

APPENDIX A.

Draft East Campus Wildfire Fuel Management Plan

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California State University Monterey Bay

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Fuel Management Plan for the East Campus Housing Area Pursuant to California Public Resources Code Chapter 3. Section 4291

FUEL¹ REDUCTION² AND DEFENSIBLE SPACE PRESCRIPTIONS WITHIN ZONES 0, 1, AND 2

ZONE 0 – Ember Resistant Zone

Location: Extends 5 feet from buildings, structures, decks, etc.³

Strategy: Implement CAL FIRE Defensible Space as described in:

- CAL FIRE Defensible Space Website <https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/>

An ember-resistant zone is now required by law (AB 3074) beginning January 1, 2023. This zone includes the area under and around all attached decks, and requires the most stringent wildfire fuel reduction. The ember-resistant zone is designed to keep fire or embers from igniting materials that can spread the fire to the home. The following provides guidance for this zone, which may change based on the regulations developed by the Board of Forestry and Fire Protection.

Worker qualifications and roles: To ensure compliance with the following Fuel Reduction and Defensible Space Prescriptions and the Best Management Practices⁴ for Fuel Reduction and Defensible Space Activities (BMP) (Appendix E), work will be:

- At all times overseen and supervised by a professional biologist
- Tree work will be directed by a certified arborist under the direction of the biologist
- Tree work will be performed in accordance with American National Safety Institute (ANSI) A300 Pruning Standards
- Tree work will be performed by tree care workers that comply with California Public Resources Code Chapter 3. Mountainous, Forest-, Brush-, and Grass-Covered Lands, Section 4291⁵
- All workers will complete the munitions training in advance of performing work found at <https://www.fortordsafety.com/>

Fuel Reduction and Defensible Space Prescriptions

1. Use hardscape like gravel, pavers, concrete, and other noncombustible mulch materials. No combustible bark or mulch.
2. Remove⁶ all dead and dying weeds, grass, plants, shrubs, trees, branches, and vegetative debris (leaves, needles, cones, bark, etc.). Check roofs, gutters, decks, porches, stairways, etc.

¹ “Fuel” means any combustible material, including petroleum-based products, cultivated landscape plants, grasses, and weeds, and wildland vegetation.

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3. Remove all branches within 10 feet of any chimney or stovepipe outlet.
4. Limit plants in this area to low growing, nonwoody, properly maintained plants.
5. Limit combustible items (outdoor furniture, planters, etc.) on top of decks.
6. Relocate firewood and lumber to Zone 2.
7. Replace combustible fencing, gates, and arbors attach to the home with noncombustible alternatives.
8. Consider relocating garbage and recycling containers outside this zone.
9. Consider relocating boats, RVs, vehicles, and other combustible items outside this zone.

ZONE 1 – Lean, Clean, and Green Zone

Location: East Campus Housing and Inter-Garrison Road Fuel Management Buffers (Figures 1a and 1b)

- 0-30 feet Management Buffer from Structures, Fences, and Road Edges^{7, 8}
- 0-50 feet Management Buffer from Inter-Garrison Road Edge (where CSUMB is the property owner). **Due to munitions restrictions, no digging is permitted on property south of Inter-Garrison Road.**

Strategy: Implement CAL FIRE Defensible Space Requirements as described in:

- CAL FIRE Defensible Space Website <https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/>

² Fuel Reduction: reduce vegetation or fuel load to lessen the threat of wildfire.

³ Zone 0 not shown in figures due to scale. Zone 0 is currently not required by law and is voluntary responsibility of the homeowner or rental housing company.

⁴ The Best Management Practices document provides special status species and biological avoidance measures as well as specific tree pruning requirements.

⁵ https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=4291.&lawCode=PRC

⁶ “Removal” consists of the elimination of specified vegetation and chipping or disposing of the vegetation. Eliminated vegetation may be placed on-site as directed by a biologist or hauled off-site in accordance with federal, state, and local regulations.

⁷ Management buffers are measured from edge of structures/fences or road edges. A road edge is where the road ends and/or curb and sidewalk begin.

⁸ Backyards are considered Zone 0.

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- CAL FIRE Defensible Space Flyer (Attachment A)

Worker qualifications and roles: To ensure compliance with the following Fuel Reduction⁹ and Defensible Space Prescriptions and the Best Management Practices¹⁰ (BMP) (Appendix E), work will be:

- At all times overseen and supervised by a professional biologist
- Tree work will be directed by a certified arborist under the direction of the biologist
- Tree work will be performed in accordance with American National Safety Institute (ANSI) A300 Pruning Standards
- Tree work will be performed by tree care workers that comply with California Public Resources Code Chapter 3. Mountainous, Forest-, Brush-, and Grass-Covered Lands, Section 4291¹¹
- All workers will complete the munitions training in advance of performing work found at <https://www.fortordsafety.com/>

Fuel Reduction and Defensible Space Prescriptions

1. Dead vegetation removal
 - a. Remove all dead plants, grass, weeds, and other vegetation (Attachment A).
 - b. Remove dead or dry leaves and pine needles from yards, roofs, and rain gutters (Attachment A).
2. Tree, shrub, and other vegetation trimming
 - a. Remove tree branches that hang over roof and keep branches 10 feet away from chimneys (Attachment A).
 - b. Trim trees regularly to keep branches a minimum of 10 feet from other trees (Attachment A).
 - c. Remove or prune flammable plants and shrubs near windows.

⁹ "Removal" consists of the elimination of specified vegetation and chipping or disposing of the vegetation. Eliminated vegetation may be placed on-site as directed by a biologist or hauled off-site in accordance with federal, state, and local regulations.

¹⁰ The Best Management Practices document provides special status species and biological avoidance measures as well as specific tree pruning requirements.

¹¹ https://leginfo.ca.gov/faces/codes_displaySection.xhtml?sectionNum=4291.&lawCode=PRC

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FUEL¹ REDUCTION² AND DEFENSIBLE SPACE PRESCRIPTIONS WITHIN ZONES 0, 1, AND 2

- d. Remove vegetation and items that could catch fire from around and under decks, balconies, and stairs.
 - e. Create a separation between trees, shrubs, and items that could catch fire, such as patio furniture, wood piles, swing sets, etc. (recommend minimum of 10 feet of separation).
3. Tree removal size and replacement
- a. Do not remove healthy trees greater than 6 inches diameter measured at breast height (diameter at breast height [DBH], 4.5 feet above natural grade).
 - b. Remove trees less than 6 inches DBH if within 10 feet of structures or fence lines. Replacement of trees greater than 4 inches DBH shall be documented by the biologist and replanted via CSUMB Habitat Restoration Program administered through Campus Planning and Development.
4. Mowing
- a. Cut and mow annual grass and herbaceous plants down to a height of 4 inches.
 - b. Mow before 10 a.m.
 - c. Only mow outside of special-status species areas (Figures 2a, 2a-1, and 2b) unless a Project Biologist has determined permissible.
 - d. Avoid removing all vegetation to bare soil, as this may cause erosion.
 - e. Do not mow ice plant.
5. Equipment
- a. Equipment shall be pressure washed prior to entering the project site, cleaned of mud or other debris that may contain invasive plants and/or seeds, and inspected to reduce the potential of spreading noxious weeds. If found, invasive species shall be removed and placed in a trash (not yard waste) dumpster and taken to the landfill.
 - b. Equipment and personnel can access vegetated nonpaved areas if work is compliant with the species-specific BMP avoidance measures (Appendix E) and or CSUMB Fuel Reduction and Defensible Space Activity Timetable (Attachment D)

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Pursuant to California Public Resources Code Chapter 3. Section 4291**

**FUEL¹ REDUCTION² AND DEFENSIBLE SPACE PRESCRIPTIONS WITHIN
ZONES 0, 1, AND 2**

6. Branches and chipping placement and relocation
 - a. Relocate dead and downed wood (fuels) outside of Zones 1 and 2 and only to areas where special-status species have not been identified (refer to Figures 2a, 2a-1, and 2b) prior to relocation of vegetation as directed by a qualified biologist.
 - b. If chipping small wood is most practicable, relocate chipping material to areas where special-status species have not been identified (refer to Figures 2a, 2a-1, and 2b prior to relocation of vegetation). Chips shall be spread so that no chip piles are left on-site or reused within the campus in coordination with the Project Biologist.
 - c. Relocate non-chipped branches off site in accordance with federal, state, and local regulations.
 - d. Biologist to estimate and report the weight or volume to Campus Planning and Development for annual waste/reuse report to CalRecycle.
7. Street signs & hydrants
 - a. Reduce vegetation to a maximum height of 4 inches within a minimum of 3 feet in all directions surrounding all street signs and fire hydrants so that emergency personnel can easily locate and access.
8. Timing
 - a. To avoid impacts to special status species, Fuel Reduction and Defensible Space Prescriptions in this section shall comply with Attachment D, *CSUMB Fuel Reduction and Defensible Space Activity Timetable*.

ZONE 2 – Reduce Fuel Zone

Location: East Campus Housing Fuel Management Buffers (Figure 1a)

- 30-100 feet Management Buffer from Zone 1

Strategy: Implement CAL FIRE Defensible Space Requirements as described in:

- CAL FIRE Defensible Space Website <https://www.fire.ca.gov/programs/communications/defensible-space-prc-4291/>
- CAL FIRE Defensible Space Flyer (Attachment A)

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FUEL¹ REDUCTION² AND DEFENSIBLE SPACE PRESCRIPTIONS WITHIN ZONES 0, 1, AND 2

- CAL FIRE Vertical Plant and Tree Spacing (Attachment B)
- CAL FIRE Horizontal Plant and Tree Spacing (Attachment C)

Worker qualifications and roles: To ensure compliance with the following Fuel Reduction¹² and Defensible Space Prescriptions and the Best Management Practices¹³ (BMP) (Appendix E), work will be:

- At all times overseen and supervised by a professional biologist
- Tree work will be directed by a certified arborist under the direction of the biologist
- Tree work will be performed in accordance with American National Safety Institute (ANSI) A300 Pruning Standards
- Tree work will be performed by tree care workers that comply with California Public Resources Code Chapter 3. Mountainous, Forest-, Brush-, and Grass-Covered Lands, Section 4291¹⁴
- All workers will complete the munitions training in advance of performing work found at <https://www.fortordsafety.com/>

Fuel Reduction and Defensible Space Prescriptions

1. Vertical Spacing – Tree, shrub, and grass trimming
 - a. Large trees do not need to be cut and removed as long as all of the plants beneath them are managed, reducing the vertical fuel ladder as described in Attachment A.
 - b. Remove tree branches 10 feet from structures or other trees (Attachment A).
 - c. Limb up healthy tree branches 6 feet from the ground (Attachment B)
 - d. To create vertical spacing and reduce fuel ladders created by shrubs under trees (Attachment B).
 - i. limb up tree branches 3x the height of the shrub

¹² “Removal” consists of the elimination of specified vegetation and chipping or disposing of the vegetation. Eliminated vegetation may be placed on-site as directed by a biologist or hauled off-site in accordance with federal, state, and local regulations.

¹³ The Best Management Practices document provides special status species and biological avoidance measures as well as specific tree pruning requirements.

¹⁴ https://leginfo.ca.gov/faces/codes_displaySection.xhtml?sectionNum=4291.&lawCode=PRC

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2. Horizontal spacing (as defined in Attachment C)
 - i. Flat to mild slopes (less than 20%)
 1. Create a horizontal space between shrubs equal to 2x the height of the shrubs by removing trees and shrubs.
 2. Create a horizontal space of 10 feet between trees by removing trees under 6 inches DBH and shrubs.
 - ii. Mild to moderate slopes (20%-40%)
 1. Create a horizontal space between shrubs equal to 4x the height of the shrubs by removing trees and shrubs.
 2. Create a horizontal space of 20 feet between trees by removing trees under 6 inches DBH and shrubs.
 - iii. Moderate to steep slopes (greater than 40%)
 1. Shrubs shall create a horizontal space between shrubs equal to 6x the height of the shrubs
 2. Create a horizontal space of 30 feet between trees by removing trees under 6 inches DBH and shrubs.
3. Tree removal size and replacement
 - a. Replacement of trees greater than 4 inches DBH shall be documented by the biologist and replanted via CSUMB Habitat Restoration Program administered through Campus Planning and Development.
 - b. Except as required by the vertical and horizontal spacing requirements described above, do not remove trees greater than 6 inches DBH.
 - c. Only remove trees under 6 inches DBH if they are within 10 feet of trees greater than 6 inches DBH.
4. Dead vegetation removal
 - a. Remove fallen leaves, needles, twigs, bark, cones, and small branches as directed by the Project Biologist as these may be permissible to a depth of 3 inches if determined appropriate by the Project Biologist.

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5. Tree snag (standing dead trees) removal
 - a. Limit removal of snags within non-native grasslands or ruderal/disturbed habitats as snags create habitat for various native wildlife species (Figures 3a and 3b) as directed by the Project Biologist.
6. Mowing
 - a. Cut and mow annual grass and herbaceous plants down to a height of 4 inches.
 - b. Mow before 10 a.m.
 - c. Only mow outside of special-status species areas (Figures 2a, 2a-1, and 2b) unless a Project Biologist has determined permissible.
 - d. Avoid removing all vegetation to bare soil, as this may cause erosion.
 - e. Do not mow ice plant.
7. Equipment
 - a. Equipment shall be pressure washed prior to entering the project site, cleaned of mud or other debris that may contain invasive plants and/or seeds, and inspected to reduce the potential of spreading noxious weeds. If found, invasive species shall be removed and placed in a trash (not yard waste) dumpster and taken to the landfill.
 - b. Equipment can drive in habitat area if work is compliant with the species-specific BMP avoidance measures (Appendix E) and or CSUMB Fuel Reduction and Defensible Space Activity Timetable (Attachment D)
8. Street signs & hydrants
 - a. Reduce vegetation to a maximum height of 4 inches within a minimum of 3 feet in all directions surrounding all street signs and fire hydrants so that emergency personnel can easily locate and access.

