# MANAGEMENT ELEMENTS

# **Invasive Species**

Non-native species are organisms that are not indigenous to a particular area but are introduced to the area either accidentally or for a purpose (e.g., for erosion control). Not all non-native species survive in new locations, but when they do, they often displace native species and become dominant, causing harm to the environment, economy, or human health (California Invasive Plant Council [Cal-IPC], 2022a). They then take on new labels such as invasive non-natives, invasive exotics, or, simply, invasive species. Invasive plants can significantly degrade habitat for native species; nationally, invasive species are the second-greatest threat to endangered species, after habitat destruction (Cal-IPC, 2022a). Invasive plants can also blanket waterways, trails, and scenic landscapes, making recreational activities such hiking, biking, and boating difficult, and lowering the land's value for photography and wildlife viewing. In farms and ranches, invaders which are low in nutrition or even toxic to livestock can crowd out crops and rangeland forage (Cal-IPC, 2022a).

The Cal-IPC Inventory lists plants that threaten the state's natural areas, including a rating of the plant's invasiveness and potential for ecological impacts based on transparent science-based criteria and expert reviews. The inventory includes plants that are currently causing damage, as well as watch list plants that are a high risk for becoming invasive in the future. The following invasive plant species were documented within the Plan Area<sup>1</sup>:

- Ice plant, including:
  - Hottentot fig (Carpobrotus edulis) High², and
  - Sea fig (*Carpobrotus chilensis*) Moderate<sup>3</sup>.
- French broom (Genista monspessulana) High,
- Pampas grass (Cortaderia jubata) High,
- Black mustard (Brassica nigra) Moderate,
- Poison hemlock (*Conium maculatum*) Moderate,
- Acacia (*Acacia* spp.) Limited<sup>4</sup> or Watch<sup>5</sup>, and

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<sup>&</sup>lt;sup>1</sup> Please note that some species (e.g., ripgut brome) which are considered invasive by the Cal-IPC, and which occur throughout the Plan Area, are not included in this list because they have become naturalized plants on the former Fort Ord; CDFW recommends that these species be managed as such, rather than as invading species (CDFW, 2005).

<sup>&</sup>lt;sup>2</sup> Cal-IPC Rating *High*: These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

<sup>&</sup>lt;sup>3</sup> Cal-IPC Rating *Moderate*: These species have substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

<sup>&</sup>lt;sup>4</sup> Cal-IPC Rating *Limited*: These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

<sup>&</sup>lt;sup>5</sup> Cal-IPC Rating *Watch*: These species have been assessed as posing a high risk of becoming invasive in the future in California.

• Eucalyptus (*Eucalyptus* spp.) – Limited or Watch.

**Table 1** below list the acreage and individual count of these non-native invasive species within each HMA. Acreage and individual count do not overlap. Where ten or fewer plants were observed, the population was mapped as one point (or one "individual"). Where more than ten plants were observed, the population was mapped as a polygon and density was estimated based on percent ground cover of the species (**Figures 3a** - **3i**). For herbs and grasses, density was estimated as follows:

- Low density: < 15% ground cover,
- Medium density: 15% 35% ground cover, and
- High density: > 35% ground cover.

For shrubs and trees<sup>6</sup>, density was estimated as follows:

- Low density: < 30% ground cover,
- Medium density: 30% 70% ground cover, and
- High density: > 70% ground cover.

Table 1. Invasive Species within the Plan Area

SPECIES	MDIMIDITALS	ACRES (BY DENSITY)			
SPECIES	INDIVIDUALS	Low	Medium	High	Total
East Garrison North HMA	1	0.02	0.23	0.15	0.41
Carpobrotus edulis	0	0	0.23	0.12	0.35
Conium maculatum	0	0.02	0	0.03	0.06
Genista monspessulana	1	0	0	0	0
East Garrison South HMA	59	10.2	74.3	0.20	84.7
Acacia spp.	0	0.21	0	0	0.21
Brassica nigra	0	< 0.01	0	0	< 0.01
Carpobrotus chilensis	1	0	0	< 0.01	< 0.01
Carpobrotus edulis	42	7.8	74.3	0.19	82.4
Conium maculatum	0	0.94	0	0	0.94
Cortaderia jubata	9	0	0	0	0
Eucalyptus spp.	1	0.83	< 0.01	0	0.84
Genista monspessulana	6	0.21	< 0.01	< 0.01	0.22
Habitat Corridor HMA	3	0.57	0	0.04	0.61
Carpobrotus edulis	1	0.11	0	0.02	0.13
Conium maculatum	0	0	0	0.02	0.02
Genista monspessulana	2	0.46	0	0	0.46

<sup>&</sup>lt;sup>6</sup> Although technically an herb, ice plant (both *C. edulis* and *C. chilensis*) density was estimated as a shrub because of its shrub-like growth pattern.

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CDECIEC	INDIVIDUALS		ACRES (BY	Y DENSITY)	
SPECIES	INDIVIDUALS	Low	Medium	High	Total
Travel Camp HMA	6	26.3	0.56	0.04	26.9
Carpobrotus edulis	2	11.8	0.41	0.04	12.3
Cortaderia jubata	2	0	0.15	0	0.15
Genista monspessulana	2	14.5	0	0	14.5
Oak Oval HMA	30	0.03	<0.01	0.04	0.07
Carpobrotus edulis	19	0	< 0.01	0.02	0.02
Genista monspessulana	11	0.03	0	0.02	0.05
Parker Flats HMA	16	0.30	0.26	0.03	0.68
Acacia spp.	1	0	0	0	0
Carpobrotus edulis	6	0	0	< 0.01	< 0.01
Conium maculatum	0	0.09	0.17	0.03	0.29
Cortaderia jubata	5	0.01	0	0	0.1
Genista monspessulana	4	0.20	0.09	0	0.29
Lookout Ridge HMA	2	2.0	0.10	0.03	2.13
Carpobrotus edulis	2	0	0.10	0.03	0.13
Conium maculatum	0	1.9	0	0	1.9
Genista monspessulana	0	0.10	0	0	0.10
Wolf Hill HMA	21	42.6	0	0.01	42.6
Carpobrotus edulis	9	42.6	0	0.01	42.6
Cortaderia jubata	12	0	0	0	0
MPC Range 45 HMA	38	16.4	0.01	0	16.5
Carpobrotus edulis	33	16.1	0.01	0	16.2
Cortaderia jubata	5	0.30	0	0	0.30
TOTAL	176	98.4	75.7	0.54	174.6

Ice plant (primarily *C. edulis*) and French broom are among the most prolific invasive plants within the former Fort Ord and, as evidenced by **Table 1**, within the Plan Area. Ice plant is a ground-hugging succulent native to the coast of South Africa, where the Mediterranean climate is like that of coastal California. Introduced to California for soil stabilization in the early 1900s, it is now found in coastal habitats from north of Eureka to as far as Rosarita in Baja California (Cal-IPC, 2022b). The Army planted ice plant in the 1940s and 1950s to stabilize the dunes and it spread to other areas of the former Fort Ord. It forms thick, nearly impenetrable mats that cover large areas, forming monospecific stands and outcompeting native species for nutrients, light, and space. The buildup of organic matter from dense ice plants mats, especially in areas where dieback and regrowth have occurred or in areas where ice plant has been treated with herbicide, can also result in invasion of other non-native species which would normally not be able to establish in sandy soils (Cal-IPC, 2022). Ice plant provides only marginal habitat for wildlife because, although it provides cover for some species, it provides little foraging habitat for most animals.

French broom is an upright, evergreen shrub native to countries surrounding the Mediterranean and the Azores. It was introduced to the central California coast in the mid-1800s as an ornamental plant and is now one of the most widespread non-native invasive species in the area. It spreads via prodigious seed production; one shrub can produce more than 8,000 seeds per year which are flung explosively from the plant when its seed pods open (Cal-IPC, 2022c). It often forms dense, monospecific stands that exclude native plants and wildlife. In addition, French broom is unpalatable to most livestock except goats, so it decreases rangeland value while increasing fire hazard (Cal-IPC, 2022d).

### **Natural Disturbances**

# Wildfire

Wildfires are an unplanned and uncontrolled fire in a natural landscape. They are among the most common forms of natural disaster in California. Historically, humans have intervened deliberately and dramatically in the fire regime through fire suppression and, more recently, actions that affect fuel connectivity. Contemporary fire management practices include fuel management activities that are intended to reduce the intensity and severity of wildfires. Reduced intensity also means that suppression efforts are more likely to be effective and can be conducted more safely in areas where wildfires are unwanted or threaten communities. Fuel reduction has proven successful where it is targeted at protecting specific resources in limited geographic areas, such as in areas of extreme fire danger or in the wildland urban interface. Areas that are treated often exhibit different fire progression characteristics and reduced fire severity from areas that are not treated. Reducing fuels through mechanical treatments have been found to be effective at reducing fire frequency, fire severity, and annual area burned when applied at the landscape scale over an extended period of time. These effects have also been found to be most effective during extreme weather conditions (i.e., hotter and drier). At these times, there is also a higher likelihood that fires will intersect with treated areas, which contributes to higher effectiveness of those treatments at reducing wildfire behavior and effects.

In 2021, evidence of wildfire was only documented at one location within the Plan Area along the northwestern edge of the East Garrison South HMA (**Figure 4b**). Within the former Fort Ord, methods of fire control have included construction and maintenance of fuel breaks and fire roads, controlled burning, and fire suppression (Army, 1992).

#### Fuel Breaks

A fuel break is a strip or area of land where vegetation has been permanently reduced or modified so that fires burning around it can be more readily and safely controlled. Fire fuels (i.e., vegetation) within fuel breaks are reduced through thinning or pruning or are changed to vegetation communities which burn with a lower intensity and offer less resistance to fire control efforts. Fuel breaks alone do not control wildfire themselves; instead, they provide access points and defensible space to facilitate wildfire control. A fuel break system may utilize existing roads, which can provide a defensible space from which firefighters can conduct direct attack on wildfires and which can provide strategic locations to create roadside fuel breaks.

As described below in *Roads and Trails*, the Plan Area contains approximately 14.2 miles of access roads and public roadways which may be used as fuel breaks in the event of a wildfire (**Figures 4a – 4i**).

#### Prescribed Burns

In accordance with HMP requirements, the Fort Ord Base Realignment and Closure Commission (BRAC) conducts prescribed burns of the former Fort Ord annually from July through December to facilitate removal of munitions and explosives of concern (MEC). Prescribed burns are conducted primarily in the southeastern portion of the former base where denser chaparral and scrub habitat pose a higher fire risk (Army, 1992 and Eisen, 2017). Controlled burns are not used for fire prevention in grasslands on the former Fort Ord; instead, fuel levels are modified through grazing programs. However, small areas of grasslands are burned annually as part of a local interagency firefighter training program (Army, 1992).

Fire management at the former Fort Ord has benefited vegetation and wildlife on many parts of the base. As described in *Natural Communities*, maritime chaparral and coastal scrub are fire dependent natural communities which evolved under conditions that included periodic disturbance from fire. Chaparral habitats, especially in the inland range area, include a mosaic of age classes caused by the variable burn schedule used on the former Fort Ord. Younger age classes of chaparral show a higher diversity of plant species and support a greater density of rare plants. These areas of younger chaparral intergrade with older or decadent stands, providing a variety of habitat conditions for wildlife. Disturbance caused by fire road and fuel break construction and maintenance also allows rare plants, such as Monterey spineflower, to establish in otherwise densely vegetated areas (Army, 1992).

At the former Fort Ord, the average rotation (the period between fires at a given site) of maritime chaparral and coastal scrub is approximately 29 years (Army, 1992). However, rotations are shorter in the inland range because of the higher frequency of prescribed burning and wildfires that started from military training activities before the base was closed in 1994. When the inland range is considered separately, the average rotation for chaparral and coastal scrub is 20 years in the inland range and approximately 52 years for the remainder of the base (Army, 1992).

### **Erosion**

Erosion is the geological process in which earthen materials are worn away and transported by natural forces such as wind or water. It is a natural process that is impacted by natural factors such as climate, topography, vegetation, and tectonic activity; however, human activity greatly increases the rate of erosion. The most significant human activities contributing to erosion include agriculture, deforestation, urban sprawl and road construction, and anthropogenic climate change. Due to the loss of nutrient-rich upper soil layers, erosion can lead to ecological collapse of natural landscapes. Soil erosion also increases pollution and sedimentation in rivers and streams, degrading habitat for fish and other aquatic species. In addition, soil degradation as a result of erosion can result in decreased groundwater infiltration and retention, thereby worsening flood events.

Erosion was documented as several areas within the Plan Area, including the East Garrison South, Oak Oval, Parker Flats, Lookout Ridge, Wolf Hill, and MPC Range 45 HMAs (**Figures 4b and 4e – 4i**). Large areas of erosion were documented at the Parker Flats, Lookout Ridge, and Wolf Hill HMAs, but the remaining HMAs contain only small, scattered pockets of erosion. **Table 2** below identifies the extent of erosion documented within the Plan Area. Small areas of erosion were mapped as points and larger areas which could not adequately be symbolized by points were mapped as polygons.

Table 2. Erosion within the Plan Area

	East Garrison North	East Garrison South	Habitat Corridor	Travel Camp	Oak Oval	Parker Flats	Lookout Ridge	Wolf Hill	MPC Range 45	TOTAL
EROSION FEATURE										
Points	0	0	0	0	1	5	4	0	3	13
Polygons (Acres)	0	0.42	0	0	0	0.12	3.0	1.5	0	5.0

### **Roads and Trails**

FONM contains more than 86 miles of trails for hikers, cyclists, and equestrians through a variety of habitats, including oak woodlands, grasslands, maritime chaparral, and streamside corridors (BLM, 2022). The Fort Ord Regional Trail and Greenway Project (FORTAG), currently in the final phases of design, proposes to add an additional 28 miles of multi-use trails within the former Fort Ord and surrounding areas (Rincon, 2020). Trails are important features in a park or open space because they connect people and communities to open space and recreational activities. They also provide an alternative method of commuting to motorized travel that is safe and accessible and that reduces vehicle trips and associated emissions. As described above, wider trails and roads can also function as fuel breaks within an otherwise vegetated environment.

The Plan Area contains approximately 24.7 miles of trails and an additional 10.5 miles of unpaved access roads and 3.6 miles of paved access roads which may be used for recreation by hikers, cyclists, and equestrians (**Figures 4a – 4i**). **Table 3** below identifies the miles of roads and trails within each HMA.

Table 3. Roads and Trails within the Plan Area

	East Garrison North	East Garrison South	Habitat Corridor	Travel Camp	Oak Oval	Parker Flats	Lookout Ridge	WolfHill	MPC Range 45	TOTAL
ROAD FEATURE					MII	LES				
Trail	0.58	4.1	6.7	5.3	1.80	5.7	0.43	0.17	0	24.7
Access Road (Unpaved)	1.6	0.60	0.72	0	0.22	1.7	2.1	1.9	1.7	10.5
Access Road (Paved)	0	0.33	0.63	0.32	0	0.91	1.2	0.15	0	3.6
Public Roadway	0	0	0	0.07	0	0	0	0	0	0.07
TOTAL	2.2	5.1	8.0	5.7	2.0	8.3	3.8	2.2	1.7	32.2

## **Barriers and Signage**

Barriers and signage within a large park or open space can provide effective information and direction for users, encourage learning, communicate rules, help prevent overuse of sensitive habitats, and preclude pedestrian, equestrian, and cyclist trespass into areas known to support special-status species. Within the former Fort Ord, warning signs also notify users of potential presence of unexploded ordnances (UXOs) left over from when the base was used for military munitions training; some areas which are still undergoing remediation are also fenced and off-limits to the public.

The Plan Area has a signage system that identifies regulatory requirements and rules, trail information, and Environmental Services Cooperative Agreement (ESCA) warnings. In addition, fences which preclude public access from or into adjacent properties are present within the Plan Area at the East Garrison South, Travel Camp, Lookout Ridge, Wolf Hill, and MPC Range 45 HMAs (**Figures 4b, 4d, and 4g-4i**).

#### Trash/Debris

Trash or debris in the form of old furniture, razor wire, PVC pipes, concrete blocks, and others were documented at several locations within the Plan Area. These waste items are the result of public dumping, remnant Army debris, and trash from homeless encampments. Although not widespread within the Plan Area, they pose a safety hazard to pedestrians, equestrians, cyclists, and wildlife where they occur. In addition, they detract from the visual integrity of the Plan Area.

Trash or debris was documented as several areas within the Plan Area, including at the East Garrison North, East Garrison South, Habitat Corridor, Parker Flats, Wolf Hill, and MPC Range 45 HMAs (**Figures 4a – 4c, 4f, 4h, and 4i**).

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# **NATURAL COMMUNITIES**

A variety of natural communities, including maritime chaparral, coastal scrub, annual grassland, perennial grassland, coast live oak woodland, ruderal/disturbed, planted Monterey pine forest, eucalyptus grove, and wetland and open water, occur within the Plan Area (Figures 1a-1i, Table 1). In addition, most of the Plan Area contain small segments of development in the form of paved roads or concrete blocks. In several areas, coast live oak woodland, maritime chaparral, coastal scrub, and annual grassland intergrade with each other. Where these natural communities comprise of approximately half of the dominant species, the areas have been mapped as a "mix" (e.g., coast live oak woodland/annual grassland mix, etc.) (Figures 1a-1i). The dominant plant species and the common wildlife found in these mixed natural communities are generally the same as those described below for the individual natural communities.

Table 1. Natural Communities within the Plan Area

	East Garrison North	East Garrison South	Habitat Corridor	Travel Camp	Oak Oval	Parker Flats	Lookout Ridge	Wolf Hill	MPC Range 45	TOTAL
NATURAL COMMUNITY <sup>1</sup> MC <sup>2</sup>	8.7	153.1	2.8	0	AC. 2.5	RES 139.7	0	31.6	198.9	537.3
MC/AG	0.7	8.8	0	0	0	0	0	0	0	8.8
MC/CS	0	5.3	0	0	0	0	0	0	0	5.3
CS	10.3	2.5	10.5	12.6	0	15.0	13.7	0	2.0	66.5
CS/AG	0	0.84	1.2	0	0	0.3	6.5	0	0	8.4
AG	15.5	9.3	20.8	18.0	0.8	7.0	104.1	30.3	0.8	212.4
PG	0	0.4	0	0	0	0	0	0	0	0.4
CLOW	10.6	15.7	168.6	60.4	63.2	173.6	14.7	0	0	506.8
CLOW/MC	1.2	51.7	0	0	5.7	12.8	<0.1	6.5	0	78.0
CLOW/CS	11.8	3.8	8.4	17.4	0	0	20.4	0	0	61.9
CLOW/AG	88.4	10.8	37.2	20.3	0.2	9.1	17.4	0	0	183.3
R/D	1.9	7.4	1.3	8.1	0	5.8	11.1	5.7	4.1	45.4
PMPF	0	0	0	4.3	0	0	0	0	0	4.3
EG	0	0	0	1.2	0	0	0	0	0	1.2
W	0	3.5	0	0.5	0	0	1.5	1.0	0	6.6
D	0	1.4	1.9	1.9	0.1	3.3	6.2	4.2	0	18.8
TOTAL	148.4	274.6	252.7	144.8	72.5	372.3	195.6	79.1	205.8	1,746

<sup>1</sup>MC: Maritime Chaparral; AG: Annual Grassland; PG: Perennial Grassland; CS: Coastal Scrub; Coast Live Oak Woodland; R/D: Ruderal/Disturbed; PMPF: Planted Monterey Pine Forest; EG: Eucalyptus Grove; W: Wetland or Open Water; D: Developed.

<sup>&</sup>lt;sup>2</sup>Bold indicates a sensitive natural community under the Fort Ord HMP.

## Chaparral and Coastal Scrub Communities

Chaparral and costal scrub communities are the most widespread habitats at Fort Ord. Chaparral and coastal scrub communities at Fort Ord are characterized by moderate to low-growing evergreen and drought-deciduous shrubs with scattered trees and patchy herbaceous cover. Chaparral is dominated by evergreen, sclerophyllous (hard-leaved) shrubs such as chamise, manzanita, and ceanothus. Coastal scrub is dominated by soft-leaved, drought-deciduous shrubs such as California sagebrush and black sage, and winter-deciduous shrubs such as tree lupine and Chamisso bush lupine. Chaparral typically requires slightly more moisture than coastal sage scrub. Maritime chaparral occurs in locations where coastal fogs increase available moisture at low elevations near the coast. These communities form on shallow soils, along dry rocky slopes and ridges, on sand hills, and on the Aromas red sand formation.

Chaparral and scrub plant species are adapted to fire, and many require fire for successful regeneration. Shrub species respond by crown-sprouting or germinating from a dormant seed bank. Herbaceous species are most abundant in the years immediately following fires. If natural disturbances such as fire are restricted or prescribed burns not implemented, species diversity in scrub and chaparral communities declines and succession from scrub and chaparral communities to coast live oak woodland may ensue (Army, 1992).

The greatest diversity of wildlife species at Fort Ord occurs in chaparral communities. Many species associated with chaparral are also found in coastal scrub, although in lower densities because many areas of coastal scrub occur in small pockets surrounded by development or other habitat types. Birds such as orange-crowned warbler, rufous-sided towhee, California thrasher, California quail, and wrentit feed and nest in chaparral and coastal scrub. The only population of greater roadrunner in coastal Monterey occurs in the chaparral at Fort Ord (Army, 1992). California mouse, brush rabbit, Heerman's kangaroo rat, and brush mouse find forage and cover in dense chaparral, while narrow-faced kangaroo rats favor sparsely vegetated openings within the thick vegetation. These small mammals serve as prey for gray fox, bobcat, spotted skunk, and western rattlesnake. Chaparral communities also provide important forage and cover for resident black-tailed deer.

Three types of chaparral and scrub communities occur at Fort Ord: sand hill maritime chaparral, Aromas formation maritime chaparral, and coastal scrub. The distinguishing characteristics of the three chaparral and scrub communities are described in the following sections.

## Maritime Chaparral

- A Manual of California Vegetation classifications: Brittle leaf—wooly leaf manzanita chaparral (Arctostaphylos [crustacea, tomentosa] shrubland alliance) and sandmat manzanita chaparral (Arctostaphylos pumila provisional shrubland alliance)
- CDFW's California Natural Communities List: Sensitive

Maritime chaparral is the dominant natural community within the former Fort Ord, where it is characterized by a wide variety of sclerophyllous shrubs occurring in moderate to high density. At the former Fort Ord, this community occupies sites that have sandy, well-drained substrates within the zone of coastal summer fog (Army, 1992), where it often intergrades with coastal scrub and coast live oak woodland. Maritime chaparral is primarily dominated by shaggy-barked manzanita (*Arctostaphylos rudis*). Other common species found in the shrub layer include chamise (*Adenostoma fasciculatum*), dwarf ceanothus (*Ceanothus* 

dentatus), blueblossom ceanothus, Monterey ceanothus (Ceanothus rigidus) coyote brush (Baccharis pilularis), sticky monkeyflower (Diplacus aurantiacus), black sage, coyote brush, poison oak, coast silk tassel, rush rose, and California sagebrush. Additional species within this natural community include California coffeeberry (Frangula californica), fuchsiaflower gooseberry (Ribes speciosum), chaparral currant (Ribes malvaceum), sticky cinquefoil (Drymocallis glandulosa), and creeping snowberry (Symphoricarpos mollis). Coast live oak (Quercus agrifolia) occurs sporadically, usually as stunted small trees. Herbaceous cover is usually low with common species including golden yarrow, purple needlegrass, and Fremont's zygadene.

Maritime chaparral at the former Fort Ord can be subdivided into two weakly differentiated subtypes based on substrate and indicator shrub species: sand hill maritime chaparral and Aromas formation maritime chaparral. In sand hill maritime chaparral, which occurs on soft rolling hill of Pleistocene sand deposits, the shrub layer is typically dominated by shaggy-barked manzanita, chamise, and sandmat manzanita. Older stands usually support an impenetrable growth of shaggy-barked manzanita and chamise. Recently burned or cleared sites support sandmat manzanita as part of the dominant cover. Toro manzanita is rarely found in sand hill maritime chaparral. Aromas formation maritime chaparral is found on more rugged, sometimes badlands, landforms and is typically inland of the sand hills. The sandy substrate is more strongly cemented and rocky than the loose sand hills. In Aromas formation maritime chaparral, the shrub layer is also dominated by shaggy-barked manzanita and chamise, but taro manzanita is present as a codominant species or sometimes in nearly pure stands. In contrast with sand hill maritime chaparral, sandmat manzanita is uncommon but Hooker's manzanita occurs in Aromas formation maritime chaparral. Within the Plan Area, sand hill and Aromas formation maritime chaparral intermix within the various HMAs.

Unfavorable soils and disturbances, such as fire, wind, and pest attacks, favor the occurrence of maritime chaparral over pine and oak woodlands. Maritime chaparral is largely a fire-dependent natural community. Many maritime chaparral species, including most *Arctostaphylos* and some *Ceanothus* species, are obligate seeders which depend on some fire cue (e.g., heat or chemicals from charred wood) to reproduce. However, controlled burns have resulted in poor survivorship of *Arctostaphylos* species, and current theories are that they need long fire-free intervals to develop a viable seedbank that can reproduce following fire (NatureServe Explorer, 2022a). Its limited distribution and pressures for development in maritime chaparral habitat have resulted in its listing as sensitive on CDFW's *California Natural Communities List*.

Approximately 537.3 acres of maritime chaparral occur within the East Garrison North, East Garrison South, Habitat Corridor, Oak Oval, Parker Flats, Wolf Hill, and MPC Range 45 HMAs (**Figures 1a-1i**; **Table 1**). In addition, 8.8 acres of this natural community intergrade with annual grassland and 5.3 acres intergrade within coastal scrub at the East Garrison South HMA, and 78.0 acres intergrade with coast live oak woodland at the East Garrison North, East Garrison South, Oak Oval, Parker Flats, Lookout Ridge, and Wolf Hill HMAs (**Figures 1a-1i**; **Table 1**).

