

# **APPENDIX C**

## **Biological Resources Report**

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# JOBY AVIATION MANUFACTURING FACILITY BIOLOGICAL RESOURCES REPORT

**December 2019**

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# 1. INTRODUCTION

Denise Duffy & Associates, Inc. (DD&A) was contracted by Joby Aero, Inc. (Joby) to prepare this Biological Resources Report for the Joby Aviation Manufacturing Facility Project (project), located in the City of Marina in Monterey County, California (Figure 1). The project consists of the construction of a new 580,000 ft<sup>2</sup> single story steel manufacturing building which would be used for the production of light-weight, all-electric, vertical take-off and landing (VTOL) aircrafts. The building may be constructed all at once or in two phases of approximately 290,000 ft<sup>2</sup> per phase, with the second phase being completed approximately three to five years after the first phase is operational.

This report describes the existing biological resources within and adjacent to the project site, including any special-status species or sensitive habitats known or with the potential to occur within and adjacent to the site. This report also assesses the potential impacts to biological resources that may result from full buildout of the entire 580,000 ft<sup>2</sup> building, and recommends appropriate avoidance, minimization, and mitigation measures necessary to reduce those impacts to a less than significant level in accordance with the California Environmental Quality Act (CEQA).

## 1.1 Summary of Results

Vegetation communities within the project site include white-tip clover swale and ruderal/disturbed. In addition, much of the site is developed. White-tip clover swale is listed as sensitive on the California Department of Fish and Wildlife's (CDFW's) *California Natural Communities List* (CDFW, 2018a). Additionally, a wetland assessment of the white-tip clover swale area was conducted in accordance with U.S. Army Corps of Engineers (ACOE) protocols; however, it was determined the site does not meet the parameters to be considered a jurisdictional wetland.

Several special-status species are known or have a moderate or high potential to occur within or directly adjacent to the project site based on observations, presence of appropriate habitat, and documented occurrences within the vicinity. All other species evaluated were determined to have a low potential to occur or were determined to be unlikely to occur or not present within the site for the species-specific reasons presented in **Appendix A**.

The following special-status wildlife species have the potential to occur within the project site:

- Northern California legless lizard (*Anniella pulchra*) – CSC/HMP<sup>1</sup>;
- Coast horned lizard (*Phrynosoma blainvillii*) – CSC; and
- California horned lark (*Eremophila alpestris actia*) – WL.

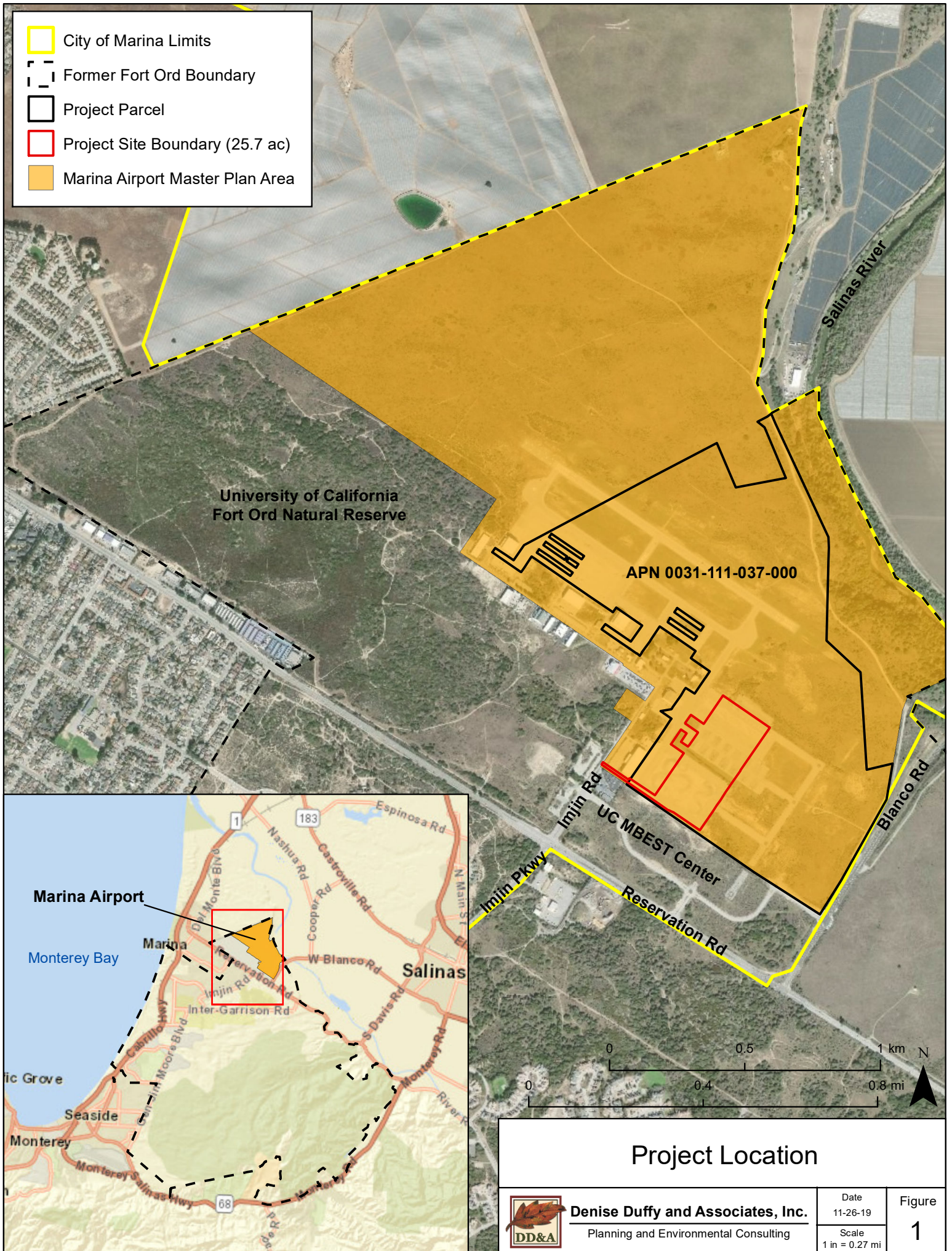
The following special-status plant species is known to occur within the project site:

- Monterey spineflower (*Chorizanthe pungens* var. *pungens*) – FT/1B/HMP.

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<sup>1</sup>Status Definitions: CSC: California Species of Concern; WL: CDFW Watch List; FT: Federally Threatened; 1B: California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) 1B Species (rare, threatened, or endangered in California and elsewhere); HMP: Fort Ord Habitat Management Plan Species.







In addition, several special-status plant species, including Monterey spineflower, sandmat manzanita (*Arctostaphylos pumila*), and sand gilia (*Gilia tenuiflora* ssp. *arenaria*) were identified directly adjacent to the project site during 2019 botanical surveys<sup>2</sup>. Suitable habitat for other special-status plants, such as seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*), marsh microseris (*Microseris paludosa*), curly-leaved monardella (*Monardella undulata*), and Yadon's piperia (*Piperia yadonii*), is also present directly adjacent to the project site; however, surveys were not conducted during the appropriate blooming period for these species within adjacent areas.

## 1.2 Project Location

The project site is located within the former Fort Ord military base in the City of Marina, within Monterey County Assessor's Parcel Number (APN) 031-111-037-000 (**Figure 1**). The proposed development would be located within the boundaries of the Marina Municipal Airport (Airport), within a designated Fort Ord Habitat Management Plan (HMP) "development" parcel (Parcel L5.1). Access to the project site would be via an access road/driveway that extends from Imjin Road to the southeast corner of the project site.