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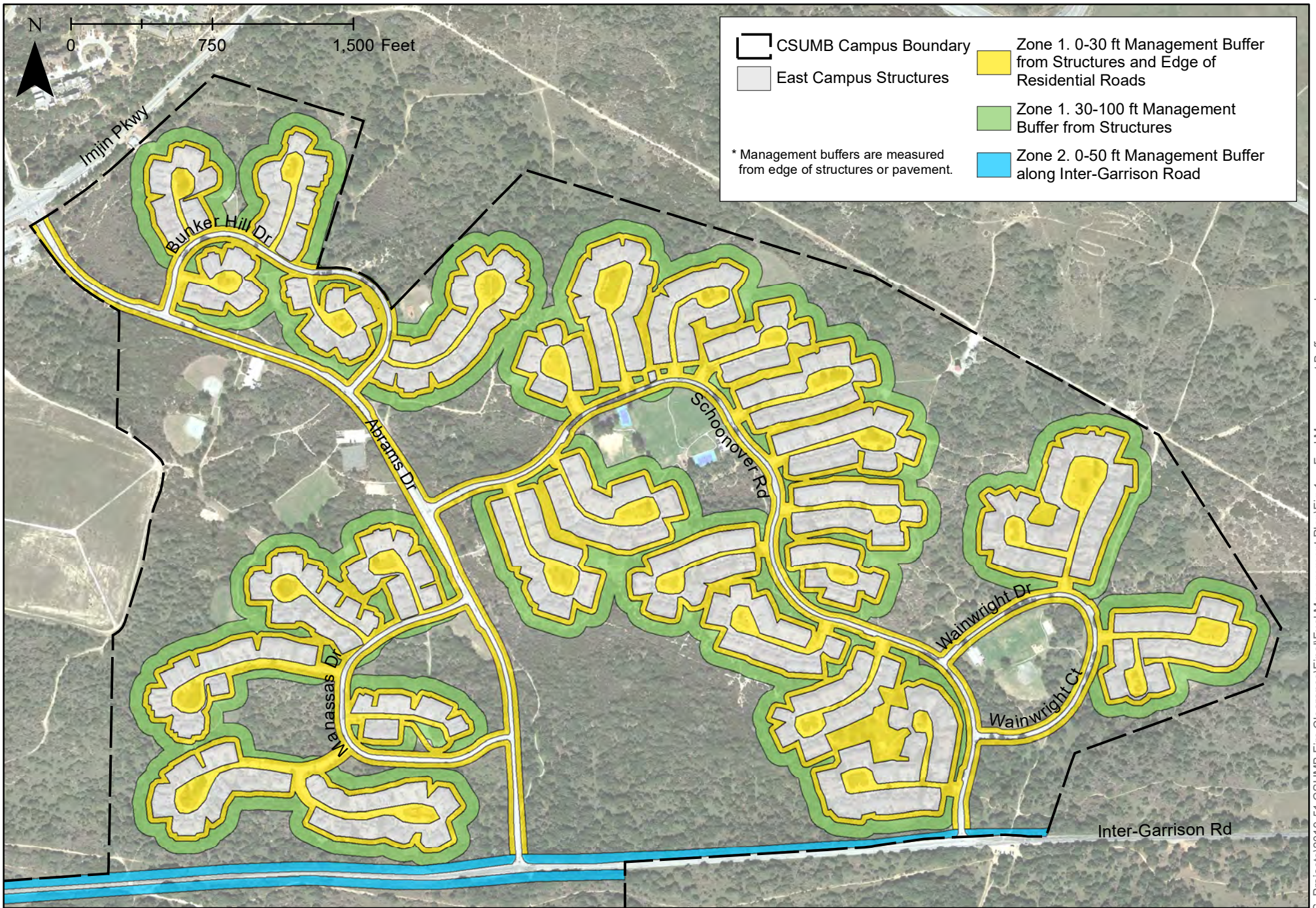
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**FUEL¹ REDUCTION² AND DEFENSIBLE SPACE PRESCRIPTIONS WITHIN
ZONES 0, 1, AND 2**

9. Timing

- a. To avoid impacts to special status species, Fuel Reduction and Defensible Space Prescriptions in this section shall comply with Attachment D, *CSUMB Fuel Reduction and Defensible Space Activity Timetable*.



CSUMB Fuel Management Plan – East Campus Housing Area
 Fuel Management Buffers

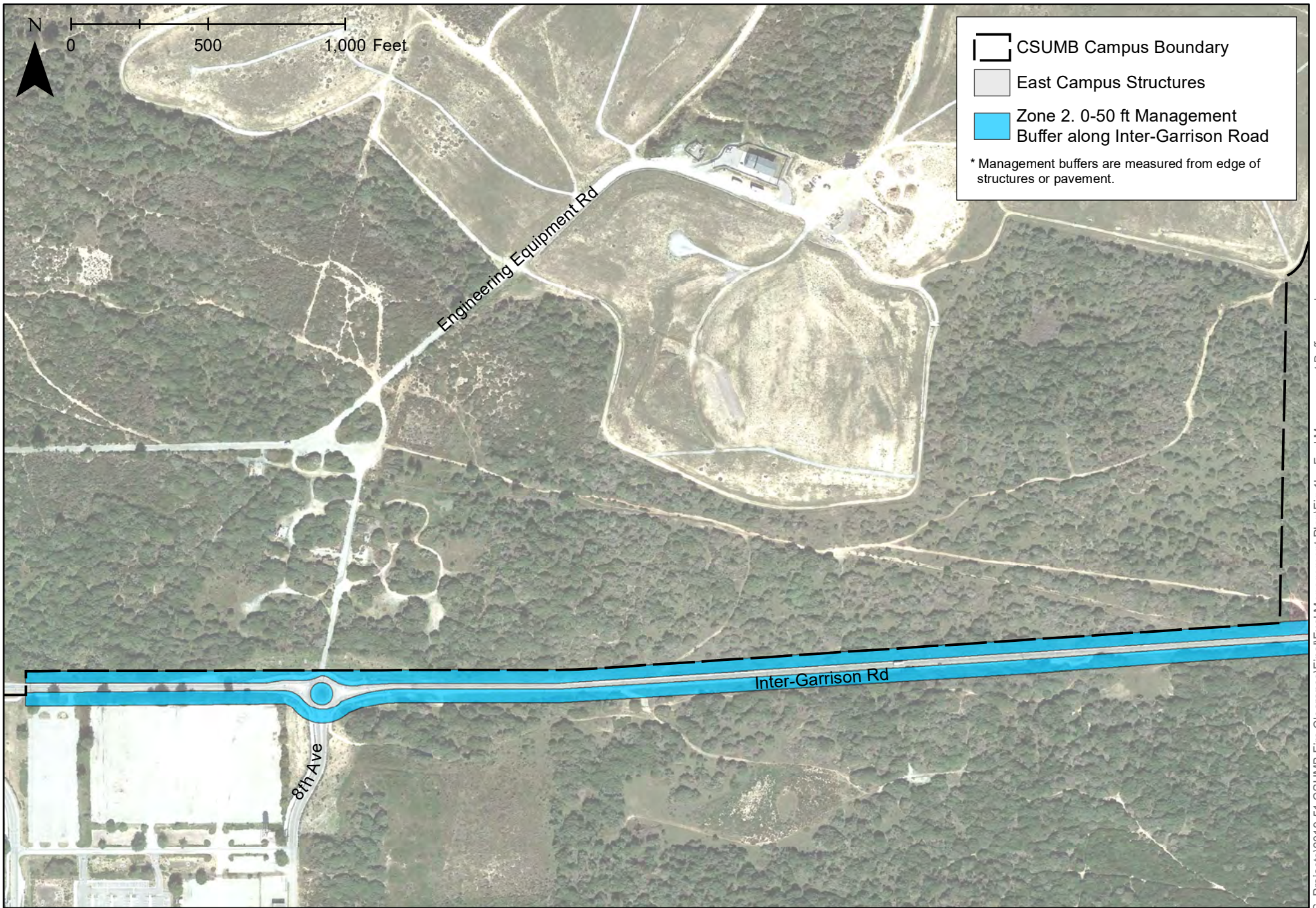
Date
 8/23/2022

Scale
 1 in = 700 ft



Denise Duffy & Associates, Inc.
 Planning and Environmental Consulting

Figure
1a



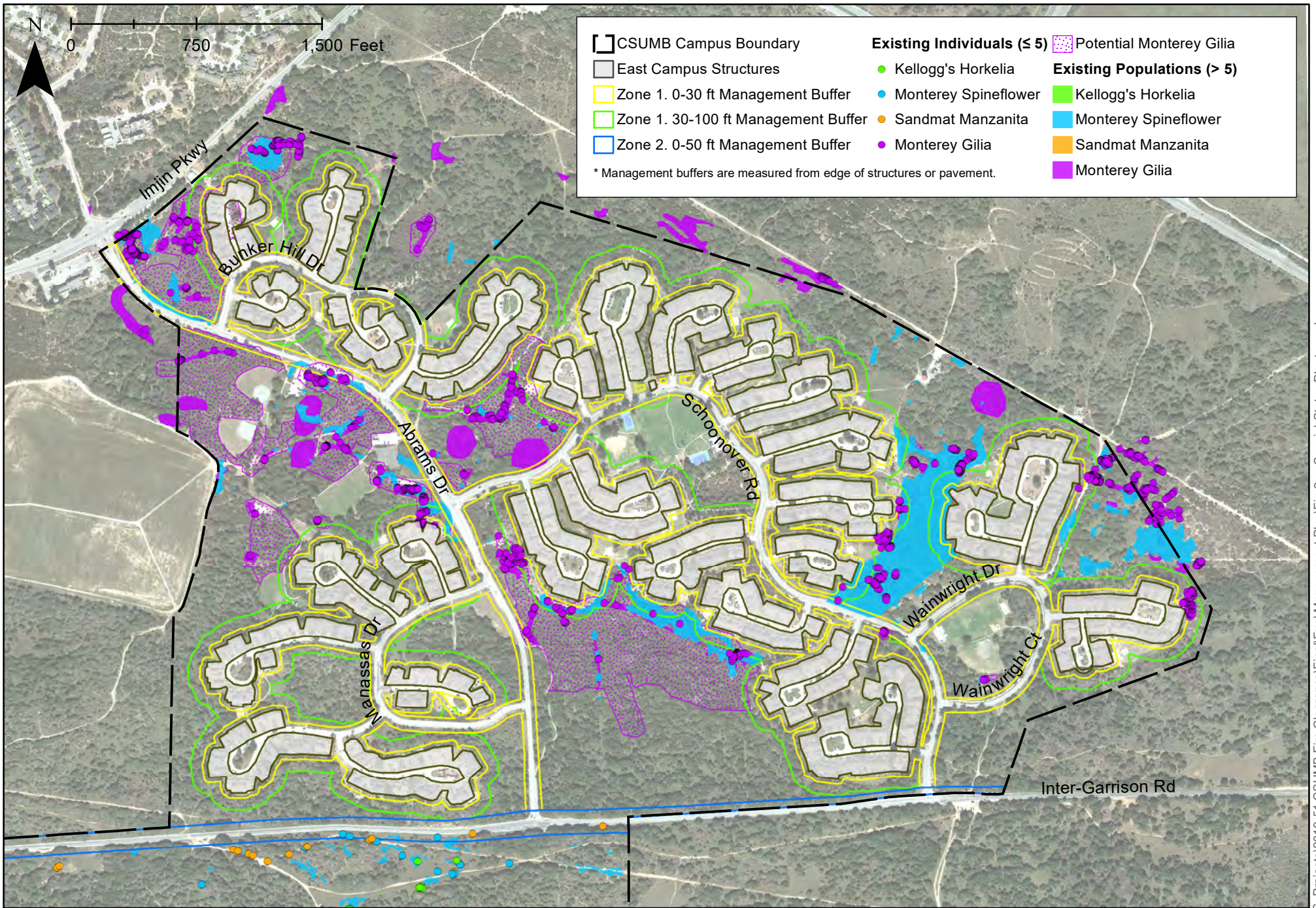
CSUMB Fuel Management Plan – East Campus Housing Area
 Fuel Management Buffers

Date
 8/23/2022
 Scale
 1 in = 500 ft



Denise Duffy & Associates, Inc.
 Planning and Environmental Consulting

Figure
1b



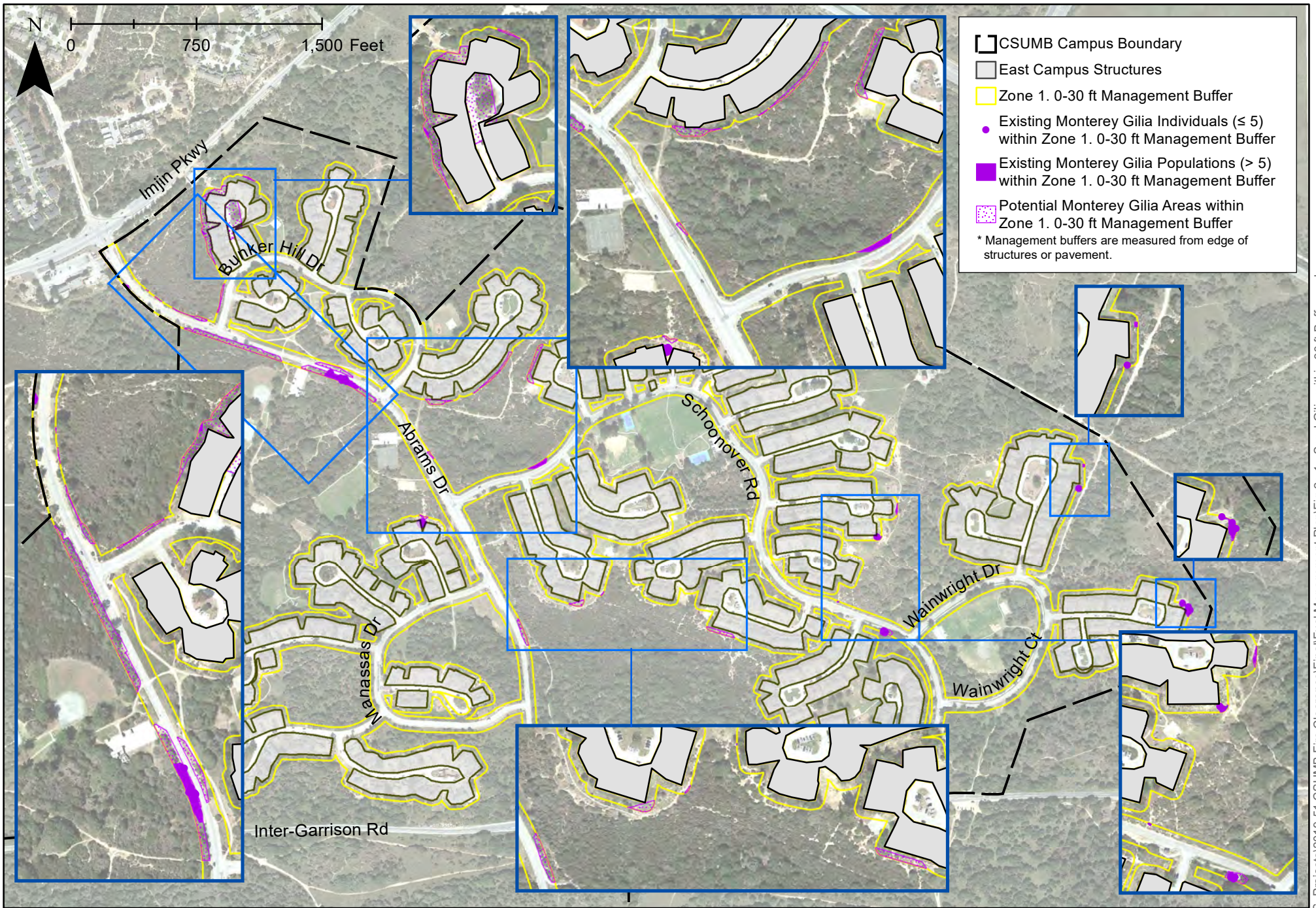
CSUMB Fuel Management Plan – East Campus Housing Area
Special-Status Plant Species Occurrences

Date
8/23/2022
Scale
1 in = 800 ft



Denise Duffy & Associates, Inc.
Planning and Environmental Consulting

Figure
2a



- CSUMB Campus Boundary
 - East Campus Structures
 - Zone 1. 0-30 ft Management Buffer
 - Existing Monterey Gilia Individuals (≤ 5) within Zone 1. 0-30 ft Management Buffer
 - Existing Monterey Gilia Populations (> 5) within Zone 1. 0-30 ft Management Buffer
 - Potential Monterey Gilia Areas within Zone 1. 0-30 ft Management Buffer
- * Management buffers are measured from edge of structures or pavement.