### Coastal Scrub

- A Manual of California Vegetation classifications: coyote brush scrub (Baccharis pilularis shrubland alliance) and black sage scrub (Salvia mellifera shrubland alliance)
- CDFW's California Natural Communities List: Not sensitive

Coastal scrub habitat is characterized by sparse to dense soft-leaved, low-stature shrubs, approximately one to two meters tall, that lack grassy openings and are often integrated with other natural communities. Dominant coastal shrub species on the former Fort Ord generally include coyote bush (*Baccharis pilularis*), California sagebrush (*Artemisia californica*), mock heather (*Ericameria ericoides*), coastal bush lupine (*Lupinus arboreus*), dune bush lupine (*Lupinus chamissonis*), and black sage (*Salvia mellifera*). Other common shrubs include California coffeeberry (*Frangula californica*), sticky monkeyflower (*Diplacus aurantiacus*), and poison oak (*Toxicodendron diversilobum*). Coastal scrub within the former Fort Ord occurs on sandy soils near the coast, intergrading with grassland, maritime chaparral, coast live oak woodland, and dune scrub. More inland areas of the former Fort Ord support coastal sage scrub on rocky slopes as habitat patches within annual grassland and oak woodland.

The coastal scrub at the former Fort Ord is classified as Lucian or central coastal scrub in Holland's (1986) classification. Lucian coastal scrub is locally abundant on the west side of the Santa Lucia range between Monterey and Point Conception. This scrub habitat is threatened by a variety of factors, especially development. Coastal scrub is considered an important natural community because it provides habitat for several special-status plants, provides forage for wildlife, and stabilizes sandy soils and steep slopes. Common species that may occur within coastal scrub include California quail (*Callipepla californica*), blue-gray gnatcatcher (*Polioptila caerulea*), Anna's hummingbird (*Calypte anna*), western fence lizard (*Sceloporus occidentalis*), northern pacific rattlesnake (*Crotalus oreganus* ssp. *oreganus*), gopher snake (*Pituophis catenifer catenifer*), brush rabbit (*Sylvilagus bachmani*), and California ground squirrel (*Spermophilus beecheyi*).

Approximately 66.5 acres of coastal scrub occur within the Plan Area, including the East Garrison North, East Garrison South, Habitat Corridor, Travel Camp, Parker Flats, Lookout Ridge, and MPC Range 45 HMAs (**Figures 1a-1i**; **Table 1**). In addition, 8.4 acres of this natural community intergrade with annual grassland at the East Garrison South, Habitat Corridor, Parker Flats, and Lookout Ridge HMAs, and 61.9 acres intergrade with coast live oak woodland at the East Garrison North, East Garrison South, Habitat Corridor, Travel Camp, and Lookout Ridge HMAs (**Figures 1a-1i**; **Table 1**). As described above, 5.3 acres of coastal scrub also intergrade with maritime chaparral at the East Garrison South HMA.

# **Grassland Communities**

Grasslands are herbaceous communities that support a variety of annual or perennial grasses with associated forbs. The former Fort Ord supports mostly annual grassland of non-native grasses with some areas supporting a good component of native perennial bunchgrasses. Grasslands occur at the most inland, southeast section of Fort Ord; at the Marina Municipal Airport (Marina Airport); and as scattered, small meadows within coast live oak woodland and maritime chaparral.

Many wildlife species, including reptiles, mammals, and birds, use grassland for forage and cover. Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Otospermophilus beecheyi*), California vole

(Microtus californicus), broad-footed mole (Scapanus latimanus), Heermann's kangaroo rat (Dipodomys heermanni), narrow-faced kangaroo rat (Dipodomys venustus), and black-tailed hare (Lepus californicus) use annual grasslands for foraging and cover. Reptiles, such as northern pacific rattlesnake (Crotalus oreganus), gopher snake (Pituophis catenifer), and western fence lizard (Sceloporus occidentalis) are also common annual grassland species. Avian species that may be found within annual grassland include western meadowlark (Sturnella neglecta), great horned owl (Bubo virginianus), grasshopper sparrow (Ammodramus savannarum), savannah sparrow (Passerculus sandwhicheneis), western kingbird (Tyrannus verticalis), red-tailed hawk (Buteo jamaicensis), and kestrels (Falco spp.). Coyotes (Canis latrans) and bobcats (Lynx rufus) also use hunt within grasslands.

#### Annual Grassland

- A Manual of California Vegetation classification: Annual brome grasslands (Bromus diandrus-Avena spp. Association)
- CDFW's California Natural Communities List: Not sensitive

Throughout California, annual grasslands typically occur in open areas of valleys and foothills, usually on fine-textured clay or loam soils that are somewhat poorly drained (Holland, 1986). This natural community is often dominated by non-native annual grasses and forbs along with scattered native grasses and wildflowers. Within the former Fort Ord, the largest occurrences of annual grassland are on heavy clay soils of hillsides in the southeast portion of the base and on sandy soils at Marina Airport (Army, 1992). The dominant species within this natural community include slender wild oat (*Avena barbata*), wild oat (*Avena fatua*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), rattail fescue (*Festuca myuros*), long beaked filaree (*Erodium botrys*), red stemmed filaree (*Erodium cicutarium*), silver hairgrass (*Aira caryophyllea*), and hare barley (*Hordeum murinum ssp. leporinum*). A host of annual and perennial forbs, including sky lupine (*Lupinus nanus*), California poppy (*Eschscholzia californica*), American vetch (*Vicia americana*), cream cups (*Platystemon californicus*), brodiaeas (*Brodiaea* spp.), and common clovers, occur as common associates in this natural community. Perennial bunchgrasses also occur in annual grassland communities on the southeastern portion of the former Fort Ord; however, grasslands are mapped as annual grassland only where perennial species comprise less than 10 percent of vegetative cover (Army, 1992).

Annual grassland is an abundant natural community with a statewide distribution. The community protects the soil from erosion and provides the primary source of forage for grazing wildlife and domestic livestock. Although this natural community consists largely of non-native annuals, it effectively prevents the reestablishment of native perennials over large areas and is considered a stable ecosystem in its final stage of ecological succession (CDFW, 2005). Therefore, CDFW recommends that introduced annuals within this community should be considered naturalized plants and be managed as such, rather than as invading species.

Annual grassland is abundant throughout the Plan Area, occurring within all of them in varying degrees. Approximately 212.4 acres of annual grassland occur within the Plan Area, including the East Garrison North, East Garrison South, Habitat Corridor, Travel Camp, Oak Oval, Parker Flats, Lookout Ridge, Wolf Hill, and MPC Range 45 HMAs (Figures 1a-1i; Table 1). In addition, 183.3 acres of this natural community intergrade with coast live oak woodland at the East Garrison North, East Garrison South, Habitat Corridor, Travel Camp, Oak Oval, Parker Flats, and Lookout Ridge HMAs (Figures 1a-1i; Table

1). As described above, 8.8 acres of annual grassland intergrade with maritime chaparral at the East Garrison South HMA and 8.4 acres intergrade with coastal scrub at the East Garrison South, Habitat Corridor, Parker Flats, and Lookout Ridge HMAs.

#### Perennial Grassland

- A Manual of California Vegetation classification: Needlegrass Melic grass grassland (Nassella lepida and Nasella pulchra herbaceous alliances) and California brome blue wildrye prairie (Bromus carinatus Elymus glaucus herbaceous alliance)
- CDFW's California Natural Communities List: Sensitive

Perennial grasslands are communities that support native perennial grass species as dominant or important components of the vegetative cover. Two perennial grassland associations, valley needlegrass grassland and blue wildrye grassland, occur in the southeast region of the former Fort Ord. Blue wildrye grassland is a perennial grassland type dominated by blue wildrye (*Elymus glaucus*) that occurs primarily in protected ravines and under oak woodlands in the southeastern part of Fort Ord. The blue wildrye grasslands mapped at Fort Ord are characterized by more than 30 percent perennial grass cover (Army, 1992).

Valley needlegrass grassland is dominated by the native perennial bunchgrasses purple needlegrass (*Stipa pulchra*, also known as *Nassella pulchra*) and foothill needlegrass (*Stipa lepida*, also known as *Nassella lepida*). At the former Fort Ord, this community typically occurs on soils with lower clay content and better drainage in the surface horizon than soils supporting annual grassland, sometimes intergrading with annual grassland, oak savannah, and oak woodland. Small occurrences of perennial grassland are also in grassland areas characterized by mima mound topography (Army, 1992).

Valley needlegrass grassland was once the dominant grassland community throughout lowland, cismontane California but has been almost entirely replaced by non-native annual grassland communities. By one estimate, native grassland once covered over five million hectares, or approximately 13 percent, of the state's land area; now less than one percent remains (Army, 1992). Many of the known occurrences of this natural community contain only 10 to 15 percent bunchgrass cover. Therefore, the boundaries between patches of valley needlegrass grassland and annual grassland are rarely distinct. To approximate the boundary of needlegrass grassland and annual grassland within the former Fort Ord, the Flora and Fauna Study used a threshold of 10 percent needlegrass cover; sites with 10 percent or greater needlegrass cover were delineated as valley needlegrass grassland while sites with less than 10 percent needlegrass cover were delineated as annual grassland. Additionally, valley needlegrass grasslands were subdivided into low- and high-quality sites by further delineating sites with 10 to 30 percent needlegrass cover separately from sites with 30 percent or greater needlegrass cover.

Only 0.4 acre of perennial grassland, in the form of valley needlegrass grassland, occurs within the Plan Area at the East Garrison South HMA.

# Coast Live Oak Woodland

- A Manual of California Vegetation classification: Coast live oak woodland (Quercus agrifolia/Toxicodendron diversilobum/grass association)
- CDFW's California Natural Communities List: Not sensitive

The coast live oak (*Quercus agrifolia*) is the dominant tree of woodlands and savannas at the former Fort Ord, usually occurring in pure stands. Three coast live oak communities, each with different growth characteristics, understory associates, and canopy cover, have been recognized on the former Fort Ord: coastal coast live oak woodland, inland coast live oak woodland, and coast live oak savanna (Army, 1992). "Woodland" is a partially open canopy to mostly closed canopy community with grass or shrub understory. "Savanna" is a transitional community between grassland and woodland with scattered trees at less than 10 percent cover and a grassy understory. The distinction of "coastal" is given based on the proximity of the coast live oak woodland to the coast.

In coastal coast live oak woodland, coast live oaks grow in unprotected sites and are exposed to the combined stresses of strong winds, salt spray, and sterile, sandy soils, which are often referred to as "sand hills." These environmental factors create an oak woodland characterized by short, wind-pruned trees that intergrades with the surrounding coastal scrub and maritime chaparral communities. The coastal coast live oak woodland canopy is dominated by an open to nearly closed canopy of coast live oak with occasional Monterey pine (*Pinus radiata*) and Monterey cypress (*Hesperocyparis macrocarpa*). The shrub layer includes poison oak (*Toxicodendron diversilobum*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), and coyote brush (*Baccharis pilularis*). Annual grassland species occur as the dominant understory at some sites, and where coastal coast live oak woodland intergrades with maritime chaparral the understory supports chaparral shrubs.

Wildlife that are commonly found within coastal coast live oak woodland are those that favor a dense canopy structure or a dense shrubby understory, including hermit thrush (*Catharus guttatus*), canyon towhee (*Melozone fusca*), plain titmouse (*Baeolophus inornatus*), blue-gray gnatcatcher (*Polioptila caerulea*), lazuli bunting (*Passerina amoeniia*), California pocket mouse (*Chaetodipus californicus*), and California mouse (*Peromyscus californicus*). Typical predators such as gray fox (*Urocyon cinereoargenteus*) and striped skunk (*Mephitis mephitis*) forage in the understory.

In contrast with coastal coast live oak woodland, inland coast live oak woodland occurs beyond the influence of strong coastal winds and salt spray and on better soils. This community occurs in ravines and protected sites on soils that retain more moisture than the surrounding open grassland areas. As a result, oaks grow tall and stately, usually in pure stands, rather than low and wind pruned. The understory supports grasses and herbs typical of annual grassland and shrub habitats, such as poison oak, coyote bush, silver lupine (*Lupinus albifrons*), sticky monkeyflower (*Diplacus aurantiacus*), and blue witch nightshade (*Solanum umbelliferum*).

The thick vegetation and moist conditions associated with the inland coast live oak woodland at the former Fort Ord allow for an abundance of wildlife species. Plain titmouse, dark-eyed junco (*Junco hyemalis*), ash throated flycatcher (*Myiarchus cinerascens*), and Nuttal's woodpecker (*Dryobates nuttallii*) forage and nest in the canopy. Mourning dove (*Zenaida macroura*), California scrub jay (*Aphelocoma californica*),

California quail (Callipepla californica), and northern flicker (Colaptes auratus) forage in the grassy understory. The understory also supports California mouse, deer mouse (Peromyscus maniculatus), southern alligator lizard (Elgaria multicarinata), and western skink (Plestiodon skiltonianus), and the relatively moist conditions support Pacific tree frog (Pseudacris regilla) and arboreal salamander (Aneides lugubris). Striped skunks are a common predator, but bobcat and mountain lion (Puma concolor) probably also occur.

Coast live oak savannas are likely the result of intermediate moisture conditions between woodland and grassland but may also have resulted from woodcutting activity. Woodland habitats are usually protected sites with greater and longer duration soil moisture resulting in more favorable conditions for oak seedling establishment. Grassland habitats are dryer for a greater portion of the year, resulting in conditions less favorable for oak seedling establishment. Historic tree removal and grazing practices have also influenced woodland, savanna, and grassland boundaries. Comprising less than 10 percent of the vegetative cover, the dominant tree in coast live oak savanna is coast live oak. The understory is dominated by annual grasses, including slender wild oat (*Avena barbata*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), annual fescue (*Vulpia myuros*), and silver hairgrass (*Aira caryophyllea*), and annual forbs such as long beaked filaree (*Erodium botrys*), red stemmed filaree (*Erodium cicutarium*).

The open canopy and grassy understory of oak savannas provide favorable conditions for many grassland-related species, including California ground squirrel (*Spermophilus beecheyi*), California vole (*Microtus californicus*), and black-tailed hare (*Lepus californicus*). Red-tailed hawks (*Buteo jamaicensis*) and other raptors use the scattered trees as perching and scanning points while hunting for these species. Western bluebird, mourning dove, and olive-side flycatcher are also found in the inland oak savannas.

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

Coast live oak woodland is the most abundant natural community within the Plan Area. Approximately 506.8 acres of coast live oak woodland occur within the Plan Area, including the East Garrison North, East Garrison South, Habitat Corridor, Travel Camp, Oak Oval, Parker Flats, and Lookout Ridge HMAs (Figures 1a-1i; Table 1). As described above, 78.0 acres of coast live oak woodland also intergrade with maritime chaparral at the East Garrison North, East Garrison South, Oak Oval, Parker Flats, Lookout Ridge, and Wolf Hill HMAs, 61.9 acres intergrade with coastal scrub at the East Garrison North, East Garrison South, Habitat Corridor, Travel Camp, and Lookout Ridge HMAs, and 183.3 acres intergrade with annual grassland at the East Garrison North, East Garrison South, Habitat Corridor, Travel Camp, Oak Oval, Parker Flats, and Lookout Ridge HMAs.

### Ruderal/Disturbed

- A Manual of California Vegetation classification: None
- CDFW's California Natural Communities List: Not listed

Ruderal areas are those areas which have been disturbed by human activities and are dominated by nonnative annual grasses and other "weedy" species. Ruderal areas include vegetation dominated by ice plant (*Carpobrotus edulis*), ripgut brome (*Bromus diandrus*), slender oat (*Avena barbata*), cut-leaved plantain (*Plantago coronopus*), English plantain (*P. lanceolata*), sand mat (*Cardionema ramosissimum*), longbeaked filaree (*Erodium botrys*), and telegraph weed (*Heterotheca grandiflora*).

This natural community is considered to have low biological value as it is generally dominated by non-native plant species and consists of relatively low-quality habitat from a wildlife perspective. However, common wildlife species which do well in urbanized and disturbed areas, such as the American crow (Corvus brachyrhynchos), California ground squirrel (Otospermophilus beecheyi), raccoon (Procyon lotor), striped skunk (Mephitis mephitis), western scrub jay (Aphelocoma californica), European starling (Sturnus vulgaris), western fence lizard (Sceloporus occidentalis), and rock pigeon (Columba livia), may forage within ruderal areas.

Approximately 45.4 acres of ruderal/disturbed vegetation occur within the Plan Area, including the East Garrison North, East Garrison South, Habitat Corridor, Travel Camp, Parker Flats, Lookout Ridge, Wolf Hill, and MPC Range 45 HMAs (**Figures 1a-1i**; **Table 1**). These areas consist of trails or areas dominated by ice plant.

### Planted Monterey Pine Forest

- A Manual of California Vegetation classification: Monterey cypress Monterey pine woodland stands (Hesperocyparis macrocarpa Pinus radiata forest and woodland semi-natural alliance)
- CDFW's California Natural Communities List: Not sensitive

Monterey pine forest is a moderate- to closed-canopy natural community dominated by Monterey pine trees (*Pinus radiata*), but also supporting coast live oak (*Quercus agrifolia*), California coffeeberry (*Frangula californica*), poison oak (*Toxicodendron diversilobum*), creeping snowberry (*Symphoricarpos mollis*), and California wood fern (*Dryopteris arguta*). Monterey pine is a closed-cone coniferous evergreen tree that is adapted to cope with fire disturbance. It is native to three limited areas in Santa Cruz, Monterey, and San Luis Obispo Counties, and also to Guadalupe and Cedros Islands in Mexico (Calscape, 2022b). Today, Monterey pine occurs throughout the greater Monterey Peninsula and is widely farmed as a timber tree worldwide, with over ten million acres in cultivation in Australia, New Zealand, South Africa, Spain, and Chile; however, natural Monterey pine forests are limited in number and locale and are threatened by human development (Pacific Horticulture, 2011).

Due to relatively short life span of closed-cone pines, dead trees and trunks are characteristic of Monterey pine forests. These attract a wide variety of wildlife, including mule deer (*Odocoileus hemionus*), raccoon (*Procyon lotor*), red-tailed hawk (*Buteo jamaicensis*), scrub jay (*Aphelocoma californica*), chestnut-backed chickadee (*Poecile rufescens*), and American robin (*Turdus migratorius*). Within the Plan Area, only one 4.3-acre of planted Monterey pine forest stand is known in the Travel Camp HMA. Although native

Monterey pine forest is considered sensitive by CDFW, the Monterey pine trees within the Plan Area were planted by the Army; therefore, the Monterey pine forest vegetation alliance occurring within the site is a semi-natural alliance of horticultural origin and is not considered sensitive by CDFW.

# **Eucalyptus Grove**

- A Manual of California Vegetation classification: Eucalyptus tree of heaven black locust groves (Eucalyptus spp. Ailanthus altissima Robinia pseudoacacia woodland semi-natural alliance)
- California Natural Communities List: Not sensitive

Eucalyptus habitats range from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus trees (*Eucalyptus* spp.) form a dense stand with a closed canopy. With over 700 species, *Eucalyptus* is a diverse genus of flowering trees that are native to Australia and were introduced to California during the gold rush (University of California, 2022). The main species planted are the blue gum (*Eucalyptus globulus*), red gum (*E. camaldulensis*), red ironbark (*E. tricarpa*), and silver dollar gum (*E. polyanthemos*). These species were introduced worldwide because they can adapt and grow in severely dry regions that have been historically unable to maintain vegetation, and therefore, provide shade, shelter, windbreaks, and a source of timber in areas that otherwise would have been dominated by grasses (University of California, 2022).

Although non-native, eucalyptus groves have become a predominant feature of the landscape. They provide roosts, perches, and nest sites for a variety of bird species, including American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), barn owl (*Tyto alba*), red-tailed hawk (*Buteo jamaicensis*), and red-shouldered hawk (*Buteo lineatus*). In addition, they provide habitat for migrating monarch butterflies (*Danaus plexippus*), recently listed as a candidate species under the federal Endangered Species Act. Those eucalyptus with stringy bark or a tendency for rapid deposition of litter (including *E. globulus*, the most common eucalyptus within the former Fort Ord) also create micro habitats for a number of small vertebrate species, including lizards, snakes, and woodrats. Eucalyptus groves have limited distribution within the former Fort Ord; within the Plan Area, only one 1.2-acre eucalyptus grove is known in the Travel Camp HMA.

## Wetland and Open Water Communities

Wetlands and open water occur at scattered sites throughout the former Fort Ord and range in the form of vernal pools, freshwater marshes, artificial ponds, and ephemeral, intermittent, and perennial streams. Wetlands include sites of both permanent and seasonal inundation and form at the interface of terrestrial and aquatic ecosystems, containing features of both. They are among the most biologically diverse of all natural communities, serving as habitat to a wide variety of plant and animal species; however, they have been greatly reduced from their historic extent and continue to be threatened by urban and agricultural development. The federal government supports a policy of minimizing the destruction, loss, or degradation of wetlands (Executive Order 11990, May 24, 1997).

Approximately 6.6 acres of wetland and open water communities, including vernal pools, freshwater marshes, artificial ponds, and streams, occur within the Plan Area at the East Garrison South, Travel Camp, Lookout Ridge, and Wolf Hill HMAs. It is important to note that wetlands have not been delineated within the Plan Area; therefore, acreage of wetlands and other waters were approximated based on field

observations and data from the Service's National Wetlands Inventory (Service, 2022). Descriptions of these communities are provided below.

### Vernal Pools

- A Manual of California Vegetation classification: Pale spikerush marshes and smooth goldfields vernal pool bottoms (Eleocharis macrostachya Lasthenia glaberrima herbaceous alliance)
- CDFW's California Natural Communities List: Sensitive

Vernal pools are internally drained basins in low-lying grassland areas that collect rainfall and surface runoff. Water accumulates in these depressions because of an impervious soil layer that prevents infiltration of water into the soil profile. The frequency and duration of this seasonal inundation varies among vernal pools, depending on the size of the basin and its watershed, soil depth to the impervious layer, and patterns of rainfall. Vernal pools provide habitat for plants and wildlife adapted to complete their life cycle under the extreme conditions of winter and spring inundation and summer and fall desiccation. At the former Fort Ord, vernal pools are most common on sites mapped by the Natural Resources Conservation Service (NRCS) as Antioch soils in isolated grassland patches within a matrix of maritime chaparral. These large, shallow pools support vernal pool-adapted species, including common spikerush (*Eleocharis macrostachya*) as the dominant cover and associated hyssop loosestrife (*Lythrum hyssopifolia*), Vasey's coyote thistle, hedge nettle (*Stachys ajugoides*), common toad rush (*Juncus bufonius*), Howell's meadow foxtail (*Alopecurus pratensis*), water buttercup (*Ranunculus aquatilis*), large water starwort (*Callitriche heterophylla*), curly dock (*Rumex crispus*), rayless goldfields (*Lasthenia glaberrima*), and quillwort (*Isoetes* sp.) (Army, 1992).

Vernal pools provide important seasonal habitat for wildlife that are water dependent during their larval stage. Western spadefoot toad, Pacific tree frog, and western toad use vernal pools for egg laying and larval development. These aquatic species serve as prey for great blue heron, snowy egret, garter snakes, and raccoons. Northern rough-winged swallows and violet-green swallows forage for insects over vernal pools.

Vernal pools at Fort Ord would likely qualify as jurisdictional wetlands based on vegetation and soil sampling and hydrologic indicators of vernal pools at the corner of Watkins Gate and Hennekins Ranch Roads and at Machine Gun Flats. Vernal pools are considered an important natural community because they have been greatly reduced from historic extent, provide habitat for wildlife and rare plant species, and continue to be threatened by urban and agricultural conversion.

### Freshwater Marshes

- A Manual of California Vegetation classification: Hardstem and California bulrush marshes (Schoenoplectus [acutus, californicus] herbaceous alliance) and cattail marshes (Typha [angustifolia, domingensis, latifolia] herbaceous alliance)
- CDFW's California Natural Communities List: Sensitive

Freshwater marshes are dominated by perennial, emergent plants that thrive in areas that are permanently flooded or saturated by fresh water. At the former Fort Ord, freshwater marsh occurs around the perimeter of ponds and in patches in the channels of Toro Creek and the Salinas River. During periods of low water levels, the bed of the Salinas River becomes increasingly dominated by tules (*Schoenoplectus acutus*) and

cattails (*Typha* spp.). Dominant plant species in the freshwater marsh include water smartweed (*Polygonum amphibium*), broad-leaved cattail, tule, and pondweed (*Potamogeton* spp.) (Army, 1992). Cattails and rushes growing in freshwater marshes provide nesting habitat and cover for soras, red-winged blackbirds, and marsh wrens. Mallards, Canada geese, and cinnamon teal nest along the edges of the marsh habitat. The same aquatic species described for vernal pools also use freshwater marshes.

Freshwater marsh is an important natural community because of its water filtering and flood storage functions and high wildlife habitat value. Losses of freshwater marsh in California have resulted from draining to create agricultural land, diversion and retention of water by darns, and the groundwater withdrawal for irrigation purposes.

## Artificial Ponds

- A Manual of California Vegetation classification: None
- CDFW's California Natural Communities List: Not listed

Artificially constructed ponds occur at scattered sites at the former Fort Ord and provide a perennial water source for livestock and wildlife. Most of these ponds occur in the southeast portion of the former Fort Ord, within the grazing lease. The largest pond at the former Fort Ord is Mudhen Lake. This artificial pond is filled by direct precipitation and has not held permanent water for years (Army, 1992). The immediate edges of most of these ponds are typically unvegetated because of widely fluctuating water levels. Other ponds support freshwater marsh species at their upper edges. Mudhen Lake is mostly devoid of vegetation, but water smartweed occurs around its perimeter.

When ponds and reservoirs are full, mallards, cinnamon teal, canvasback, pintail, and other waterfowl forage and rest on the open water. Shorebirds, such as California gulls and marbled godwits, may be attracted inland by the open water. Other species that use freshwater marsh habitat around rivers and vernal pools also will use the limited marsh habitat available at ponds and reservoirs.

# Streams

- A Manual of California Vegetation classification: None
- CDFW's California Natural Communities List: Not listed

Streams at Fort Ord include perennial streams such as the Salinas River, which carry water year-round; intermittent streams, which carry water during the rainy season; and ephemeral streams, which convey runoff during and immediately after rainfall events to intermittent and perennial streams. Poorly defined drainages are dominated by upland plants such as soft chess (*Bromus hordeaceus*), Italian rye grass (*Festuca perennis*), barley (*Hordeum* spp.), and wild oats (*Avena* spp.). More well-defined drainages support more mesic species, including rabbitsfoot grass (*Polypogon monspeliensis*) and Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*). Deeply cut drainages that transport larger amounts of water support dense bank vegetation such as coast live oak (*Quercus agrifolia*), California blackberry (*Rubus ursinus*), and coyote brush (*Baccharis pilularis*).

Streams are important habitat because they provide seasonal water and moist conditions for wildlife species similar to those found in wetland communities.

