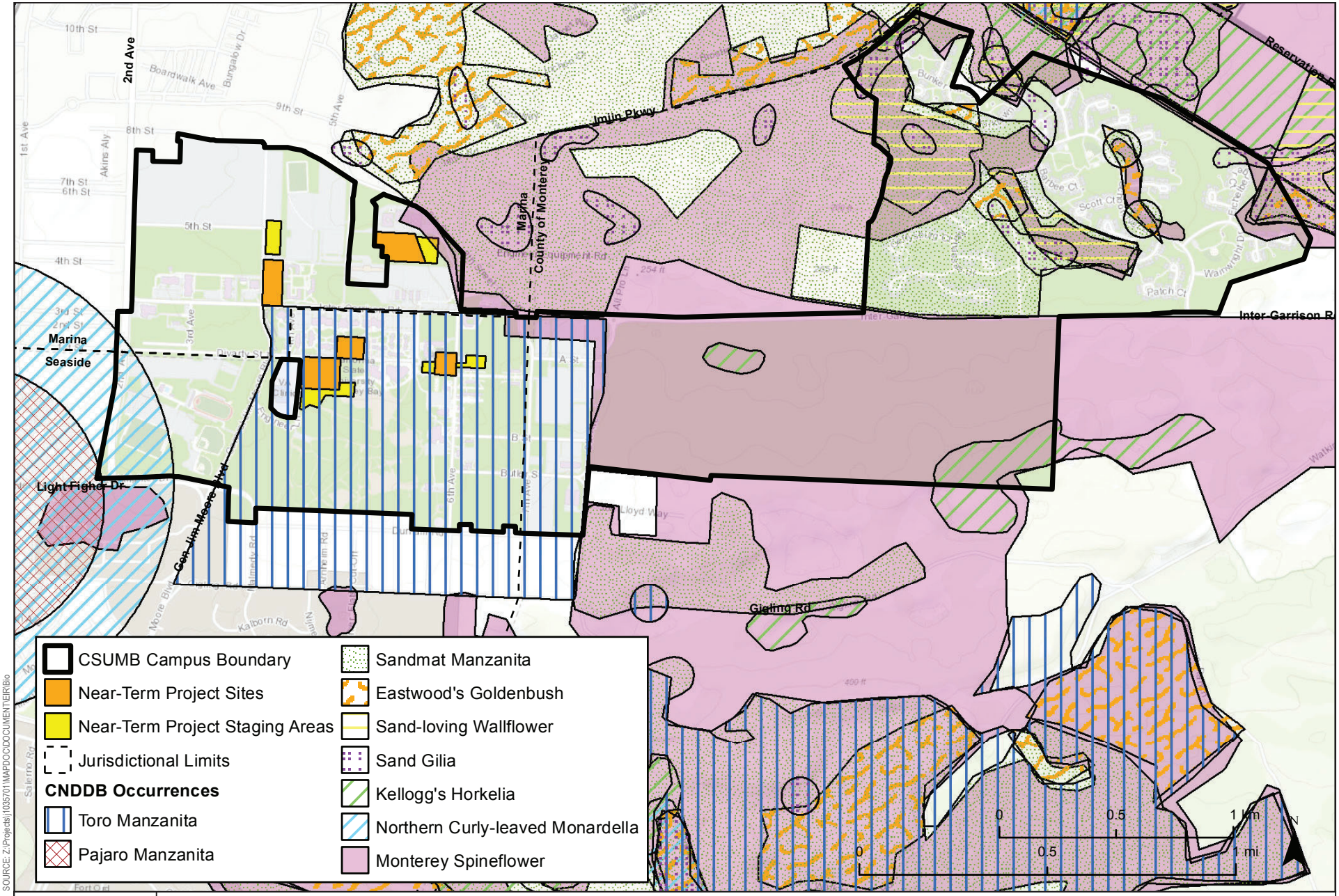
Monterey ceanothus is a CNPS CRPR 4 and HMP species. This species is associated with closed-cone coniferous forests, chaparral, and coastal scrub on sandy soils at elevations between approximately 3-550 meters (10-1,805 feet). The CNDDB does not report any occurrences of this species; however, it is known to occur throughout the former Fort Ord. Two individual Monterey ceanothus were identified within the survey area during the 2016 botanical surveys (Figure 4.3-1). This species may also occur within the unsurveyed portions of the campus.

Fort Ord Spineflower

Fort Ord spineflower is a CNPS CRPR 1B species. This annual herb is associated with sandy openings of maritime chaparral and coastal scrub at elevations of approximately 55-150 meters (180-490 feet). The CNDDB reports five occurrences of this species within the Project region, the nearest of which is located 0.3 mile south of the campus. This species was not observed within the survey area during surveys in 2016; however, this species is known to occur in other areas of the Former Fort Ord and suitable habitat is present within the unsurveyed portions of the campus. Therefore, this species has a moderate potential to occur within the campus.

Monterey Spineflower

Monterey spineflower is a federally threatened, CNPS CRPR 1B, and HMP species. 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 (10-1,480 feet) in elevation. The CNDDB reports an occurrence of this species that includes the majority of the campus (Figure 4.3-8). Monterey spineflower was identified within the survey area during the 2016 botanical surveys, including a small population that overlaps with the Student Recreation Center proposed staging area (Figure 4.3-1). This species may also occur within the unsurveyed portions of the campus.



SOURCE: Denise Duffy and Associates, Inc. 2018

DUDEK

FIGURE 4.3-8

CNDDB Plant Occurrence

CSU Monterey Bay Master Plan EIR

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Seaside Bird's-Beak

Seaside bird's-beak is a state endangered, CNPS CRPR 1B, and HMP species. Seaside bird's-beak is typically associated with closed-cone coniferous forest, chaparral, cismontane woodlands, coastal dunes, and coastal scrub in sandy soils and often in disturbed areas, within the range of 0-425 meters (0-1,395 feet) in elevation. The CNDDB reports 17 occurrences of this species within the Project region, the nearest of which is located approximately 0.3 mile from the campus (Figure 4.3-8). This species was not observed within the survey area during surveys in 2016; however, seaside bird's-beak is known to occur in other areas of the Former Fort Ord and suitable habitat is present within the unsurveyed portions of the campus. Therefore, this species has a high potential to occur within the campus.

Eastwood's Goldenbush

Eastwood's goldenbush is a CNPS CRPR 1B and HMP species. This evergreen shrub in the Asteraceae is associated with openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of approximately 30-275 meters (100-900 feet). The CNDDB reports 17 occurrences of this species within the Project region, including a specific occurrence in the northeastern portion of the campus (Figure 4.3-8). This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the campus. Based on this information, Eastwood's goldenbush has a high potential to occur within the campus, outside of the survey area.

Sand-loving Wallflower

Sand-loving wallflower is a CNPS CRPR 1B and HMP species. This perennial herb is associated with openings in maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of approximately 0-60 meters (0-200 feet). The blooming period is February to June.

The CNDDB reports 16 occurrences of this species within the Project region, including a specific occurrence in the northeastern portion of the campus (Figure 4.3-8). This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the campus. Based on this information, sand-loving wallflower has a high potential to occur within the campus, outside of the survey area.

Sand Gilia

Sand gilia is a federally endangered, state threatened, CNPS CRPR 1B, and HMP species. This annual herb is found in sandy openings of maritime chaparral, cismontane woodland, coastal dune and coastal scrub habitats within the range of approximately 0-45 meters (0-150 feet) in elevation. The CNDDB reports 30 occurrences of this species within the Project region, including a specific

occurrence in the northeastern portion of the campus (Figure 4.3-8). This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the campus. Based on this information, sand gilia has a high potential to occur within the campus, outside of the survey area.

Kellogg's Horkelia

Kellogg's horkelia is a CNPS CRPR 1B species. Kellogg's horkelia is typically associated with openings in closed cone coniferous forest, maritime chaparral, and coastal scrub in sandy or gravelly soils on relic dunes, within a range of approximately 10 to 200 meters (35-655 feet) in elevation. The CNDDB reports three occurrences of this species that overlap with the campus (Figure 4.3-8). This species was identified within a portion of the survey area on the East Campus Open Space during the 2016 botanical surveys (Figure 4.3-1). This species may also occur within the unsurveyed portions of the campus.

Point Reyes Horkelia

Point Reyes horkelia is a CNPS CRPR 1B species. Point Reyes horkelia is typically associated with coastal dunes, coastal prairie, and coastal scrub in sandy soils, within a range of approximately 5-755 meters (16-2,480 feet) in elevation. The CNDDB reports one occurrence of this species within the Project region, located approximately 1.5 miles northwest of the campus. This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the campus. Based on this information, Point Reyes horkelia has a moderate potential to occur within the campus.

Marsh Microseris

Marsh microseris is a CNPS CRPR 1B species, which is found in closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland habitats at elevations from approximately 5-300 meters (16-985 feet). The CNDDB reports 10 occurrences of this species within the Project region, the nearest of which is located approximately 0.9 mile southeast of the campus. This species was not observed within the survey area during surveys in 2016; however, suitable habitat may be present within the unsurveyed portions of the campus. Therefore, marsh microseris has a moderate potential to occur within the campus.