## 1.3 Project Description

### 1.3.1 Construction

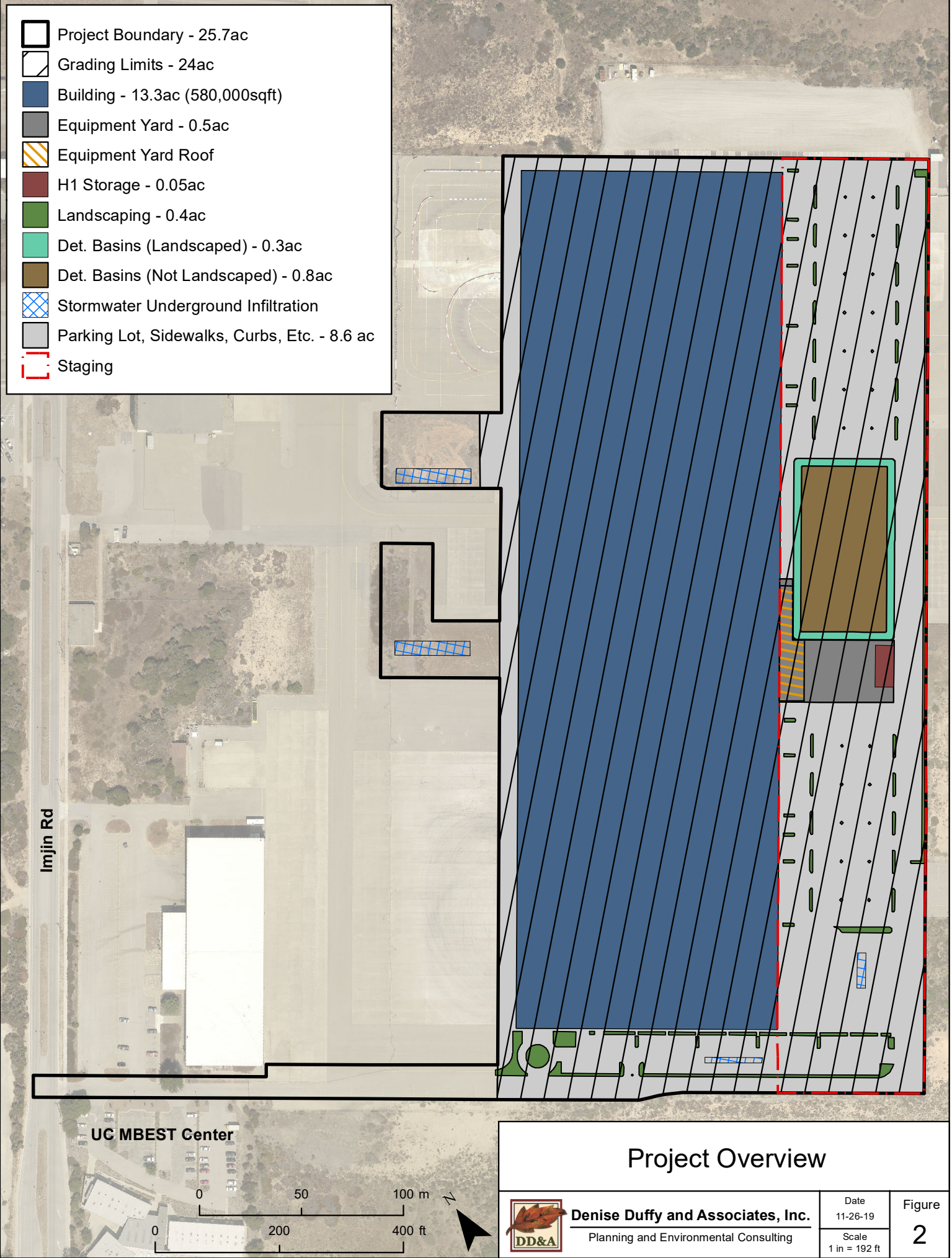
The main component of the project includes construction of a new 580,000 ft<sup>2</sup> single story steel manufacturing building which would be used for the production of aircraft (**Figures 2 and 3**). As identified above, the building could be constructed all at once or in two phases. The building would include space for component fabrication, 3D printing, assembly, paint, offices and meeting space, shipping and receiving, a kitchen/cafeteria area, and a lobby/main entry. Shipping and receiving docks would be constructed for semi-trucks and bobtail truck deliveries. The building would extend to a height of 41 feet for the main roof area and up to 51 feet where screened roof-mounted electrical equipment would be located. The project also includes an equipment yard that would be surrounded by an approximately 10-ft fence/wall to provide separation from the parking lot. The equipment yard would include two 9,000-gallon inert gas tanks, two 15ft x 15ft cooling towers, five 11ft x 40ft autoclaves that would be set into the ground<sup>3</sup>, a 2,010 ft<sup>2</sup> H-1 storage building, and dust collectors. If the project is phased, a detention basin will be constructed for Phase 1, then expanded for Phase 2. The project will also include new utility lines to connect to existing alignments outside of the project site, 627 parking sites, landscaping, and a 10-ft security fence.

The project site is relatively flat; however, some grading would be necessary. Approximately 28,500 cubic yards (CY) of cut and 28,500 CY of fill are anticipated. Existing paving to be removed would be crushed and used as engineered fill. No grading materials would be exported from the site or would be required to be imported onto the site.

Construction of the proposed project is expected to occur over a period of 15 months, beginning early in 2020 and continuing until the anticipated completion in mid-2021. If the project is phased, Phase 1 construction would occur within the same time frame, while Phase 2 would be completed within three to five years after the first phase is operational over an approximate 15 month construction period.

<sup>2</sup> Spring botanical surveys were conducted within a larger area than the project site described in this document. Summer surveys were conducted only within the project site.

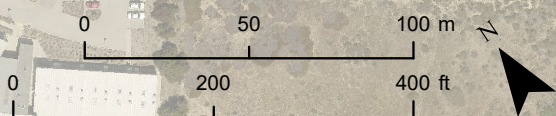
<sup>3</sup> Autoclaves would extend approximately five feet into the building.