CSUMB Fuel Management Plan – East Campus Housing Area
 Monterey Gilia Occurrences within Zone 1. 0-30 ft Management Buffer

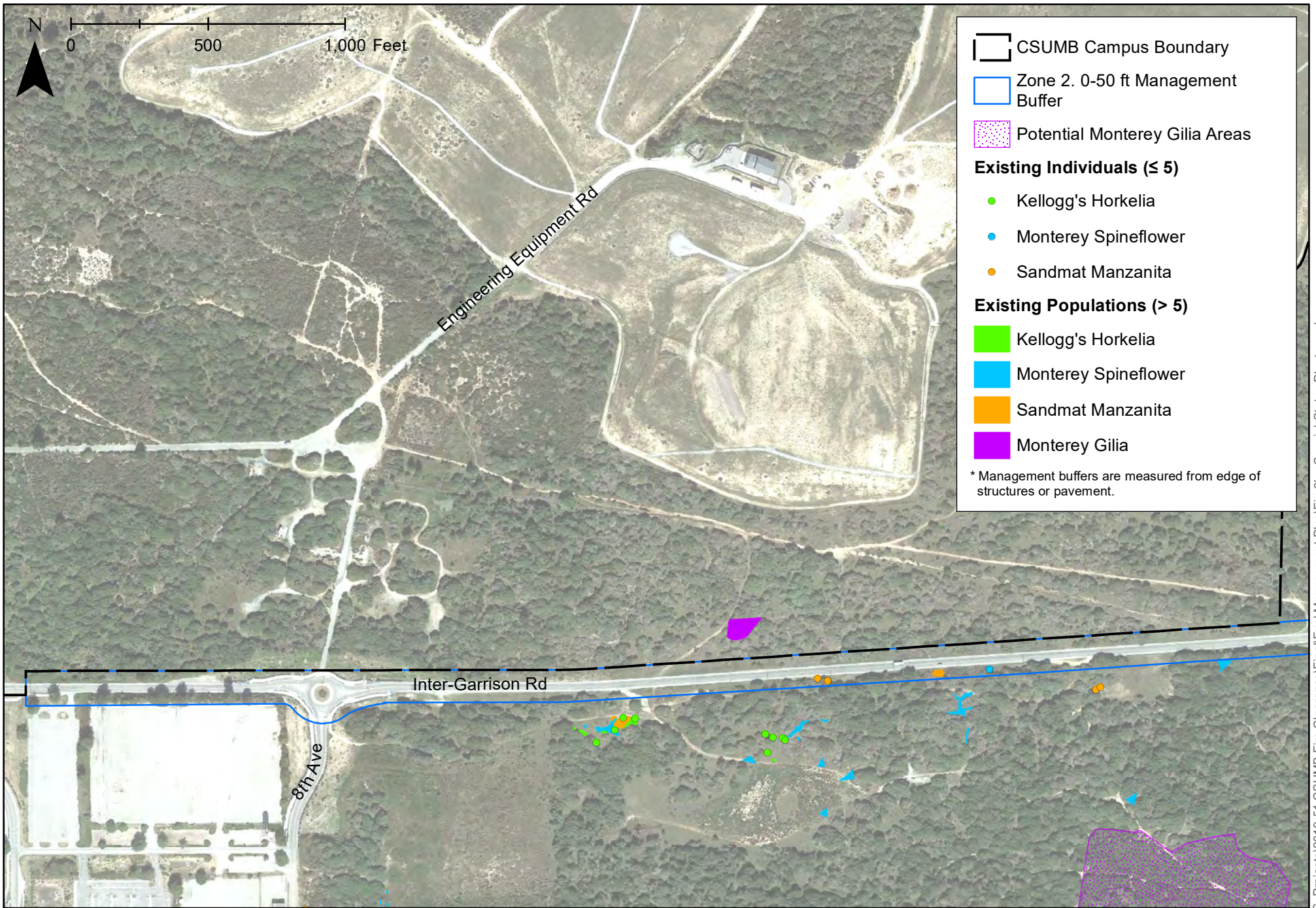
Date
8/23/2022

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1 in = 800 ft



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Figure
2a-1



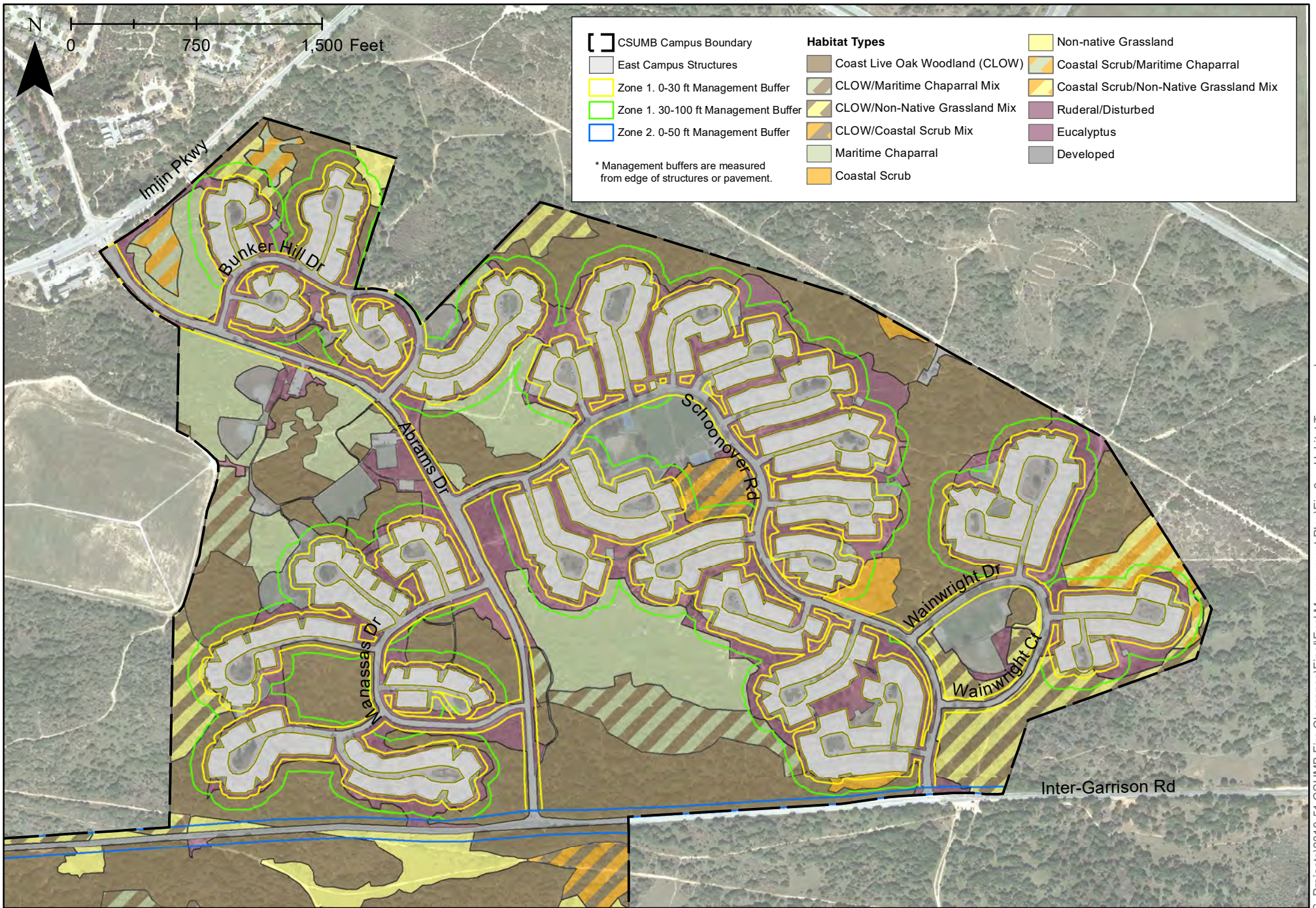
**CSUMB Fuel Management Plan – East Campus Housing Area
Special-Status Plant Species Occurrences**

Date
8/23/2022
Scale
1 in = 500 ft



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Figure
2b



**CSUMB Fuel Management Plan – East Campus Housing Area
Habitat Types**

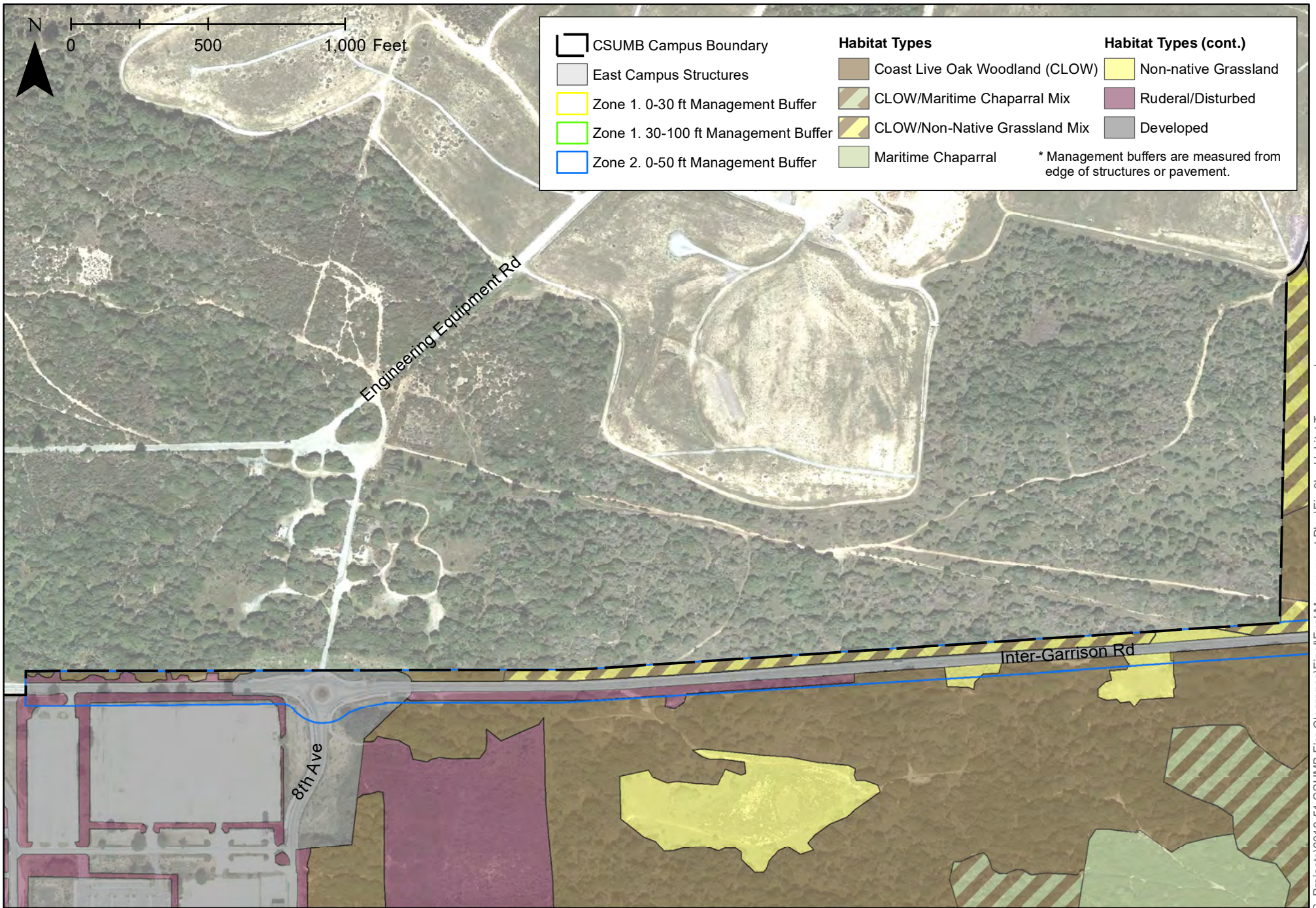
Date
8/23/2022

Scale
1 in = 800 ft



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Figure
3a



**CSUMB Fuel Management Plan – East Campus Housing Area
Habitat Types**

Date
8/23/2022
Scale
1 in = 500 ft



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Figure
3b

WILDFIRE IS COMING. ARE YOU READY?



Defensible Space is your property's front line defense against wildfire. Creating and maintaining defensible space around your home can dramatically increase your home's chance of surviving a wildfire and improves the safety of firefighters defending your property. 100 feet of defensible space is required by law.*



*For more information on creating defensible space and legal requirements visit

READYFORWILDFIRE.ORG

TWO ZONES MAKE UP THE REQUIRED 100 FEET OF DEFENSIBLE SPACE:

ZONE 1: 30 feet of lean, Clean & Green

- 1 Remove all dead plants, grass and weeds.
- 2 Remove dead or dry leaves and pine needles from your yard, roof and rain gutters.
- 3 Keep tree branches 10 feet away from your chimney and other trees.

ZONE 2: 30-100 feet of Reduced Fuel

- 4 Cut or mow annual grass down to a maximum height of 4 inches.
- 5 Create horizontal spacing between shrubs and trees.
- 6 Create vertical spacing between grass, shrubs and trees.

Use Equipment Properly to Keep from Sparking a Wildfire

- 7 Mow before 10 a.m., and never on a hot or windy day. String trimmers are a safer option (vs. lawnmowers) for clearing vegetation.



VERTICAL SPACING

Large trees do not have to be cut and removed as long as all of the plants beneath them are removed. This eliminates a vertical "fire ladder."



HORIZONTAL SPACING

Create horizontal and vertical spacing between plants, the amount of spacing will depend on how steep the slope is and the size of the plants.

PLANT AND TREE SPACING

The spacing between grass, shrubs, and trees is crucial to reduce the spread of wildfire. The spacing needed is determined by the type and size of the shrubs and trees, as well as the slope of the land. For example, a property on a steep slope with larger plant life will require greater spacing between trees and shrubs than a level property that has small, sparse vegetation.

VERTICAL SPACING

Remove all tree branches at least 6 feet from the ground.

If shrubs are under trees, additional vertical space is needed. Lack of vertical space can allow a fire to move from the ground to the shrubs to the treetops like a ladder.



FIRE-SAFE LANDSCAPING

Fire-safe landscaping isn't necessarily the same thing as a well-maintained yard. Fire-safe landscaping uses fire-resistant plants that are strategically planted to resist the spread of fire to your home.

The good news is that you don't need to spend a lot of money to make your landscape fire-safe. And fire-safe landscaping can increase your property value and conserve water while beautifying your home. For more information on fire-safe landscaping, visit: [ReadyForWildfire.org/landscaping](https://www.readyforwildfire.org/landscaping).

MINIMUM VERTICAL SPACING BETWEEN TREES AND SHRUBS

To determine the proper vertical space between shrubs and the lowest branches of trees, use the formula below.

Example:

A five-foot shrub is growing near a tree.

$3 \times 5 = 15$ feet of clearance needed between the top of the shrub and the lowest tree branches.



MINIMUM HORIZONTAL SPACING FOR TREES AND SHRUBS

Horizontal spacing depends on the slope of the land and the height of the shrubs or trees. Check the diagrams below to determine spacing distance.



Attachment D. CSUMB Fuel Reduction and Defensible Space Activity Timetable












Biological Resource	Habitat Area ¹	Recommended Work Windows for Conducting Fuel Reduction and Defensible Space Activities ²																				
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.									
Plant Species																						
Monterey spineflower (<i>Chorizanthe pungens</i> var. <i>pungens</i>)	Maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils.																					
Fort Ord spineflower (<i>Chorizanthe minutiflora</i>)	Sandy openings of maritime chaparral and coastal scrub.																					
Monterey gilia (<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>)	Openings in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils.																					
Kellogg's horkelia (<i>Horkelia cuneata</i> var. <i>sericea</i>)	Openings of closed-cone coniferous forests, maritime chaparral, coastal dunes, and coastal scrub on sandy or gravelly soils.																					
Point Reyes horkelia (<i>Horkelia marinensis</i>)	Coastal dunes, coastal prairie, and coastal scrub on sandy soils.																					
Coast wallflower (<i>Erysimum ammophilum</i>)	Openings in maritime chaparral, coastal dunes, and coastal scrub on sandy soils.																					
Marsh microseris (<i>Microseris paludosa</i>)	Closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland.																					
Seaside bird's-beak (<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>)	Closed-cone coniferous forests, maritime chaparral, cismontane woodlands, coastal dunes, and coastal scrub on sandy soils, often on disturbed sites.																					
Northern curly-leaved monardella (<i>Monardella sinuata</i> ssp. <i>nigrescens</i>)	Chaparral, coastal dunes, coastal scrub, and lower montane coniferous forest (ponderosa pine sandhills).																					
Yadon's piperia (<i>Piperia yadonii</i>)	Sandy soils in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral.																					
Toro manzanita (<i>Arctostaphylos montereyensis</i>)	Maritime chaparral, cismontane woodland, and coastal scrub on sandy soils.																					
Sandmat manzanita (<i>Arctostaphylos pumila</i>)	Openings of closed-cone coniferous forests, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils.																					
Hooker's manzanita (<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>)	Closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub on sandy soils.																					
Pajaro manzanita (<i>Arctostaphylos pajaroensis</i>)	Chaparral on sandy soils.																					
Eastwood's goldenbush (<i>Ericameria fasciculata</i>)	Openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub on sandy soils.																					
Monterey ceanothus (<i>Ceanothus rigidus</i>)	Closed cone coniferous forest, chaparral, and coastal scrub on sandy soils.																					