Northern Curly-leaved Monardella

Northern curly-leaved monardella is a CNPS CRPR 1B species, which is found in chaparral, coastal dunes, and coastal scrub at elevations of approximately 0-300 meters (0-985 feet). This species may also be found in ponderosa pine sandhills in Santa Cruz County and valley and foothill grassland habitats at elevations from approximately 5-300 meters (16-985 feet). The CNDDB

reports eight occurrences of this species within the Project region, the nearest of which is includes a portion of the southwestern corner of the campus (Figure 4.3-8). This occurrence is a non-specific occurrence based on collections from 1908 to 1919 and the exact location is unknown. This species was not observed within this portion of the campus or any other portions of the survey area during surveys in 2016. However, Northern curly-leaved monardella is known to occur in other areas of the Former Fort Ord and suitable habitat is present within the unsurveyed portions of the campus. Therefore, this species has a moderate potential to occur within the campus.

Woodland Woolythreads

Woodland woolythreads is a CNPS CRPR 1B species. This species is typically associated with openings in broadleaved upland forest, chaparral, cismontane woodland, north coast coniferous forest and valley and foothill grasslands on serpentine soils, within a range of approximately 100-1,200 meters (330-3,940 feet) in elevation. This species may occur within the non-native grassland habitat on the campus. The CNDDB reports two occurrences of this species within the Project region, the nearest of which is located approximately 5.1 miles southwest of the campus. This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the campus. Based on this information, woodland woolythreads has a moderate potential to within the campus.

Yadon's Piperia

Yadon's piperia is a federally endangered, CNPS CRPR 1B, and HMP species, which is found in closed-cone coniferous forest, maritime chaparral on sandy soils, and coastal bluff scrub at elevations from approximately 10-510 meters (35-1,675 feet). The CNDDB reports 22 occurrences of this species within the Project region, the nearest of which is located approximately 0.9 mile north of the campus. This species has also been found approximately 0.1 mile west of the campus on 1st Street. This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the campus and this species is known to occur within other portions of the Former Fort Ord. Based on this information, Yadon's piperia has a high potential to within the campus.

Santa Cruz Microseris

Santa Cruz microseris is a CNPS CRPR 1B species that is found in broadleaved upland forest, closed cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grasslands in open areas, sometimes on serpentinite soils. The elevation range for Santa Cruz microseris is approximately 10-500 meters (35-1,640 feet). The CNDDB reports two occurrences of this species within the Project region, the nearest of which is located approximately 4.6 miles south of the campus. This species was not observed within the survey

area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the campus. Based on this information, Santa Cruz microseris has a moderate potential to within the campus.

Santa Cruz Clover

Santa Cruz clover is a CNPS CRPR 1B species that is associated with broad-leaved upland forest, cismontane woodland, and margins of coastal prairie on gravelly soils, at elevations of approximately105-610 meters (345-2,000 feet). The CNDDB reports four occurrences of this species within the Project region, the nearest of which is located approximately 0.5 miles southeast of the campus. This species was not observed within the survey area during surveys in 2016; however, suitable habitat is present within the unsurveyed portions of the campus. Based on this information, Santa Cruz clover has a moderate potential to within the campus.

Pacific Grove Clover

Pacific Grove clover is a CNPS CRPR 1B species that is found in closed-cone coniferous forest, coastal prairie, meadows, seeps, and mesic areas in valley and foothill grassland at elevations of approximately 5-120 meters (16-395 feet). The CNDDB reports 12 occurrences of this species within the Project region, the nearest of which is located approximately 4.9 miles south of the campus. This species was not observed within the survey area during surveys in 2016; however, suitable habitat may be present within the unsurveyed portions of the campus. Based on this information, Pacific Grove clover has a moderate potential to within the campus.

4.3.1.3 Site Conditions for Near-Term Development Components

The existing biological resources setting for the near-term development component sites is generally described above. Additional information is provided below related to specific conditions on each site, including vegetation types, and special-status species known or having the potential to occur on the sites. Chapter 3, Project Description provides additional information about the location of each development site.

No central maritime chaparral habitat—the only sensitive habitat identified within the CSUMB campus—is located on any of the near-term development component sites. With the exception of the Academic IV site, no buckwheat plant species suitable for Smith's blue butterfly habitat were observed within the near-term development component sites or proposed staging areas. Tables 4.3-2 and 4.3-3 identify the potential for special-status wildlife and plants species to be present on the near-term development component sites. Figures 4.3-3 through 4.3-8 show the locations of prior observations of these species.

Student Housing Phase III

The new student residential buildings for this development would be located on an approximately 6.4-acre site in the North Quad on an existing parking lot. The Student Housing Phase III site and staging area are mostly paved with an existing surface parking lot and an unused paved area. Vegetation and paved pathways border the development site on the west and south. The development site contains 4.1 acres of developed land; the staging area contains 2.2 areas of developed land and 0.1 acres of ruderal/disturbed habitat.

Of the special-status wildlife species listed in Table 4.3-2 above, Northern California legless lizard and nesting raptors, migratory birds, and other protected avian species have a moderate potential to occur on the site; all other special-status wildlife species are either not present, unlikely to occur, or have a low potential to occur. The special-status plants listed in Table 4.3-3 above are either not present, unlikely to occur, or have a low potential to occur within the development site and staging area.

Academic IV

The approximately 4.0-acre Academic IV site is mostly paved or developed. An existing building and two parking lots are bordered by vegetation and paved pathways on all sides of the development site. The staging area on the west is paved and the staging area on the east is mostly unpaved. The development site contains 1.6 acres of developed land and 0.5 acres of ruderal/disturbed habitat; the staging area contains 1.0 areas of developed land and 0.9 acres of ruderal/disturbed habitat.

Given that four dune buckwheat individuals were identified within the Academic IV site, Smith's blue butterfly has moderate potential to occur on the site. Of the other special-status wildlife species listed in Table 4.3-2, Townsend's big-eared bat, Northern California legless lizard, and nesting raptors, migratory birds, and other protected avian species have a moderate potential to occur on the site; all other special-status wildlife species are either not present, unlikely to occur, or have a low potential to occur. The special-status plants listed in Table 4.3-3 above are either not present, unlikely to occur, or have a low potential to occur within the development site and staging area.

Student Recreation Center Phases I and II

The approximately 8.5-acre Student Recreation Center site is partially paved or developed. Two existing buildings and portions of two parking lots are bordered by vegetation and paved pathways on the north and west sides of the site. The staging area to the south is mostly unpaved and vegetated. The development site contains 2.9 acres of developed land and 2.5 acres of ruderal/disturbed habitat; the staging area contains 2.0 acres of ruderal/disturbed habitat, 1.1 acres of developed land, and 0.01 acres of coast live oak woodland.

Of the special-status wildlife species listed in Table 4.3-2 above, Townsend's big-eared bat, hoary bat, Monterey dusty-footed woodrat, Northern California legless lizard, and nesting raptors, migratory birds, and other protected avian species have a moderate potential to occur on the site; all other special-status wildlife species are either not present, unlikely to occur, or have a low potential to occur. Monterey spineflower is present within the development site and staging area; all other special-status plants listed in Table 4.3-3 above are not present.

Student Housing Phase IIB

The approximately 7.2-acre Student Housing Phase III site and staging area are mostly paved. Vegetation borders a portion of the entire site on the north, west, and south. The development site contains 3.9 acres of developed land and 1.4 acres of ruderal/disturbed habitat; the staging area contains 1.7 acres of developed land and 0.2 acres of ruderal/disturbed habitat.

Of the special-status wildlife species listed in Table 4.3-2 above, Townsend's big-eared bat, hoary bat, Northern California legless lizard, and nesting raptors, migratory birds, and other protected avian species have a moderate potential to occur on the site; all other special-status wildlife species are either not present, unlikely to occur, or have a low potential to occur. The special-status plants listed in Table 4.3-3 above are either not present, unlikely to occur, or have a low potential to occur within the development site and staging area.

Academic V

The approximately 2.7-acre Academic V site is relatively flat and partially paved or developed. Three existing buildings and a parking lot are bordered by vegetation and paved pathways on all sides of the development site. The development site contains 2.7 acres of developed land. Construction staging for this development would use the same staging area as that identified for the Student Recreation Center which, as described above, contains 2.0 acres of ruderal/disturbed habitat, 1.1 acres of developed land, and 0.01 acres of coast live oak woodland.

Of the special-status wildlife species listed in Table 4.3-2 above, nesting raptors, migratory birds, and other protected avian species have a moderate potential to occur on the site; all other special-status wildlife species are either not present or unlikely to occur. The special-status plants listed in Table 4.3-3 above are either not present or unlikely to occur within the development site and staging area.

4.3.2 Regulatory Framework

4.3.2.1 Federal

Federal Endangered Species Act

Provisions of the Federal Endangered Species Act (FESA) of 1973 (United States Code [USC], tit. 16, chapter 35, § 1531 *et seq*., as amended) protect federally listed threatened or endangered species and their habitats from unlawful take. Listed species include those for which proposed and final rules have been published in the Federal Register (FR). The FESA is administered by the USFWS or the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS). In general, the NMFS is responsible for the protection of FESA-listed marine species and anadromous fish, whereas other listed species are under USFWS jurisdiction.