- Project Boundary - 25.7ac
- Grading Limits - 24ac
- Building - 13.3ac (580,000sqft)
- Equipment Yard - 0.5ac
- Equipment Yard Roof
- H1 Storage - 0.05ac
- Landscaping - 0.4ac
- Det. Basins (Landscaped) - 0.3ac
- Det. Basins (Not Landscaped) - 0.8ac
- Stormwater Underground Infiltration
- Parking Lot, Sidewalks, Curbs, Etc. - 8.6 ac
- Staging

Imjin Rd

UC MBEST Center



### Project Overview



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

Date 11-26-19	Figure <b>2</b>
Scale 1 in = 192 ft	

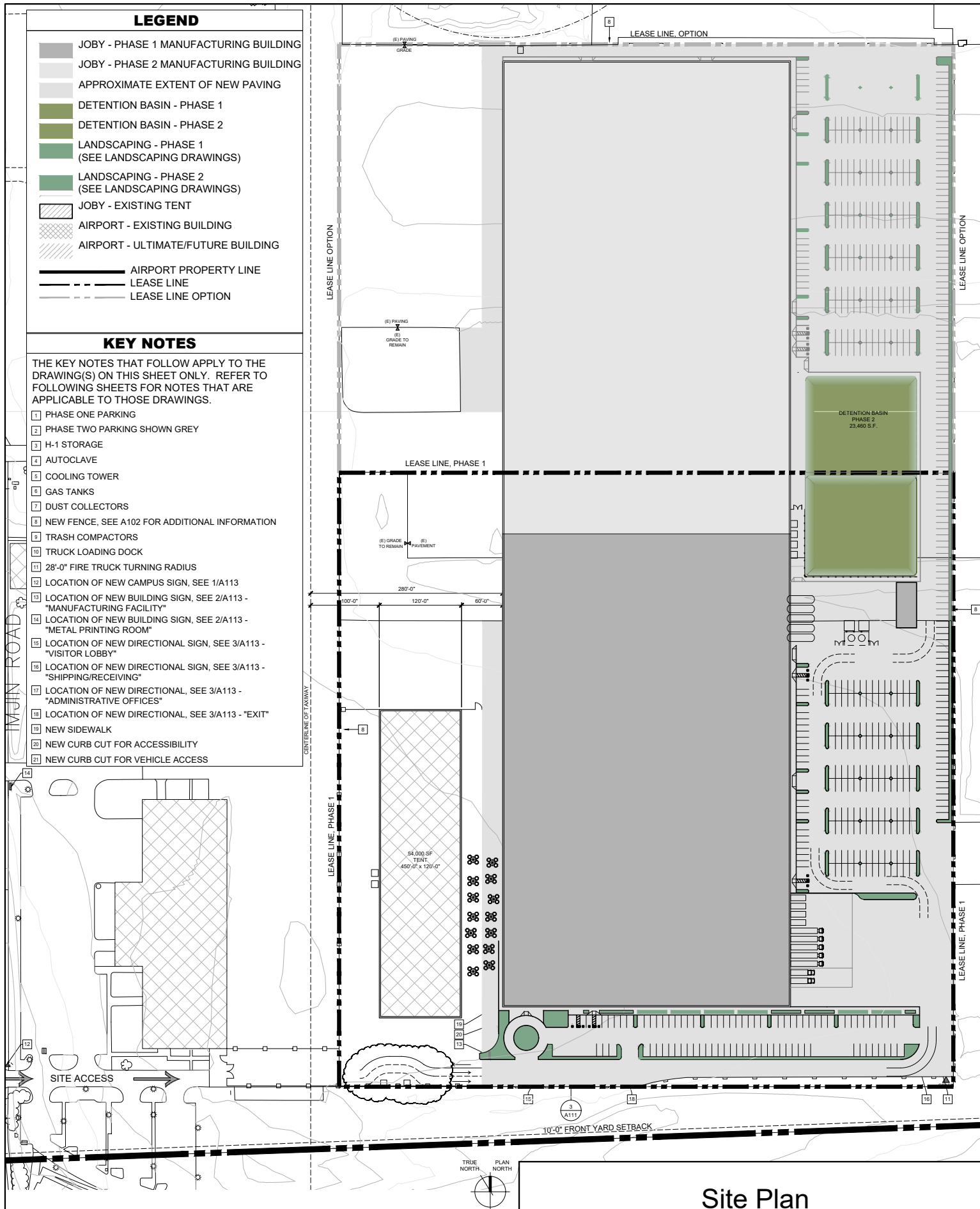
## LEGEND

- JOBY - PHASE 1 MANUFACTURING BUILDING
- JOBY - PHASE 2 MANUFACTURING BUILDING
- APPROXIMATE EXTENT OF NEW PAVING
- DETENTION BASIN - PHASE 1
- DETENTION BASIN - PHASE 2
- LANDSCAPING - PHASE 1  
(SEE LANDSCAPING DRAWINGS)
- LANDSCAPING - PHASE 2  
(SEE LANDSCAPING DRAWINGS)
- JOBY - EXISTING TENT
- AIRPORT - EXISTING BUILDING
- AIRPORT - ULTIMATE/FUTURE BUILDING
- AIRPORT PROPERTY LINE
- LEASE LINE
- LEASE LINE OPTION

## KEY NOTES

THE KEY NOTES THAT FOLLOW APPLY TO THE DRAWING(S) ON THIS SHEET ONLY. REFER TO FOLLOWING SHEETS FOR NOTES THAT ARE APPLICABLE TO THOSE DRAWINGS.

- 1 PHASE ONE PARKING
- 2 PHASE TWO PARKING SHOWN GREY
- 3 H-1 STORAGE
- 4 AUTOCLAVE
- 5 COOLING TOWER
- 6 GAS TANKS
- 7 DUST COLLECTORS
- 8 NEW FENCE, SEE A102 FOR ADDITIONAL INFORMATION
- 9 TRASH COMPACTORS
- 10 TRUCK LOADING DOCK
- 11 28'-0" FIRE TRUCK TURNING RADIUS
- 12 LOCATION OF NEW CAMPUS SIGN, SEE 1/A113
- 13 LOCATION OF NEW BUILDING SIGN, SEE 2/A113 - "MANUFACTURING FACILITY"
- 14 LOCATION OF NEW BUILDING SIGN, SEE 2/A113 - "METAL PRINTING ROOM"
- 15 LOCATION OF NEW DIRECTIONAL SIGN, SEE 3/A113 - "VISITOR LOBBY"
- 16 LOCATION OF NEW DIRECTIONAL SIGN, SEE 3/A113 - "SHIPPING/RECEIVING"
- 17 LOCATION OF NEW DIRECTIONAL SIGN, SEE 3/A113 - "ADMINISTRATIVE OFFICES"
- 18 LOCATION OF NEW DIRECTIONAL SIGN, SEE 3/A113 - "EXIT"
- 19 NEW SIDEWALK
- 20 NEW CURB CUT FOR ACCESSIBILITY
- 21 NEW CURB CUT FOR VEHICLE ACCESS



## Site Plan



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

Date  
11-11-19  
Scale

Figure  
3