¹ See Figures 3a and Figure 3b for habitat locations and Figures 2a, 2a-1, and 2b for mapped populations.

² Please note that these recommended work windows are generated from species characteristics and life histories and may vary seasonally and annually. Therefore, work may be conducted outside these recommended work windows, but only with written authorization from a qualified biologist.

Biological Resource	Habitat Area ¹	Recommended Work Windows for Conducting Fuel Reduction and Defensible Space Activities ²																				
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.									
Trees, including but not limited to: coast live oak, Monterey pine, Monterey cypress	Trees and coast live oak woodland occur throughout the CSUMB property.																					
Wildlife Species																						
Monterey dusky-footed woodrat (<i>Neotoma macrotis luciana</i>)	Forest, oak woodland, and chaparral habitats of moderate canopy with moderate to dense understory.																					
California tiger salamander (<i>Ambystoma californiense</i>)	Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Need underground refuges and vernal pools or other seasonal water sources.																					
Smith's blue butterfly (<i>Euphilotes enoptes smithi</i>)	Most commonly associated with coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz Counties. Plant hosts are <i>Eriogonum latifolium</i> and <i>E. parvifolium</i> .																					
Nesting avian species	All areas and habitats in work areas. Stands of live oak, riparian deciduous, or other forest habitats, as well as open grasslands, are used most frequently for nesting.																					
Special-status bat species	Rural and urban settings from inland deserts to coastal redwoods, oak woodland, grassland and low-to mid-elevation mixed coniferous habitats.																					
Other special-status wildlife species with potential to occur, including but not limited to Monterey ornate shrew (<i>Sorex ornatus salarius</i>), American badger (<i>Taxidea taxus</i>), northern California legless lizard (<i>Anniella pulchra</i>), and coast horned lizard (<i>Phrynosoma blainvillii</i>)	Various; please refer to Appendix C (Special-Status Species Table) of the project's Biological Resources Report.																					

LEGEND:

-  Special-status herbaceous plant species have gone to seed; fuel reduction and defensible space activities and maintenance of vegetation are acceptable within this timeframe.
-  Boundaries of special-status herbaceous plant species shall be delineated with staking and flagging and shall be avoided until plants have gone to seed.
-  Special-status shrub and tree species shall be avoided to the greatest extent feasible throughout the year; however, activities may occur during this timeframe with implementation of the BMPs identified in CSUMB Best Management Practices Required for Fuel Reduction and Defensible Space Activities.
-  Most beneficial time to trim and remove trees.
-  Monterey dusky-footed woodrat surveys shall be conducted in suitable habitat three days prior to implementing activities.
-  Conduct nesting bird surveys prior to fuel reduction activities in all areas plan for vegetation maintenance.
-  While the reproductive season is generally March 1 through September 15, special-status bat species could be present and active at any time of year and surveys are required prior to fuel reduction activities in all areas plan for vegetation maintenance year-round.
-  No nesting bird surveys shall be required during this timeframe.
-  Ideal time to work in/near habitat for this species. Protection measures identified in the BMPs must be implemented.
-  If feasible, work in/near habitat should be avoided. If work is required during this time, protection measures identified in the BMPs must be implemented.
-  Activities may be conducted year-round. Implementation of the protection measures identified in the BMPs is required year-round.

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(California Public Resources Code Chapter 3, Section 4291)

SPECIAL-STATUS SPECIES AVOIDANCE AND MINIMIZATION MEASURES REQUIRED WITHIN ZONES 0, 1, AND 2

The following recommendations have been developed to avoid and minimize potential impacts to the special-status species and sensitive habitats within and adjacent to the fuel reduction site to a less-than-significant level in accordance with the California Environmental Quality Act (CEQA). Special-status species are those plants and animals that have been formally listed or proposed for listing as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA).

Species	General Habitat/Description	Best Management Practices (BMPs)	Recommended Work Windows for Conducting Fuel Reduction and Defensible Space Activities ¹ (Also Refer to Attachment D)
WORKER REQUIREMENTS			
ALL	ALL	<p>Worker qualifications and roles: To ensure compliance with the Fuel Management Plan (FMP) and these Best Management Practices² Required for Fuel Reduction and Defensible Space Activities (BMP), work will be:</p> <ul style="list-style-type: none"> • At all times overseen and supervised by a professional biologist • Figures 2a, 2a-1, and 2b will be consulted as a basis for avoiding special-status species • Tree work will be directed by a certified arborist under the direction of the biologist • Tree work will be performed in accordance with American National Safety Institute (ANSI) A300 Pruning Standards • Tree work will be performed by tree care workers that comply with California Public Resources Code Chapter 3. Mountainous, Forest-, Brush-, and Grass-Covered Lands, Section 4291.³ • All workers will complete the munitions training in advance of performing work found at https://www.fortordsafety.com/ 	Year-round
ALL	ALL	<p>Employee Education Program: A qualified biologist shall conduct an Employee Education Program for the workers prior to the implementation of any fuel management activities. The qualified biologist shall meet with the fuel management workers (crews) at the onset of work at the project site to educate them on the following: 1) the appropriate access route(s) in and out of the construction area and review project boundaries; 2) how a biological monitor will examine the area and agree upon a method which will ensure the safety of the monitor during such activities, 3) the identification of special-status species that may be present; 4) the specific mitigation measures that will be incorporated into the work effort; 5) the general provisions and protections afforded; and 6) the proper procedures if a special-status species is encountered within the project site to avoid impacts.</p>	Year-round
PLANTS			
Monterey gilia (<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>)	Openings in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils at elevations of 0-45 meters. Annual herb in the Polemoniaceae family; typically blooms April-June.	<ul style="list-style-type: none"> • Activities shall only occur in areas known to support Monterey gilia from approximately June 1 to September 30 (see Figures 2a, 2a-1, and 2b). • Vehicle traffic in areas known to support Monterey gilia is strictly prohibited at any time. • Piling of any cut vegetation or other debris within areas known to support Monterey gilia is strictly prohibited at any time. • Areas known to support Monterey gilia shall be avoided from October 1 to May 31. Boundaries of Monterey gilia populations shall be staked and flagged prior to implementing any activities to avoid impacts to the populations. The flagged areas shall be avoided from October 1 to May 31. 	June 1 – September 30
Seaside bird's-beak (<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>)	Closed-cone coniferous forests, maritime chaparral, cismontane woodlands, coastal dunes, and coastal scrub on sandy soils, often on disturbed sites, at elevations of 0-425 meters. Annual hemi-parasitic herb in the Orobanchaceae family; typically blooms April-October.	<ul style="list-style-type: none"> • Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for seaside bird's-beak during the appropriate blooming period of this species. • Activities shall only occur in areas known to support seaside bird's-beak from approximately October 1 to January 31. • Vehicle traffic in areas known to support seaside bird's-beak is strictly prohibited at any time. • Piling of any cut vegetation or other debris within areas known to support seaside bird's-beak is strictly prohibited at any time. • Areas known to support seaside bird's-beak shall be avoided from February 1 to September 30. Boundaries seaside bird's-beak shall be staked and flagged prior to implementing any activities to avoid impacts to the populations. The flagged areas shall be avoided from February 1 to May 31. 	October 1 – January 31

¹ Please note that these recommended work windows (Attachment D) are generated from species characteristics and life histories and may vary seasonally and annually. Therefore, work may be conducted outside these recommended work windows with implementation of specific avoidance measures. Avoidance is required for species that would be detrimentally affected by activities without the implementation of specific measures identified herein and are protected by federal and/or law, but only with written authorization from a qualified biologist.

² This Best Management Practices document (Attachment E) provides special-status species and sensitive habitat avoidance and minimization measures, as well as specific tree pruning requirements.

³ https://leginfo.ca.gov/faces/codes_displaySection.xhtml?sectionNum=4291.&lawCode=PRC

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Species	General Habitat/Description	Best Management Practices (BMPs)	Recommended Work Windows for Conducting Fuel Reduction and Defensible Space Activities ¹ (Also Refer to Attachment D)
Northern curly-leaved monardella (<i>Monardella sinuata</i> ssp. <i>nigrescens</i>)	Chaparral, coastal dunes, coastal scrub, and lower montane coniferous forest (ponderosa pine sandhills) on sandy soils at elevations of 0-300 meters. Annual herb in the Lamiaceae family; typically blooms April-September.	<ul style="list-style-type: none"> • Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for northern curly-leaved monardella during the appropriate blooming period of this species. • Activities shall only occur in areas known to support northern curly-leaved monardella from approximately September 1 to January 31. • Vehicle traffic in areas known to support northern curly-leaved monardella is strictly prohibited at any time. • Piling of any cut vegetation or other debris within areas known to support northern curly-leaved monardella is strictly prohibited at any time. • Areas known to support northern curly-leaved monardella shall be avoided from February 1 to August 31. Boundaries of northern curly-leaved monardella shall be staked and flagged prior to implementing any activities to avoid impacts to the populations. The flagged areas shall be avoided from February 1 to August 31. 	September 1 – January 31
Yadon's piperia (<i>Piperia yadonii</i>)	Sandy soils in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral at elevations of 10-510 meters. Annual herb in the Orchidaceae family; blooms February-August.	<ul style="list-style-type: none"> • Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for Yadon's piperia during the appropriate blooming period of this species. • Fuel reduction and defensible space activities (collectively referred to herein as “activities”) shall only occur in areas known to support Yadon's piperia, as determined by the field survey, from approximately September 1 to January 31. • Vehicle traffic in areas known to support Yadon's piperia is strictly prohibited at any time. • Piling of any cut vegetation or other debris within areas known to support Yadon's piperia is strictly prohibited at any time. • Areas known to support Yadon's piperia populations shall be avoided from February 1 to August 31. Boundaries of Yadon's piperia populations shall be staked and flagged prior to implementing any activities to avoid impacts to the populations. The flagged areas shall be avoided from February 1 to August 31. 	September 1 – January 31
Monterey spineflower (<i>Chorizanthe pungens</i> var. <i>pungens</i>)	Maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils at elevations of 3-450 meters. Annual herb in the Polygonaceae family; typically blooms April-July.	<ul style="list-style-type: none"> • Fuel reduction and defensible space activities (collectively referred to herein as “activities”) shall only occur in areas known to support Monterey spineflower from approximately June 1 to January 31 (see Figures 2a and 2b). • Vehicle traffic in areas known to support Monterey spineflower is strictly prohibited at any time. • Piling of any cut vegetation or other debris within areas known to support Monterey spineflower is strictly prohibited at any time. • Areas known to support Monterey spineflower populations shall be avoided from February 1 to May 31. Boundaries of Monterey spineflower populations shall be staked and flagged prior to implementing any activities to avoid impacts to the populations. The flagged areas shall be avoided from February 1 to May 31. 	June 1 – January 31
Fort Ord spineflower (<i>Chorizanthe minutiflora</i>)	Sandy openings of maritime chaparral and coastal scrub at elevations of 55-150 meters. Only known occurrences on Fort Ord National Monument. Annual herb in the Polygonaceae family; blooms April-July.	<ul style="list-style-type: none"> • Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for Fort Ord spineflower during the appropriate blooming period of this species. • Fuel reduction and defensible space activities (collectively referred to herein as “activities”) shall only occur in areas known to support Fort Ord spineflower, as determined by the field survey, from approximately June 1 to January 31. • Vehicle traffic in areas known to support Fort Ord spineflower is strictly prohibited at any time. • Piling of any cut vegetation or other debris within areas known to support Fort Ord spineflower is strictly prohibited at any time. 	June 1 – January 31

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Species	General Habitat/Description	Best Management Practices (BMPs)	Recommended Work Windows for Conducting Fuel Reduction and Defensible Space Activities ¹ (Also Refer to Attachment D)
		<ul style="list-style-type: none"> • Areas known to support Fort Ord spineflower populations shall be avoided from February 1 to May 31. Boundaries of Fort Ord spineflower populations shall be staked and flagged prior to implementing any activities to avoid impacts to the populations. The flagged areas shall be avoided from February 1 to May 31. 	
Coast wallflower (<i>Erysimum ammphilum</i>)	Openings in maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 0-60 meters. Perennial herb in the Brassicaceae family; typically blooms February-June.	<ul style="list-style-type: none"> • Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for coast wallflower during the appropriate blooming period of this species. • Activities shall only occur in areas known to support coast wallflower from approximately June 1 to January 31. • Vehicle traffic in areas known to support coast wallflower is strictly prohibited at any time. • Piling of any cut vegetation or other debris within areas known to support coast wallflower is strictly prohibited at any time. • Areas known to support coast wallflower shall be avoided from February 1 to May 31. Boundaries of coast wallflower populations shall be staked and flagged prior to implementing any activities to avoid impacts to the populations. The flagged areas shall be avoided from February 1 to May 31. 	June 1 – January 31
Marsh microseris (<i>Microseris paludosa</i>)	Closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland at elevations of 5-300 meters. Perennial herb in the Asteraceae family; blooms April-July.	<ul style="list-style-type: none"> • Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for marsh microseris during the appropriate blooming period of this species. • Fuel reduction and defensible space activities (collectively referred to herein as “activities”) shall only occur in areas known to support marsh microseris, as determined by the field survey, from approximately June 1 to January 31. • Vehicle traffic in areas known to support marsh microseris is strictly prohibited at any time. • Piling of any cut vegetation or other debris within areas known to support marsh microseris is strictly prohibited at any time. • Areas known to support Marsh microseris populations shall be avoided from February 1 to May 31. Boundaries of marsh microseris populations shall be staked and flagged prior to implementing any activities to avoid impacts to the populations. The flagged areas shall be avoided from February 1 to May 31. 	June 1 – January 31
Kellogg’s horkelia (<i>Horkelia cuneate</i> var. <i>sericea</i>)	Openings of closed-cone coniferous forests, maritime chaparral, coastal dunes, and coastal scrub on sandy or gravelly soils at elevations of 10-200 meters. Perennial herb in the Rosaceae family; typically blooms April-September.	<ul style="list-style-type: none"> • Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for Kellogg’s horkelia during the appropriate blooming period of this species. • Activities shall only occur in areas known to support Kellogg’s horkelia from approximately June 1 to January 31 (see Figures 2a and 2b). • Vehicle traffic in areas known to support Kellogg’s horkelia is strictly prohibited at any time. • Piling of any cut vegetation or other debris within areas known to support Kellogg’s horkelia is strictly prohibited at any time. • Areas known to support Kellogg’s horkelia shall be avoided from February 1 to May 31. Boundaries of Kellogg’s horkelia populations shall be staked and flagged prior to implementing any activities to avoid impacts to the populations. The flagged areas shall be avoided from February 1 to May 31. 	June 1 – January 31