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

Critical Habitat

Critical habitat is a term defined and used in the FESA. 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 USFWS 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 USFWS on actions they carry out, fund, or authorize to ensure that their actions will not destroy or adversely modify critical habitat. In this way, a critical habitat designation protects areas that are necessary for the conservation of the species. No critical habitat for federally listed species is designated within the campus.

Recovery Plans

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

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

- Recovery Plan for the Central California Distinct Population Segment of the California Tiger Salamander (*Ambystoma californiense*)
- Smith's Blue Butterfly Recovery Plan

Migratory Bird Treaty Act

The MBTA of 1918 (USC, tit. 16, § 703 *et seq*.) regulates or prohibits taking, killing, possession of, or harm to migratory bird species. The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country and is enforced in the United States by the USFWS. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors). On December 22, 2017, the Department of Interior issued a legal opinion (M-Opinion 37050) that interpreted the above prohibitions as only applying to direct and purposeful actions of which the intent is to kill, take, or harm migratory birds; their eggs; or their active nests. Incidental take of birds, eggs, or nests that are not the purpose of such an action, even if there are direct and foreseeable results, was not prohibited. However, on January 7, 2021, the USFWS published a final rule (the January 7th rule) that codified the previous administration's interpretation, which after further review was determined to be inconsistent with the majority of relevant court decisions and readings of the MBTA's text, purpose, and history. On May 5, 2021, the USFWS published a rule to revoke the January 7th rule, which would result in a return to implementing the statute as prohibiting incidental take. On July 19, 2021, the USFWS announced the availability of two revised economic analysis documents for public review that evaluate the potential for the proposed rule to impact small entities, including businesses, governmental jurisdictions, and other organizations. The public review period on these documents ends on August 19, 2021.

Federal Clean Water Act

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

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

Federal Executive Order 11990 – Protection of Wetlands

Executive Order 11990 – Protection of Wetlands (42 Federal Register [FR] 26961) calls for no net loss of wetlands. For the regulatory process, the ACOE and EPA jointly define wetlands as follows: "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Federal agencies are required to implement the following procedures for any federal action that involves wetlands: 1) provide an opportunity for early public involvement; 2) consider alternatives that would avoid wetlands, and if avoidance is not possible, measures to minimize harm to wetlands must be included in the action; 3) prepare a "Wetlands Only Practicable Alternative Finding" for actions that require an Environmental Impact Study.

Federal Executive Order 13112 – Invasive Species

Executive Order 13112 – Invasive Species (64 FR 6183) requires the prevention of introduction and spread of invasive species. Invasive species are defined as "alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health." Each federal agency whose actions may affect the status of invasive species on a project site shall, to the extent practicable and permitted by law, subject to the availability of appropriations, use relevant programs and authorities to: 1) prevent the introduction of invasive species; 2) detect and respond rapidly to and control populations of such species in a cost-effective and

environmentally sound manner; 3) monitor invasive species populations accurately and reliably; 4) provide for restoration of native species and habitat conditions in ecosystems that have been invaded; 5) conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species; and 6) promote public education on invasive species and the means to address them. A national invasive species management plan was prepared by the National Invasive Species Council and the Invasive Species Advisory Committee that recommends objectives and measures to implement the Executive Order. The California Invasive Plant Council (Cal-IPC) Inventory categorizes non-native invasive plants that threaten California's wildlands. Categorization is based on an assessment of the ecological impacts of each plant. The Cal-IPC Inventory represents the best available knowledge of invasive plant experts in the state. Although the impact of each plant varies regionally, its rating represents cumulative impacts statewide. Therefore, a plant whose statewide impacts are categorized as Limited may have more severe impacts in a particular region. Conversely, a plant categorized as having a High cumulative impact across California may have very little impact in some regions.

4.3.2.2 State

California Endangered Species Act

The California Endangered Species Act (CESA) (Fish and Game Code [FGC] §§ 2050-2100) was enacted in 1984. The California Code of Regulations lists animal species considered endangered or threatened by the state (Cal. Code Regs., tit. 14, § 670.5). CESA § 2090 requires state agencies to comply with endangered species protection and recovery and to promote conservation of these species. FGC § 2080 prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. "Take" is defined in FGC § 86 as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." A Section 2081 Incidental Take Permit from the CDFW may be obtained to authorize "take" of any state listed species.

California Fish and Game Code

Birds

FGC § 3503 states that it is "unlawful to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Section 3503.5 prohibits the killing, possession, or destruction of any birds in the orders Falconiformes or Strigiformes (birds-of-prey). Section 3511 prohibits take or possession of fully protected birds. Section 3513 prohibits the take or possession of any migratory nongame birds designated under the federal MBTA. Section 3800 prohibits take of nongame birds. (FGC §§ 3500-3864)

Fully Protected Species

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

Species of Special Concern

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

Lake and Streambeds

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

Native Plant Protection Act

The California Native Plant Protection Act (CNPPA) (FGC § 1900 *et seq*.) of 1977 directed the CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and endangered plants in the state." The CNPPA prohibits importing rare and endangered plants into California, taking rare and endangered plants, and selling rare and endangered plants. The CESA and CNPPA authorized the Fish and Game Commission to designate endangered, threatened, and rare species and to regulate the taking of these species (FGC §§ 2050-2098). Plants listed as rare under the CNPPA are not protected under CESA.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne) (California Water Code [CWC] §13000 *et seq*.) is California's statutory authority for the protection of water quality

and applies to surface waters, wetlands, and groundwater, and to both point and nonpoint sources. Under the Porter-Cologne, the State Water Resources Control Board (SWRCB) has the ultimate authority over State water rights and water quality policy. However, Porter-Cologne also establishes nine Regional Water Quality Control Boards (RWQCBs) to oversee water quality on a day-to-day basis at the local/regional level. The campus is located within Region 3 – Central Coast RWQCB. Porter-Cologne incorporates many provisions of the federal Clean Water Act, such as delegation to the State Board and RWQCBs of the National Pollutant Discharge Elimination System (NPDES) permitting program.

Under Porter-Cologne, the state must adopt water quality policies, plans, and objectives that protect the state's waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegate to the nine RWQCBs. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. The Porter-Cologne sets forth the obligations of the State Board and RWQCBs to adopt and periodically update water quality control plans (basin plans). The act also requires waste dischargers to notify the RWQCBs of such activities through filing of Reports of Waste Discharge (RWD) and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements (WDRs), NPDES permits, Section 401 water quality certifications, or other approvals. The RWQCBs also have authority to issue waivers to RWD requirements and WDRs for broad categories of "low threat" discharge activities that have minimal potential for adverse water quality effects, when implemented according to prescribed terms and conditions. CSUMB has a waiver from the WDRs for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). Therefore, only the NPDES Construction General Permit and the WDRs General Permit for Discharges with Low Threat to Water Quality apply to the campus. See Section 4.8, Hydrology and Water Quality for additional information about NPDES permits that apply to the campus.

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

4.3.2.3 CSUMB Tree Restoration Program

CSUMB has established a tree restoration program for impacts to coast live oak trees and other trees resulting from campus projects. This program requires that for every tree greater than 4 inches diameter at breast height (dbh) removed, a minimum of two coast live oak trees would be replanted, and assumed to survive, in the identified on-campus restoration area. In some cases,

more than two trees would need to be planted to achieve this survival rate. The implementation of this program is required for all projects that would result in impacts to trees 4 inches dbh or greater. The proposed PDF-OS-4 will continue and expand this program to maximize the health and stability of existing and replacement trees.

4.3.2.4 Local

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

Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord

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 FESA. The USFWS 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.

The HMP establishes guidelines for the conservation and management of HMP species and their habitats on former Fort Ord lands by identifying lands that are available for development, lands that have some restrictions with development, and habitat reserve areas. The intent of the plan is to establish large, contiguous habitat conservation areas and corridors to compensate for future development in other areas of the former base. The HMP establishes a habitat conservation area and corridor system with parcel-specific land use categories and management requirements for all lands on former Fort Ord. The HMP identifies what type of activities can occur on each parcel at former Fort Ord and parcels are designated as "development," "habitat reserves with management requirements," or "habitat reserves with development restrictions." Within these land use designations, parcels may also be identified as Borderlands with specific requirements for lands adjacent to Bureau of Land Management (BLM) lands and contain future road corridors, easements, and rights of way. The HMP sets the standards to assure the long-term viability of former Fort Ord's biological resources in the context of base reuse so that no further mitigation should be necessary for impacts to species and habitats considered in the HMP. This plan has been approved by the USFWS; the HMP, deed restrictions, and Memoranda of Agreement between the Army and various land recipients, including the Board of Trustees of the California

State University, provide the legal mechanism to assure HMP implementation. It is a legally binding document, and all recipients of former Fort Ord lands are required to abide by its management requirements and procedures.