# **Developed**

- A Manual of California Vegetation classifications: None
- CDFW's California Natural Communities List: Not listed

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

Approximately 18.8 acres of development, mostly in the form of paved access roads, occur within the Plan Area at the East Garrison North, East Garrison South, Habitat Corridor, Travel Camp, Oak Oval, Parker Flats, Lookout Ridge, and Wolf Hill HMAs.

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# SPECIAL-STATUS SPECIES TABLE

Carmel Valley, Chualar, Marina, Monterey, Moss Landing, Mt. Carmel, Natividad, Prunedale, Rana Creek, Salinas, San Juan Bautista, Seaside, Soberanes Point, and Spreckels Quadrangles

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
MAMMALS Antrozous pallidus Pallid bat	—/ CSC / —	Occurs in a wide variety of habitats including grasslands, shrublands, arid desert areas, oak savanna, coastal forested areas, and coniferous forests of the mountain regions of California. Most common in open, dry habitats with rocky areas for roosting. Day roosts include caves, crevices, mines, and occasionally hollow trees and buildings. Seems to prefer rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Similar structures are used for night roosting and will also use more open sites such as eaves, awnings, and open areas under bridges for feeding roosts.	<ul> <li>East Garrison North HMA: Low</li> <li>East Garrison South HMA: Low</li> <li>Habitat Corridor HMA: Low</li> <li>Travel Camp HMA: Low</li> <li>Oak Oval HMA: Low</li> <li>Parker Flats HMA: Low</li> <li>Lookout Ridge HMA: Low</li> <li>Wolf Hill HMA: Low</li> <li>MPC HMA: Unlikely</li> <li>May use some of the trees within oak woodland, Monterey pine forest, and eucalyptus grove habitats for night roosts and may forage over all undeveloped areas of the Plan Area. However, no suitable day, colonial, or maternity roost habitat is present. The CNDDB reports only one occurrence of this species within the quadrangles reviewed, located approximately 15 miles north of the Plan Area.</li> </ul>
Corynorhinus townsendii Townsend's big-eared bat	—/ CSC / —	Found primarily in rural settings from inland deserts to coastal redwoods, oak woodland of the inner Coast Ranges and Sierra foothills, and low to mid-elevation mixed coniferous-deciduous forests. Typically roost during the day in limestone caves, lava tubes, and mines, but can roost in buildings that offer suitable conditions. Night roosts are in more open settings and include bridges, rock crevices, and trees.	<ul> <li>East Garrison North HMA: Moderate</li> <li>East Garrison South HMA: Moderate</li> <li>Habitat Corridor HMA: Moderate</li> <li>Travel Camp HMA: Moderate</li> <li>Oak Oval HMA: Moderate</li> <li>Parker Flats HMA: Moderate</li> <li>Lookout Ridge HMA: Moderate</li> <li>Wolf Hill HMA: Moderate</li> <li>MPC HMA: Unlikely</li> <li>May use some of the trees within oak woodland, Monterey pine forest, and eucalyptus grove habitats for night roosts and may forage over all undeveloped areas of the Plan Area. However, no suitable day, colonial, or maternity roost habitat is present. The CNDDB reports three occurrences of this species within the quadrangles reviewed, the nearest located less than 1,000 feet from the East Garrison South HMA. Therefore, this species has the potential to use all HMAs within the Plan Area for forage and night roost.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Neotoma macrotis luciana Monterey dusky-footed woodrat	—/CSC/—	Forest and oak woodland habitats of moderate canopy with moderate to dense understory. Also occurs in chaparral habitats.	<ul> <li>East Garrison North HMA: Present</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Present</li> <li>Travel Camp HMA: Present</li> <li>Oak Oval HMA: Present</li> <li>Parker Flats HMA: Present</li> <li>Lookout Ridge HMA: High</li> <li>Wolf Hill HMA: High</li> <li>MPC HMA: High</li> <li>Suitable habitat is present throughout the entire Plan Area in oak woodland, maritime chaparral, Monterey pine forest, and eucalyptus grove habitats, including any mixed habitats. The CNDDB reports two occurrences of this species within the quadrangles reviewed, the nearest located approximately 2.5 miles east of the East Garrison South HMA. In addition, this species is known to occur throughout the former Fort Ord and nests were observed within several HMAs during surveys in 2021. Therefore, this species is assumed to be present within the Plan Area where suitable habitat occurs.</li> </ul>
Sorex ornatus salarius Monterey 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.	<ul> <li>East Garrison North HMA: Moderate</li> <li>East Garrison South HMA: Moderate</li> <li>Habitat Corridor HMA: Moderate</li> <li>Travel Camp HMA: Moderate</li> <li>Oak Oval HMA: Moderate</li> <li>Parker Flats HMA: Moderate</li> <li>Lookout Ridge HMA: Moderate</li> <li>Wolf Hill HMA: Moderate</li> <li>MPC HMA: Moderate</li> <li>Suitable habitat is present throughout the entire Plan Area in oak woodland, chaparral, coastal scrub, and grasslands. The CNDDB reports five occurrences of this species within the quadrangles reviewed, the nearest located approximately 2.5 miles southwest of the Plan Area.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Taxidea taxus American badger	—/ CSC /—	Dry, open grasslands, fields, pastures savannas, and mountain meadows near timberline are preferred. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated grounds.	<ul> <li>East Garrison North HMA: Moderate</li> <li>East Garrison South HMA: Low</li> <li>Habitat Corridor HMA: Low</li> <li>Travel Camp HMA: Low</li> <li>Oak Oval HMA: Low</li> <li>Parker Flats HMA: Low</li> <li>Lookout Ridge HMA: Moderate</li> <li>Wolf Hill HMA: Moderate</li> <li>MPC HMA: Low</li> <li>Suitable habitat is present in the Plan Area where abundant open grassland habitats occur. The CNDDB reports 13 occurrences of this species within the quadrangles reviewed, including an occurrence which overlaps the Plan Area at the Lookout Ridge HMA. Badger burrows were not identified within the Plan Area during biological surveys in 2021; however; this species is known to occur within grasslands on the former Fort Ord and may move into the Plan Area at any time.</li> </ul>
BIRDS Agelaius tricolor Tricolored blackbird (nesting colony)	—/SC/—	Nest in colonies in dense riparian vegetation, along rivers, lagoons, lakes, and ponds. Forages over grassland or aquatic habitats. Historically nested in wetlands with cattails, bulrushes, and willows, but as wetlands were converted to agricultural fields or developed, started nesting also in agricultural fields.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Moderate</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Low</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Low</li> <li>Wolf Hill HMA: Moderate</li> <li>MPC HMA: Unlikely</li> <li>Suitable habitat is present within the Plan Area at the East Garrison South and Wolf Hill HMAs, where emergent wetland vegetation is present in the form of freshwater marshes. The CNDDB reports 21 occurrences of this species within the Plan Area, the nearest located less than 500 ft from the Wolf Hill HMA.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Aquila chrysaetos Golden eagle (nesting and wintering)	— / CFP / —	Use rolling foothills, mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, cliffs, and rocky outcrops. Nest in secluded cliffs with overhanging ledges as well as large trees.	<ul> <li>East Garrison North HMA: Moderate</li> <li>East Garrison South HMA: Moderate</li> <li>Habitat Corridor HMA: Moderate</li> <li>Travel Camp HMA: Moderate</li> <li>Oak Oval HMA: Moderate</li> <li>Parker Flats HMA: Moderate</li> <li>Lookout Ridge HMA: Moderate</li> <li>Wolf Hill HMA: Moderate</li> <li>MPC HMA: Moderate</li> <li>Suitable habitat is present throughout the entire Plan Area. The CNDDB reports only one occurrence of this species within the quadrangles reviewed, located approximately 12 miles from the Plan Area; however, this species is known to occur within the former Fort Ord.</li> </ul>
Asio flammeus Short-eared owl (nesting)	—/ CSC /—	Usually found in open areas with few trees, such as annual and perennial grasslands, prairies, meadows, dunes, irrigated lands, and saline and freshwater emergent marshes.  Dense vegetation is required for roosting and nesting cover. This includes tall grasses, brush, ditches, and wetlands. Open, treeless areas containing elevated sites for perching, such as fence posts or small mounds, are also needed. Some individuals breed in northern California.	<ul> <li>East Garrison North HMA: Moderate</li> <li>East Garrison South HMA: Moderate</li> <li>Habitat Corridor HMA: Moderate</li> <li>Travel Camp HMA: Moderate</li> <li>Oak Oval HMA: Moderate</li> <li>Parker Flats HMA: Moderate</li> <li>Lookout Ridge HMA: Moderate</li> <li>Wolf Hill HMA: Moderate</li> <li>MPC HMA: Unlikely</li> <li>Suitable habitat is present throughout the entire Plan Area in grassland and wetland habitats. The CNDDB reports one occurrence of this species within the quadrangles reviewed, located approximately 8.5 miles north of the Plan Area.</li> </ul>
Athene cunicularia Burrowing owl (burrow sites and 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.	<ul> <li>East Garrison North HMA: Moderate</li> <li>East Garrison South HMA: Low</li> <li>Habitat Corridor HMA: Low</li> <li>Travel Camp HMA: Low</li> <li>Oak Oval HMA: Low</li> <li>Parker Flats HMA: Low</li> <li>Lookout Ridge HMA: Moderate</li> <li>Wolf Hill HMA: Moderate</li> <li>MPC HMA: Moderate</li> <li>Suitable habitat is present in the Plan Area where abundant open grassland habitats occur. The CNDDB reports 12 occurrences of this species within the quadrangles reviewed, the nearest located approximately 1.5 miles from the Plan Area in the City of Marina.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Buteo swainsoni Swainson's hawk (nesting)	—/ST/—	Generally found associated with plains, range, open hills, and sparse trees. Suitable nesting habitat includes trees within mature riparian forest or corridors, lone oak trees and oak groves, and mature roadside trees. Nest sites are generally adjacent to, or within easy flying distance to suitable foraging habitat that provides available prey resources. Within California, most of the breeding for this species occurs within the Central Valley.	<ul> <li>East Garrison North HMA: Moderate</li> <li>East Garrison South HMA: Low</li> <li>Habitat Corridor HMA: Low</li> <li>Travel Camp HMA: Low</li> <li>Oak Oval HMA: Low</li> <li>Parker Flats HMA: Low</li> <li>Lookout Ridge HMA: Moderate</li> <li>Wolf Hill HMA: Moderate</li> <li>MPC HMA: Low</li> <li>Suitable habitat is present in grassland and coast live oak woodland/grassland mix habitats throughout the entire Plan Area. The CNDDB reports one occurrence of this species within the quadrangles reviewed, located approximately 6.4 miles east of the Plan Area.</li> </ul>
Brachyramphus marmoratus 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.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable habitat within the Plan Area. The CNDDB does not report any occurrences of this species within the quadrangles reviewed.</li> </ul>
Charadrius nivosus nivosus 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.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable habitat within the Plan Area.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Coturnicops noveboracensis 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	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>Marginally suitable foraging habitat is present within wetland habitats in the Plan Area; however, this species does not nest on the central coast.</li> </ul>
Cypseloides niger 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.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable nesting habitat within the Plan Area.</li> </ul>
Elanus leucurus White-tailed kite (nesting)	— / CFP / —	Open groves, river valleys, marshes, and grasslands. Prefer such area with low roosts (fences etc.). Nest in shrubs and trees adjacent to grasslands.	<ul> <li>East Garrison North HMA: Moderate</li> <li>East Garrison South HMA: Moderate</li> <li>Habitat Corridor HMA: Moderate</li> <li>Travel Camp HMA: Moderate</li> <li>Oak Oval HMA: Low</li> <li>Parker Flats HMA: Moderate</li> <li>Lookout Ridge HMA: Moderate</li> <li>Wolf Hill HMA: Moderate</li> <li>MPC HMA: Moderate</li> <li>Suitable foraging and nesting habitat is present throughout the Plan Area in grassland and coast live oak woodland/grassland mix habitats. The CNDDB reports only two occurrences of this species within the quadrangles reviewed, both located approximately 11 miles north of the Plan Area; however, this species has been observed within the former Fort Ord by DD&amp;A biologists.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Empidonax traillii extimus 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. 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.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable habitat within the Plan Area. The CNDDB does not report any occurrences of this species within the quadrangles reviewed.</li> </ul>
Falco peregrinus anatum American peregrine falcon (nesting)	— / CFP / —	Forages for other birds over a variety of habitats. Breeds primarily on rocky cliffs.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>Although this species may forage within the Plan Area, no suitable nesting habitat present. The CNDDB reports one non-specific occurrence of the species approximately 6.2 miles from the Plan Area in the Moss Landing quadrangle.</li> </ul>
Gymnogyps californianus 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.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>Suitable roosting habitat is present within the Plan Area; however, no suitable nesting habitat is present. In addition, the CNDDB does not report any occurrences of this species within the quadrangles reviewed.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Hydrobates homochroa Ashy storm-petrel (nesting)	—/ CSC /—	Tied to land only to nest, otherwise remains over open sea. Nests in natural cavities, sea caves, or rock crevices on offshore islands and prominent peninsulas of the mainland.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable habitat within the Plan Area.</li> </ul>
Laterallus jamaicensis coturniculus California black rail	— / ST+CFP / —	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that does not fluctuate during the year and dense vegetation for nesting habitat.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable habitat within the Plan Area.</li> </ul>
Pelecanus occidentalis californicus 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.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable habitat within the Plan Area.</li> </ul>
Rallus obsoletus obsoletus California Ridgway's rail	FE / SE+CFP / —	Salt and brackish marshes.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable habitat within the Plan Area.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Riparia riparia Bank swallow (nesting)	— / ST / —	Nest colonially in sand banks. Found near water; fields, marshes, streams, and lakes.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable habitat within the Plan Area.</li> </ul>
Sterna antillarum browni 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.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable habitat within the Plan Area. The CNDDB does not report any occurrences of this species within the quadrangles reviewed.</li> </ul>
Vireo bellii pusillus 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.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable nesting habitat within the Plan Area.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
REPTILES AND AMPHIBI Ambystoma californiense California tiger salamander	FT/ST/—	Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Need underground refuges and vernal pools or other seasonal water sources.	<ul> <li>East Garrison North HMA: High</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: High</li> <li>Travel Camp HMA: Present</li> <li>Oak Oval HMA: Moderate</li> <li>Parker Flats HMA: Moderate</li> <li>Lookout Ridge HMA: Present</li> <li>Wolf Hill HMA: Present</li> <li>MPC HMA: Moderate</li> <li>Suitable breeding, upland, and dispersal habitat is present within the Plan Area. Suitable aquatic breeding habitat, including ponds which are known to be occupied by CTS, is present within the Plan Area at the East Garrison South, Travel Camp, Lookout Ridge, and Wolf Hill HMAs. In addition, the Plan Area is surrounded by numerous aquatic breeding resources that are known or have the potential to be occupied by CTS; the entire Plan Area except the westernmost portion of the MPC HMA is within the 2.2 km dispersal range of CTS from a known or potential breeding pond. Therefore, the entire Plan Area except the westernmost portion of the MPC HMA may be used for dispersal by CTS and for upland habitat where habitat conditions are appropriate.</li> </ul>
Ambystoma macrodactylum croceum Santa Cruz long-toed salamander	FE / SE+CFP / —	Preferred habitats include ponderosa pine, montane hardwood-conifer, mixed conifer, montane riparian, red fir and wet meadows. Occurs in a small number of localities in Santa Cruz and Monterey Counties. Adults spend the majority of the time in underground burrows and beneath objects. Larvae prefer shallow water with clumps of vegetation.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable habitat within the Plan Area. In addition, the Plan Area is outside the known range of this species.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Anniella pulchra 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.	<ul> <li>East Garrison North HMA: High</li> <li>East Garrison South HMA: High</li> <li>Habitat Corridor HMA: High</li> <li>Travel Camp HMA: High</li> <li>Oak Oval HMA: High</li> <li>Parker Flats HMA: High</li> <li>Lookout Ridge HMA: High</li> <li>Wolf Hill HMA: High</li> <li>MPC HMA: High</li> <li>Suitable habitat is present within the Plan Area within maritime chaparral, coastal scrub, and oak woodland habitats on sandy soils. The CNDDB reports 58 occurrences of this species within the quadrangles reviewed, including an occurrence which overlaps the Plan Area at the Oak Oval HMA. In addition, DD&amp;A biologists have observed this species in several areas of the former Fort Ord.</li> </ul>
Emys marmorata 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.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No permanent water within the Plan Area.</li> </ul>
Phrynosoma blainvillii Coast horned lizard	—/CSC/—	Associated with open patches of sandy soils in washes, chaparral, scrub, and grasslands.	<ul> <li>East Garrison North HMA: High</li> <li>East Garrison South HMA: High</li> <li>Habitat Corridor HMA: High</li> <li>Travel Camp HMA: High</li> <li>Oak Oval HMA: High</li> <li>Parker Flats HMA: Present</li> <li>Lookout Ridge HMA: High</li> <li>Wolf Hill HMA: High</li> <li>MPC HMA: Present</li> <li>Suitable habitat is present within the Plan Area within maritime chaparral, coast scrub, and grassland habitats. The CNDDB reports six occurrences of this species within the quadrangles reviewed, the nearest located less than 0.5 mile from the Plan Area at Marina Airport. In addition, DD&amp;A biologists observed several occurrences of this species at the Parker Flats HMA during biological surveys in 2021 and 2022.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Rana boylii Foothill yellow-legged frog	— / SE/ —	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.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable habitat within the Plan Area. In addition, the Plan Area is</li> </ul>
Rana draytonii California red-legged frog	FT/CSC/—	Lowlands and foothills in or near permanent or late-season sources of deep water with dense, shrubby, or emergent riparian vegetation. During late summer or fall adults are known to utilize a variety of upland habitats with leaf litter or mammal burrows.	likely outside the current range of this species.  East Garrison North HMA: Low  East Garrison South HMA: Moderate  Habitat Corridor HMA: Low  Travel Camp HMA: Moderate  Oak Oval HMA: Low  Parker Flats HMA: Low  Lookout Ridge HMA: Moderate  Wolf Hill HMA: Moderate  MPC HMA: Low  Suitable upland and dispersal habitat is present throughout the Plan Area and suitable breeding habitat is present at the East Garrison South, Travel Camp, Lookout Ridge, and Wolf Hill HMAs. The CNDDB reports 99 occurrences of this species within the quadrangles reviewed, the nearest located approximately 4.2 miles south of the Plan Area at the Tehama Golf Course. However, the nearest known breeding pond (breeding only observed in 2011) is approximately 1.9 miles east of the Lookout Ridge HMA. Although this species has not been reported within one mile (its known dispersal range) of the Plan Area, it has the potential to travel between ponds and upland habitat over time and eventually occupy suitable habitat within the Plan Area. Due to distance from the known breeding pond, this process is unlikely to be completed in the near future for HMAs located further from the pond and which don't contain suitable breeding habitat for CRLF.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Spea hammondii Western spadefoot toad	—/ CSC /—	Grasslands with shallow temporary pools are optimal habitats for the western spadefoot. Occur primarily in grassland habitats but can be found in valley and foothill woodlands. Vernal pools are essential for breeding and egg laying.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Low</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Low</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Low</li> <li>Wolf Hill HMA: Low</li> <li>MPC HMA: Unlikely</li> <li>Suitable breeding and upland habitat is present within the Plan Area at the East Garrison South, Travel Camp, Lookout Ridge, and Wolf Hill HMAs. However, the CNDDB reports only one historical (1922) occurrence of this species within the quadrangles reviewed, located approximately 4.2 miles northeast of the Plan Area near Natividad Creek.</li> </ul>
Taricha torosa 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.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Low</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Low</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Low</li> <li>Wolf Hill HMA: Low</li> <li>MPC HMA: Unlikely</li> <li>Suitable breeding habitat is present within the Plan Area within ponds at the East Garrison South, Travel Camp, Lookout Ridge, and Wolf Hill HMAs. In addition, suitable upland habitat is present throughout the entire Plan Area in maritime chaparral, coastal scrub, and grassland habitats. However, this species is not known to occur within the former Fort Ord. The CNDDB reports five occurrences of this species within the quadrangles reviewed, the nearest located approximately 2.3 miles east of the Plan Area within the Salinas River riparian corridor.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Thamnophis hammondii Two-striped garter snake	—/ CSC /—	Associated with permanent or semi- permanent bodies of water bordered by dense vegetation in a variety of habitats from sea level to 2400m elevation.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>No suitable habitat within the Plan Area. The CNDDB reports only one occurrence of this species within the quadrangles reviewed, located approximately 6.5 miles east of the Plan Area.</li> </ul>
Eucyclogobius newberryi Tidewater goby	FE / — / —	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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>No suitable habitat within the Plan Area.</li> </ul>
Lavinia exilicauda harengus Monterey hitch	—/ CSC /—	Found only within the Pajaro and Salinas River systems. Can occupy a wide variety of habitats, however, they are most abundant in lowland areas with large pools or small reservoirs that mimic such conditions. May be found in brackish water conditions within the Salinas River lagoon during the early summer months when the sandbar forms at the mouth of the river.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>No suitable habitat within the Plan Area.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Oncorhynchus mykiss irideus Steelhead (south-central California coast DPS)	FT/—/—	Cold headwaters, creeks, and small to large rivers and lakes; anadromous in coastal streams.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>No suitable habitat within the Plan Area.</li> </ul>
Spirinchus thaleichthys Longfin smelt	FC/ST/—	Euryhaline, nektonic and 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>No suitable habitat within the Plan Area.</li> </ul>
INVERTEBRATES Branchinecta lynchi 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.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>Suitable habitat is present within the Plan Area at ponds within the East Garrison South, Travel Camp, Lookout Ridge, and Wolf Hill HMAs; however, the CNDDB does not report any occurrences of this species within the quadrangles reviewed.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Danaus plexippus 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.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Low</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>Suitable habitat is present within the Plan Area at the Travel Camp HMA; however, this species is well-documented where it occurs, and the CNDDB does not report an occurrence of this species within or adjacent to the Plan Area. The CNDDB reports 14 occurrences of this species within the quadrangles reviewed, the nearest located approximately 4.0 miles southwest of the Plan Area.</li> </ul>
Euphilotes enoptes smithi Smith's blue butterfly	FE / — / —	Most commonly associated with coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz Counties. Plant hosts are <i>Eriogonum latifolium</i> and <i>E. parvifolium</i> .	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>No suitable habitat within the Plan Area. In addition, the obligate plant host species were not identified within the Plan Area during botanical surveys in 2021.</li> </ul>
Euphydryas editha bayensis Bay checkerspot butterfly	FT / — / —	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of the San Francisco Bay. <i>Plantago erecta</i> is the primary host plant; <i>Castilleja densiflorus</i> and <i>Castilleja exserta</i> are secondary host plants.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Unlikely</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Unlikely</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Unlikely</li> <li>Wolf Hill HMA: Unlikely</li> <li>MPC HMA: Unlikely</li> <li>Suitable habitat is present within the Plan Area the East Garrison South HMA with a small area of perennial grassland; however, the Plan Area is outside the known range of this species.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Linderiella occidentalis California linderiella	—/—/—	Ephemeral ponds with no flow. Generally associated with hardpans.	<ul> <li>East Garrison North HMA: Unlikely</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Unlikely</li> <li>Travel Camp HMA: Moderate</li> <li>Oak Oval HMA: Unlikely</li> <li>Parker Flats HMA: Unlikely</li> <li>Lookout Ridge HMA: Present</li> <li>Wolf Hill HMA: Moderate</li> <li>MPC HMA: Unlikely</li> <li>Suitable habitat is present within the Plan Area at the East Garrison South, Travel Camp, Lookout Ridge, and Wolf Hill HMAs. The CNDDB reports 11 occurrences of this species within the quadrangles reviewed, including two occurrences that overlap the Plan Area at the Lookout Ridge HMA. This species is known to occur at several ponds within the East Garrison South and Lookout Ridge HMAs.</li> </ul>
PLANTS Agrostis lacuna-vernalis 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Allium hickmanii Hickman's onion	—/—/1B	Closed-cone coniferous forests, maritime chaparral, coastal prairie, coastal scrub, and valley and foothill grasslands at elevations of 5-200 meters. Bulbiferous perennial herb in the Alliaceae family; blooms March-May.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Arctostaphylos edmundsii Little Sur manzanita	—/—/1B	Coastal bluff scrub and chaparral on sandy soils at elevations of 30-105 meters. Evergreen shrub in the Ericaceae family; blooms November-April.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Arctostaphylos hookeri ssp. hookeri Hooker's manzanita	—/—/1B	Closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub on sandy soils at elevations of 85-536 meters. Evergreen shrub in the Ericaceae family; blooms January-June.	<ul> <li>East Garrison North HMA: Present</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Present</li> <li>Parker Flats HMA: Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Present</li> <li>MPC HMA: Not Present</li> <li>Suitable habitat is present throughout the entire Plan Area in maritime chaparral, coastal scrub, Monterey pine forest, and coast live oak woodland habitats, including mixes of these habitats. The CNDDB reports 22 occurrences of this species within the quadrangles reviewed, including a large, non-specific occurrence that overlaps much of the Plan Area. This species was identified within the East Garrison North, East Garrison South, Habitat Corridor, Oak Oval, Parker Flats, and Wolf Hill HMAs during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Arctostaphylos montereyensis 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.	<ul> <li>East Garrison North HMA: Present</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Present</li> <li>Oak Oval HMA: Present</li> <li>Parker Flats HMA: Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Present</li> <li>MPC HMA: Not Present</li> <li>Suitable habitat is present throughout the entire Plan Area in maritime chaparral, coastal scrub, and coast live oak woodland habitats, including mixes of these habitats. The CNDDB reports 18 occurrences of this species within the quadrangles reviewed, including a large, non-specific occurrence that overlaps much of the Plan Area. This species was identified within the East Garrison North, East Garrison South, Travel Camp, Oak Oval, Parker Flats, and Wolf Hill HMAs during focused botanical surveys in 2021.</li> </ul>
Arctostaphylos pajaroensis Pajaro manzanita	—/—/1B	Chaparral on sandy soils at elevations of 30-760 meters. Evergreen shrub in the Ericaceae family; blooms December-March.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Arctostaphylos pumila Sandmat manzanita	—/—/1B	Openings of closed-cone coniferous forests, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils at elevations of 3-205 meters. Evergreen shrub in the Ericaceae family; blooms February-May.	<ul> <li>East Garrison North HMA: Present</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Present</li> <li>Travel Camp HMA: Present</li> <li>Oak Oval HMA: Present</li> <li>Parker Flats HMA: Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Present</li> <li>MPC HMA: Present</li> <li>Suitable habitat is present throughout the entire Plan Area in maritime chaparral, coastal scrub, coast live oak woodland habitats, and Monterey pine forest, including mixes of these habitats. The CNDDB reports 17 occurrences of this species within the quadrangles reviewed, including three large, non-specific occurrences that overlaps much of the Plan Area. This species was identified within the East Garrison North, East Garrison South, Habitat Corridor, Travel Camp, Oak Oval, Parker Flats, Wolf Hill, and MPC Range 45 HMAs during focused botanical surveys in 2021 and 2022.</li> </ul>
Arenaria paludicola 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021. The CNDDB does not report any occurrences of this species within the quadrangles reviewed.</li> </ul>
Astragalus tener var. tener Alkali milk-vetch	—/—/1B	Playas, valley and foothill grassland on adobe clay, and vernal pools on alkaline soils at elevations of 1-60 meters. Annual herb in the Fabaceae family; blooms March-June.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Astragalus tener var. titi 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Castilleja ambigua var. insalutata Pink Johnny-nip	—/—/1B	Coastal prairie and coastal scrub at elevations of 0-100 meters. Annual herb in the Orobanchaceae family; blooms May-August.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Ceanothus rigidus Monterey ceanothus	//4	Closed cone coniferous forest, chaparral, and coastal scrub on sandy soils at elevations of 3-550 meters. Evergreen shrub in the Rhamnaceae family, blooms February-June.	<ul> <li>East Garrison North HMA: Present</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Present</li> <li>MPC HMA: Present</li> <li>Suitable habitat is present throughout the entire Plan Area in maritime chaparral, coastal scrub, and Monterey pine forest, including mixes of these habitats. The CNDDB does not report any occurrences of this species within the quadrangles reviewed; however, this species was identified within the East Garrison North, East Garrison South, Parker Flats, Wolf Hill, and MPC Range 45 HMAs during focused botanical surveys in 2021 and 2022.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Centromadia parryi ssp. congdonii 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Chorizanthe douglasii Douglas's spineflower	//4	Chaparral, cismontane woodland, coastal scrub, and lower montane coniferous forest in sandy or gravelly soils at elevations of 55-1600 meters. Annual herb in the Polygonaceae family; blooms April-July.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Present</li> <li>Suitable habitat is present throughout the entire Plan Area in maritime chaparral, coastal scrub, coast live oak woodland, and Monterey pine forest, including mixes of these habitats. The CNDDB does not report any occurrences of this species within the quadrangles reviewed; however, this species was identified within the East Garrison South and MPC Range 45 HMAs during focused botanical surveys in 2021 and 2022.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Chorizanthe minutiflora 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Suitable habitat is present throughout the entire Plan Area in maritime chaparral and coastal scrub habitats, including mixes of these habitats. The CNDDB reports five occurrences of this species within the quadrangles reviewed, including two occurrences that overlap the Plan Area at the East Garrison South and Parker Flats HMA. This species was identified within the East Garrison South and Parker Flats HMAs during focused botanical surveys in 2021.</li> </ul>
Chorizanthe pungens var. pungens Monterey spineflower	FT / — / 1B	Maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils at elevations of 3-450 meters. Annual herb in the Polygonaceae family; blooms April-July.	<ul> <li>East Garrison North HMA: Present</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Present</li> <li>Lookout Ridge HMA: Present</li> <li>Wolf Hill HMA: Present</li> <li>MPC HMA: Present</li> <li>Suitable habitat is present throughout the entire Plan Area in maritime chaparral, coastal scrub, coast live oak woodland, grassland, and ruderal habitats, including mixes of these habitats. The CNDDB reports 35 occurrences of this species within the quadrangles reviewed, including a large, non-specific occurrence that overlaps much of the Plan Area. This species was identified within the East Garrison North, East Garrison South, Habitat Corridor, Parker Flats, Lookout Ridge, Wolf Hill, and MPC Range 45 HMAs during focused botanical surveys in 2021 and 2022.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Chorizanthe robusta var. robusta Robust spineflower	FE / — / 1B	Openings in cismontane woodland, coastal dunes, maritime chaparral, and coastal scrub on sandy or gravelly soils at elevations of 3-300 meters. Annual herb in the Polygonaceae family; blooms April-September.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Clarkia jolonensis Jolon clarkia	—/—/1B	Cismontane woodland, chaparral, riparian woodland, and coastal scrub at elevations of 20-660 meters. Annual herb in the Onagraceae family; blooms April-June.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Clarkia lewisii Lewis's clarkia	//4	Broadleaved upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub at elevations of 30-610 meters. Annual herb in the Onagraceae family; blooms May-July.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Present</li> <li>Wolf Hill HMA: Present</li> <li>MPC HMA: Not Present</li> <li>Suitable habitat is present throughout the entire Plan Area in maritime chaparral, coastal scrub, coast live oak woodland, and Monterey pine forest, including mixes of these habitats. The CNDDB does not report any occurrences of this species within the quadrangles reviewed; however, this species was identified within the Lookout Ridge and Wolf Hill HMAs during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Collinsia multicolor San Francisco collinsia	—/—/1B	Closed-cone coniferous forest and coastal scrub, sometimes on serpentinite soils, at elevations of 30-250 meters. Annual herb in the Plantaginaceae family; blooms March-May.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Cordylanthus rigidus ssp. littoralis Seaside bird's-beak	—/SE/1B	Closed-cone coniferous forests, maritime chaparral, cismontane woodlands, coastal dunes, and coastal scrub on sandy soils, often on disturbed sites, at elevations of 0-425 meters. Annual hemi-parasitic herb in the Orobanchaceae family; blooms April-October.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Present</li> <li>Suitable habitat is present throughout the entire Plan Area in maritime chaparral, coastal scrub, coast live oak woodland, and Monterey pine forest habitats, including mixes of these habitats. The CNDDB reports 15 occurrences of this species within the quadrangles reviewed, including an occurrence that overlaps the Plan Area at the East Garrison South HMA. This species was identified within the East Garrison South and MPC Range 45 HMAs during focused botanical surveys in 2021.</li> </ul>
Delphinium californicum ssp. interius 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Delphinium hutchinsoniae Hutchinson's larkspur	—/—/1B	Broadleaved upland forest, chaparral, coastal scrub, and coastal prairie at elevations of 0-427 meters. Perennial herb in the Ranunculaceae family; blooms March-June.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Delphinium umbraculorum Umbrella larkspur	—/—/1B	Cismontane woodland at elevations of 400-1600 meters. Perennial herb in the Ranunculaceae family; blooms April-June.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021. The Plan Area is outside the known elevation range of this species.</li> </ul>
Eriastrum virgatum Virgate eriastrum	//4	Coastal bluff scrub, chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 45 – 700 meters. Annual herb in the Polemoniaceae family; blooms May – July.	<ul> <li>East Garrison North HMA: Present</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Present</li> <li>Suitable habitat is present throughout the entire Plan Area in maritime chaparral and coastal scrub habitats, including mixes of these habitats. The CNDDB does not report any occurrences of this species within the quadrangles reviewed; however, this species was identified within the East Garrison North, East Garrison South, Parker Flats, and MPC Range 45 HMAs during focused botanical surveys in 2021 and 2022.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Ericameria fasciculata Eastwood's goldenbush	—/—/1B	Openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 30-275 meters. Evergreen shrub in the Asteraceae family; blooms July-October.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Present</li> <li>MPC HMA: Present</li> <li>Suitable habitat is present throughout the entire Plan Area in maritime chaparral, coastal scrub, and Monterey pine forest habitats, including mixes of these habitats. The CNDDB reports 23 occurrences of this species within the quadrangles reviewed, including three large, nonspecific occurrences that overlap much of the Plan Area. This species was identified within the East Garrison South, Parker Flats, Wolf Hill, and MPC Range 45 HMAs during focused botanical surveys in 2021 and 2022.</li> </ul>
Eriogonum nortonii Pinnacles buckwheat	—/—/1B	Chaparral and valley and foothill grassland on sandy soils, often on recent burns, at elevations of 300-975 meters. Annual herb in the Polygonaceae family; blooms May-September.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021. The Plan Area is outside the known elevation range of this species.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Erysimum ammophilum 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.	<ul> <li>East Garrison North HMA: Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Suitable habitat is present throughout the entire Plan Area in maritime chaparral and coastal scrub habitats, including mixes of these habitats. The CNDDB reports 22 occurrences of this species within the quadrangles reviewed, including three occurrences that overlap the Plan Area at the East Garrison North, Parker Flats, and Wolf Hill HMAs. This species was identified within the East Garrison North HMA during focused botanical surveys in 2021.</li> </ul>
Erysimum menziesii Menzies' wallflower	FE / SE / 1B	Coastal dunes at elevations of 0-35 meters. Perennial herb in the Brassicaceae family; blooms March-September.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Fritillaria liliacea 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Gilia tenuiflora ssp. arenaria 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.	<ul> <li>East Garrison North HMA: Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Present</li> <li>Suitable habitat is present throughout the entire Plan Area in sandy openings of maritime chaparral, coastal scrub, and coast live oak woodland habitats, including mixes of these habitats. The CNDDB reports 28 occurrences of this species within the quadrangles reviewed, including several occurrences that overlap the Plan Area at the East Garrison North, East Garrison South, Parker Flats, Wolf Hill, and MPC HMAs. This species was identified within the East Garrison North and MPC Range 45 HMAs during focused botanical surveys in 2021.</li> </ul>
Hesperocyparis goveniana Gowen cypress	FT / — / 1B	Closed-cone coniferous forest and maritime chaparral at elevations of 30-300 meters. Evergreen tree in the Cupressaceae family. Natively occurring only at Point Lobos near Gibson Creek and the Huckleberry Hill Nature Preserve near Highway 68.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>The Plan Area is outside the native range of this species; therefore, any individuals occurring within the Plan Area are of unknown genetic stock and are not considered special-status.</li> </ul>
Hesperocyparis macrocarpa Monterey cypress	—/—/1B	Closed-cone coniferous forest at elevations of 10-30 meters. Evergreen tree in the Cupressaceae family. Natively occurring only at Cypress Point in Pebble Beach and Point Lobos State Park; widely planted and naturalized elsewhere.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>The Plan Area is outside the native range of this species; therefore, any individuals occurring within the Plan Area are of unknown genetic stock and are not considered special-status.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Holocarpha macradenia Santa Cruz tarplant	FT/SE/1B	Coastal prairies and valley foothill grasslands, often clay or sandy soils, at elevations of 10-220 meters. Annual herb in the Asteraceae family; blooms June-October.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Horkelia cuneata ssp. sericea Kellogg's horkelia	—/—/1B	Openings of closed-cone coniferous forests, maritime chaparral, coastal dunes, and coastal scrub on sandy or gravelly soils at elevations of 10-200 meters. Perennial herb in the Rosaceae family; blooms April-September.	<ul> <li>East Garrison North HMA: Present</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Present</li> <li>Parker Flats HMA: Present</li> <li>Lookout Ridge HMA: Present</li> <li>Wolf Hill HMA: Present</li> <li>MPC HMA: Present</li> <li>Suitable habitat is present throughout the entire Plan Area in sandy openings of maritime chaparral, coastal scrub, and Monterey pine forest habitats, including mixes of these habitats. The CNDDB reports 17 occurrences of this species within the quadrangles reviewed, including several occurrences that overlap the Plan Area at the East Garrison North, East Garrison South, Habitat Corridor, Parker Flats, Oak Oval, Wolf Hill, and MPC HMAs. This species was identified within the East Garrison North, East Garrison South, Oak Oval, Parker Flats, Lookout Ridge, Wolf Hill, and MPC Range 45 HMAs during focused botanical surveys in 2021 and 2022.</li> </ul>
Horkelia marinensis Point Reyes horkelia	—/—/1B	Coastal dunes, coastal prairie, and coastal scrub on sandy soils at elevations of 5-350 meters. Perennial herb in the Rosaceae family; blooms May-September.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Lasthenia conjugens Contra Costa goldfields	FE / — / 1B	Mesic areas of valley and foothill grassland, alkaline playas, cismontane woodland, and vernal pools at elevations of 0-470 meters. Annual herb in the Asteraceae family; blooms March-June.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Layia carnosa Beach layia	FE / SE / 1B	Coastal dunes and coastal scrub on sandy soils at elevations of 0-60 meters. Annual herb in the Asteraceae family; blooms March-July.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Legenere limosa Legenere	—/—/1B	Vernal pools and wetlands at elevations of 1-880 meters. Annual herb in the Campanulaceae family; blooms April- June.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Lupinus tidestromii Tidestrom's lupine	FE/SE/1B	Coastal dunes at elevations of 0-100 meters. Perennial rhizomatous herb in the Fabaceae family; blooms April-June.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Malacothamnus palmeri var. involucratus 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Malacothrix saxatilis var. arachnoidea 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Meconella oregana Oregon meconella	—/—/1B	Coastal prairie and coastal scrub at elevations of 250-620 meters. Annual herb in the Papaveraceae Family; blooms March-April.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Microseris paludosa 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Suitable habitat is present in the Plan Area in mesic areas of grassland, coast live oak woodland, and Monterey pine forest habitats, including mixes of these habitats. The CNDDB reports 10 occurrences of this species within the quadrangles reviewed, the nearest located less than 0.5 mile from the East Garrison South HMA. This species was identified within the Lookout Ridge HMA during focused botanical surveys in 2021.</li> </ul>
Monardella sinuata ssp. nigrescens 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Present</li> <li>Suitable habitat is present in the Plan Area in chaparral and coast scrub habitats, including mixes of these habitats. This species was identified within the MPC Range 45 HMA during focused botanical surveys in 2022.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Monolopia gracilens Woodland woollythreads	—/—/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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Pinus radiata 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>The Plan Area is outside the native range of this species; therefore, any individuals occurring within the Plan Area are of unknown genetic stock and are not considered special-status.</li> </ul>
Piperia michaelii Michael's piperia	//4	Coastal bluff scrub, closed-coned coniferous forest, chaparral, cismontane woodland, coastal scrub, and lower montane coniferous forest at elevations of 3-915 meters. Annual herb in the Orchidaceae family; blooms April-August.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Suitable habitat is present throughout the entire Plan Area in maritime chaparral, coastal scrub, coast live oak woodland, and Monterey pine forest, including mixes of these habitats. The CNDDB does not report any occurrences of this species within the quadrangles reviewed; however, this species was identified within the East Garrison South and Parker Flats HMAs during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
<i>Piperia yadonii</i> Yadon's piperia	FE / — / 1B	Sandy soils in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral at elevations of 10-510 meters. Annual herb in the Orchidaceae family; blooms February-August.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Plagiobothrys chorisianus var. chorisianus Choris's 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Plagiobothrys diffusus San Francisco popcornflower	—/ SE / 1B	Coastal prairie and valley and foothill grassland at elevations of 60-360 meters. Annual herb in the Boraginaceae family; blooms March-June.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Plagiobothrys uncinatus Hooked popcornflower	—/—/1B	Chaparral, cismontane woodlands, and valley and foothill grasslands on sandy soils at elevations of 300-760 meters. Annual herb in the Boraginaceae family; blooms April-May.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021. The Plan Area is outside the known elevation range of this species.</li> </ul>
Potentilla hickmanii Hickman's cinquefoil	FE/SE/1B	Coastal bluff scrub, closed-cone coniferous forests, vernally mesic meadows and seeps, and freshwater marshes and swamps at elevations of 10-149 meters. Perennial herb in the Rosaceae family; blooms April-August.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Ramalina thrausta Angel's hair lichen	—/—/2B	North coast coniferous forest on dead twigs and other lichens. Epiphytic fructose lichen in the Ramalinaceae family. In northern CA it is usually found on dead twigs, and has been found on <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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Rosa pinetorum Pine rose	—/—/1B	Closed-cone coniferous forest at elevations of 2-300 meters. Perennial shrub in the Rosaceae family; blooms May-July. Possible hybrid of <i>R. spithamea</i> , <i>R. gymnocarpa</i> , or others; further study needed.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Stebbinsoseris decipiens Santa Cruz microseris	—/—/1B	Broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and openings in valley and foothill grassland, sometimes on serpentinite, at elevations of 10-500 meters. Annual herb in the Asteraceae family; blooms April-May.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Sulcaria spiralifera 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Tortula californica California screw moss	—/—/1B	Valley and foothill grassland and chenopod scrub on sandy soils at elevations of 10-1460 meters. Moss in the Pottiaceae family.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Trifolium buckwestiorum 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.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Trifolium hydrophilum Saline clover	—/—/1B	Marshes and swamps, mesic and alkaline valley and foothill grassland, and vernal pools at elevations of 0-300 meters. Annual herb in the Fabaceae family; blooms April-June.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence
Trifolium polyodon Pacific Grove clover	—/SR/1B	Mesic areas of closed-cone coniferous forest, coastal prairie, meadows and seeps, and valley and foothill grassland at elevations of 5-120 meters. Annual herb in the Fabaceae family; blooms April-July.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>
Trifolium trichocalyx Monterey clover	FE/SE/1B	Sandy openings and burned areas of closed-cone coniferous forest at elevations of 30-240 meters. Annual herb in the Fabaceae family; blooms April-June.	<ul> <li>East Garrison North HMA: Not Present</li> <li>East Garrison South HMA: Not Present</li> <li>Habitat Corridor HMA: Not Present</li> <li>Travel Camp HMA: Not Present</li> <li>Oak Oval HMA: Not Present</li> <li>Parker Flats HMA: Not Present</li> <li>Lookout Ridge HMA: Not Present</li> <li>Wolf Hill HMA: Not Present</li> <li>MPC HMA: Not Present</li> <li>Not observed within the Plan Area during focused botanical surveys in 2021.</li> </ul>