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Species	General Habitat/Description	Best Management Practices (BMPs)	Recommended Work Windows for Conducting Fuel Reduction and Defensible Space Activities ¹ (Also Refer to Attachment D)
Point Reyes horkelia (<i>Horkelia marinensis</i>)	Coastal dunes, coastal prairie, and coastal scrub on sandy soils at elevations of 5-350 meters. Perennial herb in the Rosaceae family; blooms May-September.	<ul style="list-style-type: none"> • Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for Point Reyes horkelia during the appropriate blooming period of this species. • Activities shall only occur in areas known to support Point Reyes horkelia from approximately June 1 to January 31 (see Figures 2a and 2b). • Vehicle traffic in areas known to support Point Reyes horkelia is strictly prohibited at any time. • Piling of any cut vegetation or other debris within areas known to support Point Reyes horkelia is strictly prohibited at any time. • Areas known to support Point Reyes horkelia shall be avoided from February 1 to May 31. Boundaries of Point Reyes horkelia populations shall be staked and flagged prior to implementing any activities to avoid impacts to the populations. The flagged areas shall be avoided from February 1 to May 31. 	June 1 – January 31
Hooker's manzanita (<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>)	Closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub on sandy soils at elevations of 85-536 meters. Evergreen shrub in the Ericaceae family; blooms January-June.	<ul style="list-style-type: none"> • Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for Hooker's. • Hooker's manzanita shall be avoided year-round to the greatest extent feasible during activities due to its slow growth pattern. • Vehicle traffic in areas known to support Hooker's manzanita is strictly prohibited at any time. • Piling of any cut vegetation or other debris within areas known to support Hooker's manzanita is strictly prohibited at any time. 	Year-round
Pajaro manzanita (<i>Arctostaphylos pajaroensis</i>)	Chaparral on sandy soils at elevations of 30-760 meters. Evergreen shrub in the Ericaceae family; blooms December-March.	<ul style="list-style-type: none"> • Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for Pajaro manzanita. • Pajaro manzanita individuals shall be retained at approximately 50-foot intervals. Hand crews shall receive additional training from the Project Biologist in Pajaro manzanita identification. • Vehicle traffic in areas known to support Pajaro manzanita is strictly prohibited at any time. • Piling of any cut vegetation or other debris within areas known to support Pajaro manzanita is strictly prohibited at any time. 	Year-round
Sandmat manzanita (<i>Arctostaphylos pumila</i>)	Openings of closed-cone coniferous forests, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils at elevations of 3-205 meters. Evergreen shrub in the Ericaceae family; typically blooms February-May.	<ul style="list-style-type: none"> • Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for sandmat manzanita. • Sandmat manzanita shall be avoided year-round to the greatest extent feasible during activities due to its slow growth pattern. • Vehicle traffic in areas known to support sandmat manzanita is strictly prohibited at any time. • Piling of any cut vegetation or other debris within areas known to support sandmat manzanita is strictly prohibited at any time. • Figures 2a and 2b shall be referenced to recognize boundaries of sandmat manzanita for avoidance. 	Year-round
Toro manzanita (<i>Arctostaphylos montereyensis</i>)	Maritime chaparral, cismontane woodland, and coastal scrub on sandy soils at elevations of 30-730 meters. Evergreen shrub in the Ericaceae family; typically blooms February-March.	<ul style="list-style-type: none"> • Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for Toro manzanita. • Toro manzanita individuals shall be retained at approximately 50-foot intervals. Hand crews shall receive additional training from the Project Biologist in Toro manzanita identification. • Vehicle traffic in areas known to support Toro manzanita is strictly prohibited at any time. 	Year-round

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Species	General Habitat/Description	Best Management Practices (BMPs)	Recommended Work Windows for Conducting Fuel Reduction and Defensible Space Activities ¹ (Also Refer to Attachment D)
		<ul style="list-style-type: none"> Piling of any cut vegetation or other debris within areas known to support Toro manzanita is strictly prohibited at any time. 	
Eastwood's goldenbush (<i>Ericameria fasciculata</i>)	Openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 30-275 meters. Evergreen shrub in the Asteraceae family; typically blooms July-October.	<ul style="list-style-type: none"> Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for Eastwood's goldenbush. Eastwood's goldenbush shall be avoided to the greatest extent feasible during activities due to its slow growth pattern. Vehicle traffic in areas known to support Eastwood's goldenbush is strictly prohibited at any time. Piling of any cut vegetation or other debris within areas known to support Eastwood's goldenbush is strictly prohibited at any time. 	Year-round
Monterey ceanothus (<i>Ceanothus rigidus</i>)	Closed cone coniferous forest, chaparral, and coastal scrub on sandy soils at elevations of 3-550 meters. Evergreen shrub in the Rhamnaceae family, blooms February-June.	<ul style="list-style-type: none"> Prior to initiating fuel reduction and defensible space activities, a qualified biologist shall survey the work area for Monterey ceanothus. Monterey ceanothus shall be avoided year-round to the greatest extent feasible during activities due to its slow growth pattern. Vehicle traffic in areas known to support Monterey ceanothus is strictly prohibited at any time. Piling of any cut vegetation or other debris within areas known to support Monterey ceanothus is strictly prohibited at any time. 	Year-round
Trees, including but not limited to: coast live oak, Monterey pine, and Monterey cypress	<p>The CSUMB Tree Restoration Program was established to mitigation for impacts to coast live oak trees and other trees resulting from projects that occur on campus. This program replants two coast live oak trees for every tree greater than 4" diameter breast height (DBH) removed within an identified restoration area on campus.</p> <p>CSUMB Master Plan Project Design Feature (PDF) OS-4 provides for continuation and expansion of the CSUMB tree restoration program and management project 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 DBH at a minimum 2:1 ratio.</p>	<ul style="list-style-type: none"> Removal of trees greater than 4" in diameter shall be avoided to the greatest extent feasible unless they are determined a safety and/or fire hazard. Branches larger than 4" shall not be cut from existing trees to the greatest extent feasible unless they are determined to be a safety and/or fire hazard. The Project Biologist shall inventory and track removal of trees greater than 4" DBH that are determined a safety and/or fire hazard and must be removed or pruning of more than 30% of any tree. CSUMB shall review documents and coordinate this effort with its Tree Restoration Program and replace removed trees as determined feasible. Pruning shall be conducted to avoid unnecessary injuries to trees. General principles of pruning (ANSI A300 Pruning Standards) include placing cuts immediately beyond the branch collar, making clean cuts by scoring the underside of the branch first, and, for coast live oak, pruning is recommended from May 1 to January 31. 	May 1 – January 31
Invasive plant species (i.e., <i>Genista</i> sp., <i>Acacia</i> sp., iceplant, etc.)	Per CSUMB Master Plan, PDF-OS-3: Remove invasive species using best management practices during construction, demolition, and landscape projects.	<ul style="list-style-type: none"> Equipment shall be pressure washed prior to entering the project site, cleaned of mud or other debris that may contain invasive plants and/or seeds, and inspected to reduce the potential of spreading noxious weeds. Equipment shall also be pressure washed and cleared of debris prior to exiting the project site to limit the spread of noxious weeds. If found, invasive species shall be removed and placed in a trash (not green yard waste intended for reuse) dumpster and taken to the landfill. 	Year-round

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WILDLIFE			
Monterey dusky-footed woodrat (<i>Neotoma macrotis luciana</i>)	Forest and oak woodland habitats of moderate canopy with moderate to dense understory. Also occurs in chaparral habitats.	<ul style="list-style-type: none"> To avoid and reduce impacts to the Monterey dusky-footed woodrat, a qualified biologist shall conduct surveys for woodrat nests in suitable habitat proposed for fuel reduction, ground disturbance, or staging activities within three days prior to the implementation of activities within the project area and within a buffer zone of 100 feet from the limit of disturbance. All woodrat nests shall be flagged for avoidance from impacts that may result from activities and for protection during activities, where feasible. Nests that cannot be avoided shall be manually deconstructed prior to implementing activities to allow animals to escape harm. If a litter of young is found or suspected, nest material shall be replaced, and the nest left alone for 2-3 weeks before a re-check to verify that young are capable of independent survival before proceeding with nest dismantling. 	Year-round
California tiger salamander (<i>Ambystoma californiense</i>)	Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Need underground refuges and vernal pools or other seasonal water sources.	<ul style="list-style-type: none"> A qualified biologist will survey the proposed project area and immediately adjacent areas 48 hours before and the morning of the onset of work activities for the presence of CTS. If any life stage of CTS is observed, project activities will not commence until the Service and CDFW are consulted and appropriate actions are taken to allow project activities to begin. A qualified biologist shall survey appropriate areas of the site daily before the onset of work activities for the presence of CTS. The qualified biologist shall remain on site until all ground disturbing activities are completed. If any life stage of CTS is found and these individuals are likely to be killed or injured by work activities, work shall stop and the Service and CDFW shall be contacted. Activities will not resume until the Service and CDFW are consulted and appropriate actions are taken to allow project activities to continue. The qualified biologist shall complete a daily log summarizing activities and environmental compliance throughout the duration of the proposed project. Only tightly woven fiber netting or similar material may be used for erosion control at the project site. Coconut coir matting is an acceptable erosion control material. No plastic mono-filament matting will be used for erosion control, as this material may ensnare wildlife, including CTS. Because dusk and dawn are often the times when CTS are most actively foraging and dispersing, all project activities should cease one half hour before sunset and should not begin prior to one half hour after sunrise. All trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following completion of work activities, all trash and construction debris shall be removed from work areas. 	April 15 – October 15
Smith's blue butterfly (<i>Euphilotes enoptes smithi</i>)	Most commonly associated with coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz Counties. Plant hosts are <i>Eriogonum latifolium</i> and <i>E. parvifolium</i> .	<ul style="list-style-type: none"> Prior to project activities, CSUMB shall retain a qualified biologist to conduct a survey for SBB habitat (i.e., its host plants, <i>E. latifolium</i> and <i>E. parvifolium</i>) within the project site. If found, SBB habitat shall be avoided. Areas known to support SBB habitat shall be flagged, and activities within those areas shall only occur from approximately June 1 to January 31, or at the discretion of the qualified biologist. Vehicle traffic in areas known to support SBB habitat shall be strictly prohibited at all times. Piling of any cut vegetation or other debris within areas known to support SBB habitat shall be strictly prohibited at all times. 	September 1 – January 31
Nesting Avian Species and other protected Avian Species, including but not limited to burrowing owl (<i>Athene cunicularia</i>) and white-tailed kite (<i>Elanus leucurus</i>)	Stands of live oak, riparian deciduous, or other forest habitats, as well as open grasslands, are used most frequently for nesting.	<ul style="list-style-type: none"> In compliance with CDFW Code and standard professional practice, 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 (January 15 – September 15). Specifically, vegetation and/or tree removal should be scheduled between September 16 and January 14. Alternatively, if activities during the breeding and nesting season cannot be avoided, a qualified biologist shall conduct pre-activity surveys for nesting raptors and other protected avian species within the site and within a suitable buffer area (recommended buffer distances are 500 feet for birds of prey and 250 feet for other passerine species) if activities commences between January 15 and September 15. Pre-activity surveys shall 	September 16 – January 14

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The following recommendations have been developed to avoid and minimize potential impacts to the special-status species and sensitive habitats within and adjacent to the fuel reduction site to a less-than-significant level in accordance with the California Environmental Quality Act (CEQA). Special-status species are those plants and animals that have been formally listed or proposed for listing as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA).

Species	General Habitat/Description	Best Management Practices (BMPs)	Recommended Work Windows for Conducting Fuel Reduction and Defensible Space Activities ¹ (Also Refer to Attachment D)
		be conducted no more than 14 days prior to the start of fuel reduction activities during the early part of the breeding season (January 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 September). Because some bird species nest early in spring and others nest later in summer, surveys for nesting birds may be required to continue during fuel reduction activities 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 fuel reduction schedule and buffer distances.	
Special-Status Bat Species, including but not limited to Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	Found in rural and urban settings from inland deserts to coastal redwoods, oak woodland, grassland and low to mid-elevation mixed coniferous-deciduous forests. Typically roost during the day in tree cavities, tree foliage, bark crevices, limestone caves, lava tubes, and mines, but can roost in buildings that offer suitable conditions. Night roosts are in more open settings and include bridges, rock crevices, and trees.	<ul style="list-style-type: none"> To avoid and reduce impacts to special-status bat species, a qualified bat specialist or wildlife biologist shall conduct surveys during the reproductive season (March 1 through September 15) to characterize bat utilization of the project site and potential species present (techniques utilized to be determined by the biologist) prior to any tree or vegetation removal (or any other suitable roosting habitat). Surveys should also be conducted outside of the reproductive season, generally September 16-February 28 (or 29), as bats could be present and active any time of the year. Surveys may include visual inspection during the day and emergence surveys aided by acoustics at sunset, and shall be conducted no more than 14 days prior to any tree or vegetation removal (or any other suitable roosting habitat) within 100 feet of vegetation removal limits. If, according to the bat specialist, no bats or bat signs are observed in the course of the surveys, tree and building removal may proceed. If bats and/or bat signs are observed during the surveys, the biologist shall determine if disturbance would jeopardize a maternity roost or another type of roost (i.e., foraging, day, or night). If avoidance is not possible then vegetation removal must be postponed until the end of the reproductive season. According to CDFW, maternity roosts cannot be moved or deliberately disturbed for any species of bat. 	September 16 – February 28 (or February 29)
Other special-status wildlife species with potential to occur, including but not limited to Monterey ornate shrew (<i>Sorex ornatus salarius</i>), American badger (<i>Taxidea taxus</i>), Northern California legless lizard (<i>Anniella pulchra</i>), and Coast horned lizard (<i>Phrynosoma blainvillii</i>)	Various; please refer to Appendix C (Special-Status Species Table) of the project's Biological Resources Report.	<ul style="list-style-type: none"> A qualified biologist shall conduct an Employee Education Program for the workers prior to the implementation of any fuel management activities. The qualified biologist shall meet with the fuel management workers (crews) at the onset of work at the project site to educate them on the following: 1) the appropriate access route(s) in and out of the construction area and review project boundaries; 2) how a biological monitor will examine the area and agree upon a method which will ensure the safety of the monitor during such activities, 3) the identification of special-status species that may be present; 4) the specific mitigation measures that will be incorporated into the work effort; 5) the general provisions and protections afforded; and 6) the proper procedures if a special-status species is encountered within the project site to avoid impacts. 	Year-round

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APPENDIX B.

California Natural Diversity Database Report

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Selected Elements by Scientific Name
 California Department of Fish and Wildlife
 California Natural Diversity Database



Query Criteria: Quad IS (Marina (3612167) OR Monterey (3612158) OR Moss Landing (3612177) OR Prunedale (3612176) OR Salinas (3612166) OR Seaside (3612157) OR Spreckels (3612156))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
<i>Agrostis lacuna-vernalis</i> vernal pool bent grass	PMPOA041N0	None	None	G1	S1	1B.1
<i>Allium hickmanii</i> Hickman's onion	PMLIL02140	None	None	G2	S2	1B.2
<i>Ambystoma californiense pop. 1</i> California tiger salamander - central California DPS	AAAAA01181	Threatened	Threatened	G2G3	S3	WL
<i>Ambystoma macrodactylum croceum</i> Santa Cruz long-toed salamander	AAAAA01082	Endangered	Endangered	G5T1T2	S1S2	FP
<i>Anniella pulchra</i> Northern California legless lizard	ARACC01020	None	None	G3	S3	SSC
<i>Arctostaphylos hookeri ssp. hookeri</i> Hooker's manzanita	PDERI040J1	None	None	G3T2	S2	1B.2
<i>Arctostaphylos montereyensis</i> Toro manzanita	PDERI040R0	None	None	G2?	S2?	1B.2
<i>Arctostaphylos pajaroensis</i> Pajaro manzanita	PDERI04100	None	None	G1	S1	1B.1
<i>Arctostaphylos pumila</i> sandmat manzanita	PDERI04180	None	None	G1	S1	1B.2
<i>Asio flammeus</i> short-eared owl	ABNSB13040	None	None	G5	S3	SSC
<i>Astragalus tener var. tener</i> alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
<i>Astragalus tener var. titi</i> coastal dunes milk-vetch	PDFAB0F8R2	Endangered	Endangered	G2T1	S1	1B.1
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Bombus caliginosus</i> obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
<i>Bombus crotchii</i> Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	None	G2G3	S1	
<i>Buteo regalis</i> ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
<i>Castilleja ambigua var. insalutata</i> pink Johnny-nip	PDSCR0D403	None	None	G4T2	S2	1B.1