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

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 FESA or CESA. In compliance with the FESA and CESA, the campus would need to obtain a FESA Section 10(a)(1)(B) Incidental Take Permit from the USFWS and CESA Section 2081 Incidental Take Permit from the CDFW, to provide coverage for the take of federal and state listed wildlife and plant species as a non-federal entity receiving land on the former Fort Ord.

The entire campus is located within designated "development" parcels under the HMP. Additionally, a portion of the campus, along the southeastern boundary of the East Campus Open Space parcel (Army parcel number S1.3.2), is designated in the HMP as having Borderlands requirements. Borderlands are designated development parcels or habitat reserve parcels at the urban/wildland interface where specific design considerations and management activities are required to minimize effects of development on HMP species and natural communities. For the East Campus Open Space parcel, these activities include interim management activities, including but not limited to, the installation and maintenance of firebreaks and vehicle barriers where appropriate to separate developed and developing area from natural lands. To minimize the possibility of fire damage to the adjacent habitat reserve as well as structures on the development parcels, parking lots, greenbelts, or other nonflammable or fire-resistant land uses will be located as a buffer between the habitat reserve and development. Measures will also be taken to reduce potential for erosion in these parcels so as not to affect the adjacent habitat reserve from stormwater runoff that may originate in this parcel. This parcel is to be conserved and managed until development occurs. Non-native species (i.e., iceplant, scotch broom, and pampas grass) controls will also be in place to avoid spreading to the adjacent habitat reserve.

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

Habitat Conservation Plans or NCCP

There are no adopted HCPs or Natural Community Conservation Plans (NCCPs) associated with the CSUMB campus.

Fort Ord Oak Woodland Conservation Requirements

The Fort Ord Reuse Authority Act was implemented to facilitate the transfer and reuse of the Fort Ord military base, and established FORA as the entity responsible for planning, financing, and carrying out the transfer and reuse of the base in a cooperative, coordinated, balanced, and decisive manner (Cal. Gov. Code § 67650 *et seq.)*. Pursuant to the Act, FORA must dissolve when eighty percent of the base has been developed or reused in a manner consistent with the Fort Ord Reuse Plan (Reuse Plan), or on June 30, 2020, whichever comes first. The FORA Resolution No. 18-11 approved a Transition Plan that assigns assets and liabilities, designates responsible successor agencies, and provides a schedule of remaining obligations. The Transition Plan calls for the cities of Marina, Seaside, Monterey and Del Rey Oaks and the County of Monterey to follow the Reuse Plan policies and programs (see description below related to oak woodlands). FORA's legislatively defined mission was complete as of June 30, 2020 and FORA has now been dissolved.

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

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

4.3.3 Impacts and Mitigation Measures

This section presents the evaluation of potential environmental impacts associated with the Project related to biological resources. The section includes the thresholds of significance used in evaluating the impacts, the methods used in conducting the analysis, and the evaluation of Project impacts and the Project's contribution to significant cumulative impacts. In the event significant impacts within the meaning of CEQA are identified, appropriate mitigation measures, where feasible, are identified.

4.3.3.1 Thresholds of Significance

The significance thresholds used to evaluate the impacts of the Project related to biological resources are based on Appendix G of the CEQA Guidelines. Based on Appendix G, a significant impact related to biological resources would occur if the Project would:

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

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

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

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

E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

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

4.3.3.2 Analytical Method

Program- and Project-Level Review

The biological resources impact analysis in this section includes a program-level analysis under CEQA of the proposed Master Plan and project design features (PDFs), as described in Chapter 3 Project Description. The analysis also includes a project-level analysis under CEQA of the 5 near-term development components that would be implemented under the proposed Master Plan. Both construction and operation of the Project are considered in the impact analysis, where relevant. In the event significant environmental impacts would occur even with incorporation of applicable regulations and proposed PDFs, impacts would be potentially significant and mitigation measures would be identified to reduce impacts to less than significant, where feasible.

Project Design Features

There are a number of PDFs that are incorporated into the technical analysis of biological resources, as summarized below (see Chapter 3, Project Description for specific text of each applicable PDF):

- *PDF-MO-5* provides for a compact campus core.
- *PMF-OS-1* provides for the management and designation of open space consistent with Figure 3-8 (see Chapter 3, Project Description), including natural open space and connecting landscape, which will connect and protect habitats and sensitive species and avoid fragmenting such areas.
- *PDF-OS-2* provides for the maintenance, enhancement and restoration of natural open spaces, native habitats and sensitive species, at a minimum in accordance with the HMP and HCP EIR requirements and/or other best management practices.
- *PDF-OS-3* provides for construction best management practices to avoid special-status plant and animal species, avoid or minimize erosion and sedimentation, and remove invasive species during construction, demolition and landscape projects.
- *PDF-OS-4* provides for continuation and expansion of the CSUMB tree restoration and management program to maximize the health and stability of existing and replacement trees. This includes, but is not limited to, Campus Planning approving and directing major trimming (over 30 percent) and replacement of all removed trees over 4-inches in diameter at a minimum 2:1 ratio.
- *PDF-OS-5* establishes a habitat restoration fund to collect funds for the replacement of trees and/or habitat that may be removed or disturbed during construction of proposed development.
- *PDF-OS-6* provides for the stabilization of newly created bare land after construction with native plants and seed mixes to eliminate erosion, and indicates that permanent landscaping will use consistent, low maintenance, native and drought-tolerant landscaping using a campus wide landscape palette informed by the campus Landscape Maintenance Plan and FORA RUDG palettes.
- *PDF-OS-7* minimizes human caused impacts along trail corridors by: minimizing obtrusive lighting, separating users by type and connecting people to and protecting the natural environment.
- *PDF-OS-11* requires the preparation and implementation of a defensible space plan to address landscape requirements for structures located: (1) along the eastern edge of the Main Campus, along Eighth Street (east of Fifth Avenue) and along Eighth Avenue between Inter-Garrison Road and Colonel Durham Street; (2) adjacent to the Southern Oak

Woodlands; (3) along the undeveloped portions of Inter-Garrison Road; and (4) at the East Campus Housing area.

- *PDF-D-7* indicates the CSUMB will aim to meet Neighborhood Development (LEED ND) light pollution reduction requirements in all new building and pathway development, adhere to Title 24 maximums for lighting power density, and shall use LED lights, reflectors, visors, shields and customized optics and technology at the replacement stadium to precisely aim and illuminate the field.
- *PDF-D-9* establishes ecological, sustainable and historical interpretive signage within the natural open space and connecting landscape and near, and as part of, new pathway development, which will highlight and educate users about the natural and cultural heritage of CSUMB.

Literature Review and Surveys

Potential impacts to biological resources in the study area are evaluated based on a review of the available literature regarding the status and known distribution of the special-status species or their habitat within the project area and surrounding areas. Literature and data sources reviewed to determine the occurrence or potential for occurrence of special-status species on the CSUMB campus include: current agency status information from the USFWS and CDFW for special-status species, the CNPS *Inventory of Rare and Endangered Vascular Plants of California*, CNDDB occurrence reports, the USFWS Critical Habitat Mapper, *Flora and Fauna Baseline Study of Fort Ord*, and the *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord*. The U.S. Geological Survey (USGS) Marina quadrangle and the six surrounding quadrangles (Monterey, Moss Landing, Prunedale, Salinas, Seaside, and Spreckels) from the CNDDB were reviewed for documented special-status species occurrences in the vicinity of the campus. This search range was used to identify potential special-status species issues because it encompasses a sufficient distance to accommodate for regional habitat diversity and to overcome the limitations of the CNDDB. The CNDDB is based on actual recorded occurrences and does not constitute an exhaustive inventory of every resource.

Once all data sources were reviewed, a final list of special-status species with moderate or greater potential to occur in the vicinity of the campus was compiled (see Table 4.3-2 and 4.3-3), and each of the species was evaluated for presence or absence on the site. In addition, the presence of suitable habitat characteristics was evaluated based on all data sources and site surveys. Qualified biologists conducted reconnaissance-level wildlife and general habitat surveys, reconnaissance-level surveys for special-status plant and wildlife species habitat, and focused botanical surveys. Table 4.3-5 outlines the type, location, and dates for each of these surveys and Figure 4.3-1 shows the survey areas. Additional detail on survey methods is provided in Appendix E.

Table 4.3-5
Biological Survey Dates within the CSUMB Campus

Survey Type	Location	Date
Focused spring-flowering plant species survey	Survey Area	April 2016
Focused summer-flowering plant species survey	Survey Area	July 2016
Reconnaissance-level wildlife and general habitat survey	Main Campus and East Campus Open Space	December 2016[2]
Reconnaissance-level wildlife and general habitat survey	East Campus Housing and Portions of Main Campus	August 2017
Reconnaissance-level special-status plant and wildlife species habitat survey	Near-Term Development Component Sites	January 2018

HMP Species and Habitat Impacts Analysis

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

As described in Section 4.3.1.2, Campus Setting, the HMP species known or with the potential to occur within the campus include: Monterey spineflower, sand gilia, sandmat manzanita, Hooker's manzanita, Toro manzanita, Monterey ceanothus, seaside bird's-beak, sand-loving wallflower, Eastwood's goldenbush, Yadon's piperia, California tiger salamander, Smith's blue butterfly, Northern California legless lizard, and Monterey ornate shrew (see Section 4.3.1.2, Tables 4.3-2 and 4.3-3 and Appendix E). With the designated off-campus habitat reserves and corridors and habitat management requirements of the HMP in place, the loss of these species associated with development in the Fort Ord area is not expected to jeopardize the long-term viability of these species and their populations on the former Fort Ord. This is such because the recipients of disposed land with habitat management requirements and development restrictions designated by the HMP will be obligated to implement those specific measures through the HMP and deed covenants.