# STATUS DEFINITIONS

# Federal (U.S. Fish and Wildlife Service [Service])

- 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 (California Department of Fish and Wildlife [CDFW])

- 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 = 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 (CNPS)

- 1B = California Rare Plant Rank (CRPR) 1B species; plants rare, threatened, or endangered in California and elsewhere
- 2B = California Rare Plant Rank (CRPR) 1B species; plants rare, threatened, or endangered in California, but more common elsewhere
- 4 = California Rare Plant Rank (CRPR) 4 species; watch list: plants of limited distribution
- -- = no listing

# Former Fort Ord Habitat Management Plan (HMP)

**Bold** = species considered in the HMP

# POTENTIAL OCCURRENCE

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

High = known occurrence of species in the vicinity from the CNDDB or other documentation; presence of suitable habitat conditions

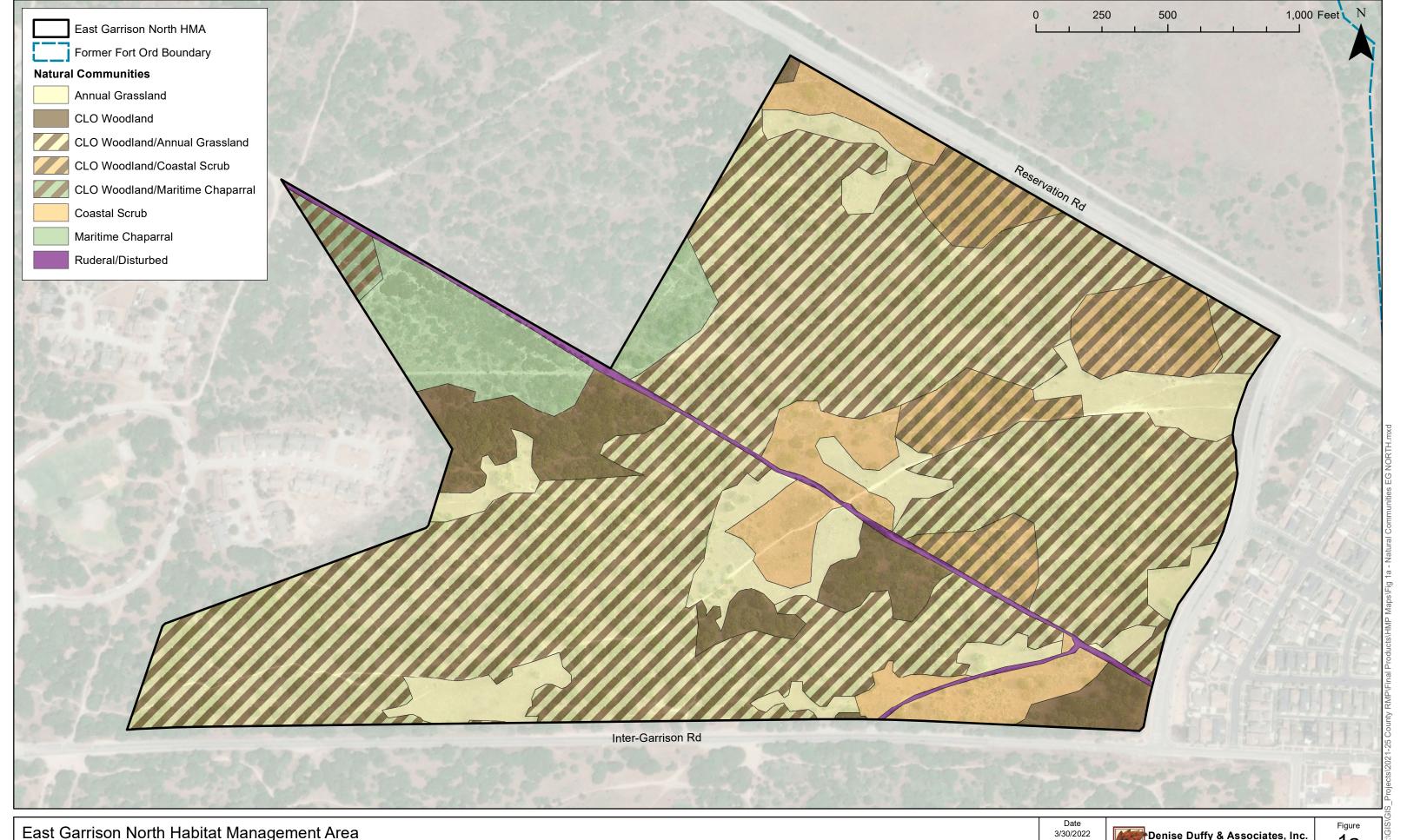
Moderate = known occurrence of species in the vicinity from the CNDDB or other documentation; presence of marginal habitat conditions within the site

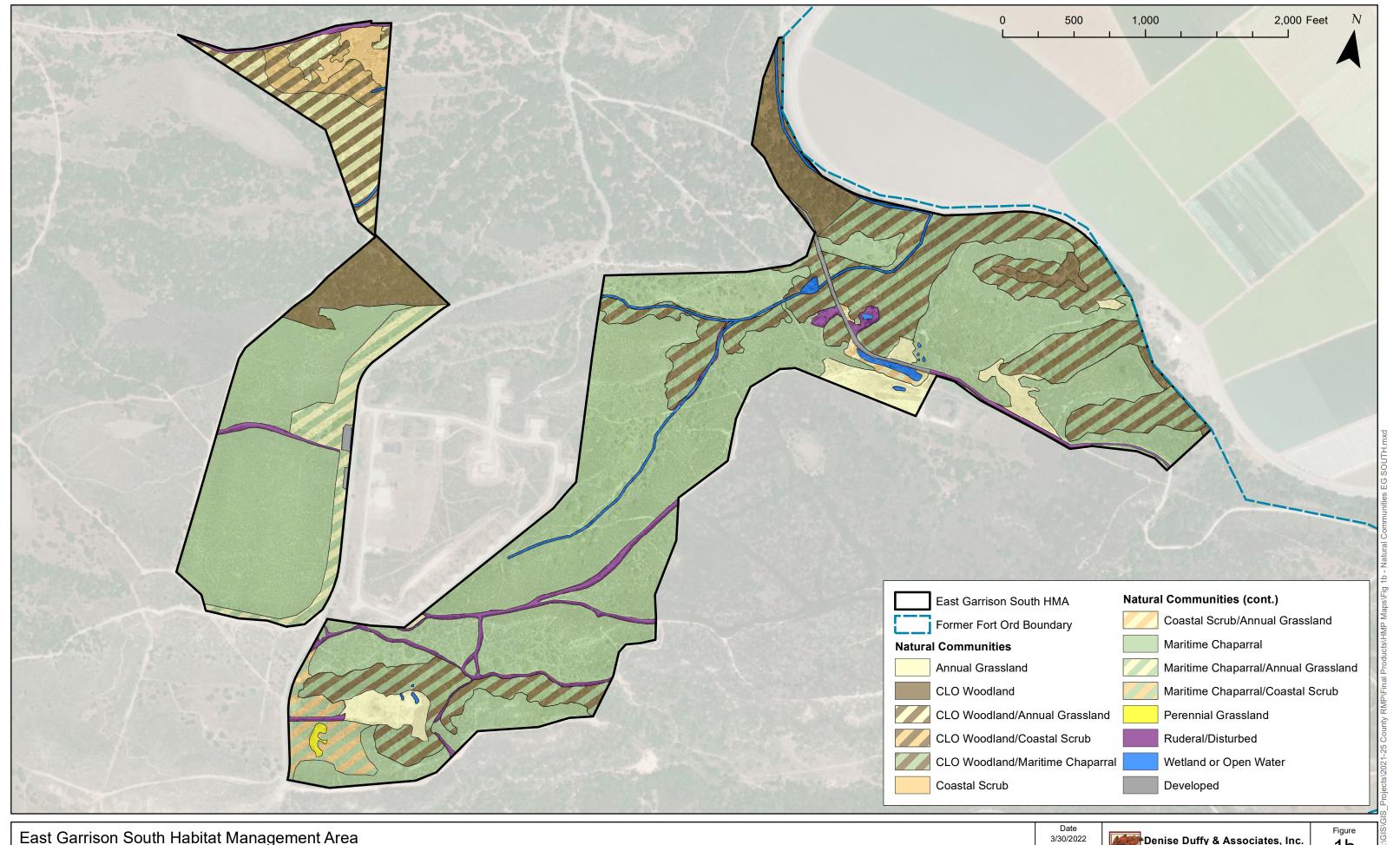
Low = species known to occur in the vicinity from the CNDDB or other documentation; lack of suitable habitat or poor quality

Unlikely = species not known to occur in the vicinity from the CNDDB or other documentation, no suitable habitat is present within the site