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Central Dune Scrub Central Dune Scrub	CTT21320CA	None	None	G2	S2.2	
Central Maritime Chaparral Central Maritime Chaparral	CTT37C20CA	None	None	G2	S2.2	
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T1T2	S1S2	1B.1
Charadrius nivosus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S2	SSC
Chorizanthe minutiflora Fort Ord spineflower	PDPGN04100	None	None	G1	S1	1B.2
Chorizanthe pungens var. pungens Monterey spineflower	PDPGN040M2	Threatened	None	G2T2	S2	1B.2
Chorizanthe robusta var. robusta robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
Clarkia jolonensis Jolon clarkia	PDONA050L0	None	None	G2	S2	1B.2
Coastal and Valley Freshwater Marsh Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	G3	S2.1	
Coastal Brackish Marsh Coastal Brackish Marsh	CTT52200CA	None	None	G2	S2.1	
Coelus globosus globose dune beetle	IICOL4A010	None	None	G1G2	S1S2	
Collinsia multicolor San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
Cordylanthus rigidus ssp. littoralis seaside bird's-beak	PDSCR0J0P2	None	Endangered	G5T2	S2	1B.1
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S1S2	SSC
Cypseloides niger black swift	ABNUA01010	None	None	G4	S2	SSC
Danaus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	Candidate	None	G4T2T3	S2S3	
Delphinium californicum ssp. interius Hospital Canyon larkspur	PDRAN0B0A2	None	None	G3T3	S3	1B.2
Delphinium hutchinsoniae Hutchinson's larkspur	PDRAN0B0V0	None	None	G2	S2	1B.2
Delphinium umbraculorum umbrella larkspur	PDRAN0B1W0	None	None	G3	S3	1B.3
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Eremophila alpestris actia</i> California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
<i>Ericameria fasciculata</i> Eastwood's goldenbush	PDAST3L080	None	None	G2	S2	1B.1
<i>Eriogonum nortonii</i> Pinnacles buckwheat	PDPGN08470	None	None	G2	S2	1B.3
<i>Erysimum ammophilum</i> sand-loving wallflower	PDBRA16010	None	None	G2	S2	1B.2
<i>Erysimum menziesii</i> Menzies' wallflower	PDBRA160R0	Endangered	Endangered	G1	S1	1B.1
<i>Eucyclogobius newberryi</i> tidewater goby	AFCQN04010	Endangered	None	G3	S3	
<i>Eumetopias jubatus</i> Steller (=northern) sea-lion	AMAJC03010	Delisted	None	G3	S2	
<i>Euphilotes enoptes smithi</i> Smith's blue butterfly	IILEPG2026	Endangered	None	G5T1T2	S1	
<i>Falco mexicanus</i> prairie falcon	ABNKD06090	None	None	G5	S4	WL
<i>Falco peregrinus anatum</i> American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
<i>Fritillaria liliacea</i> fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
<i>Gilia tenuiflora ssp. arenaria</i> Monterey gilia	PDPLM041P2	Endangered	Threatened	G3G4T2	S2	1B.2
<i>Hesperocyparis goveniana</i> Gowen cypress	PGCUP04031	Threatened	None	G1	S1	1B.2
<i>Hesperocyparis macrocarpa</i> Monterey cypress	PGCUP04060	None	None	G1	S1	1B.2
<i>Holocarpha macradenia</i> Santa Cruz tarplant	PDAST4X020	Threatened	Endangered	G1	S1	1B.1
<i>Horkelia cuneata var. sericea</i> Kellogg's horkelia	PDROS0W043	None	None	G4T1?	S1?	1B.1
<i>Horkelia marinensis</i> Point Reyes horkelia	PDROS0W0B0	None	None	G2	S2	1B.2
<i>Lasiurus cinereus</i> hoary bat	AMACC05030	None	None	G3G4	S4	
<i>Lasthenia conjugens</i> Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
<i>Laterallus jamaicensis coturniculus</i> California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Lavinia exilicauda harengus</i> Monterey hitch	AFCJB19013	None	None	G4T2T4	S3	SSC
<i>Layia carnosa</i> beach layia	PDAST5N010	Endangered	Endangered	G2	S2	1B.1
<i>Legenere limosa</i> legenere	PDCAM0C010	None	None	G2	S2	1B.1
<i>Linderiella occidentalis</i> California linderiella	ICBRA06010	None	None	G2G3	S2S3	
<i>Lupinus tidestromii</i> Tidestrom's lupine	PDFAB2B3Y0	Endangered	Endangered	G1	S1	1B.1
<i>Malacothamnus palmeri var. involucratus</i> Carmel Valley bush-mallow	PDMAL0Q0B1	None	None	G3T2Q	S2	1B.2
<i>Malacothrix saxatilis var. arachnoidea</i> Carmel Valley malacothrix	PDAST660C2	None	None	G5T2	S2	1B.2
<i>Meconella oregana</i> Oregon meconella	PDPAP0G030	None	None	G2G3	S2	1B.1
<i>Microseris paludosa</i> marsh microseris	PDAST6E0D0	None	None	G2	S2	1B.2
<i>Monardella sinuata ssp. nigrescens</i> northern curly-leaved monardella	PDLAM18162	None	None	G3T2	S2	1B.2
<i>Monolopia gracilens</i> woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
Monterey Cypress Forest Monterey Cypress Forest	CTT83150CA	None	None	G1	S1.2	
Monterey Pine Forest Monterey Pine Forest	CTT83130CA	None	None	G1	S1.1	
Monterey Pygmy Cypress Forest Monterey Pygmy Cypress Forest	CTT83162CA	None	None	G1	S1.1	
<i>Neotoma macrotis luciana</i> Monterey dusky-footed woodrat	AMAFF08083	None	None	G5T3	S3	SSC
Northern Bishop Pine Forest Northern Bishop Pine Forest	CTT83121CA	None	None	G2	S2.2	
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
<i>Oncorhynchus mykiss irideus pop. 9</i> steelhead - south-central California coast DPS	AFCHA0209H	Threatened	None	G5T2Q	S2	
<i>Pelecanus occidentalis californicus</i> California brown pelican	ABNFC01021	Delisted	Delisted	G4T3T4	S3	FP
<i>Phrynosoma blainvillii</i> coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
<i>Pinus radiata</i> Monterey pine	PGPIN040V0	None	None	G1	S1	1B.1



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Piperia yadonii</i> Yadon's rein orchid	PMORC1X070	Endangered	None	G1	S1	1B.1
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> Choris' popcornflower	PDBOR0V061	None	None	G3T1Q	S1	1B.2
<i>Potentilla hickmanii</i> Hickman's cinquefoil	PDROS1B370	Endangered	Endangered	G1	S1	1B.1
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	ABNME05011	Endangered	Endangered	G3T1	S1	FP
<i>Ramalina thrausta</i> angel's hair lichen	NLLEC3S340	None	None	G5?	S2S3	2B.1
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
<i>Rana draytonii</i> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<i>Reithrodontomys megalotis distichlis</i> Salinas harvest mouse	AMAFF02032	None	None	G5T1	S1	
<i>Riparia riparia</i> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<i>Rosa pinetorum</i> pine rose	PDROS1J0W0	None	None	G2	S2	1B.2
<i>Sidalcea malachroides</i> maple-leaved checkerbloom	PDMAL110E0	None	None	G3	S3	4.2
<i>Sorex ornatus salarius</i> Monterey shrew	AMABA01105	None	None	G5T1T2	S1S2	SSC
<i>Spea hammondii</i> western spadefoot	AAABF02020	None	None	G2G3	S3	SSC
<i>Spirinchus thaleichthys</i> longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	PDAST6E050	None	None	G2	S2	1B.2
<i>Sulcaria spiralifera</i> twisted horsehair lichen	NLT0042560	None	None	G3G4	S2	1B.2
<i>Taricha torosa</i> Coast Range newt	AAAAF02032	None	None	G4	S4	SSC
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S3	SSC
<i>Thamnophis hammondii</i> two-striped gartersnake	ARADB36160	None	None	G4	S3S4	SSC
<i>Trifolium buckwestiorum</i> Santa Cruz clover	PDFAB402W0	None	None	G2	S2	1B.1
<i>Trifolium hydrophilum</i> saline clover	PDFAB400R5	None	None	G2	S2	1B.2



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Trifolium polyodon</i> Pacific Grove clover	PDFAB402H0	None	Rare	G1	S1	1B.1
<i>Trifolium trichocalyx</i> Monterey clover	PDFAB402J0	Endangered	Endangered	G1	S1	1B.1
<i>Tryonia imitator</i> mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	
Valley Needlegrass Grassland Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	

Record Count: 107

APPENDIX C.

Information for Planning and Consultation Resource List

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IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California



Local office

Ventura Fish And Wildlife Office

☎ (805) 644-1766

📅 (805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME

STATUS

California Condor <i>Gymnogyps californianus</i>	Endangered
There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/8193	
California Least Tern <i>Sterna antillarum browni</i>	Endangered
Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	
Least Bell's Vireo <i>Vireo bellii pusillus</i>	Endangered
Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/5945	
Marbled Murrelet <i>Brachyramphus marmoratus</i>	Threatened
There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/4467	
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i>	Endangered
Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/6749	
Western Snowy Plover <i>Charadrius nivosus nivosus</i>	Threatened
There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/8035	

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i>	Threatened
Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2891	
California Tiger Salamander <i>Ambystoma californiense</i>	Threatened
There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2076	

Santa Cruz Long-toed Salamander *Ambystoma macrodactylum* Endangered

croceum

Wherever found

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/7405>

Fishes

NAME

STATUS

Tidewater Goby *Eucyclogobius newberryi* Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/57>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus* Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Smith's Blue Butterfly *Euphilotes enoptes smithi* Endangered

Wherever found

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/4418>

Crustaceans

NAME

STATUS

Vernal Pool Fairy Shrimp *Branchinecta lynchi* Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/498>

Flowering Plants

NAME

STATUS

Contra Costa Goldfields *Lasthenia conjugens* Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/7058>

Marsh Sandwort *Arenaria paludicola* Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/2229>

Menzies' Wallflower *Erysimum menziesii* Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/2935>

Monterey Gilia *Gilia tenuiflora* ssp. *arenaria* Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/856>

Monterey Spineflower *Chorizanthe pungens* var. *pungens* Threatened

Wherever found

There is **final** critical habitat for this species. Your location overlaps the critical habitat.

<https://ecos.fws.gov/ecp/species/396>

Yadon's Piperia *Piperia yadonii* Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/4205>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Monterey Spineflower <i>Chorizanthe pungens</i> var. <i>pungens</i> https://ecos.fws.gov/ecp/species/396#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES

THAT THE BIRD DOES NOT LIKELY
BREED IN YOUR PROJECT AREA.)

<p>Allen's Hummingbird <i>Selasphorus sasin</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637</p>	Breeds Feb 1 to Jul 15
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626</p>	Breeds Jan 1 to Aug 31
<p>Black Oystercatcher <i>Haematopus bachmani</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591</p>	Breeds Apr 15 to Oct 31
<p>Black Tern <i>Chlidonias niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093</p>	Breeds May 15 to Aug 20
<p>California Thrasher <i>Toxostoma redivivum</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jan 1 to Jul 31
<p>Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jun 1 to Aug 31
<p>Common Yellowthroat <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084</p>	Breeds May 20 to Jul 31
<p>Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680</p>	Breeds Jan 1 to Aug 31

- Lawrence's Goldfinch** *Carduelis lawrencei* Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
<https://ecos.fws.gov/ecp/species/9464>
- Marbled Godwit** *Limosa fedoa* Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
<https://ecos.fws.gov/ecp/species/9481>
- Nuttall's Woodpecker** *Picoides nuttallii* Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
<https://ecos.fws.gov/ecp/species/9410>
- Oak Titmouse** *Baeolophus inornatus* Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
<https://ecos.fws.gov/ecp/species/9656>
- Olive-sided Flycatcher** *Contopus cooperi* Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
<https://ecos.fws.gov/ecp/species/3914>
- Scripps's Murrelet** *Synthliboramphus scrippsi* Breeds Feb 20 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
- Short-billed Dowitcher** *Limnodromus griseus* Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
<https://ecos.fws.gov/ecp/species/9480>
- Tricolored Blackbird** *Agelaius tricolor* Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
<https://ecos.fws.gov/ecp/species/3910>
- Willet** *Tringa semipalmata* Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
- Wrentit** *Chamaea fasciata* Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie *Pica nuttalli*

Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9726>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

Black Tern
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



California Thrasher
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



Clark's Grebe
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



Common
 Yellowthroat
 BCC - BCR (This is a
 Bird of
 Conservation
 Concern (BCC) only
 in particular Bird
 Conservation
 Regions (BCRs) in
 the continental
 USA)



Golden Eagle
 Non-BCC
 Vulnerable (This is
 not a Bird of
 Conservation
 Concern (BCC) in
 this area, but
 warrants attention
 because of the
 Eagle Act or for
 potential
 susceptibilities in
 offshore areas
 from certain types
 of development or
 activities.)



Lawrence's Goldfinch

BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Marbled Godwit

BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Olive-sided Flycatcher

BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Scripps's Murrelet
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)

Short-billed
 Dowitcher
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)

Tricolored
 Blackbird
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)

Willet
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)

Wrentit
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



Yellow-billed
Magpie
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental USA
and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

[PSSA](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

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APPENDIX D.

Special-Status Species Table

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Special-Status Species Table

Marina, Monterey, Moss Landing, Prunedale, Salinas, Seaside, and Spreckels Quadrangles