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

In addition to the HMP species identified, impacts to sensitive central maritime chaparral habitat are also addressed in the HMP and, therefore, impacts to this habitat are also considered mitigated through the implementation of the HMP based on the same conclusions. Specifically, the Project: 1) would pursue development activities only within designated development parcels; 2) would comply with the HMP, as required; and 3) would not result in any additional impacts to HMP species and habitats beyond those anticipated in the HMP. Therefore, no additional mitigation measures for these HMP species or central maritime chaparral habitat are required. Project impacts to these special-status species and central maritime chaparral are considered less than significant.

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

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

4.3.3.3 Project Impacts and Mitigation Measures

This section provides a detailed evaluation of biological resources impacts associated with the Project.

Impact BIO-1: **Special-Status Species (Threshold A).** The Project could result in substantial adverse effects to special-status plant and wildlife species and their habitat. *(Potentially Significant)*

Master Plan

Proposed Master Plan implementation has the potential to impact special-status species plant and wildlife species and their habitat. The proposed Master Plan and PDF-MO-5 cites development in already developed areas and creates a compact campus core, which would minimize these potential impacts. Proposed PDF-OS-1 through PDF-OS-7, PDF-OS-11, and PDF-D-8 and PDF- D-9 would also serve to minimize potential impacts on special-status species by: designating and managing open space to connect and protect sensitive species; implementing construction best management practices to avoid special-status species, where possible; minimizing erosion and sedimentation to protect habitat; removing invasive species; continuing and expanding the CSUMB tree restoration program to maximize the health of existing and replacement trees; establishing a habitat restoration fund to support the replacement of trees and/or habitat; implementing planting specifications that require native plants and seed mixes when replanting is required; minimizing human caused impacts along trails; minimizing wildland fire hazards; minimizing lighting; and establishing interpretive signage in natural open space.

Even with the proposed Master Plan focus on development within already developed areas and implementation of the above proposed PDFs, future development on the CSUMB campus under the proposed Master Plan could result in direct loss of individuals and habitat for a number of special-status wildlife species. These species include special-status bat species, Monterey dusky-footed woodrat, Monterey ornate shrew, American badger, Northern California legless lizard, coast horned lizard, California tiger salamander, Smith's blue butterfly, obscure bumble bee, western bumble bee, and nesting raptors and other protected avian species. In addition, future development on the campus could also result in direct loss of individuals and habitat for a number of special-status plant species, including Toro manzanita, Hooker's manzanita, Pajaro manzanita, sandmat manzanita, Monterey ceanothus, Fort Ord spineflower, Monterey spineflower, seaside bird's beak, Eastwood's goldenbush, sand-loving wallflower, sand gilia, Kellogg's horkelia, Point Reyes horkelia, marsh microseris, Northern curly-leaved monardella, woodland woolythreads, Yadon's piperia, Santa Cruz microseris, Santa Cruz clover, and Pacific Grove clover.

HMP Species

As described in Section 4.3.3.2, Analytical Methods, impacts to HMP plant and wildlife species are considered *less than significant*. HMP Species include California tiger salamander, Smith's blue butterfly, Northern California legless lizard, Monterey ornate shrew, Monterey spineflower, sand gilia, sandmat manzanita, Hooker's manzanita, Toro manzanita, Monterey ceanothus, seaside bird's-beak, sand-loving wallflower, Eastwood's goldenbush and Yadon's piperia (see Tables 4.3- 2 and 4.3-3 and Appendix E). While not required to reduce a significant impact, MM-BIO-1a will be implemented to further reduce the impact. This measure would ensure that sensitive biological resources are identified on development sites in advance of construction and that take authorization is obtained, were needed. Per the HMP and the BO requirements in deed covenants, MM-BIO-1a acknowledges that CSUMB will identify sensitive biological resources within all development parcels prior to any future construction to determine whether salvage is feasible and if so, seed and topsoil salvage would occur to support reseeding and restoration efforts on- or off-site. In addition, CSUMB is required to implement Borderlands requirements in the East Campus Open Space parcel. While new building construction is not proposed in this location, it is possible that open space management activities could occur in this area. Implementation of these requirements are included in MM-BIO-1d, which includes measures to avoid and minimize impacts to biological resources in adjacent open space areas. Additionally, Project impacts to species listed as threatened or endangered by CDFW and/or the USFWS may also require agency consultation and/or incidental take permits. These species include: Monterey spineflower, federally threatened; sand gilia, federally endangered and state threatened; seaside bird's-beak, state endangered; Yadon's piperia, federally endangered; California tiger salamander, federal and state threatened; and Smith's blue butterfly, federally endangered. Therefore, although these species are HMP species and impacts to HMP species are considered *less than significant*, the take of these species is prohibited under the FESA and/or CESA. The take of these species would need to be authorized by the USFWS and/or CDFW through the issuance of incidental take permits from the applicable agency to avoid violation of the FESA and/or CESA.

Non-HMP Species

If the Project would result in impacts to special-status species not included in the HMP, such impacts would be potentially significant, and mitigation will be required. Special-status species not included in the HMP that would require mitigation include: Kellogg's horkelia, Pajaro manzanita, Fort Ord spineflower, Point Reyes horkelia, marsh microseris, Northern curly-leaved monardella, woodland woolythreads, Santa Cruz microseris, Santa Cruz clover, Pacific Grove Clover, special-status bat species, Monterey dusky-footed woodrat, American badger, coast horned lizard, western bumble bee, and obscure bumble bee (see Tables 4.3-2 and 4.3-3 and Appendix E). These species are not listed under the FESA or CESA and take authorization from the USFWS or CDFW is not required;

however, the impact of the Project on these non-HMP special-status species either through direct removal or indirectly through habitat disturbance could be *potentially significant.*[3]

Implementation of MM-BIO-1b and MM-BIO-1d will avoid substantial adverse effects to non-HMP special-status species by requiring: project-specific biological assessments for future development to determine presence/absence of special-status species; identification and implementation of measures necessary to avoid, minimize, and/or compensate for any identified impacts; and implementation of open space requirements that will reduce the damaging effects of adjacent development, by providing for necessary access controls, barriers, signage, and control of non-native species. With the implementation of these mitigation measures, the impacts on non-HMP special-status species would be reduced to *less than significant.*

Protected Avian Species

The MBTA protects the majority of migrating birds breeding in the U.S., regardless of their official federal or state listing status under the FESA or CESA. The law applies to the disturbance or removal of active nests occupied by migratory birds during their breeding season. It is specifically a violation of the MBTA to directly kill or destroy an occupied nest of any bird species covered by the MBTA. FGC § 3503 protects the nest and eggs of native non-game birds. Under this law, it is unlawful to take, possess, or destroy any such birds or to take, possess, or destroy the nests or eggs of any such bird. FGC § 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Most of the birds observed or with the potential to occur within the campus are protected under both the MBTA and FGC § 3503, and, in addition, birds may be designated as California species of special concern. Project impacts associated with construction-related activities (e.g., trimming and removal of vegetation, and equipment noise, vibration, and lighting) that result in harm, injury, or death of individuals, or abandonment of an active nest would be *potentially significant.*

Implementation of MM-BIO-1c will avoid harm, injury, or death of individuals, or abandonment of an active nest by requiring surveys to identify the presence of active nests prior to construction and measures to avoid active nests if found. With the implementation of this mitigation measure, the impact on protected avian species would be reduced to *less than significant.*

[3] Indirect effects associated with Project implementation may include vandalism, dumping of trash, trampling, mountain bike use, equestrian use, and off-road vehicle use; runoff from adjacent streets and landscaped areas containing lawn fertilizer, pesticides, and vehicle waste (petroleum byproducts); introduction of invasive non-native species; off-trail activity resulting in habitat destruction and/or fragmentation and spread of invasive species; lights and noise from nearby development; unregulated movement of domestic animals; and a lack of barriers to special-status species that may enter developed areas.

Near-Term Development Components

Student Housing Phase III

This development component site is primarily developed, but the site does contain some suitable habitat for the Northern California legless lizard; a HMP species. Therefore, potential impacts to this species would be *less than significant*. While not required to reduce a significant impact, MM-BIO-1a and MM-BIO-1d will be implemented to further reduce this impact and comply with the HMP, as described for the proposed Master Plan.

In addition, trees within and adjacent to the site may provide nesting habitat for raptors, migratory birds, and other protected avian species, and potential impacts of this component to such species would be *potentially significant*. Implementation of MM-BIO-1c would reduce potentially significant impacts to *less than significant*, as described for the proposed Master Plan.