Not Present = species was not observed during surveys

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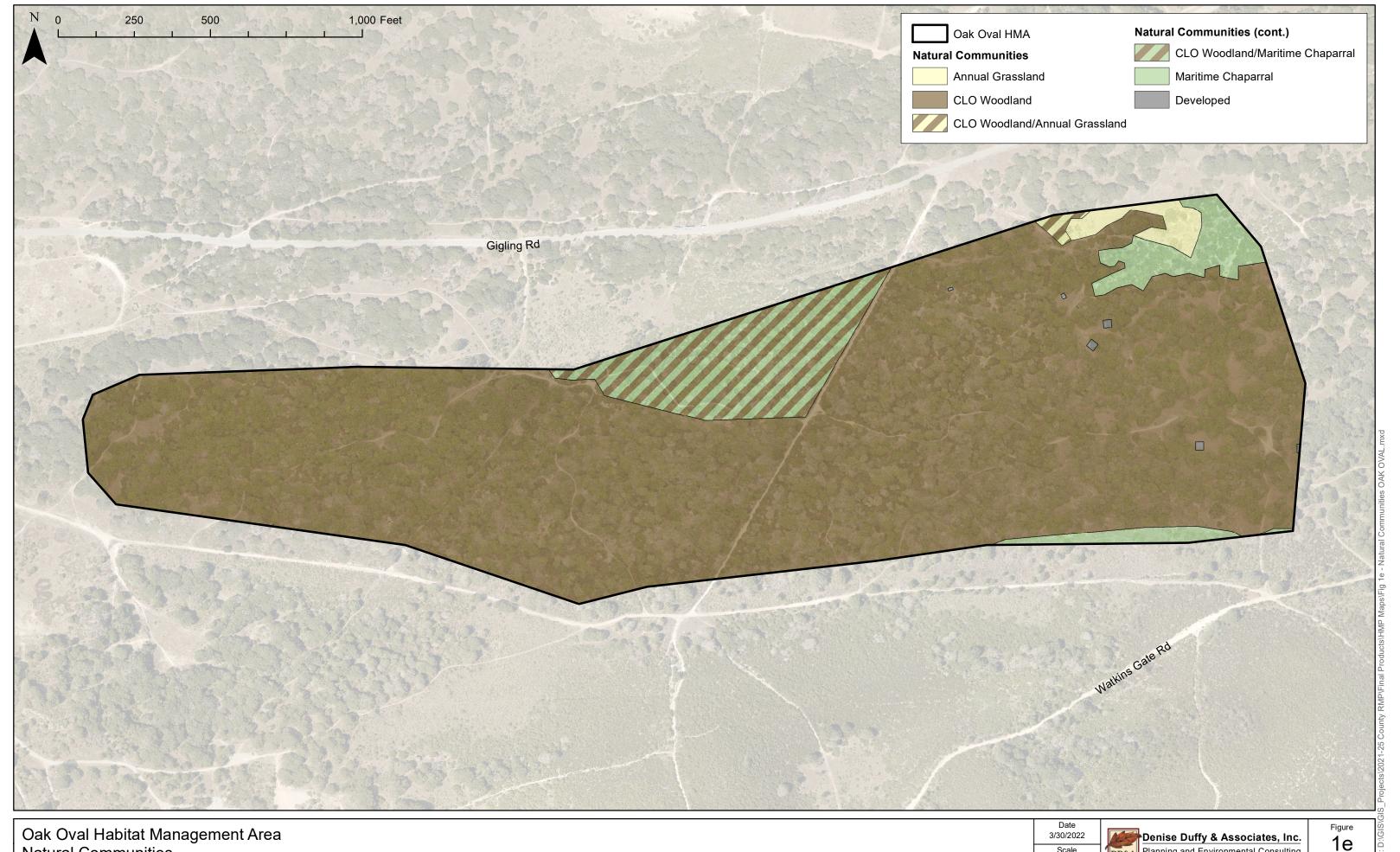
East Garrison South Habitat Management Area **Natural Communities** 

Scale 1 in = 600 ft

Denise Duffy & Associates, Inc. Planning and Environmental Consulting



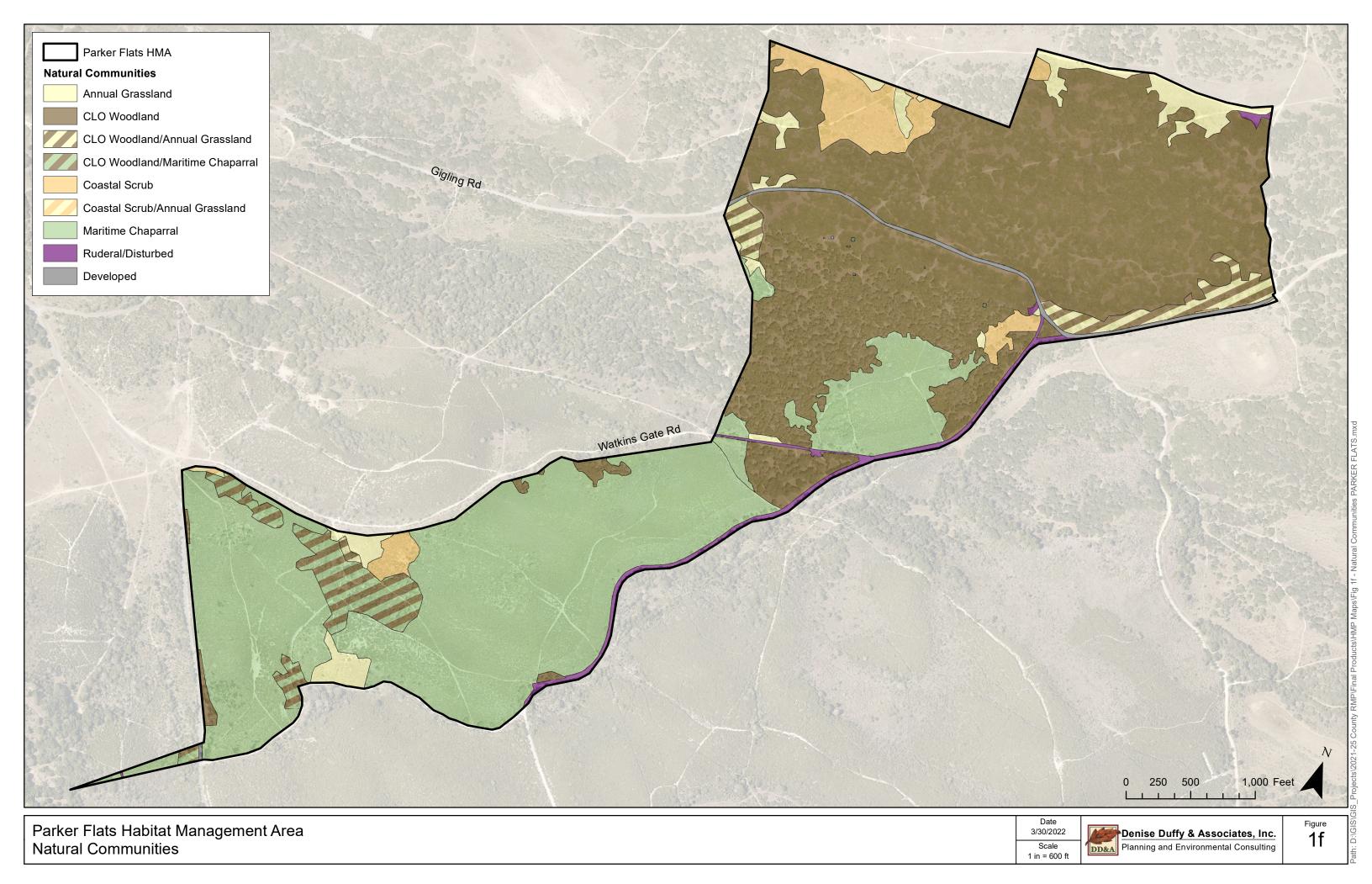


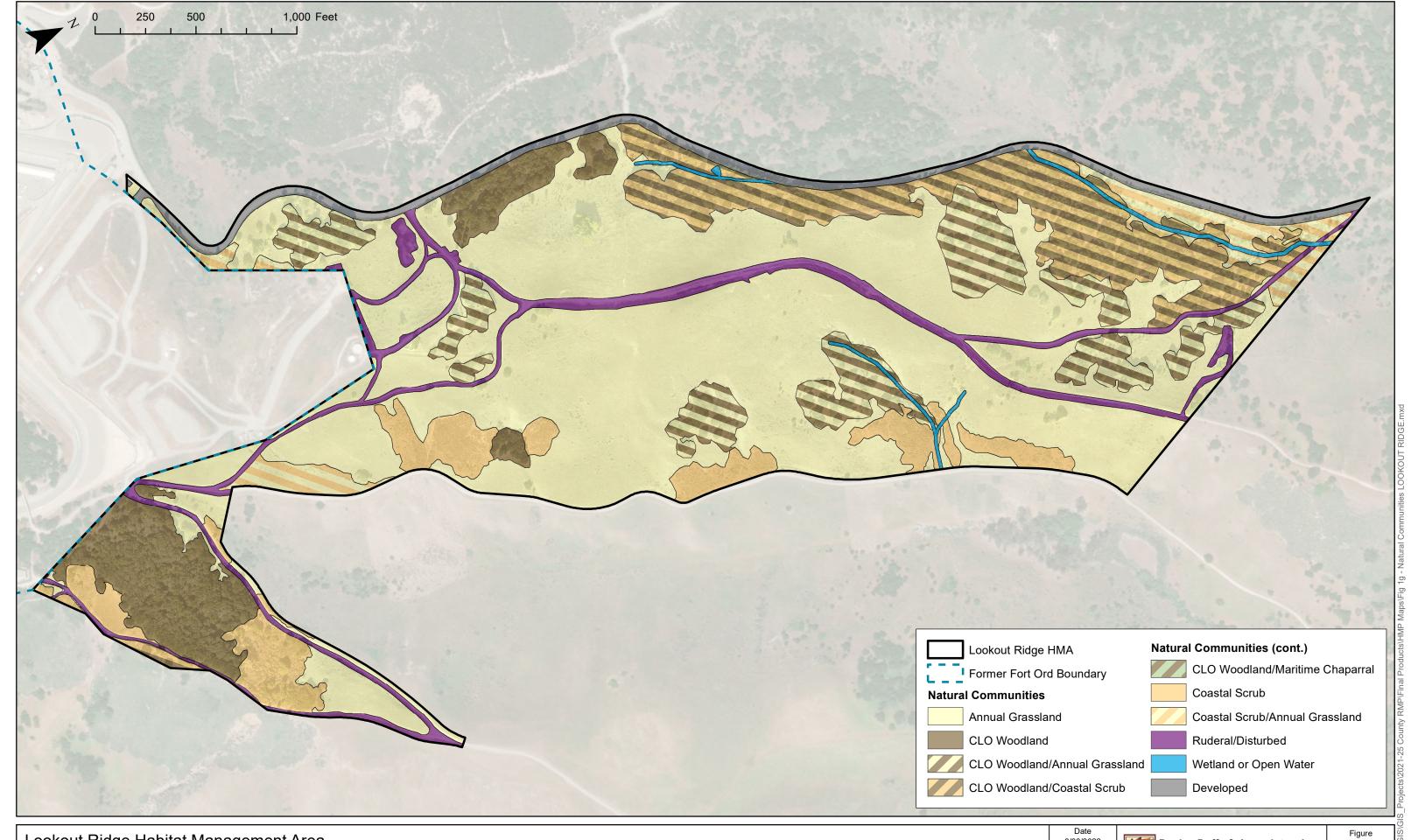


Oak Oval Habitat Management Area Natural Communities

Scale 1 in = 300 ft



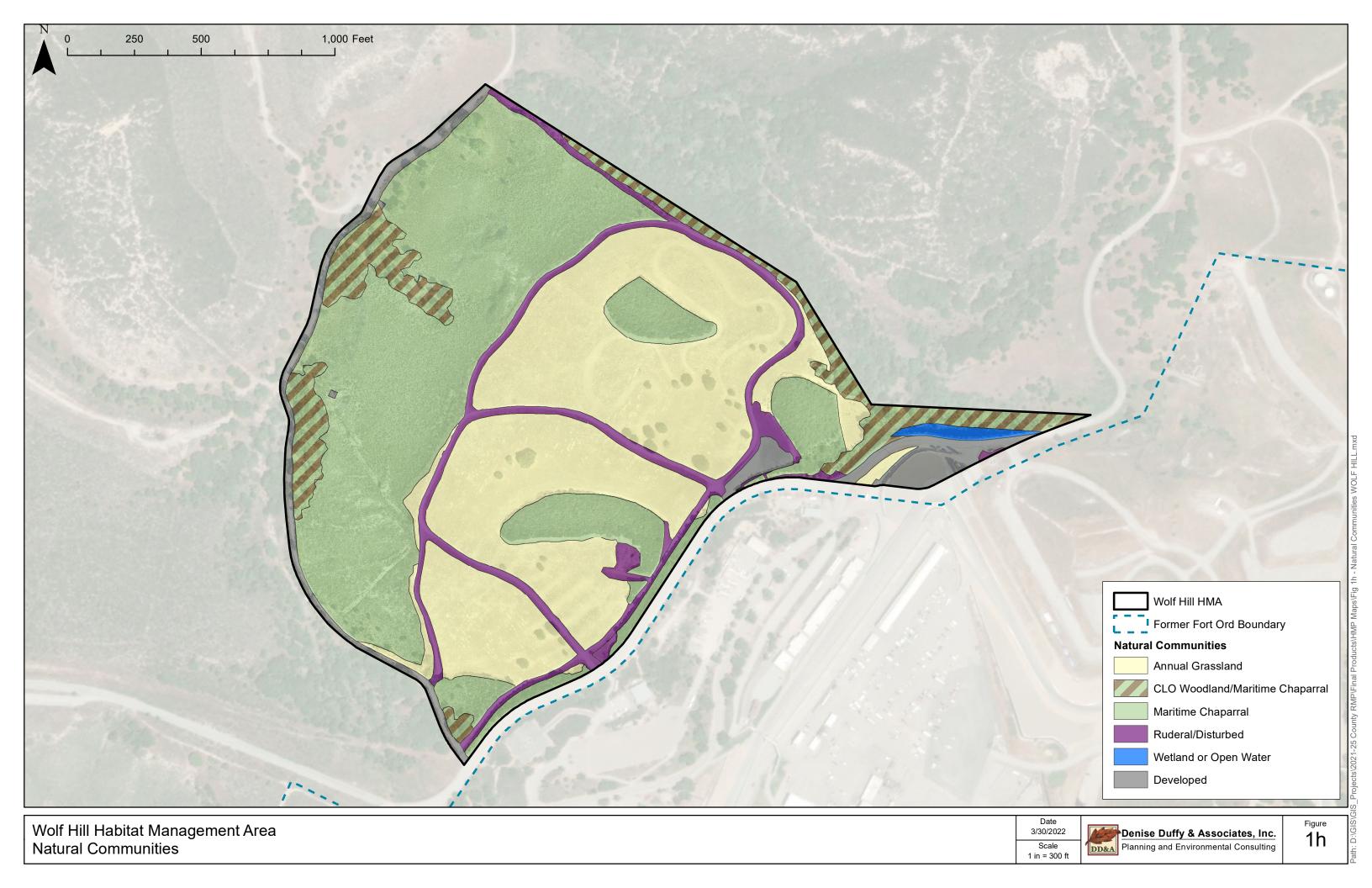


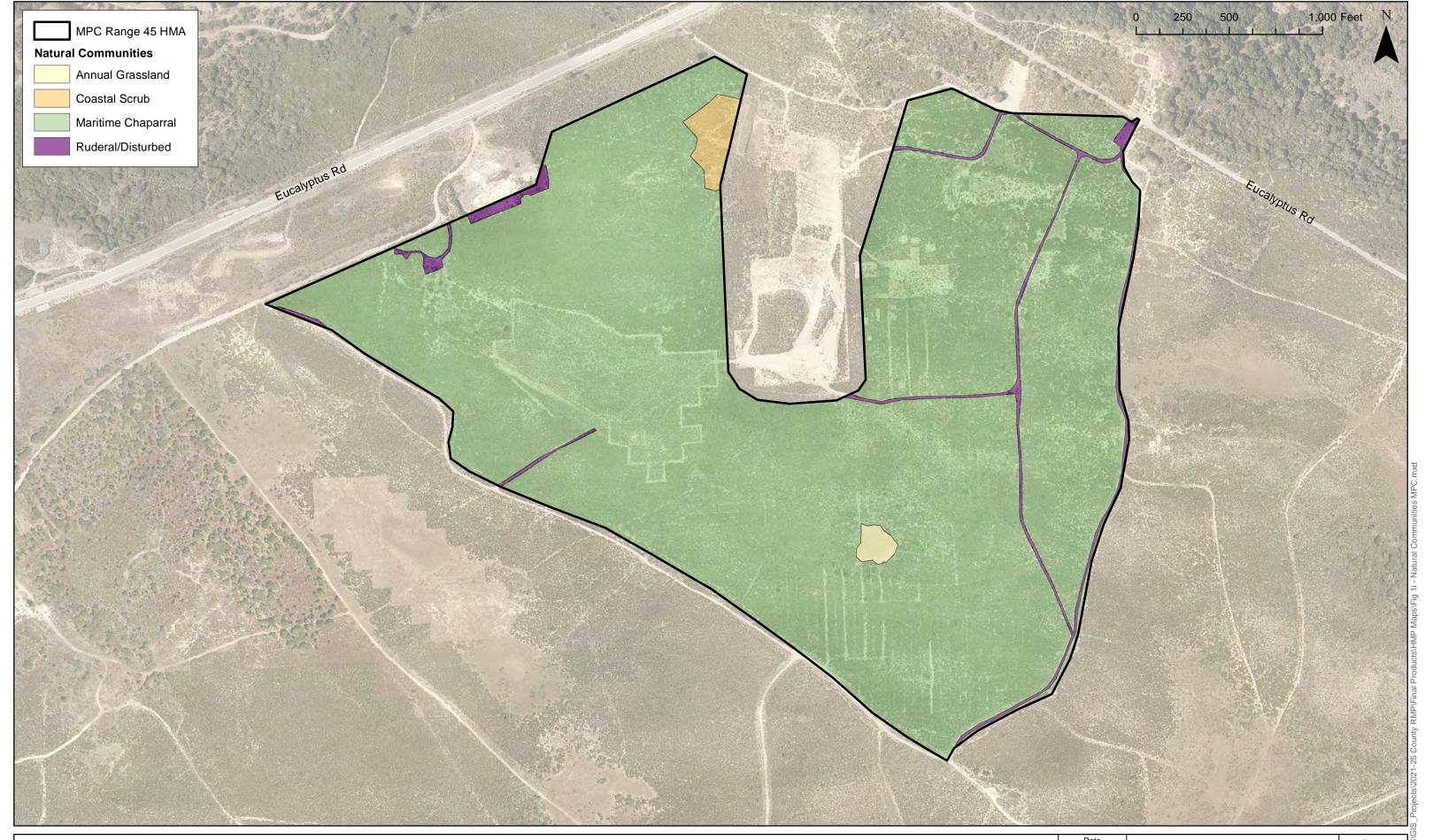


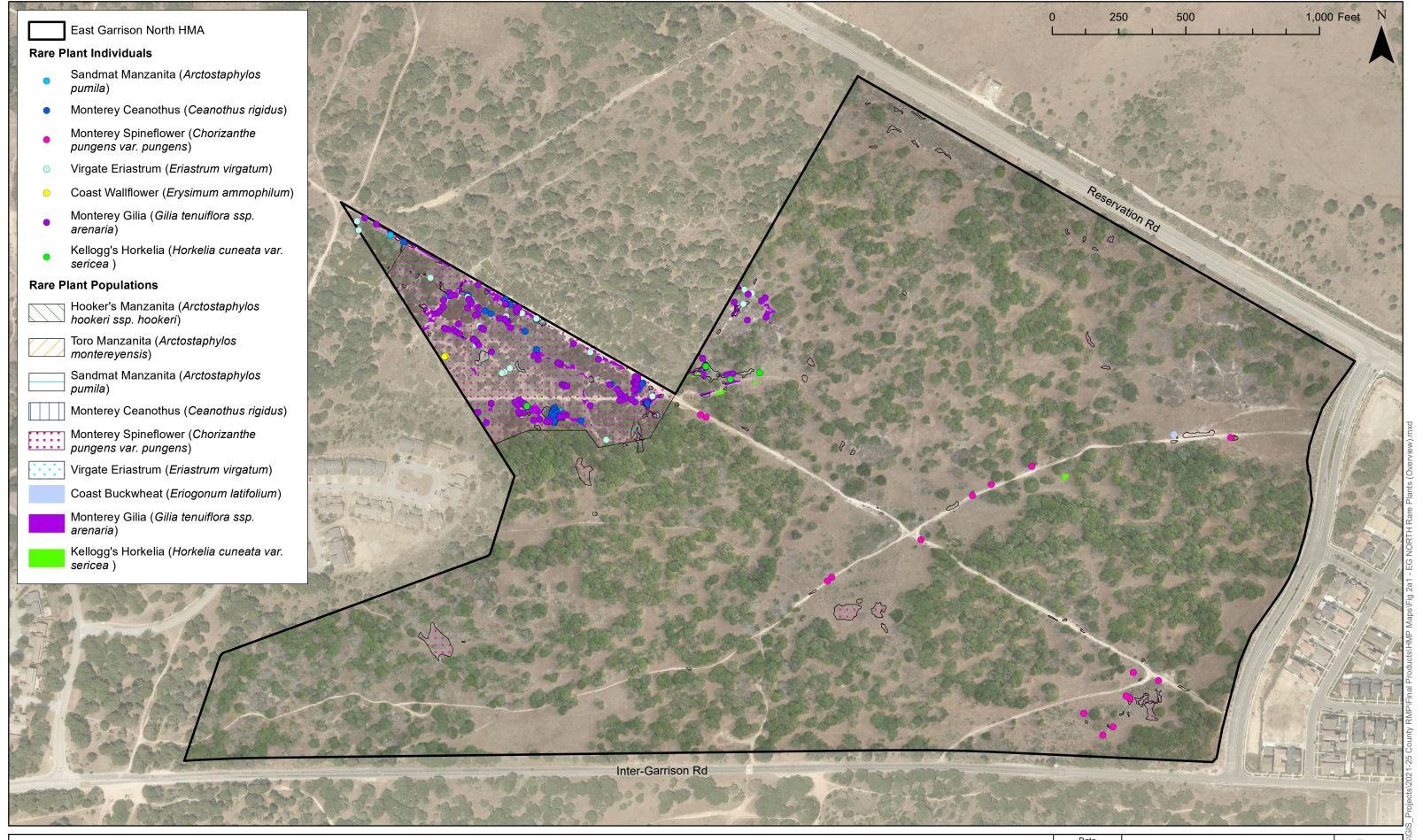
Lookout Ridge Habitat Management Area Natural Communities

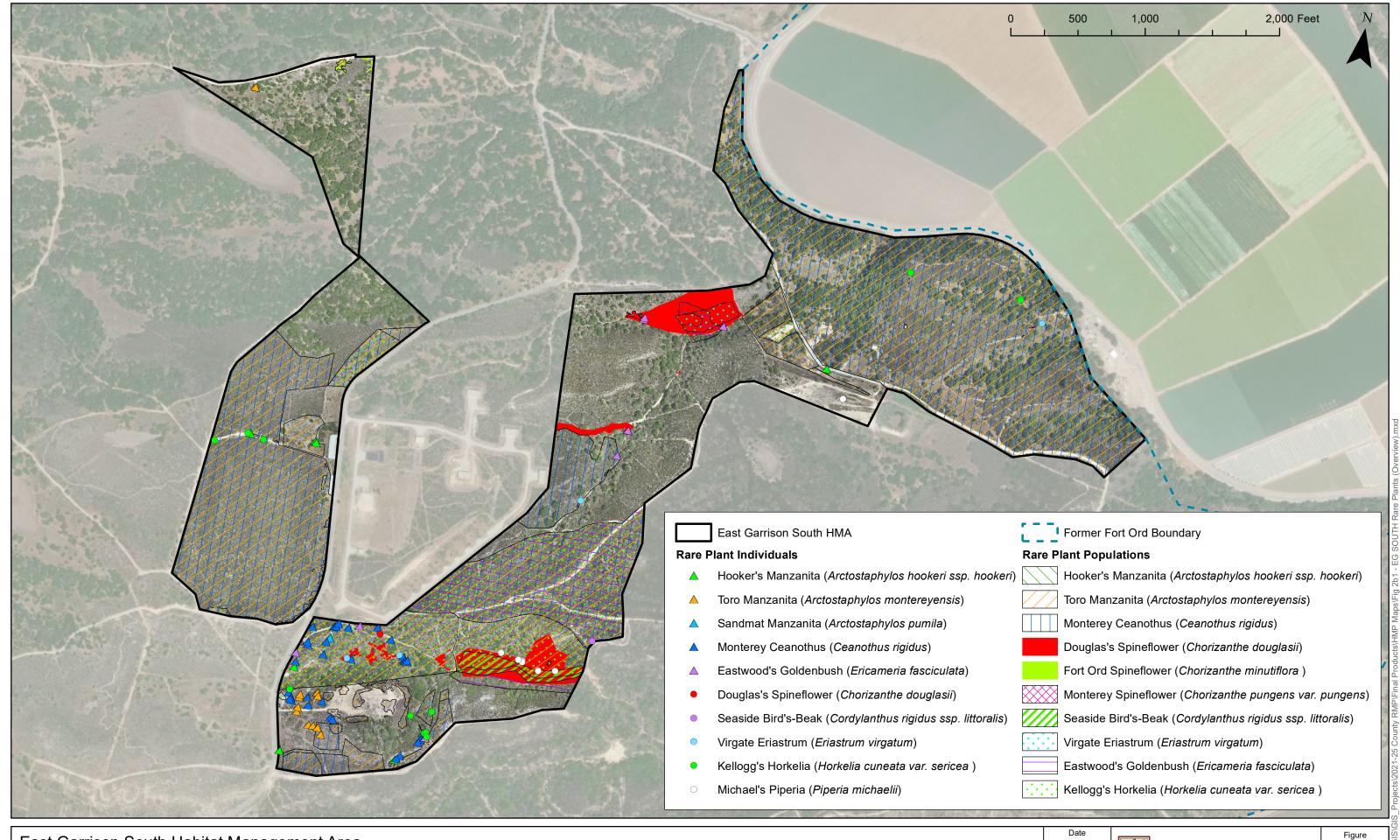
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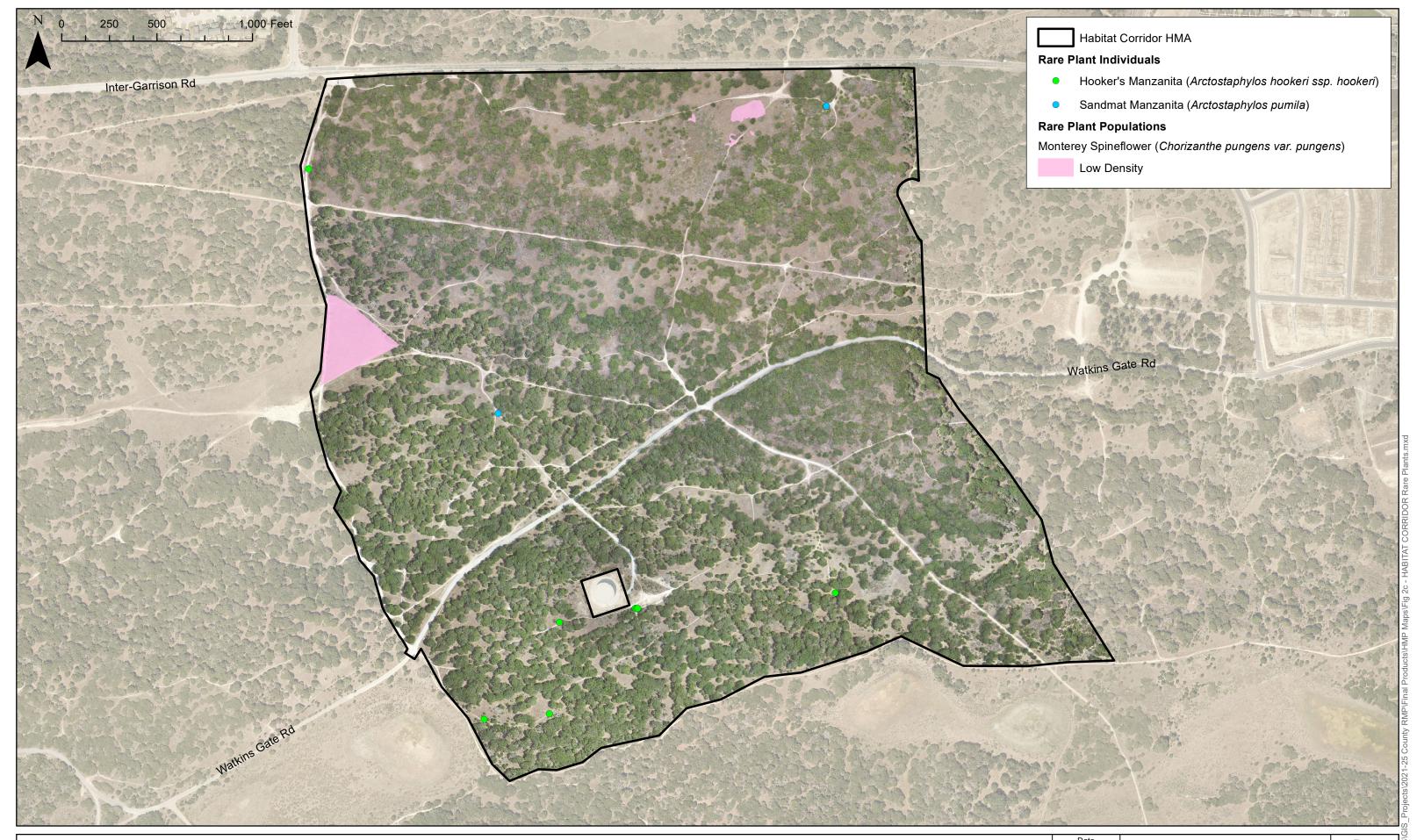