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
MAMMALS			
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-- / CSC / --	Found primarily in rural settings from inland deserts to coastal redwoods, oak woodland of the inner Coast Ranges and Sierra foothills, and low to mid-elevation mixed coniferous-deciduous forests. Typically roost during the day in limestone caves, lava tubes, and mines, but can roost in buildings that offer suitable conditions. Night roosts are in more open settings and include bridges, rock crevices, and trees.	Moderate Suitable habitat is present within the project site. The CNDDDB reports one occurrence of this species within the quadrangles reviewed, located approximately 1.3 miles east of the project site.
<i>Neotoma macrotis luciana</i> Monterey dusky-footed woodrat	-- / CSC / --	Forest and oak woodland habitats of moderate canopy with moderate to dense understory. Also occurs in chaparral habitats.	High Suitable habitat is present within the project site. Nests of this species were observed within the site during biological surveys in 2016 and 2017. Therefore, this species has a high potential to occur within the project site.
<i>Sorex ornatus salarii</i> Monterey ornate shrew	-- / CSC / --	Mostly moist or riparian woodland habitats and within chaparral, grassland, and emergent wetland habitats where there is a thick duff or downed logs.	High Suitable habitat is present within project site. The CNDDDB reports six (6) occurrences of this species within the quadrangles reviewed, the nearest located approximately 4.2 miles from the project site. The HMP identifies the project site as containing potential habitat for this species.
<i>Taxidea taxus</i> American badger	-- / CSC / --	Dry, open grasslands, fields, pastures savannas, and mountain meadows near timberline are preferred. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated grounds.	Moderate Suitable habitat is present within project site. The CNDDDB reports eight (8) occurrences of this species within the quadrangles reviewed, including a 1992 occurrence which overlaps the project site.
BIRDS			
<i>Agelaius tricolor</i> Tricolored blackbird (nesting colony)	-- / SC&CSC / --	Nest in colonies in dense riparian vegetation, along rivers, lagoons, lakes, and ponds. Forages over grassland or aquatic habitats.	Unlikely No suitable habitat is present within project site.
<i>Asio flammeus</i> Short-eared owl (nesting)	-- / CSC / --	Usually found in open areas with few trees, such as annual and perennial grasslands, prairies, meadows, dunes, irrigated lands, and saline and freshwater emergent marshes. Dense vegetation is required for roosting and nesting cover. This includes tall grasses, brush, ditches, and wetlands. Open, treeless areas containing elevated sites for perching, such as fence posts or small mounds, are also needed. Some individuals breed in northern California.	Unlikely No suitable habitat is present within project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Athene cunicularia</i> Burrowing owl (burrow sites & some wintering sites)	-- / CSC / --	Year-round resident of open, dry grassland and desert habitats, and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Frequent open grasslands and shrublands with perches and burrows. Use rodent burrows (often California ground squirrel) for roosting and nesting cover. Pipes, culverts, and nest boxes may be substituted for burrows in areas where burrows are not available.	Moderate Suitable habitat is present within project site. The CNDDDB reports nine (9) occurrences of this species within the quadrangles reviewed, the nearest located less than one (1) mile from the project site.
<i>Brachyramphus marmoratus</i> Marbled murrelet	FT / SE / --	Occur year-round in marine subtidal and pelagic habitats from the Oregon border to Point Sal. Partial to coastlines with stands of mature redwood and Douglas-fir. Requires dense mature forests of redwood and/or Douglas-fir for breeding and nesting.	Unlikely No suitable habitat is present within project site.
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	FT / CSC / --	Sandy beaches on marine and estuarine shores, also salt pond levees and the shores of large alkali lakes. Requires sandy, gravelly or friable soil substrate for nesting.	Unlikely No suitable habitat within the project site.
<i>Coturnicops noveboracensis</i> Yellow rail	-- / CSC / --	Wet meadows and coastal tidal marshes. Occurs year round in California, but in two primary seasonal roles: as a very local breeder in the northeastern interior and as a winter visitor (early Oct to mid-Apr) on the coast and in the Suisun Marsh region	Unlikely No suitable habitat is present within project site.
<i>Cypseloides niger</i> Black swift	-- / CSC / --	Regularly nests in moist crevice or cave on sea cliffs above the surf, or on cliffs behind, or adjacent to, waterfalls in deep canyons. Forages widely over many habitats.	Unlikely No suitable habitat is present within project site.
<i>Elanus leucurus</i> White-tailed kite (nesting)	-- / CFP / --	Open groves, river valleys, marshes, and grasslands. Prefer such area with low roosts (fences etc.). Nest in shrubs and trees adjacent to grasslands.	Moderate Suitable habitat is present within the project site. The CNDDDB reports one (1) occurrences of this species within the quadrangles reviewed, located approximately 10.5 miles from the project site.
<i>Empidonax traillii extimus</i> Southwestern willow flycatcher	FE / SE / --	Breeds in riparian habitat in areas ranging in elevation from sea level to over 2,600 meters. Builds nest in trees in densely vegetated areas. This species establishes nesting territories and builds, and forages in mosaics of relatively dense and expansive areas of trees and shrubs, near or adjacent to surface water or underlain by saturated soils. Not typically found nesting in areas without willows (<i>Salix sp.</i>), tamarisk (<i>Tamarix ramosissima</i>), or both.	Unlikely No suitable habitat is present within project site.
<i>Falco peregrinus anatum</i> American peregrine falcon (nesting)	-- / CFP / --	Forages for other birds over a variety of habitats. Breeds primarily on rocky cliffs.	Unlikely No suitable habitat is present within project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Gymnogyps californianus</i> California condor	FE / SE / --	Roosting sites in isolated rocky cliffs, rugged chaparral, and pine covered mountains 2000-6000 feet above sea level. Foraging area removed from nesting/roosting site (includes rangeland and coastal area - up to 19 mile commute one way). Nest sites in cliffs, crevices, potholes.	Unlikely No suitable habitat is present within project site.
<i>Laterallus jamaicensis coturniculus</i> California black rail	-- / ST&CFP / --	Inhabits freshwater marshes, wet meadows & shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that does not fluctuate during the year & dense vegetation for nesting habitat.	Unlikely No suitable habitat is present within project site.
<i>Pelecanus occidentalis californicus</i> California brown pelican	-- / CFP / --	Found in estuarine, marine subtidal, and marine pelagic waters along the California coast. Usually rests on water or inaccessible rocks, but also uses mudflats, sandy beaches, wharfs, and jetties.	Unlikely No suitable habitat is present within project site.
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	FE / SE&CFP / --	Salt and brackish marshes.	Unlikely No suitable habitat is present within project site.
<i>Riparia riparia</i> Bank swallow (nesting)	-- / ST / --	Nest colonially in sand banks. Found near water; fields, marshes, streams, and lakes.	Unlikely No suitable habitat is present within project site.
<i>Sterna antillarum browni</i> California least tern	FE / SE / --	Prefers undisturbed nest sites on open, sandy/gravelly shores near shallow-water feeding areas in estuaries. Sea beaches, bays, large rivers, bars.	Unlikely No suitable habitat is present within project site.
<i>Vireo bellii pusillus</i> Least Bell's Vireo	FE / SE / --	Riparian areas and drainages. Breed in willow riparian forest supporting a dense, shrubby understory. Oak woodland with a willow riparian understory is also used in some areas, and individuals sometimes enter adjacent chaparral, coastal sage scrub, or desert scrub habitats to forage.	Unlikely No suitable habitat is present within project site.
REPTILES AND AMPHIBIANS			
<i>Ambystoma californiense</i> California tiger salamander	FT / ST / --	Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Need underground refuges and vernal pools or other seasonal water sources.	High No suitable breeding habitat is present within the project site; however, suitable upland and dispersal habitat is present. The CNDDDB reports 55 occurrences of this species within the quadrangles reviewed, including a 2005 occurrence within the project site. Therefore, this species has a high potential to occur within the project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Ambystoma macrodactylum croceum</i> Santa Cruz long-toed salamander	FE / SE&CFP / --	Preferred habitats include ponderosa pine, montane hardwood-conifer, mixed conifer, montane riparian, red fir and wet meadows. Occurs in a small number of localities in Santa Cruz and Monterey Counties. Adults spend the majority of the time in underground burrows and beneath objects. Larvae prefer shallow water with clumps of vegetation.	Unlikely No suitable habitat is present within project site. The project site is outside the currently known range of this species.
<i>Anniella pulchra</i> Northern California legless lizard	-- / CSC / --	Requires moist, warm habitats with loose soil for burrowing and prostrate plant cover, often forages in leaf litter at plant bases; may be found on beaches, sandy washes, and in woodland, chaparral, and riparian areas.	High Suitable habitat is present within the project site. The CNDDDB reports 56 occurrences of this species within the quadrangles reviewed, including a 2014 occurrence within the project site.
<i>Emys marmorata</i> Western pond turtle	-- / CSC / --	Associated with permanent or nearly permanent water in a wide variety of habitats including streams, lakes, ponds, irrigation ditches, etc. Require basking sites such as partially submerged logs, rocks, mats of vegetation, or open banks.	Unlikely No suitable habitat is present within project site.
<i>Phrynosoma blainvillii</i> Coast horned lizard	-- / CSC / --	Associated with open patches of sandy soils in washes, chaparral, scrub, and grasslands.	High Suitable habitat is present within the project site. The CNDDDB reports five (5) occurrences of this species within the quadrangles reviewed, including a 1992 occurrence within the project site. Therefore, this species has a high potential to occur within the project site.
<i>Rana boylei</i> Foothill yellow-legged frog	-- / SC&CSC / --	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats, including hardwood, pine, and riparian forests, scrub, chaparral, and wet meadows. Rarely encountered far from permanent water.	Unlikely No suitable habitat is present within project site.
<i>Rana draytonii</i> California red-legged frog	FT / CSC / --	Lowlands and foothills in or near permanent or late-season sources of deep water with dense, shrubby, or emergent riparian vegetation. During late summer or fall adults are known to utilize a variety of upland habitats with leaf litter or mammal burrows.	Unlikely Suitable upland and dispersal habitat is present within the project site; however, the project site is outside of the known dispersal range of any known breeding resources.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Taricha torosa</i> Coast Range newt	-- / CSC / --	Occurs mainly in valley-foothill hardwood, valley-foothill hardwood-conifer, coastal scrub, and mixed chaparral but is known to occur in grasslands and mixed conifer types. Seek cover under rocks and logs, in mammal burrows, rock fissures, or man-made structures such as wells. Breed in intermittent ponds, streams, lakes, and reservoirs.	Unlikely Suitable upland and dispersal habitat is present within the project site; however, the project site is outside of the known dispersal range of any known breeding resources.
<i>Thamnophis hammondi</i> Two-striped garter snake	-- / CSC / --	Associated with permanent or semi-permanent bodies of water bordered by dense vegetation in a variety of habitats from sea level to 2400m elevation.	Unlikely No suitable habitat is present within project site.
FISH			
<i>Eucyclogobius newberryi</i> Tidewater goby	FE / CSC / --	Brackish water habitats, found in shallow lagoons and lower stream reaches. Tidewater gobies appear to be naturally absent (now and historically) from three large stretches of coastline where lagoons or estuaries are absent and steep topography or swift currents may prevent tidewater gobies from dispersing between adjacent localities. The southernmost large, natural gap occurs between the Salinas River in Monterey County and Arroyo del Oso in San Luis Obispo County.	Not Present No suitable habitat is present within project site.
<i>Oncorhynchus mykiss irideus</i> Steelhead (south-central California coast DPS)	FT / -- / --	Cold headwaters, creeks, and small to large rivers and lakes; anadromous in coastal streams.	Not Present No suitable habitat is present within project site.
<i>Spirinchus thaleichthys</i> Longfin smelt	FC / ST&CSC / --	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefers salinities of 15-30 PPT, but can be found in completely freshwater to almost pure seawater.	Not Present No suitable habitat is present within project site.
INVERTEBRATES			
<i>Danaus plexippus</i> Monarch butterfly	FC / -- / --	Overwinters in coastal California using colonial roosts generally found in Eucalyptus, pine and acacia trees. Overwintering habitat for this species within the Coastal Zone represents ESHA. Local ordinances often protect this species as well.	Unlikely No overwintering occurrences are known within the project site.
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT / -- / --	Require ephemeral pools with no flow. Associated with vernal pool/grasslands from near Red Bluff (Shasta County), through the central valley, and into the South Coast Mountains Region. Require ephemeral pools with no flow.	Not Present No suitable habitat is present within project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Euphilotes enoptes smithi</i> Smith's blue butterfly	FE / -- / --	Most commonly associated with coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz Counties. Plant hosts are <i>Eriogonum latifolium</i> and <i>E. parvifolium</i> .	Moderate Suitable habitat is present within the project site. The CNDDDB reports 14 occurrences of this species within the project site, the nearest located approximately 1.9 miles west of the project site within Fort Ord Dunes State Park. The obligate host plants were not identified within the project site during previous botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions.
<i>Linderiella occidentalis</i> California linderiella (fairy shrimp)	-- / -- / --	Ephemeral ponds with no flow. Generally associated with hardpans.	Not Present No suitable habitat within the project site.
PLANTS			
<i>Agrostis lacuna-vernalis</i> Vernal pool bent grass	-- / -- / 1B	Vernal pool Mima mounds at elevations of 115-145 meters. Annual herb in the Poaceae family; blooms April-May. Known only from Butterfly Valley and Machine Gun Flats of Ft. Ord National Monument.	Unlikely No suitable habitat within the project site.
<i>Allium hickmanii</i> Hickman's onion	-- / -- / 1B	Closed-cone coniferous forests, maritime chaparral, coastal prairie, coastal scrub, and valley and foothill grasslands at elevations of 5-200 meters. Bulbiferous perennial herb in the Alliaceae family; blooms March-May.	Unlikely No suitable habitat within the project site.
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i> Hooker's manzanita	-- / -- / 1B	Closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub on sandy soils at elevations of 85-536 meters. Evergreen shrub in the Ericaceae family; blooms January-June.	Moderate Suitable habitat is present within the project site. The CNDDDB reports 19 occurrences of this species within the quadrangles reviewed, the nearest located approximately 0.5 miles from the project site. This species was not identified within the project site during 2016 botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions.
<i>Arctostaphylos montereyensis</i> Toro manzanita	-- / -- / 1B	Maritime chaparral, cismontane woodland, and coastal scrub on sandy soils at elevations of 30-730 meters. Evergreen shrub in the Ericaceae family; blooms February-March.	Moderate Suitable habitat is present within the project site. The CNDDDB reports 16 occurrences of this species within the quadrangles reviewed, including an occurrence which overlaps the project site. This species was not identified within the project site during 2016 botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Arctostaphylos pajaroensis</i> Pajaro manzanita	-- / -- / 1B	Chaparral on sandy soils at elevations of 30-760 meters. Evergreen shrub in the Ericaceae family; blooms December-March.	Moderate Suitable habitat is present within the project site. The CNDDDB reports 22 occurrences of this species within the quadrangles reviewed, the nearest located approximately 1.2 miles from the project site. This species was not identified within the project site during 2016 botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions.
<i>Arctostaphylos pumila</i> Sandmat manzanita	-- / -- / 1B	Openings of closed-cone coniferous forests, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils at elevations of 3-205 meters. Evergreen shrub in the Ericaceae family; blooms February-May.	Present Suitable habitat is present within the project site. This species was observed within the project site during 2016 botanical surveys.
<i>Arenaria paludicola</i> Marsh sandwort	FE / SE / 1B	Known from only two natural occurrences in Black Lake Canyon and at Oso Flaco Lake. Sandy openings of freshwater of brackish marshes and swamps at elevations of 3-170 meters. Stoloniferous perennial herb in the Caryophyllaceae family; blooms May-August.	Unlikely No suitable habitat within the project site. The project site is outside of the currently known range for this species.
<i>Astragalus tener</i> var. <i>tener</i> Alkali milk-vetch	-- / -- / 1B	Playas, valley and foothill grassland on adobe clay, and vernal pools on alkaline soils at elevations of 1-60 meters. Annual herb in the Fabaceae family; blooms March-June.	Unlikely No suitable habitat within the project site.
<i>Astragalus tener</i> var. <i>titi</i> Coastal dunes milk-vetch	FE / SE / 1B	Sandy soils in coastal bluff scrub, coastal dunes, coastal prairie (mesic); elevation 3-164 feet. Annual herb in the Fabaceae family; blooms March-May.	Unlikely No suitable habitat within the project site.
<i>Bryoria spiralifera</i> Twisted horsehair lichen	-- / -- / 1B	California North Coast coniferous forest at elevations of 0-30 meters. Often found on conifers, including <i>Picea sitchensis</i> , <i>Pinus contorta</i> var. <i>contorta</i> , <i>Pseudotsuga menziesii</i> , <i>Abies grandis</i> , and <i>Tsuga heterophylla</i> . Fruticose lichen in the Parmeliaceae family.	Unlikely No suitable habitat within the project site.