Academic IV Building

This development component site contains mostly developed areas with some ruderal/disturbed areas and would require building demolition. Four dune buckwheat individuals were identified within this site, which may provide habitat for the federally endangered Smith's blue butterfly (see Figure 4.3-6). Although Smith's blue butterfly is a HMP species and impacts to this species resulting from this development component would be *less than significant*, take authorization must be received from USFWS if avoidance is not possible. Therefore, implementation of MM-BIO-1g would provide for compliance with the HMP and with FESA in advance of construction.

In areas not surveyed (i.e., the staging area), the ruderal/disturbed habitat may provide suitable habitat for Northern California legless lizard; a HMP species. Therefore, potential impacts of this development component to this species would be *less than significant*. While not required to reduce a significant impact, MM-BIO-1a and MM-BIO-1d will be implemented to further reduce the impact and comply with the HMP, as described above for the proposed Master Plan.

In addition, mature trees and existing buildings within and adjacent to the site may provide nesting habitat for raptors, migratory birds, and other protected avian species, as well as Townsend's big-eared bat. Potential impacts of this development component on these species would be *potentially significant*. No special-status plant species were observed within the development site and staging area, and none are expected to occur in these areas. Implementation of MM-BIO-1b through MM-BIO-1e would reduce potential impacts on avian species and Townsend's big-eared bat to *less than significant.*

Student Recreation Center Phases I and II

The ruderal/disturbed habitat within the site may provide suitable habitat for Northern California legless lizard and approximately 0.01 acres of Monterey spineflower was observed within the development component site. Both of these species are HMP species and therefore potential impacts to these species would be *less than significant*. While not required to reduce a significant impact, MM-BIO-1a and MM-BIO-1d will be implemented to further reduce the impacts and comply with the HMP and FESA, as described above for the proposed Master Plan.

In addition, mature trees and existing buildings within and adjacent to the site may provide nesting habitat for raptors, migratory birds, and other protected avian species, as well as Townsend's big-eared bat and hoary bat. Although the hoary bat may roost and forage within some of the oak trees during the winter, they are not known to breed in California. Therefore, impacts to hoary bat are unlikely. The oak trees may provide suitable habitat for the Monterey dusky-footed woodrat. Potential impacts of this development component on these species, except for hoary bat, would be *potentially significant*. Implementation of MM-BIO-1b through MM-BIO-1f would reduce potential significant special-status species impacts to *less than significant*.

Student Housing Phase IIB

This development site is primarily developed with some ruderal/disturbed areas. The ruderal/disturbed habitat within the site may provide suitable habitat for Northern California legless lizard; a HMP species. Therefore, potential impacts to this species would be *less than significant*. While not required to reduce a significant impact, MM-BIO-1a and MM-BIO-1d will be implemented to further reduce the impact and comply with the HMP, as described above for the proposed Master Plan.

In addition, mature trees within and adjacent to the site may provide nesting habitat for raptors, migratory birds, and other protected avian species, as well as Townsend's big-eared bat and hoary bat. However, because the hoary bat is not known to breed in California, impacts to hoary bat are unlikely. Potential impacts of this development component on these species, except for hoary bat, would be *potentially significant*. Implementation of MM-BIO-1b through MM-BIO-1e would reduce potential special-status species impacts to *less than significant*.

Academic V

This development component site is completely developed; however, trees within and adjacent to the site may provide nesting habitat for raptors, migratory birds, and other protected avian species, as well as Townsend's big-eared bat. Potential impacts of this development component on these species would be *potentially significant*. Implementation of MM-BIO-1b through BIO-1e would reduce potential impacts on avian species and Townsend's big-eared bat to *less than significant*.

Mitigation Measures

MM-BIO-1a: Project-Specific Biological Assessments (HMP Species). The CSUMB CPD Department shall require that a biological survey of development sites be conducted by a qualified biologist to determine if the development could potentially impact HMP species or potential habitat (HMP Species include: California tiger salamander, Smith's blue butterfly, Northern California legless lizard, Monterey ornate shrew, Monterey spineflower, sand gilia, sandmat manzanita, Hooker's manzanita, Toro manzanita, Monterey ceanothus, seaside bird's-beak, sand-loving wallflower, Eastwood's goldenbush and Yadon's piperia). A report describing the results of the surveys shall be provided to the CSUMB CPD Department prior to any ground disturbing activities. The report shall include, but not be limited to: 1) a description of the biological conditions at the site; 2) identification of the potential for HMP species to occur or HMP species observed, if any; and 3) maps of the locations of HMP species or potential habitat, if observed.

If HMP species that do not require take authorization from the USFWS or CDFW are identified within the development site, salvage efforts for these species shall be evaluated by a qualified biologist in coordination with CSUMB CPD Department to further reduce impacts per the requirements of the HMP and BO. Where salvage is determined feasible and proposed, seed collection should occur from plants within the development site and/or topsoil should be salvaged within occupied areas to be disturbed. Seeds shall be collected during the appropriate time of year for each species by qualified biologists. The collected seeds and topsoil shall be used to revegetate temporarily disturbed construction areas and reseeding and restoration efforts on- or off-site, as determined appropriate by the qualified biologist and CSUMB CPD Department. For impacts to the HMP species within the development site that do require take authorization from the USFWS and/or CDFW, the CSUMB CPD Department shall comply with ESA and CESA and obtain necessary permits prior to construction. If non-HMP special-status species are identified during the implementation of this measure, MM-BIO-1b shall also be implemented.

MM-BIO-1b: Project-Specific Biological Assessments (Non-HMP Species). The CSUMB CPD Department shall require that a biological survey of development sites be conducted by a qualified biologist to determine if the development could potentially impact a special-status species or their habitat. A report describing the results of the surveys shall be provided to the CSUMB CPD

Department prior to any ground disturbing activities. The report shall include, but not be limited to: 1) a description of the biological conditions at the site; 2) identification of the potential for special-status species to occur or special-status species observed, if any; 3) maps of the locations of special-status species or potential habitat, if observed; and 4) recommended mitigation measures, if applicable. If special-status species are determined not to occur at the development site, no additional mitigation is necessary.

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

MM-BIO-1c: Pre-Construction Surveys for Protected Avian Species. Construction activities that may directly (e.g., vegetation removal) or indirectly (e.g., noise/ground disturbance) affect protected nesting avian species shall be timed to avoid the breeding and nesting season. Specifically, vegetation and/or tree removal can be scheduled after September 16 and before January 31. Alternatively, a qualified biologist shall be retained by the CSUMB CPD Department to conduct pre-construction surveys for nesting raptors and other protected avian species within 500 feet of proposed construction activities if construction occurs between February 1 and September 15. Pre-construction surveys shall be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). Because some bird species nest early in spring and others nest later in summer, surveys for nesting birds may be required to continue during construction to address new arrivals, and because some species breed multiple times in a season. The necessity and timing of these continued surveys shall be determined by the qualified biologist based on review of the final construction plans and in coordination with the USFWS and CDFW, as needed for protected avian species nests.

If raptors or other protected avian species nests are identified during the pre-construction surveys, the qualified biologist shall notify the CSUMB CPD Department and an appropriate no-disturbance buffer shall be imposed within which no construction activities or disturbance shall take place (generally 500 feet in all directions for raptors; other avian species may have species-specific requirements) until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

MM-BIO-1d: Implement Open Space Protection Requirements. For open space areas adjacent to proposed campus development, the following measures shall be implemented:

- Conduct an access assessment to identify necessary access controls. In some cases, structures including fences or other appropriate barriers may be required within the new development parcel to control access into the habitat areas. An assessment of access issues and necessary controls shall be completed as part of planning for the development and submitted to the CSUMB CPD Department for review and approval, prior to development.
- Signs, interpretive displays, trailhead markers, or other information shall be installed and maintained at identified urban/wildland interface that illustrate the importance of the adjacent habitat area and prohibit trespass, motor vehicle entry, dumping of trash or yard wastes, pets off-leash, capture or harassment of wildlife, impacts to special-status species, and other unauthorized activities.
- Incorporate non-native species control features into site design. Detention ponds or other water features associated with new development shall be sited as far from the urban/wildland interface as possible. Suitable barriers shall be located between these features and the habitat area boundary to prevent these features from becoming "sinks" for special-status wildlife species, as well as sources for invasive non-natives that could then move into the adjacent habitat area.
- If detention ponds or other waterbodies must be located at the urban/wildland interface, a specific management program addressing control of non-native animals (e.g., bullfrogs) must be prepared and submitted for review and approval by the CSUMB CPD Department, prior to development.