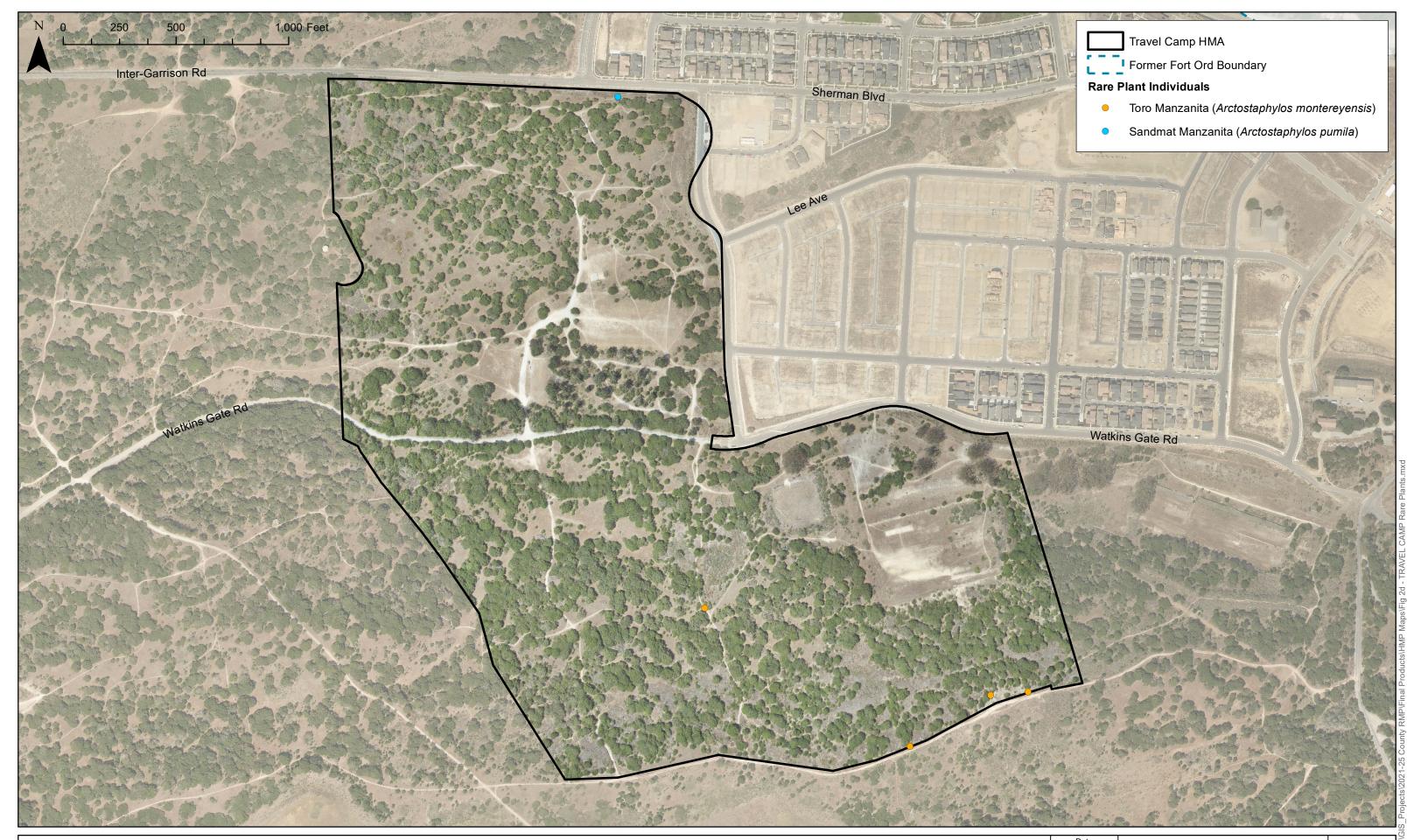


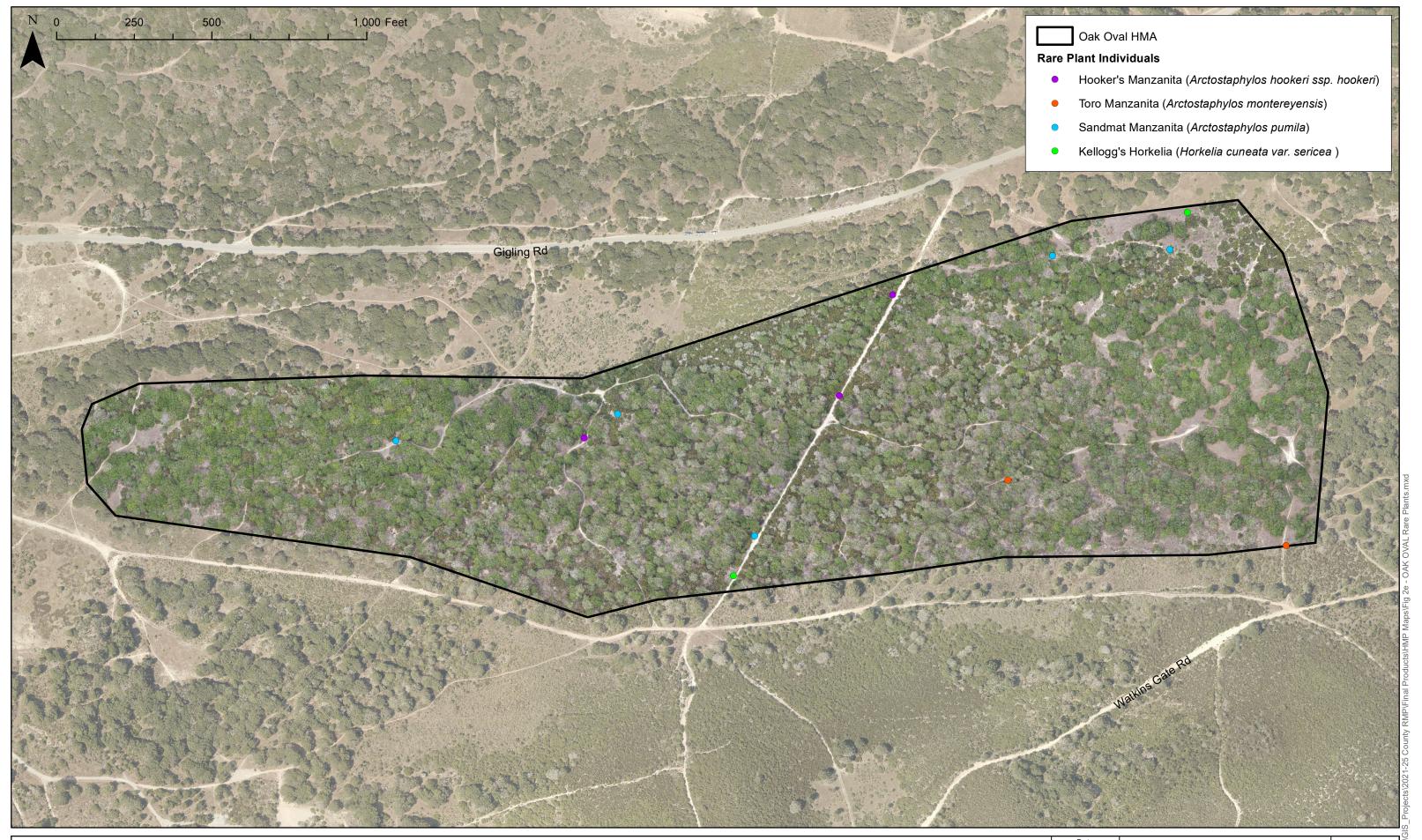
East Garrison South Habitat Management Area Rare Plants (Overview)

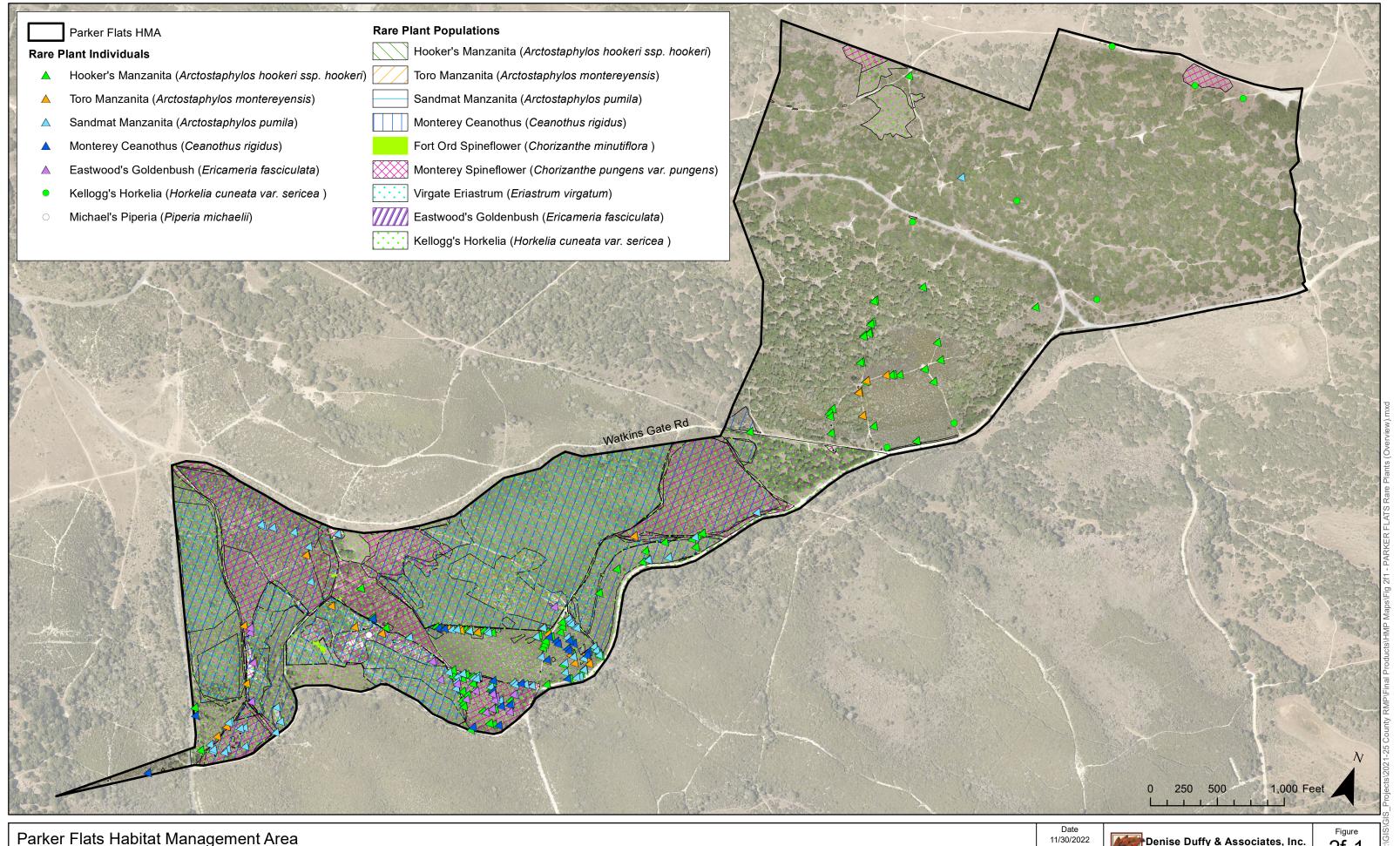
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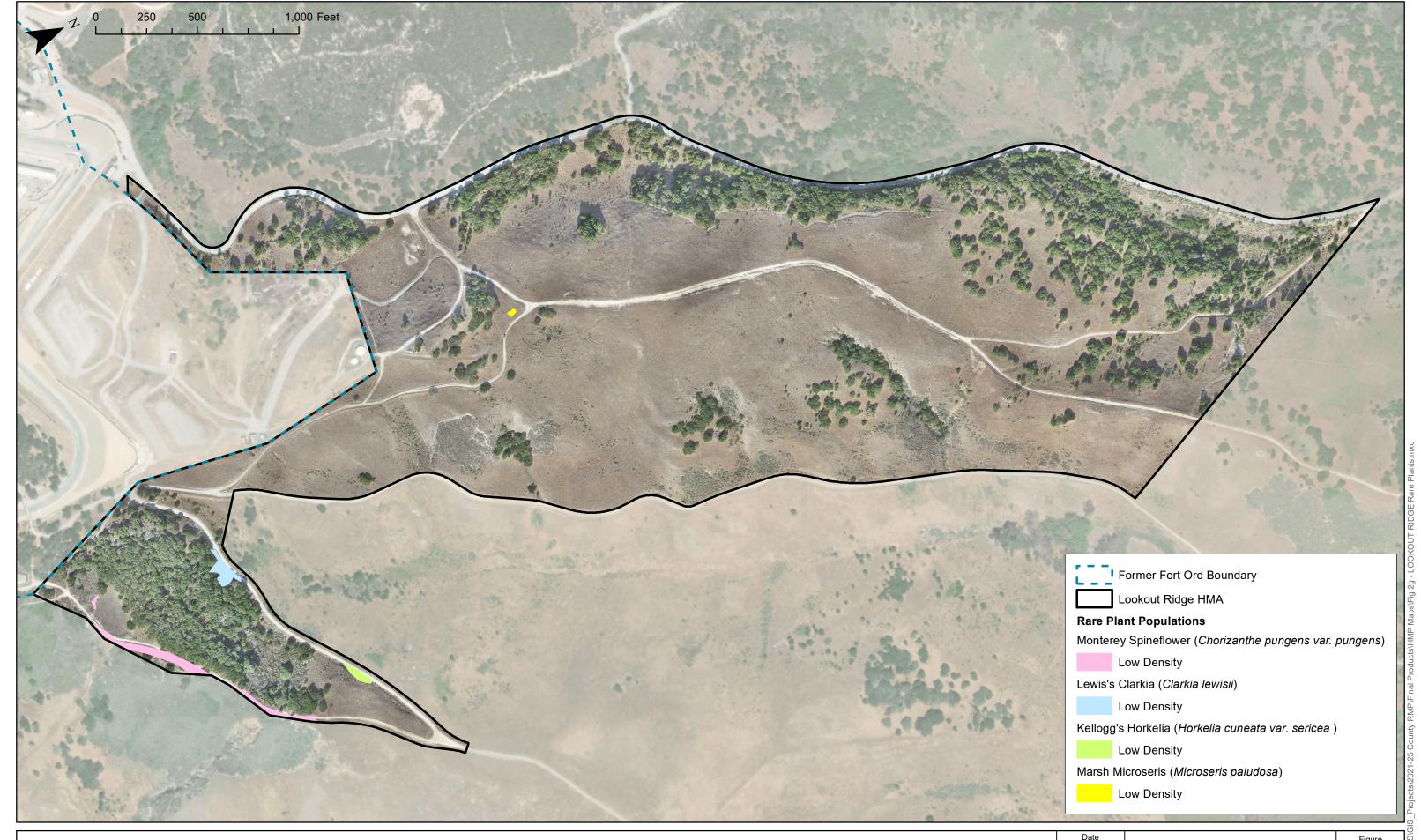




Parker Flats Habitat Management Area Rare Plants (Overview)