<i>Castilleja ambigua</i> var. <i>insalutata</i> Pink Johnny-nip	-- / -- / 1B	Coastal prairie and coastal scrub at elevations of 0-100 meters. Annual herb in the Orobanchaceae family; blooms May-August.	Low Low quality habitat is present within the coastal scrub habitat within the project site. The CNDDDB reports a non-specific occurrence which overlaps the project site; however, the CNDDDB identifies that the species was found in the "mima mounds" area of Fort Ord, which does not occur within the site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Ceanothus rigidus</i> Monterey ceanothus	-- / -- / --	Closed cone coniferous forest, chaparral, and coastal scrub on sandy soils at elevations of 3-550 meters. Evergreen shrub in the Rhamnaceae family, blooms February-June.	Moderate Suitable habitat is present within the project site. The CNDDDB does not report any occurrences of this species within the quadrangles reviewed; however, this species is known to occur throughout the Former Fort Ord where suitable habitat is present. This species was not identified within the project site during 2016 botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions.
<i>Centromadia parryi</i> ssp. <i>congdonii</i> Congdon's tarplant	-- / -- / 1B	Valley and foothill grassland on heavy clay, saline, or alkaline soils at elevations of 0-230 meters. Annual herb in the Asteraceae family; blooms May-November.	Unlikely No suitable habitat within the project site.
<i>Chorizanthe minutiflora</i> Fort Ord spineflower	-- / -- / 1B	Sandy openings of maritime chaparral and coastal scrub at elevations of 55-150 meters. Only known occurrences on Fort Ord National Monument. Annual herb in the Polygonaceae family; blooms April-July.	Moderate Suitable habitat is present within the project site. The CNDDDB reports five (5) occurrences of this species within the quadrangles reviewed, the nearest located approximately 0.7 miles from the project site. This species was not identified within the project site during 2016 botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions.
<i>Chorizanthe pungens</i> var. <i>pungens</i> Monterey spineflower	FT / -- / 1B	Maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils at elevations of 3-450 meters. Annual herb in the Polygonaceae family; blooms April-July.	Present Suitable habitat is present within the project site. This species was observed within the project site during 2016 botanical surveys.
<i>Chorizanthe robusta</i> var. <i>robusta</i> Robust spineflower	FE / -- / 1B	Openings in cismontane woodland, coastal dunes, maritime chaparral, and coastal scrub on sandy or gravelly soils at elevations of 3-300 meters. Annual herb in the Polygonaceae family; blooms April-September.	Unlikely Suitable habitat is present within the project site; however, the project site is outside of the known distribution range of this species.
<i>Clarkia jolonensis</i> Jolon clarkia	-- / -- / 1B	Cismontane woodland, chaparral, riparian woodland, and coastal scrub at elevations of 20-660 meters. Annual herb in the Onagraceae family; blooms April-June.	Low Low quality habitat is present within the coast live oak woodland and coastal scrub habitats of the project site. No occurrences of this species are known on the Former Fort Ord.
<i>Collinsia multicolor</i> San Francisco collinsia	-- / -- / 1B	Closed-cone coniferous forest and coastal scrub, sometimes on serpentinite soils, at elevations of 30-250 meters. Annual herb in the Plantaginaceae family; blooms March-May.	Low Suitable habitat is present within coastal scrub habitats of the project site; however, no occurrences of this species are known on the Former Fort Ord.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i> Seaside bird's-beak	-- / SE / 1B	Closed-cone coniferous forests, maritime chaparral, cismontane woodlands, coastal dunes, and coastal scrub on sandy soils, often on disturbed sites, at elevations of 0-425 meters. Annual hemi-parasitic herb in the Orobanchaceae family; blooms April-October.	Moderate Suitable habitat is present within the project site. The CNDDDB reports 14 occurrences of this species within the quadrangles reviewed, the nearest located approximately 0.3 miles from the project site. This species was not identified within the project site during 2016 botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions.
<i>Delphinium californicum</i> ssp. <i>interius</i> Hospital Canyon larkspur	-- / -- / 1B	Openings in chaparral, coastal scrub, and mesic areas of cismontane woodland at elevations of 230-1095 meters. Perennial herb in the Ranunculaceae family; blooms April-June.	Unlikely Suitable habitat is present within the project site; however, the project site is outside the known elevation range of this species.
<i>Delphinium hutchinsoniae</i> Hutchinson's larkspur	-- / -- / 1B	Broadleaved upland forest, chaparral, coastal scrub, and coastal prairie at elevations of 0-427 meters. Perennial herb in the Ranunculaceae family; blooms March-June.	Low Suitable habitat is present within chaparral and coastal scrub habitats of the project site; however, no occurrences of this species are known on the Former Fort Ord.
<i>Delphinium umbraculorum</i> Umbrella larkspur	-- / -- / 1B	Cismontane woodland at elevations of 400-1600 meters. Perennial herb in the Ranunculaceae family; blooms April-June.	Unlikely Suitable habitat is present within the project site; however, the project site is outside the known elevation range of this species.
<i>Ericameria fasciculata</i> Eastwood's goldenbush	-- / -- / 1B	Openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 30-275 meters. Evergreen shrub in the Asteraceae family; blooms July-October.	Moderate Suitable habitat is present within the project site. The CNDDDB reports 23 occurrences of this species within the quadrangles reviewed, including an occurrence which overlaps the project site. This species was not identified within the project site during 2016 botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions.
<i>Eriogonum nortonii</i> Pinnacles buckwheat	-- / -- / 1B	Chaparral and valley and foothill grassland on sandy soils, often on recent burns, at elevations of 300-975 meters. Annual herb in the Polygonaceae family; blooms May-September.	Unlikely Suitable habitat is present within the project site; however, the project site is outside the known elevation range of this species.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Erysimum ammophilum</i> Coast wallflower	-- / -- / 1B	Openings in maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 0-60 meters. Perennial herb in the Brassicaceae family; blooms February-June.	Moderate Suitable habitat is present within the project site. The CNDDDB reports 21 occurrences of this species within the quadrangles reviewed, including an occurrence which overlaps the project site. This species was not identified within the project site during 2016 botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions.
<i>Erysimum menziesii</i> Menzies' wallflower	FE / SE / 1B	Coastal dunes at elevations of 0-35 meters. Perennial herb in the Brassicaceae family; blooms March-September.	Unlikely No suitable habitat within the project site.
<i>Fritillaria liliacea</i> Fragrant fritillary	-- / -- / 1B	Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland, often serpentinite, at elevations of 3-410 meters. Bulbiferous perennial herb in the Liliaceae family; blooms February-April.	Low Suitable habitat is present the project site; however, no occurrences of this species are known on the Former Fort Ord.
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i> Monterey gilia	FE / ST / 1B	Openings in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils at elevations of 0-45 meters. Annual herb in the Polemoniaceae family; blooms April-June.	Present Suitable habitat is present within the project site. This species was observed within the project site during 2017 botanical surveys by Dr. Fred Watson.
<i>Hesperocyparis goveniana</i> Gowen cypress	FT / -- / 1B	Closed-cone coniferous forest and maritime chaparral at elevations of 30-300 meters. Evergreen tree in the Cupressaceae family. Natively occurring only at Point Lobos near Gibson Creek and the Huckleberry Hill Nature Preserve near Highway 68.	Not Present Not observed within the project site during 2016 botanical surveys.
<i>Hesperocyparis macrocarpa</i> Monterey cypress	-- / -- / 1B	Closed-cone coniferous forest at elevations of 10-30 meters. Evergreen tree in the Cupressaceae family. Natively occurring only at Cypress Point in Pebble Beach and Point Lobos State Park; widely planted and naturalized elsewhere.	Not Present The project site is outside of the currently known native range of this species. Any Monterey cypress trees within the site are from planted stock and are therefore not considered special-status species.
<i>Holocarpha macradenia</i> Santa Cruz tarplant	FT / SE / 1B	Coastal prairies and valley foothill grasslands, often clay or sandy soils, at elevations of 10-220 meters. Annual herb in the Asteraceae family; blooms June-October.	Unlikely No suitable habitat within the project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Horkelia cuneata</i> ssp. <i>sericea</i> Kellogg's horkelia	-- / -- / 1B	Openings of closed-cone coniferous forests, maritime chaparral, coastal dunes, and coastal scrub on sandy or gravelly soils at elevations of 10-200 meters. Perennial herb in the Rosaceae family; blooms April-September.	Moderate Suitable habitat is present within the project site. The CNDDDB reports 17 occurrences of this species within the quadrangles reviewed, including an occurrence which overlaps the project site. This species was not identified within the project site during 2016 botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions. In addition, this species was identified within other areas of the CSUMB campus during 2016 surveys.
<i>Horkelia marinensis</i> Point Reyes horkelia	-- / -- / 1B	Coastal dunes, coastal prairie, and coastal scrub on sandy soils at elevations of 5-350 meters. Perennial herb in the Rosaceae family; blooms May-September.	Moderate Suitable habitat is present within the project site. The CNDDDB reports 21 occurrences of this species within the quadrangles reviewed, including an occurrence which overlaps the project site. This species was not identified within the project site during 2016 botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions.
<i>Lasthenia conjugens</i> Contra Costa goldfields	FE / -- / 1B	Mesic areas of valley and foothill grassland, alkaline playas, cismontane woodland, and vernal pools at elevations of 0-470 meters. Annual herb in the Asteraceae family; blooms March-June.	Unlikely No suitable habitat within the project site.
<i>Layia carnosa</i> Beach layia	FE / SE / 1B	Coastal dunes and coastal scrub on sandy soils at elevations of 0-60 meters. Annual herb in the Asteraceae family; blooms March-July.	Unlikely No suitable habitat within the project site.
<i>Legenere limosa</i> Legenere	-- / -- / 1B	Vernal pools and wetlands at elevations of 1-880 meters. Annual herb in the Campanulaceae family; blooms April- June.	Unlikely No suitable habitat within the project site.
<i>Lupinus tidestromii</i> Tidestrom's lupine	FE / SE / 1B	Coastal dunes at elevations of 0-100 meters. Perennial rhizomatous herb in the Fabaceae family; blooms April-June.	Unlikely No suitable habitat within the project site.
<i>Malacothamnus palmeri</i> var. <i>involucratus</i> Carmel Valley bush-mallow	-- / -- / 1B	Chaparral, cismontane woodland, and coastal scrub at elevations of 30-1100 meters. Perennial deciduous shrub in the Malvaceae family; blooms May-October.	Unlikely Suitable habitat is present the project site; however, no occurrences of this species are known on the Former Fort Ord and the project site is likely outside the dispersal range of this species.
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i> Carmel Valley malacothrix	-- / -- / 1B	Chaparral and coastal scrub on rocky soils at elevations of 25-1036 meters. Perennial rhizomatous herb in the Asteraceae family; blooms June-December.	Unlikely Suitable habitat is present the project site; however, no occurrences of this species are known on the Former Fort Ord and the project site is likely outside the dispersal range of this species.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Meconella oregana</i> Oregon meconella	-- / -- / 1B	Coastal prairie and coastal scrub at elevations of 250-620 meters. Annual herb in the Papaveraceae Family; blooms March-April.	Unlikely Suitable habitat is present within the project site; however, the project site is outside the known elevation range of this species.
<i>Microseris paludosa</i> Marsh microseris	-- / -- / 1B	Closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland at elevations of 5-300 meters. Perennial herb in the Asteraceae family; blooms April-July.	Moderate Suitable habitat is present within the project site. The CNDDDB reports 10 occurrences of this species within the quadrangles reviewed, the nearest located approximately 1.1 miles from the project site. This species was not identified within the project site during 2016 botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions.
<i>Monardella sinuata</i> ssp. <i>nigrescens</i> Northern curly-leaved monardella	-- / -- / 1B	Chaparral, coastal dunes, coastal scrub, and lower montane coniferous forest (ponderosa pine sandhills) on sandy soils at elevations of 0-300 meters. Annual herb in the Lamiaceae family; blooms April-September.	Moderate Suitable habitat is present within the project site. The CNDDDB reports 10 occurrences of this species within the quadrangles reviewed, the nearest located approximately 300 feet from the project site. This species was not identified within the project site during 2016 botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions.
<i>Monolopia gracilens</i> Woodland wollythreads	-- / -- / 1B	Openings of broadleaved upland forest, chaparral, cismontane woodland, North Coast coniferous forest, and valley and foothill grassland on serpentinite soils at elevations of 100-1200 meters. Annual herb in the Asteraceae family; blooms February-July.	Unlikely Suitable habitat is present within the project site; however, the project site is outside the known elevation range of this species.
<i>Pinus radiata</i> Monterey pine	-- / -- / 1B	Closed-cone coniferous forest and cismontane woodland at elevations of 25-185 meters. Evergreen tree in the Pinaceae family. Only three native stands in CA at Ano Nuevo, Cambria, and the Monterey Peninsula; introduced in many areas.	Not Present The project site is outside of the currently known native range of this species. Any Monterey pine trees within the site are from planted stock and are therefore not considered special-status species.
<i>Piperia yadonii</i> Yadon's rein orchid	FE / -- / 1B	Sandy soils in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral at elevations of 10-510 meters. Annual herb in the Orchidaceae family; blooms February-August.	Moderate Suitable habitat is present within the project site. The CNDDDB reports 24 occurrences of this species within the quadrangles reviewed, the nearest located approximately 1.6 miles from the project site. This species was not identified within the project site during 2016 botanical surveys; however, surveys were conducted more than three years ago and may not reflect current site conditions.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> Choris' popcorn-flower	-- / -- / 1B	Mesic areas of chaparral, coastal prairie, and coastal scrub at elevations of 15-160 meters. Annual herb in the Boraginaceae family; blooms March-June.	Unlikely Marginally suitable habitat is present within the project site. However, this species is only known to occur within a few vernal pools on the Former Fort Ord.
<i>Potentilla hickmanii</i> Hickman's cinquefoil	FE / SE / 1B	Coastal bluff scrub, closed-cone coniferous forests, vernal mesic meadows and seeps, and freshwater marshes and swamps at elevations of 10-149 meters. Perennial herb in the Rosaceae family; blooms April-August.	Unlikely No suitable habitat within the project site.
<i>Ramalina thrausta</i> Angel's hair lichen	-- / -- / 2B	North coast coniferous forest on dead twigs and other lichens. Epiphytic fructose lichen in the Ramalinaceae family. In northern CA it is usually found on dead twigs, and has been found on <i>Alnus rubra</i> , <i>Calocedrus decurrens</i> , <i>Pseudotsuga menziesii</i> , <i>Quercus garryana</i> , and <i>Rubus spectabilis</i> . In Sonoma County it grows on and among dangling mats of <i>R. menziesii</i> and <i>Usnea</i> spp.	Unlikely No suitable habitat within the project site.
<i>Rosa pinetorum</i> Pine rose	-- / -- / 1B	Closed-cone coniferous forest at elevations of 2-300 meters. Perennial shrub in the Rosaceae family; blooms May-July. Possible hybrid of <i>R. spithamea</i> , <i>R. gymnocarpa</i> , or others; further study needed.	Unlikely No suitable habitat within the project site.
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	-- / -- / 1B	Broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and openings in valley and foothill grassland, sometimes on serpentinite, at elevations of 10-500 meters. Annual herb in the Asteraceae family; blooms April-May.	Low Suitable habitat is present within the project site; however, no occurrences of this species are known on the former Fort Ord.
<i>Trifolium buckwestiorum</i> Santa Cruz clover	-- / -- / 1B	Gravelly margins of broadleaved upland forest, cismontane woodland, and coastal prairie at elevations of 105-610 meters. Annual herb in the Fabaceae family; blooms April-October.	Unlikely Suitable habitat is present within the project site; however, the project site is outside the known elevation range of this species.
<i>Trifolium hydrophilum</i> Saline clover	-- / -- / 1B	Marshes and swamps, mesic and alkaline valley and foothill grassland, and vernal pools at elevations of 0-300 meters. Annual herb in the Fabaceae family; blooms April-June.	Unlikely No suitable habitat within the project site.
<i>Trifolium polyodon</i> Pacific Grove clover	-- / SR / 1B	Mesic areas of closed-cone coniferous forest, coastal prairie, meadows and seeps, and valley and foothill grassland at elevations of 5-120 meters. Annual herb in the Fabaceae family; blooms April-July.	Low Only marginally suitable habitat is present within the project site. The CNDDDB reports only one occurrence of this species within the former Fort Ord, located approximately 3.4 miles from the project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Trifolium trichocalyx</i> Monterey clover	FE / SE / 1B	Sandy openings and burned areas of closed-cone coniferous forest at elevations of 30-240 meters. Annual herb in the Fabaceae family; blooms April-June.	Unlikely No suitable habitat within the project site.

STATUS DEFINITIONS

Federal

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

State

- SE = listed as Endangered under the California Endangered Species Act
 ST = listed as Threatened under the California Endangered Species Act
 SC = Candidate for listing under California Endangered Species Act
 SR = plants listed as Rare under the California Native Plant Protection Act
 CFP = California Fully Protected Species
 CSC = CDFW Species of Concern
 -- = no listing

California Native Plant Society

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

Former Fort Ord Habitat Management Plan (HMP)

- Bold** = Former Fort Ord HMP Species

POTENTIAL TO OCCUR

- Present = known occurrence of species within the site; presence of suitable habitat conditions; or observed during field surveys
 High = known occurrence of species in the vicinity from the CNDDDB or other documentation; presence of suitable habitat conditions
 Moderate = known occurrence of species in the vicinity from the CNDDDB or other documentation; presence of marginal habitat conditions within the site
 Low = species known to occur in the vicinity from the CNDDDB or other documentation; lack of suitable habitat or poor quality
 Unlikely = species not known to occur in the vicinity from the CNDDDB or other documentation, no suitable habitat is present within the site
 Not Present = species was not observed during surveys