- Landscaping within the areas adjacent to open space areas shall consist of native or non-native plant species that shall not colonize reserve areas in the former Fort Ord outside the campus boundaries. Any landscaping or replanting required for the Project shall not use species listed as noxious by the CDFA. All landscape plans shall be reviewed by the CSUMB CPD Department.
- Limit artificial lighting at the urban/wildland interface. Outdoor lighting associated with new development shall be low intensity, focused, and directional to preclude night illumination of the adjacent habitat area. Outdoor lighting shall be placed as far from the urban/wildland interface as possible given safety constraints. Facilities such as ball parks and fields that require high intensity night lighting (i.e., flood lights) shall be sited as far from the urban/wildland interface as possible. High-intensity lighting facing the habitat areas shall be directional and as low to the ground as possible to minimize long distance glare.
- Develop and implement erosion control measures to prevent sediment transport into and within habitat areas. Erosion control measures shall be required where vegetation removal or soil disturbance occurs as a result of all facility construction and maintenance, including trail, road, or fuel break construction/maintenance, access controls, or stormwater management, consistent with existing stormwater management plans. Specific measures to be implemented shall be detailed in an erosion control plan. The erosion control plan shall include, at a minimum, the following measures.
    - Re-contour eroded areas.
    - Maintain and grade areas along the reserve perimeter and main roads as appropriate to avoid washouts. Gullies shall be repaired as needed.
    - Install drainage features such as outlet ditches, rolling dips (similar to waterbars), and berms as needed to facilitate the proper drainage of storm runoff.
    - Add soil amendments such as fertilizers and gypsum for designated development areas only.
    - Prevent sediments from entering basins or swales that could be used by HMP species during erosion control activities.
    - Design and conduct erosion control measures to minimize the footprint of the structures and repairs, and design structures to

minimize potential impacts on CTS that may be moving between breeding and upland habitats.

- Use weed-free mulch, weed-free rice, sterile barley straw, or other similar functioning product where needed for erosion control. Seed native plant species to stabilize soils disturbed by erosion control activities and prevent colonization by invasive weeds. Incorporate native plant species to the extent practicable.

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

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

maternity roost must be disrupted, a depredation permit would be required prior to removal of the roost.

MM-BIO-1f: Pre-Construction Monterey Dusky-Footed Woodrat Surveys. Not more than thirty (30) days prior to the start of construction (including vegetation removal), a qualified biologist shall conduct a survey of the development sites to locate existing Monterey dusky-footed woodrat nests. All Monterey dusky-footed woodrat nests shall be mapped and flagged for avoidance. Graphics depicting all Monterey dusky-footed woodrat nests shall be provided to CSUMB and the construction contractor. Any Monterey dusky-footed woodrat nests that cannot be avoided shall be relocated according to the following procedures.

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

MM-BIO-1g: Smith's Blue Butterfly Habitat Avoidance/ESA Compliance. Smith's Blue Butterfly habitat (i.e., dune buckwheat) shall be avoided to the greatest extent feasible. Smith's Blue Butterfly habitat that will not be impacted by the Project shall be protected prior to and during construction to the maximum possible using exclusionary fencing and/or flagging. A biological monitor shall supervise the installation of protective fencing/flagging and monitor at least once per week until construction is complete to ensure that the protective fencing/flagging remains intact.

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

Significance After Mitigation

Implementation of MM-BIO-1b through MM-BIO-1f would avoid substantial adverse effects on non-HMP special-status species and protected avian species by requiring project-specific biological assessments for future development to determine presence/absence of non-HMP special-status species and protected avian species; identification and implementation of measures necessary to avoid, minimize, and/or compensate for any identified impacts; and implementation of open space requirements that will reduce the damaging effects of adjacent development, by providing for necessary access controls, barriers, signage, and control of non-native species. With the implementation of these mitigation measures, the potentially significant impacts on non-HMP special-status species and protected avian species would be reduced to *less than significant*.

Additionally, the implementation of MM-BIO-1a, MM-BIO-1d, and MM-BIO-1g will further reduce the less than significant impact on HMP species and provide for compliance with the HMP and CESA and FESA, where relevant.

Impact BIO-2:	**Riparian and Wetland Habitat (Thresholds B and C).** The Project could result in a substantial adverse effect on riparian habitat or other sensitive community as identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, or on state or federally protected wetlands. *(Potentially Significant)*

Master Plan

Proposed Master Plan implementation has the potential to impact sensitive habitat. The proposed Master Plan and PDF-MO-5 cites development in already developed areas and creates a compact campus core, which would minimize these potential impacts. Proposed PDF-OS-1 through PDF-OS-7, PDF-OS-11, and PDF-D-8 and PDF-D-9 would also serve to minimize potential impacts on sensitive habitat, as described in Impact BIO-1. Even with the proposed Master Plan focus on development within already developed areas and implementation of the above proposed PDFs, future development on the CSUMB campus under the proposed Master Plan could result in impacts to sensitive habitat, as further described below.

Central Maritime Chaparral

Habitats occurring within the campus that are listed as sensitive on the CDFW's CNDDB working list of high priority and rare natural communities include central maritime chaparral. This habitat type includes central maritime chaparral mix habitats. Approximately 124.3 acres of central maritime chaparral (including central maritime chaparral mix habitats) are present within the campus and could be impacted if trail or other similar development occurs in the East Campus

Housing or East Campus Open Space areas; however, the proposed Master Plan does not site new development in these areas where central maritime chaparral is located.

As described in Section 4.3.3.2, Analytical Methods, the implementation of the HMP mitigates for the loss of central maritime chaparral by preserving the same habitat within the habitat reserve areas on the former Fort Ord, outside of the campus boundaries. Therefore, with the implementation of the HMP, impacts to central maritime chaparral are considered *less than significant*.

Riparian, Wetlands and Other Sensitive Communities

Although not observed on the campus during the surveys in 2016 and 2017, there is a low potential for future establishment of riparian habitat, state or federally protected wetlands, and/or other sensitive communities within the campus boundaries. Development that occurs within or adjacent to sensitive natural communities may result in a significant impact. The presence of sensitive natural communities on a development site must be evaluated prior to approval of the development. Any impacts to sensitive natural communities are considered a *potentially significant*.

Near-Term Development Components

The proposed near-term development components are generally located on sites that have been disturbed and are mostly developed. No sensitive communities occur within the near-term development component sites; therefore, *no impacts* related to the removal of riparian habitat or other sensitive community would occur as a result of their implementation.

Mitigation Measures

MM-BIO-2: Project-Specific Sensitive Natural Community Assessments - The CSUMB CPD Department shall require that for any development that could potentially impact a sensitive natural community, a survey of the site by a qualified biologist shall be required. A report describing the results of the survey shall be provided to CSUMB prior to any ground-disturbing activities. The report shall include but shall not be limited to: 1) a description of the biological conditions at the site; 2) identification of the potential for sensitive habitats or sensitive habitats observed, if any; 3) maps of the locations of sensitive habitats or potential sensitive habitat, if observed; and 4) recommended avoidance and minimization measures, if applicable. If a potential state or federally protected wetland is newly identified to be present on the site, a formal wetland delineation shall be conducted in accordance with ACOE methodology.

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

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

Significance After Mitigation

Implementation of MM-BIO-2 would avoid substantial adverse effects on riparian habitat, protected wetlands, and/or other sensitive communities by requiring project-specific biological assessments for future development to determine presence/absence of sensitive habitats and identification of measures necessary to avoid, minimize, and/or compensate for any identified impacts. With the implementation of this mitigation measure, the potentially significant impact on riparian habitat, protected wetlands, and/or other sensitive communities would be reduced to *less than significant*.

Impact BIO-3: **Wildlife Corridors (Threshold D).** The Project would not result in interference with wildlife migration or corridors. *(Less than Significant)*

Master Plan

The proposed Master Plan would not interfere with wildlife migration or wildlife corridors. The proposed Master Plan and PDF-MO-5 cites development in already developed areas, creates a compact campus core, and avoids non-trail development in the East Campus Open Space.

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

The East Campus Open Space connects with other planned habitat areas to the east, south, and north beyond CSUMB campus boundaries and is considered an important area for wildlife movement. The majority of the area is proposed to be retained in Open Space and the remainder of the area is designated as a faculty and staff housing reserve area and is not proposed for development as part of the proposed Master Plan, thus maintaining wildlife movement through this area. No other areas of the campus contain significant open space areas that would support wildlife movement. Therefore, impacts to movement of wildlife resulting from implementation of the proposed Master Plan would be *less than significant.*

Near-Term Development Components

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

Mitigation Measures

Mitigation measures are not required because a significant impact has not been identified.

Impact BIO-4: **Biological Resource Policies and Ordinances (Threshold E).** The Project would not conflict with local policies and ordinances protecting biological resources, including tree preservation policies. *(Less than Significant)*

Master Plan

The proposed Master Plan would not conflict with local policies and ordinances protecting biological resources, including CSUMB's tree restoration program. The proposed Master Plan, and PDF-MO-5 cites development in already developed areas, creates a compact campus core, and avoids development in the East Campus Open Space, which serves to minimize tree removal with the Project.

Regardless, implementation of the proposed Master Plan may result in impacts to trees within the campus boundaries. However, CSUMB has established a tree restoration program for impacts to coast live oak and other trees from projects that take place on campus. This program requires that, for every coast live oak tree or other tree greater than 4 inches dbh removed, a minimum of two (2) coast live oak trees will be replanted in the identified restoration area on campus. The implementation of this program is required for all development that would result in impacts to coast live oak or other trees at least 4 dbh in size. The replanting specifications would be required in subsequent project plans and permits. Proposed PDF-OS-4 continues and expands this program to maximize the health and stability of existing and replacement trees. Therefore, implementation of the proposed Master Plan would not conflict with the CSUMB tree restoration program and the impact would be *less than significant*.