Scale 1 in = 600 ft

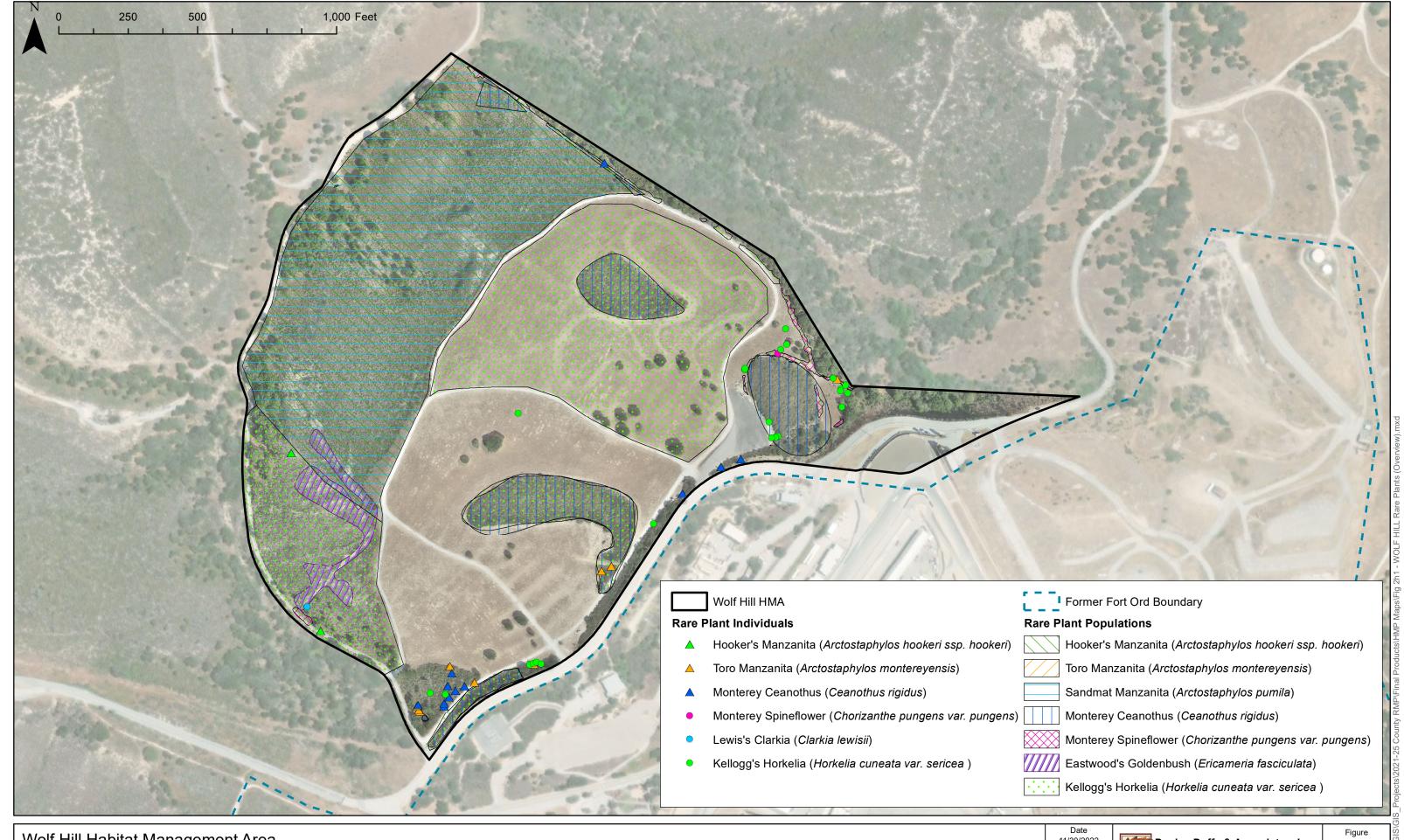




Lookout Ridge Habitat Management Area Rare Plants

Date 11/30/2022 Scale 1 in = 400 ft

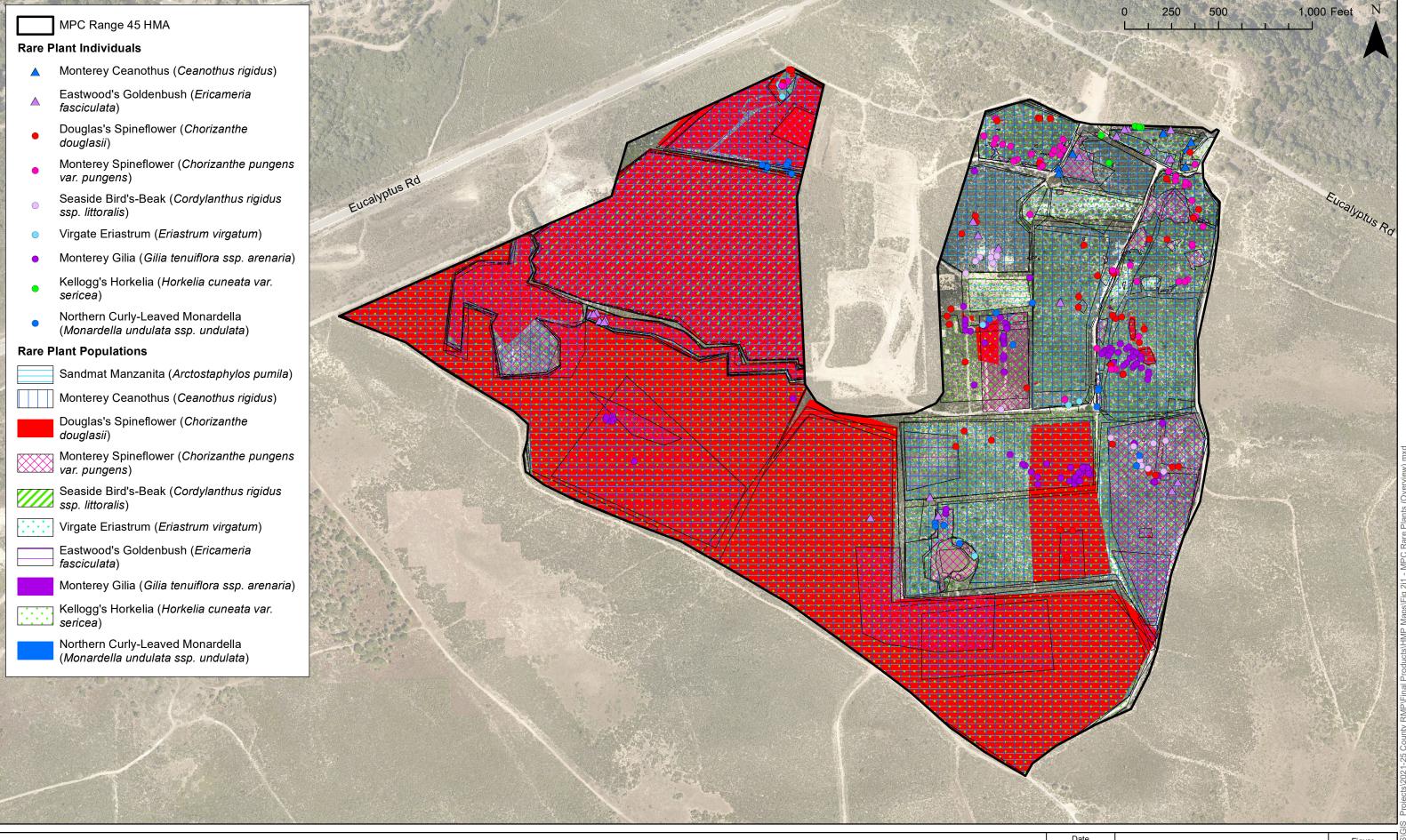


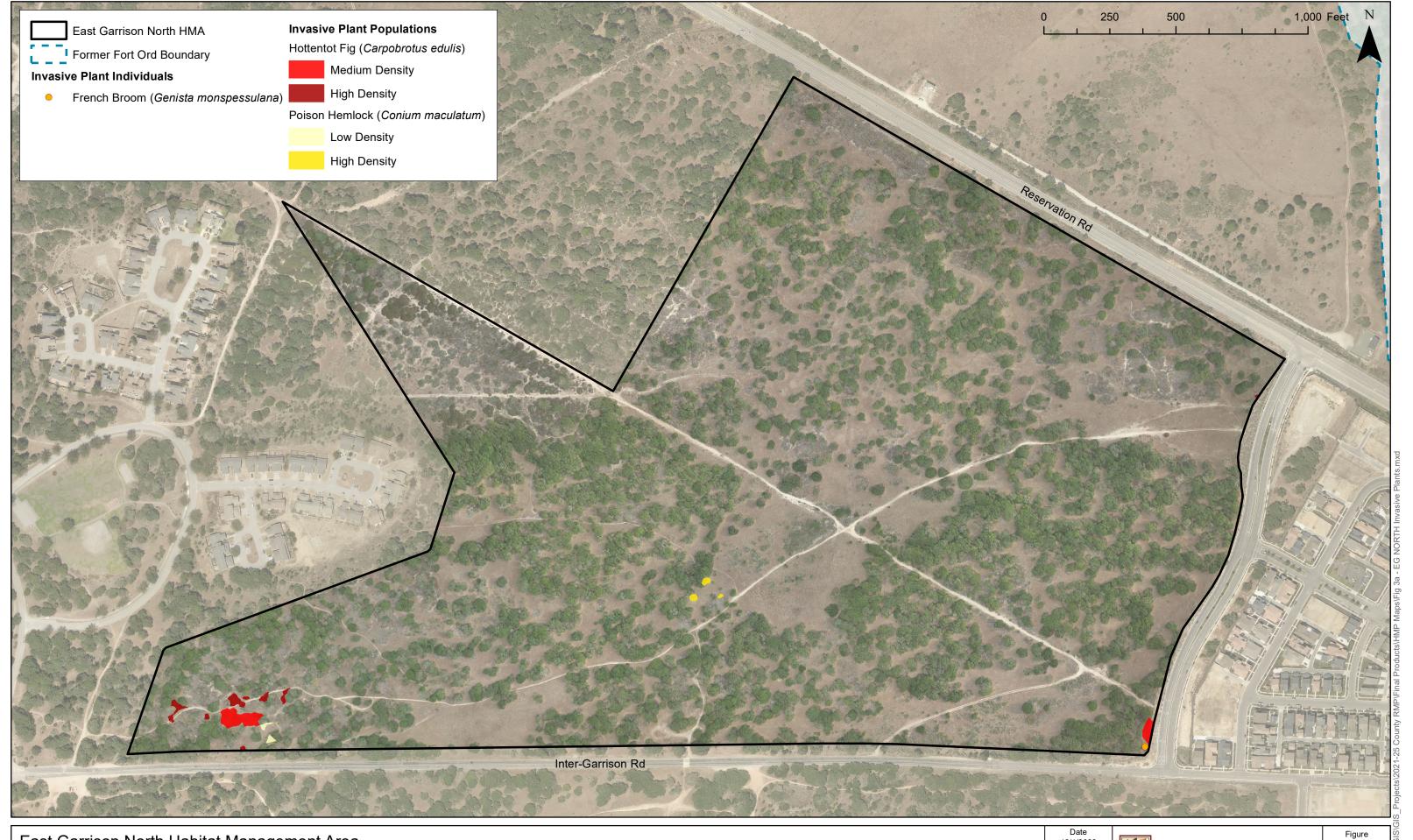


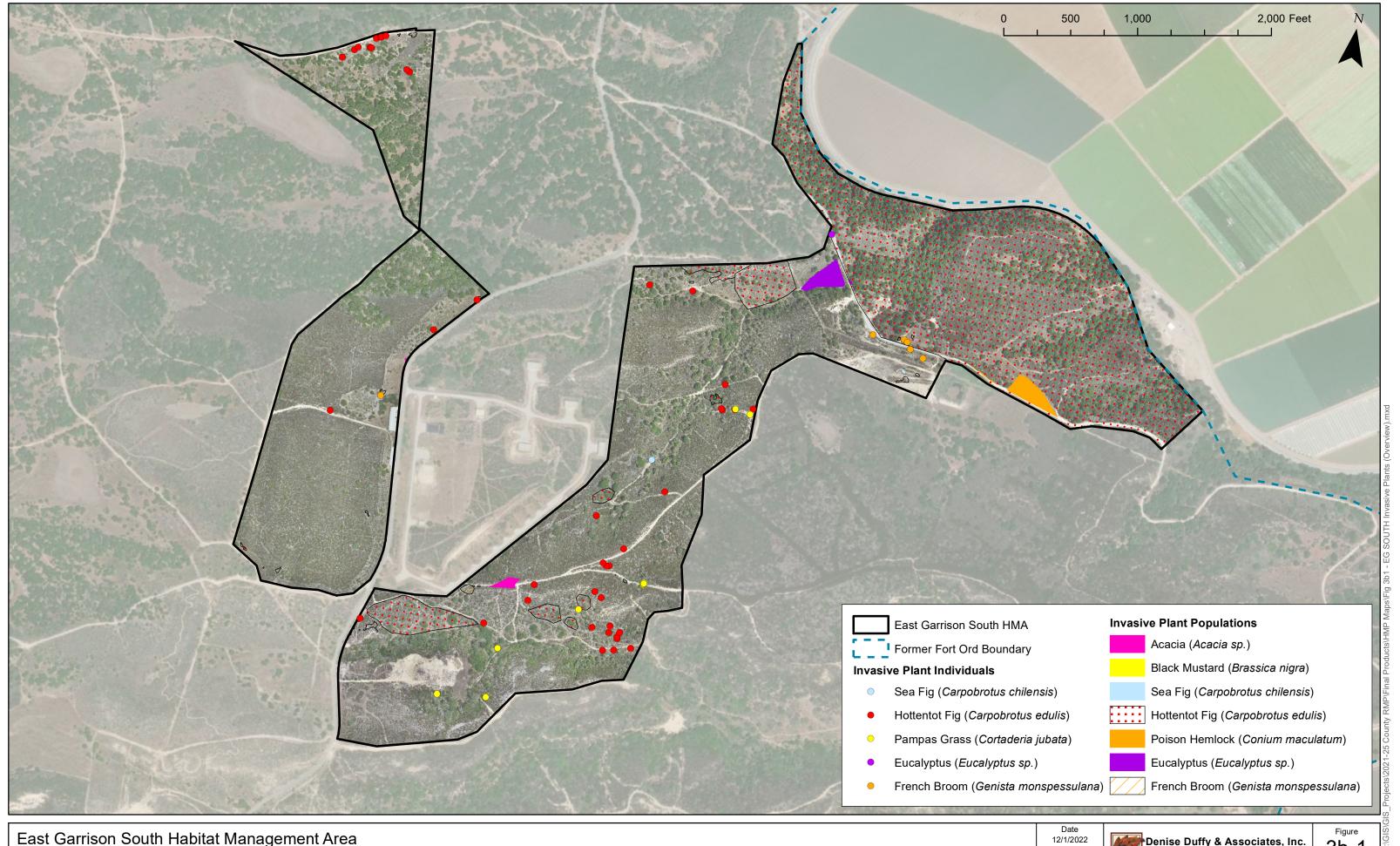
Wolf Hill Habitat Management Area Rare Plants (Overview)

Date 11/30/2022 Scale 1 in = 300 ft





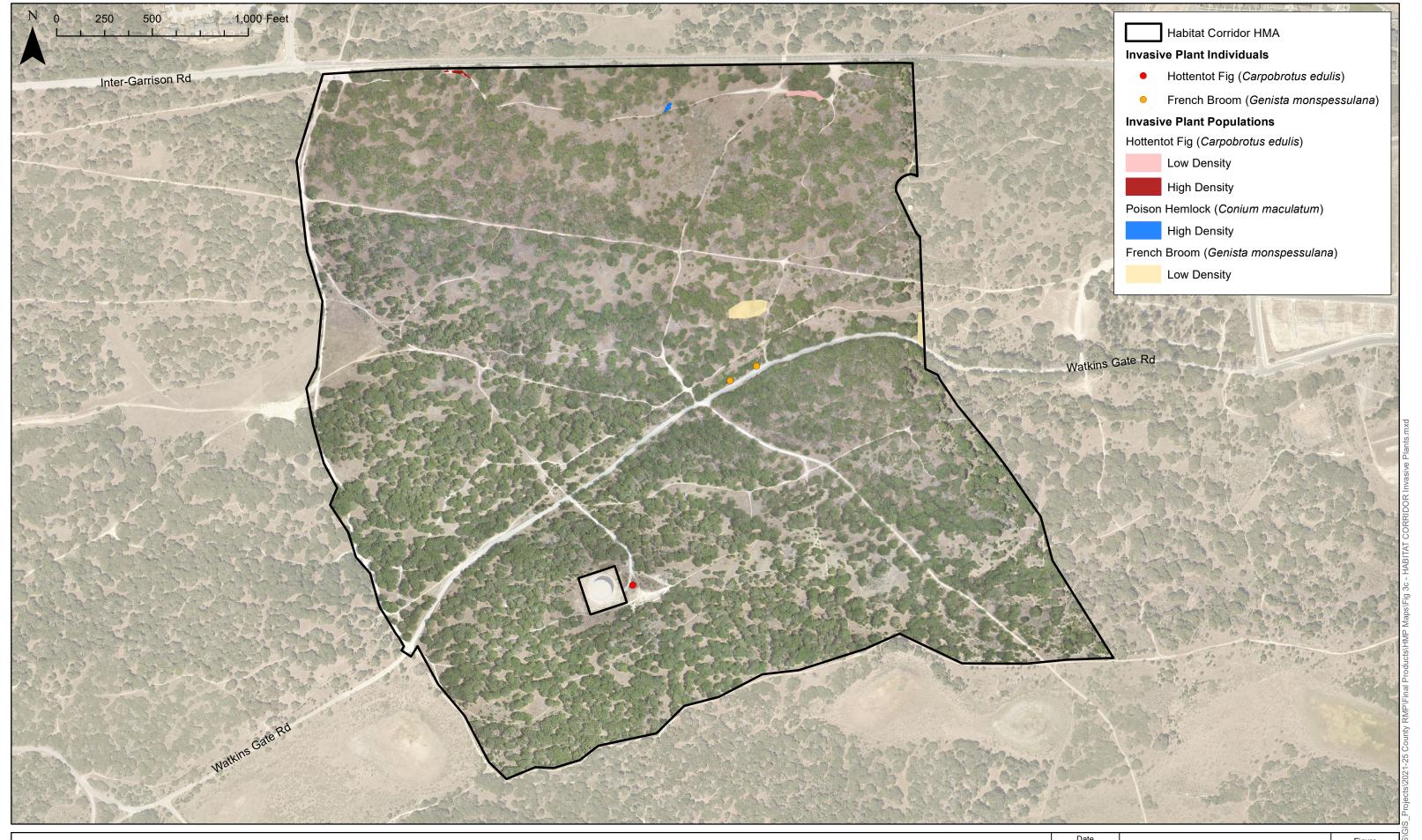


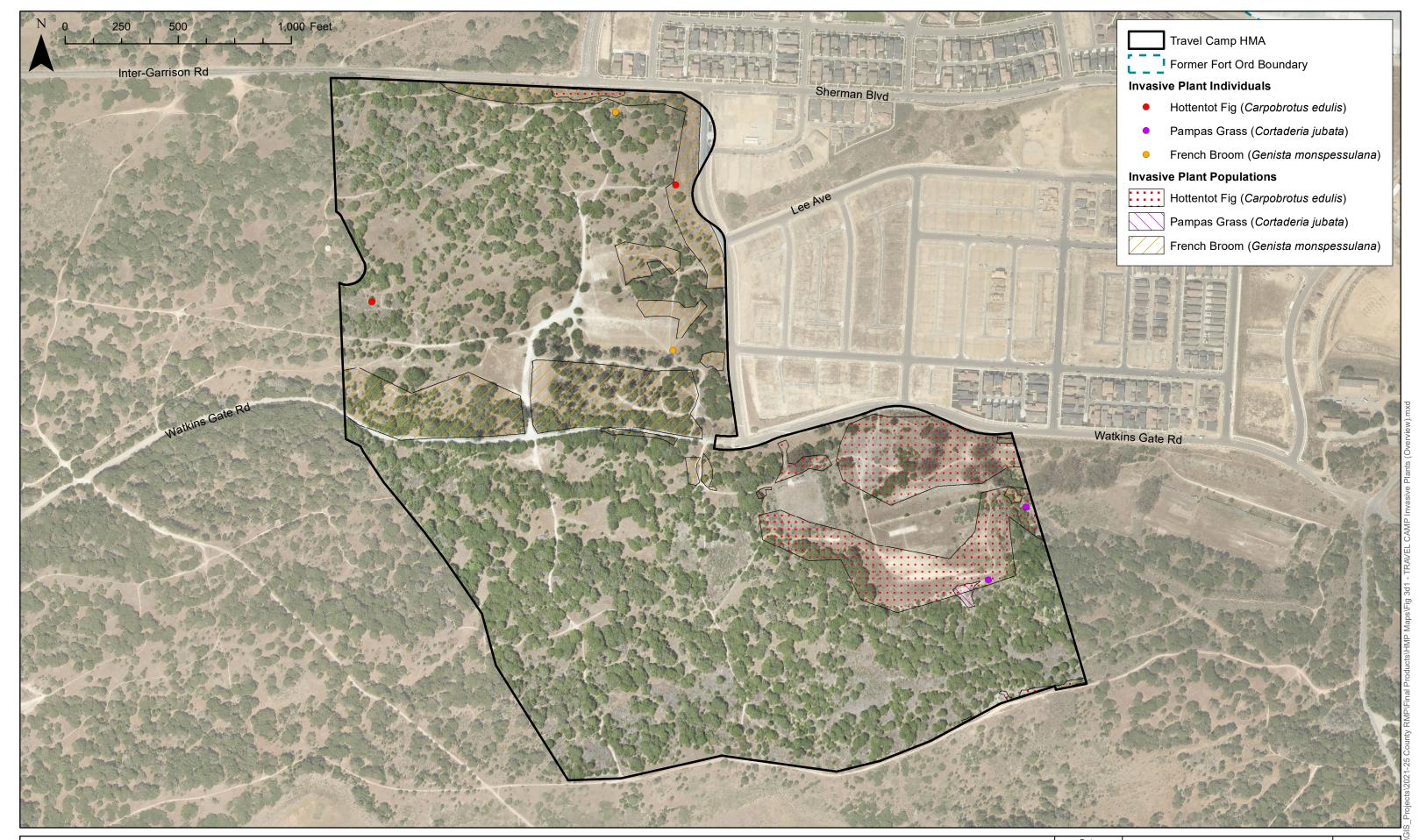


East Garrison South Habitat Management Area Invasive Plants (Overview)

Scale 1 in = 600 ft



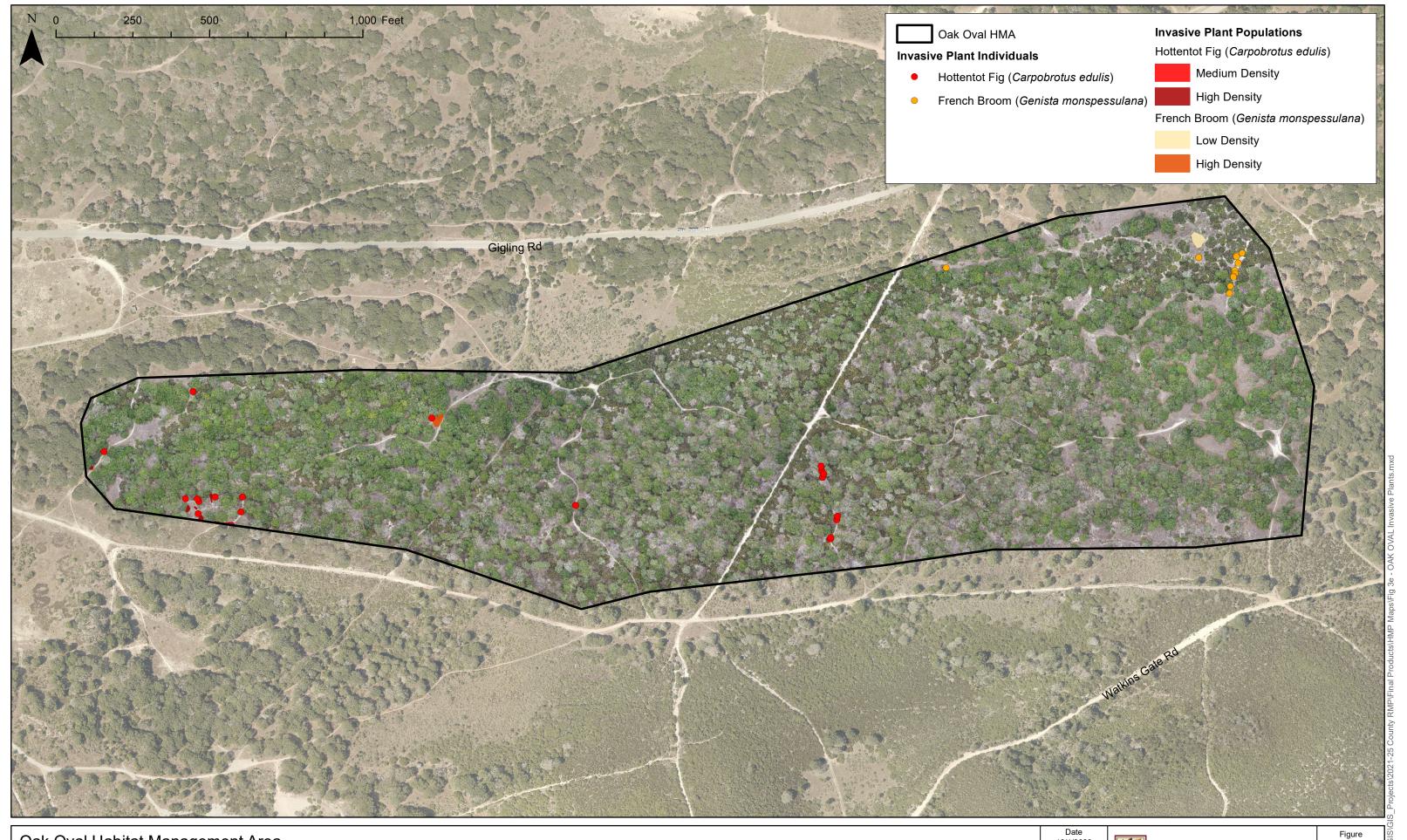




Travel Camp Habitat Management Area Invasive Plants (Overview)

Date 12/1/2022 Scale 1 in = 400 ft

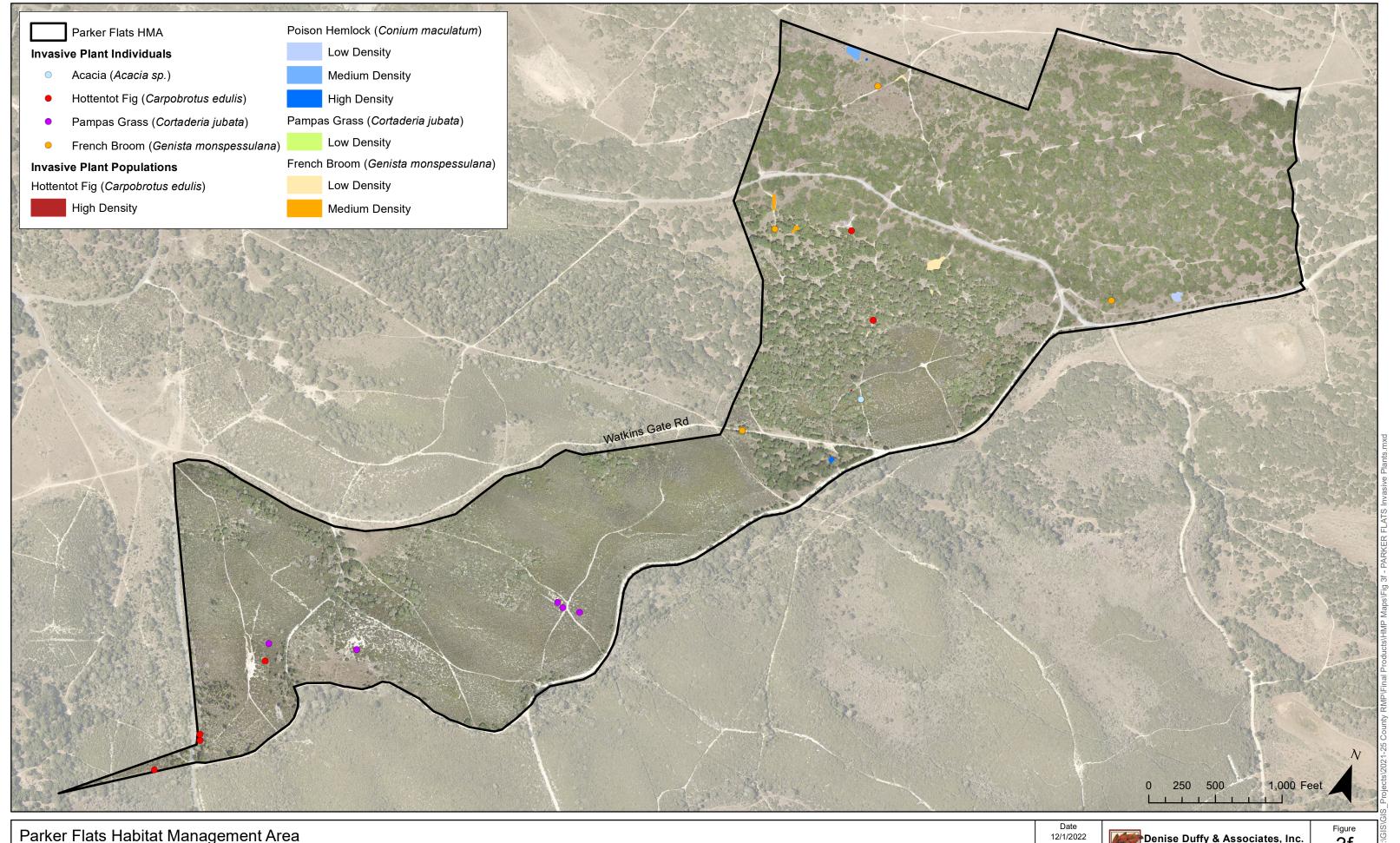




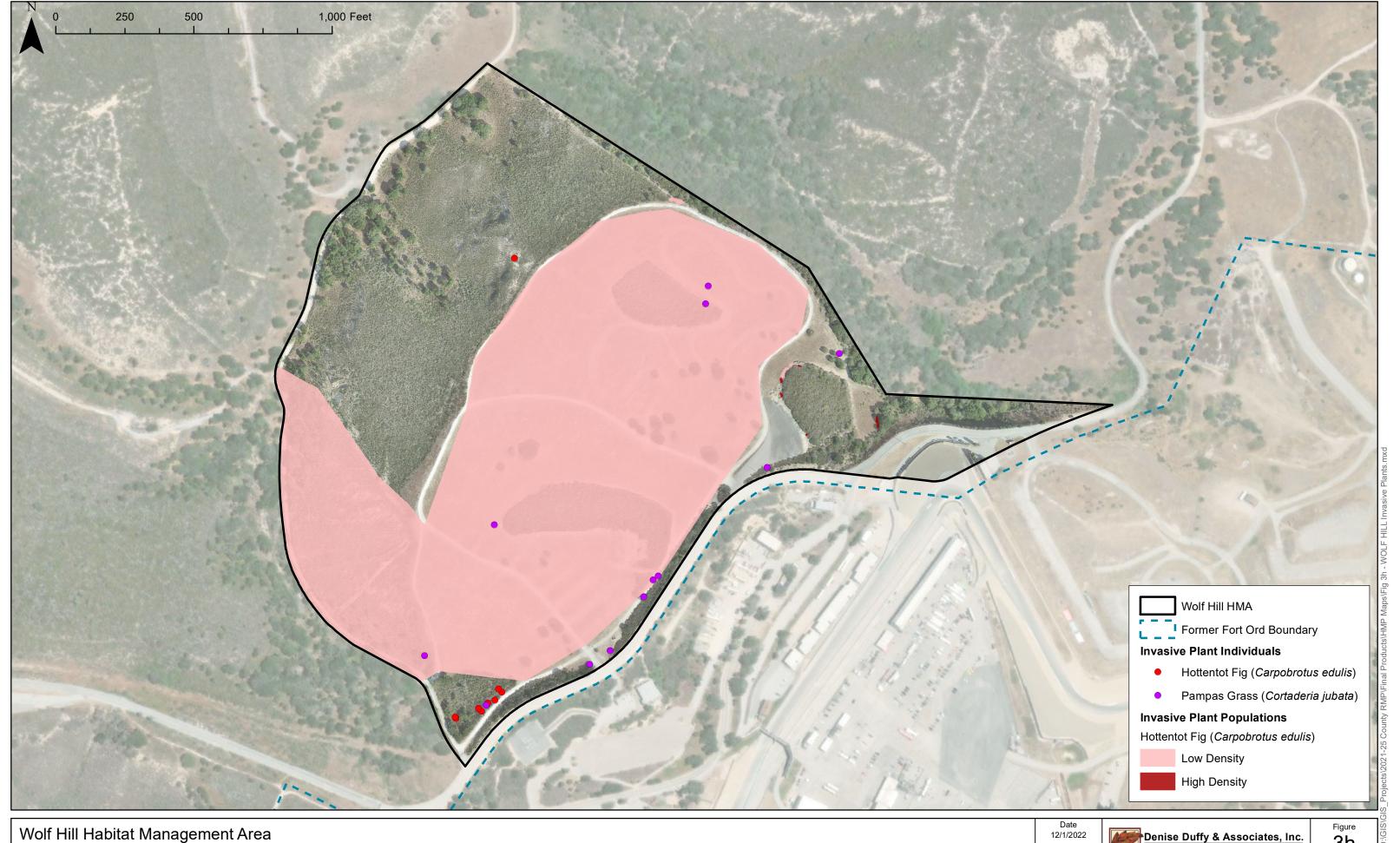
Oak Oval Habitat Management Area Invasive Plants