Near-Term Development Components

Implementation of the proposed Student Recreation Center could result in impacts to trees within the campus boundaries; other near-term development components would not result in tree removal. As described above, at a minimum, two coast live oak trees would be replanted for every coast live oak or other tree 4 inches dbh or greater removed from the Student Recreation Center site, per CSUMB's tree restoration program. Further, proposed PDF-OS-4 calls for continuation and expansion of this tree restoration program to maximize the health and stability of existing and replacement trees, which would benefit existing trees on the near-term development component sites. Therefore, the near-term development components would not conflict with the CSUMB tree restoration program for the campus and the impact would be *less than significant*.

Mitigation Measures

Mitigation measures are not required because a significant impact has not been identified.

Impact BIO-5: **Adopted Habitat Conservation Plans (Threshold F).** The Project would not conflict with any adopted HCP, NCCP, or other approved conservation plan. *(No Impact)*

Master Plan

As described in Section 4.3.2.3, the campus is not located within an approved HCP or NCCP area. However, the campus is located within the approved Fort Ord HMP area. The entire campus is located within parcels designated by the HMP as "development." Parcels designated as "development" do not have habitat management requirements. Additionally, a portion of the campus, along the southeastern boundary of the East Campus Open Space parcel (Army parcel number S1.3.2), is designated in the HMP as having Borderlands requirements. Borderlands are designated development parcels or habitat reserve parcels at the urban/wildland interface where specific design considerations and management activities are required to minimize effects of development on HMP species and natural communities. However, the proposed Master Plan does not currently propose new non-trail development in the East Campus Open Space, as described in Impact BIO-4.

CSUMB is required to implement HMP requirements in accordance with the deed covenants, which apply to all parcels within the campus boundaries. This requirement is acknowledged in PDF-OS-2 and described in detail in MM-BIO-1a and MM-BIO-1d (see Impact BIO-1). Therefore, implementation of the proposed Master Plan would not conflict with the approved HMP and *no impact* would occur.

Near-Term Development Components

The campus is not located within an approved HCP or NCCP area. However, the campus is located within the approved Fort Ord HMP area. All of the proposed near-term development component sites are located within parcels designated by the HMP as "development." CSUMB is required to implement HMP requirements, applicable to all parcels within the campus boundaries, which is acknowledged in PDF-OS-2 and described in detail in MM-BIO-1a and MM-BIO-1d (see Impact BIO-1). Therefore, as described above, implementation of the proposed near-term development components would not conflict with the approved HMP and *no impact* would occur.

Mitigation Measures

Mitigation measures are not required because a significant impact has not been identified.

4.3.3.4 Cumulative Impacts

This section provides an evaluation of biological resources impacts associated with the Project, including near-term development components, when considered together with other reasonably

foreseeable cumulative development, as identified in Table 4.0-1 in Section 4.0, Introduction to Analysis, and as relevant to the environmental topic being evaluated. The geographic area considered in the cumulative analysis for this topic is described in the impact analysis below.

The Project would not interfere with wildlife migration or wildlife corridors, as it would not allow for development in the East Campus Open Space (see Impact BIO-3). The Project also would not conflict with local policies and ordinances protecting biological resources, including CSUMB's tree restoration program, as it would comply with and continue and expand this program (see Impact BIO-4). Lastly, the Project would not conflict with adopted HCP or NCCP (see Impact BIO-5). Accordingly, per the California Environmental Quality Act (CEQA) Guidelines Section 15130(a)(1), the cumulative analysis does not further discuss these impacts given that any such cumulative impacts would not result in part from the Project.

Impact BIO-6: **Cumulative Biological Resources Impacts (Thresholds A, B, and C).** The Project would not result in a cumulatively considerable contribution to significant cumulative impacts on special-status species, protected avian species and sensitive habitat, with the implementation of mitigation. *(Less than Significant)*

The geographic context for the analysis of cumulative impacts related to special-status species, protected avian species, and sensitive habitat includes the campus and other cumulative project sites in the former Fort Ord and beyond. This cumulative impact analysis considers the incremental effects of the Project, when combined with the effects of past, present and reasonably foreseeable projects listed in Table 4.0.1 and shown in Figure 4.0.1, Section 4.0, Introduction to Analysis.

Special-Status Species

HMP Species

As described in Section 4.3.3.2, Analytical Methods, impacts to HMP plant and wildlife species, including impacts that would result from the Project and cumulative development located on HMP-designated development parcels in the former Fort Ord, would be *less than significant*. Impacts to HMP species and habitats occurring within the designated development parcels were anticipated and mitigated through the establishment of habitat reserves and corridors and the implementation of habitat management requirements within habitat reserve parcels on the former Fort Ord, located off-campus. As acknowledged in MM-BIO-1a, CSUMB and other landowners subject to the HMP are required to identify sensitive biological resources within all development parcels prior to any future construction to determine whether salvage is feasible and if so, seed and topsoil salvage would occur to support reseeding and restoration efforts on- or off-site. Additionally, Project and on- and off-campus cumulative impacts to HMP species listed as threatened or endangered by CDFW and/or the USFWS (see Impact BIO-1) may also require

agency consultation and/or incidental take permits to avoid violation of the FESA and/or CESA. This is acknowledged for the Project in MM-BIO-1a and MM-BIO-1g and would also be a requirement for other on- and off-campus cumulative development. While not required to reduce a significant impact, MM-BIO-1a, MM-BIO-1d, and MM-BIO-1g will be implemented to further reduce the impact to HMP species and their habitats. In summary, as indicated above, cumulative impacts to HMP species would be *less than significant*.

Non-HMP Species and Protected Avian Species

Implementation of the Project and other on- and off-campus cumulative development located in the former Fort Ord and beyond could impact non-HMP special-status species and protected avian species if any are present on these sites at the time of construction (see Table 4.0-1 and Figure 4.0-1). As indicated in Impact BIO-1, Project impacts related to non-HMP special-status species and protected avian species would be reduced to *less than significant* through the implementation of MM-BIO-1b through MM-BIO-1f. Implementation of MM-BIO-1b through MM-BIO-1f will require project-specific biological assessments and pre-construction surveys where warranted for future development to determine presence/absence of special-status species and identification of measures necessary to avoid, minimize, and/or compensate for any identified impacts; open space requirements are also included to protect habitat adjacent to development (i.e., access controls, barriers, signage, and control of non-native species).

The impacts of cumulative development projects on non-HMP special-status species and protected avian species should be evaluated as part of the discretionary approval process and should incorporate all feasible mitigation measures to reduce impacts. However, it is possible that these cumulative projects could have significant cumulative impacts on non-HMP species and protected avian species due to construction if these cumulative projects are not properly mitigated. With the implementation of the Project mitigation measures, potential Project-related impacts would be avoided, reduced, or compensated for such that they would not result in a considerable contribution to the significant cumulative impact. Therefore, the Project would not result in a cumulatively considerable contribution to the significant cumulative impacts on non-HMP species and protected avian species. As such, the Project's cumulative impact would be *less than significant*.

Sensitive Habitat

Implementation of the Project and other on- and off-campus cumulative development located in the former Fort Ord and beyond could impact riparian habitat, state or federally protected wetlands, and/or other sensitive communities if such habitat is present or becomes established on these sites prior to construction (see Table 4.0-1 and Figure 4.0-1), as further described below.

Central Maritime Chaparral

Impacts of the Project to central maritime chaparral, located on the campus and likely on other cumulative development sites on the former Fort Ord, are considered *less than significant* with the implementation of the HMP. It should also be noted that the proposed Master Plan does not site new development in areas where central maritime chaparral is located. While it is possible that significant cumulative impacts on central maritime chaparral could result from cumulative development outside of the former Fort Ord boundaries, the Project would not result in a cumulatively considerable contribution to any such significant cumulative impacts on central maritime chaparral. As such, the Project's cumulative impact would be *less than significant*.

Riparian, Wetlands and Other Sensitive Communities

As indicated in Impact BIO-2, the Project's impact on riparian habitat, state or federally protected wetlands, and/or other sensitive communities that may become established in the future would be reduced to *less than significant* through the implementation of MM-BIO-2. Implementation of MM-BIO-2 will require project-specific biological assessments for future development to determine presence/absence of sensitive habitats and identification of measures necessary to avoid, minimize, and/or compensate for any identified impacts.

The impacts of cumulative development projects on riparian, wetlands and other sensitive habitat should be evaluated as part of the discretionary approval process and should incorporate all feasible mitigation measures to reduce impacts. However, it is possible that these cumulative projects could have significant cumulative impacts on such resources due to construction if these cumulative projects are not properly mitigated. With the implementation of the Project mitigation measures, potential Project-related impacts would be avoided, reduced, or compensated for such that they would not result in a considerable contribution to the significant cumulative impact. Therefore, the Project would not result in a cumulatively considerable contribution to the significant cumulative impacts on riparian, wetlands and other sensitive habitat. As such, the Project's cumulative impact would be *less than significant*.

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