Date 12/1/2022 Scale 1 in = 300 ft





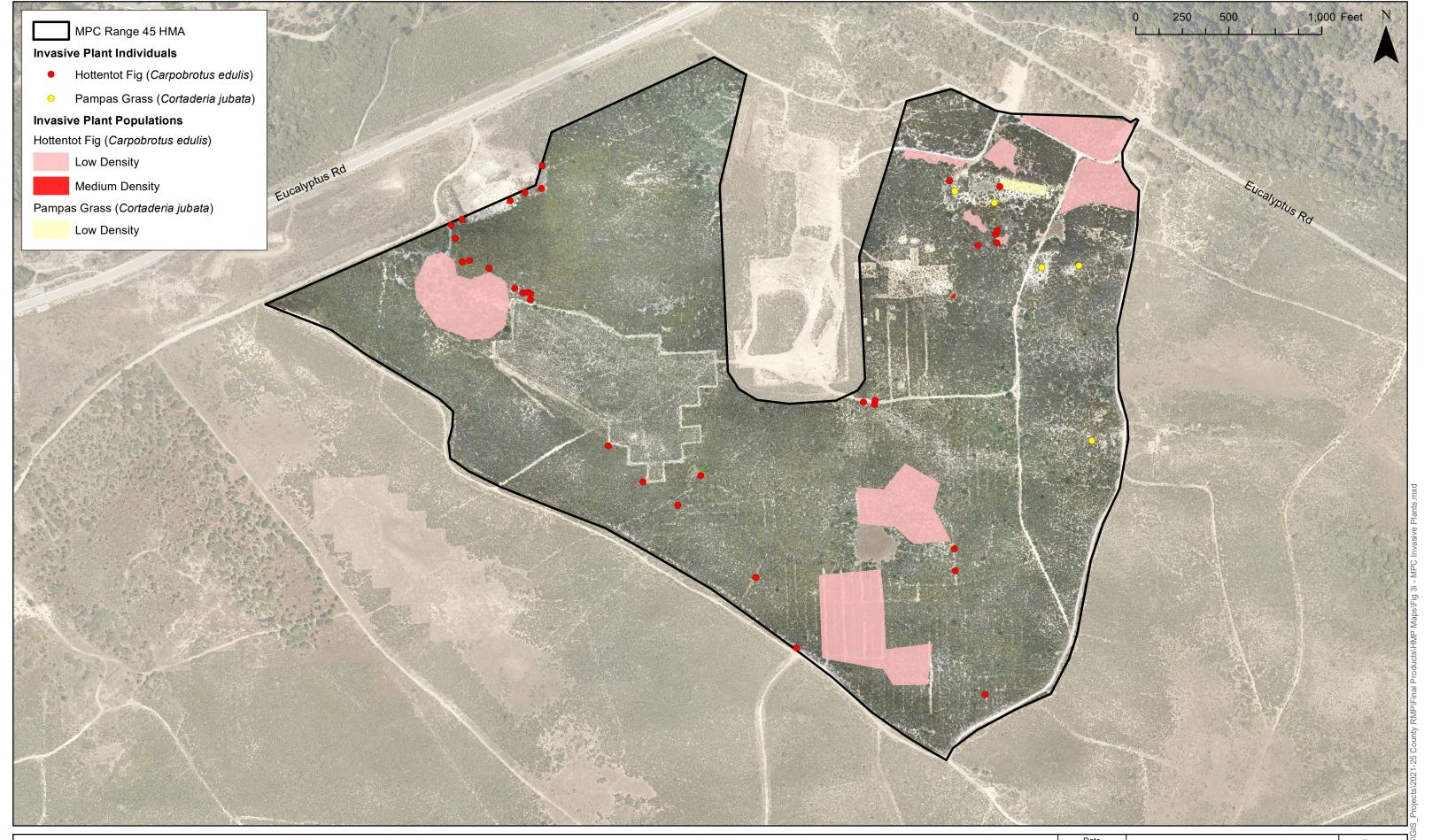


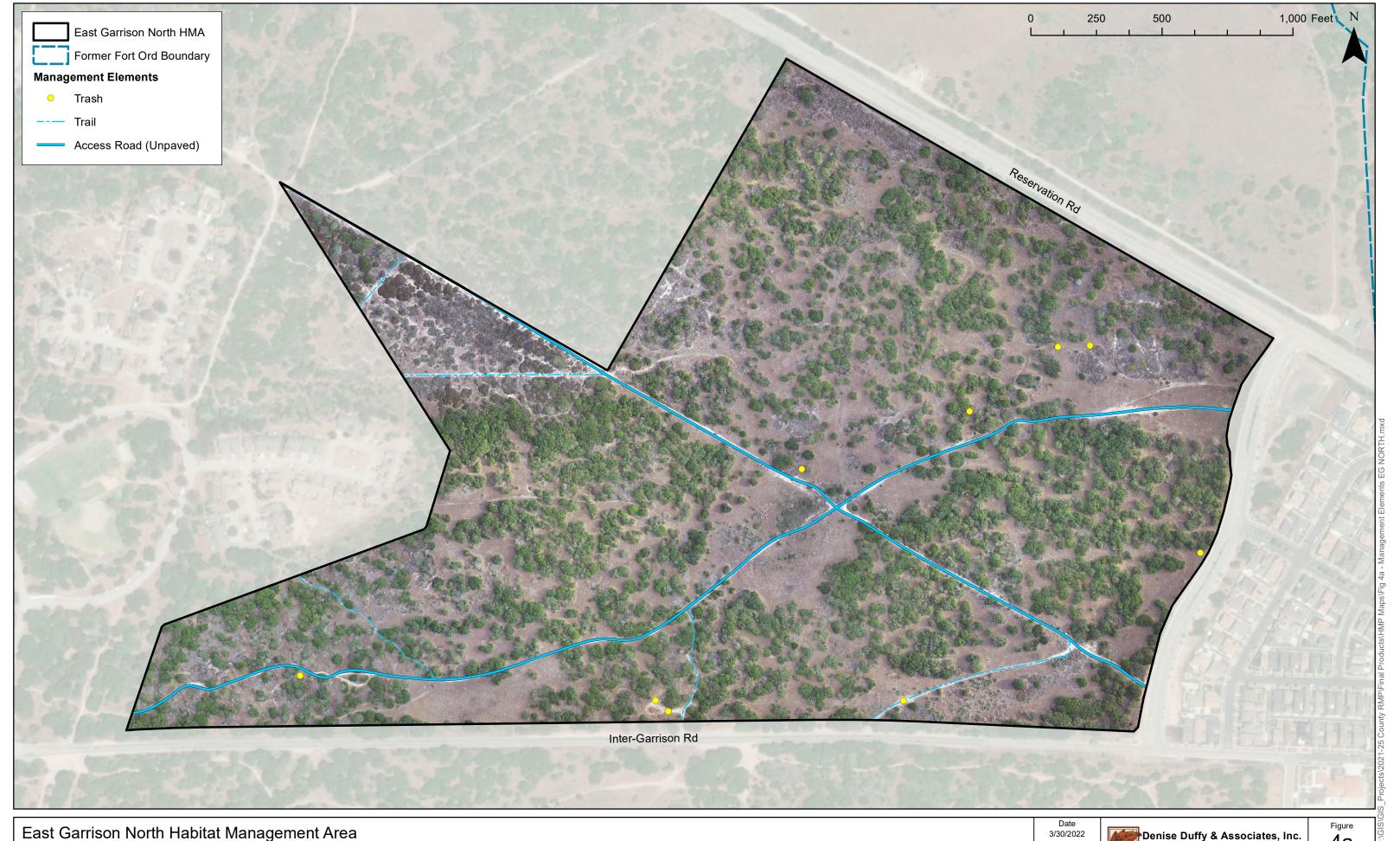


**Invasive Plants** 

Scale 1 in = 300 ft



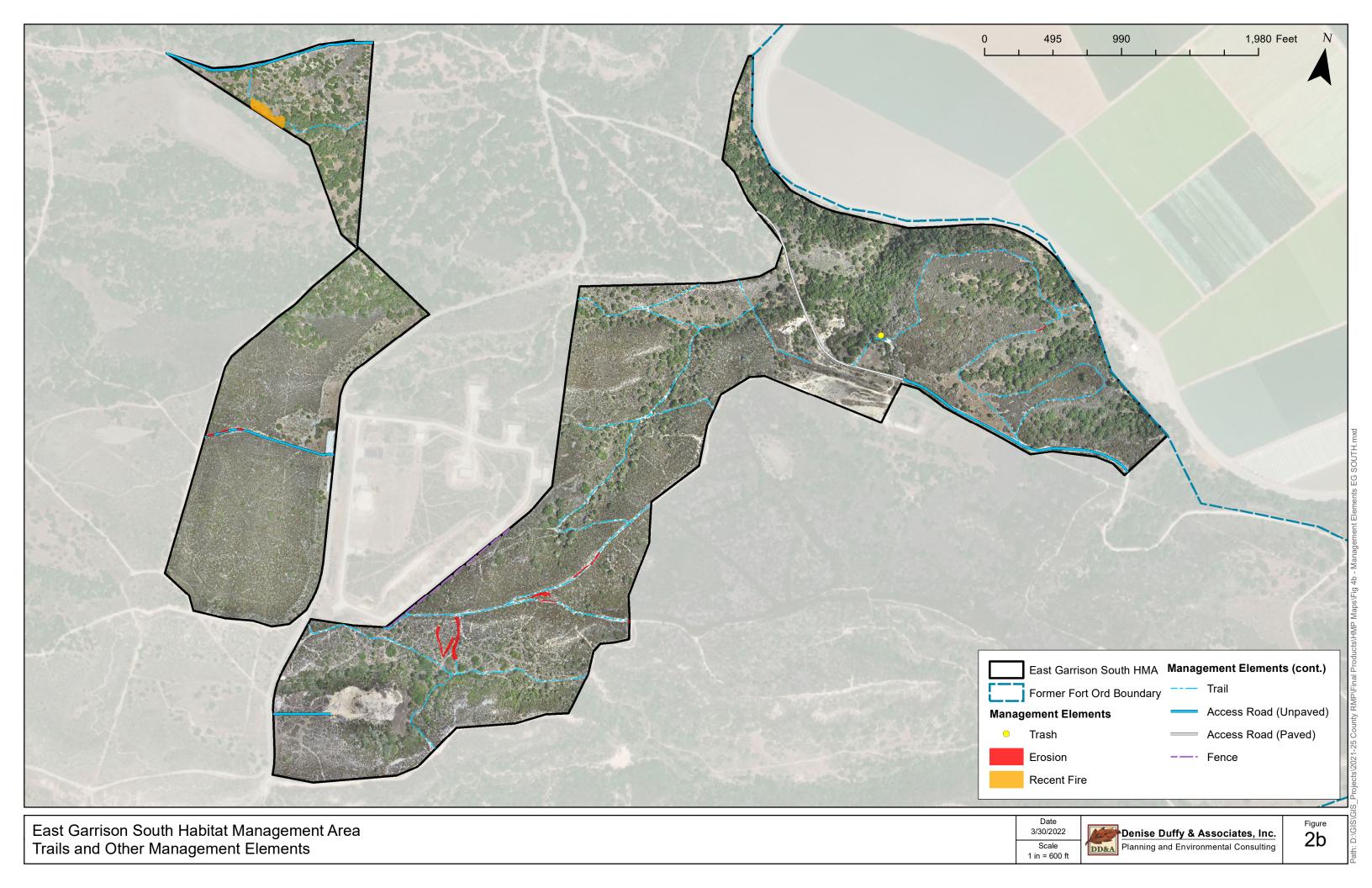


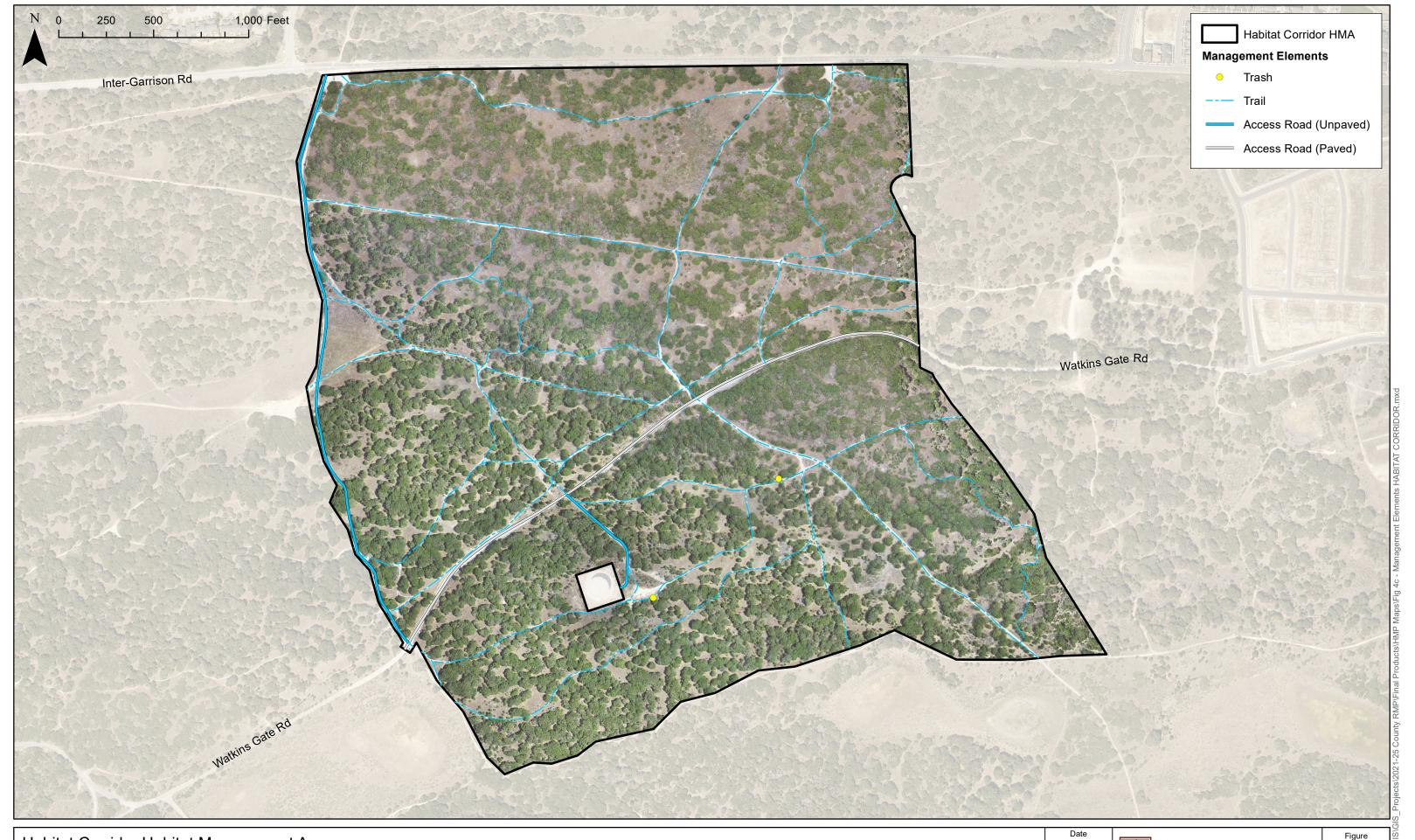


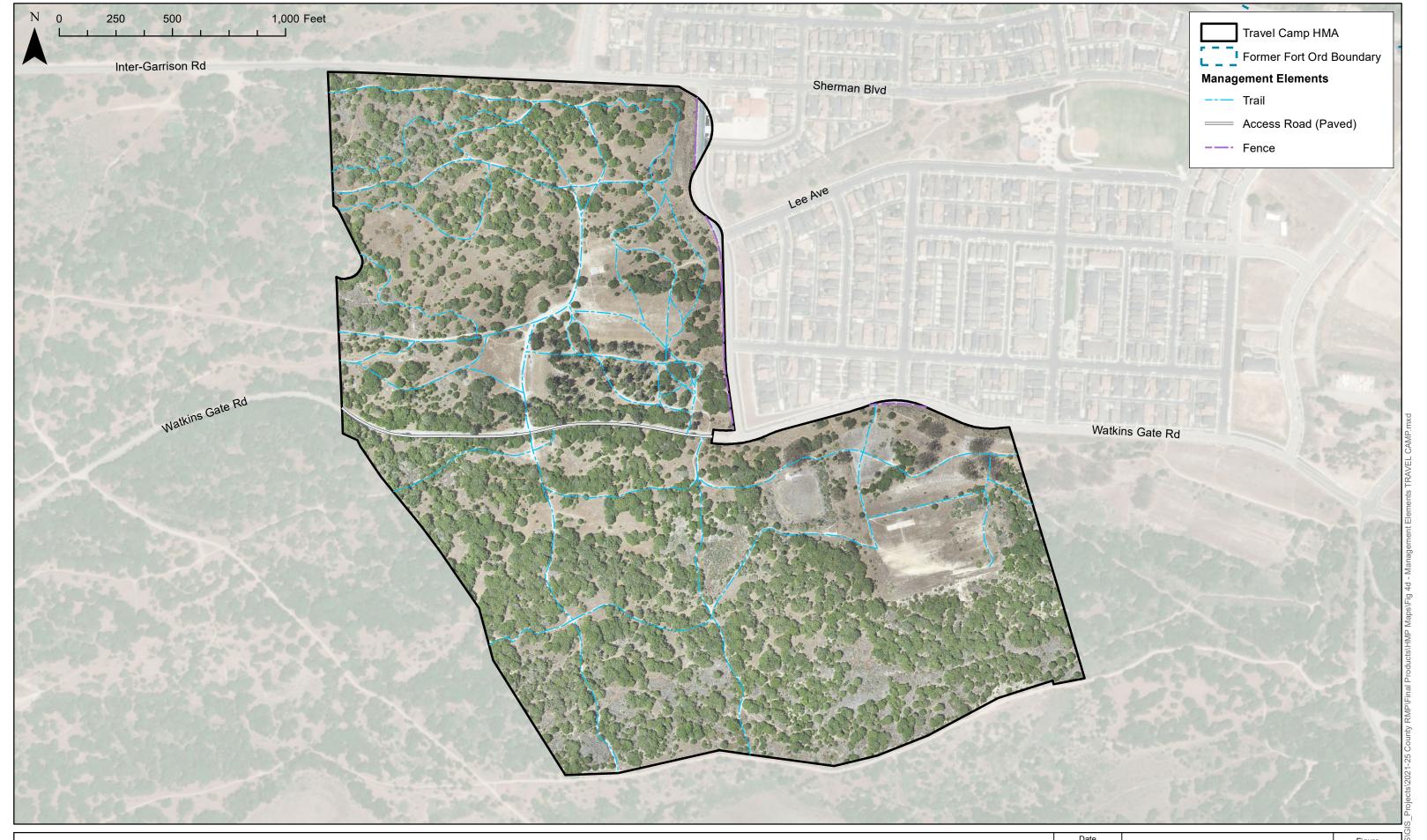
East Garrison North Habitat Management Area Trails and Other Management Elements

Scale 1 in = 300 ft







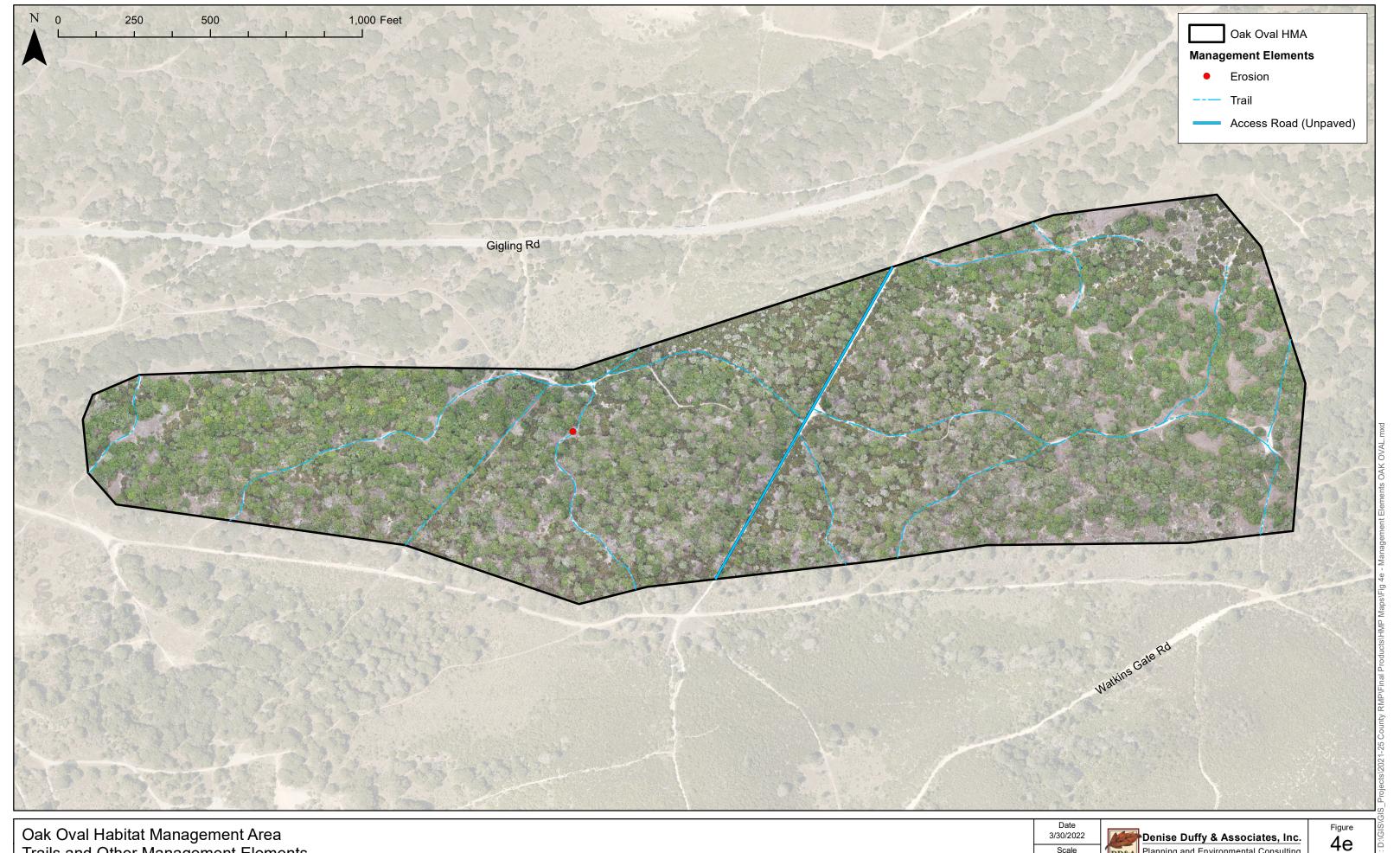


Travel Camp Habitat Management Area Trails and Other Management Elements

Date 3/30/2022

Scale 1 in = 400 ft

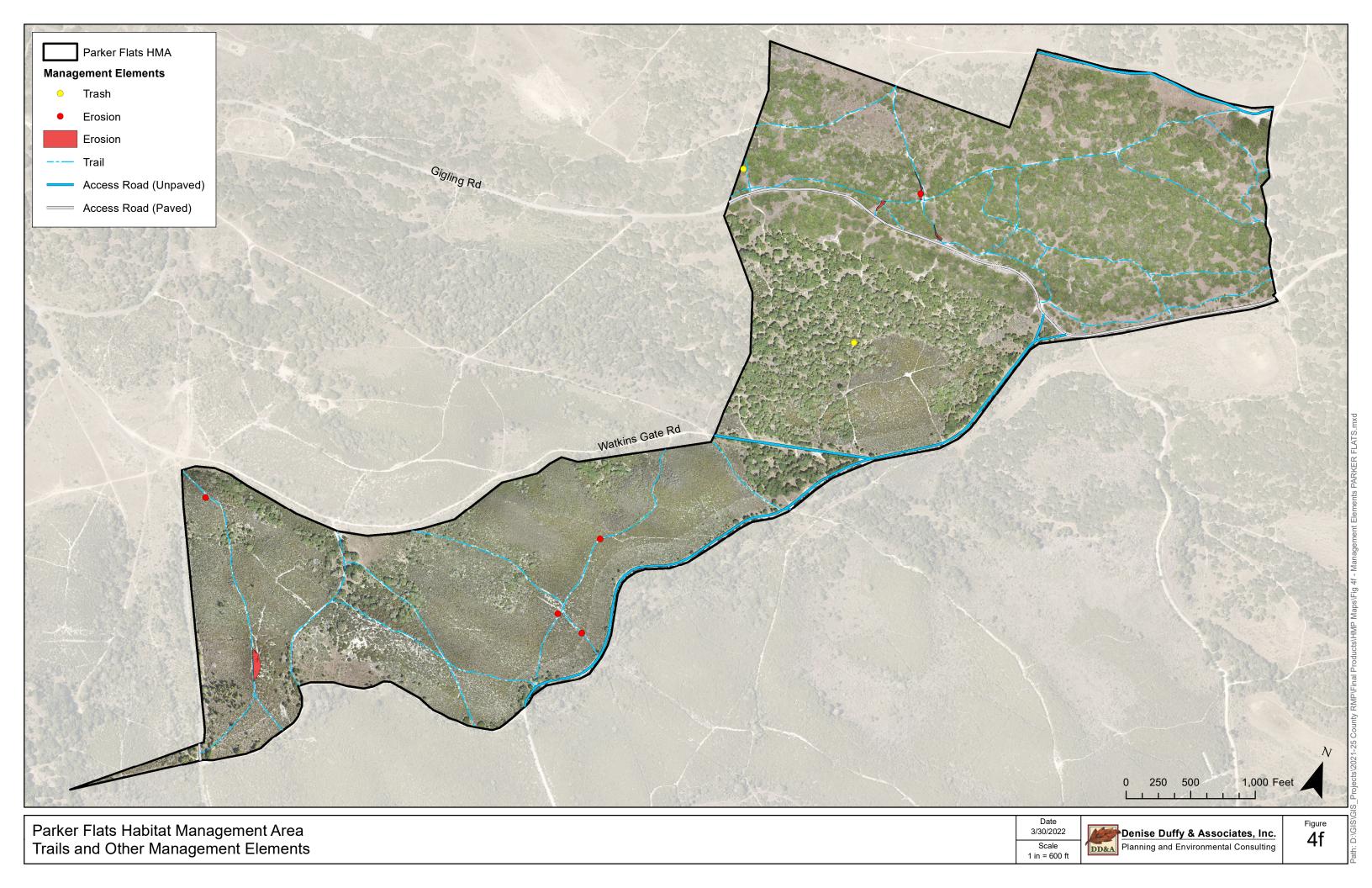




Oak Oval Habitat Management Area Trails and Other Management Elements

Scale 1 in = 300 ft







Lookout Ridge Habitat Management Area Trails and Other Management Elements

Scale 1 in = 400 ft