Construction would occur Monday through Saturday between the hours of 7 AM to 5 PM (no night-time construction). If the building is constructed all at once, construction staging would occur in areas designated for Phase 2 parking. However, if the project is phased, construction staging for Phase 1 would be located on future Phase 2 development areas and Phase 2 construction staging would occur in areas designated for Phase 2 parking.

In support of these activities and for the assumptions for this document, the types of equipment that may be used at any one time during construction may include, but not be limited to: excavator, concrete truck, crane, backhoe, dump truck, delivery truck, water truck, asphalt paver, high reach forklift, and McCloskey International 154 crusher (or similar).

### 1.3.2 Operations

Operations proposed within the new building include manufacturing, composite fabrication, assemblage of aircraft, parts testing, and research and development. The manufacturing process includes aircraft part layup, oven curing, trimming, adhesive bonding, and painting. Operations would also include aircraft testing and integration. All manufacturing would be conducted within the building. Operations would also include utilization of taxiways and remote test areas on the Airport for propulsion testing, antenna performance testing, acoustics measurement testing, hover testing and flight-testing. Operations would occur 24 hours per day, 7 days per week.

## 2. METHODS

### 2.1 Personnel and Survey Methods

DD&A Senior Environmental Scientists Josh Harwayne and Jami Colley and Assistant Environmental Scientists Liz Camilo and Max Hofmarcher conducted biological surveys of the project site in April, May, and June 2019. Botanical survey methods included walking the survey area and using aerial maps and GPS to identify general vegetation types and potential sensitive vegetation types, and conducting focused surveys for special-status plant species. Reconnaissance-level wildlife habitat surveys were conducted concurrently with botanical surveys to identify any special-status wildlife species or suitable habitat for those species. Data collected during the surveys were used to assess the environmental conditions of the project site and its surroundings, evaluate environmental constraints at the site and within the local vicinity, and provide a basis for recommendations to minimize and avoid impacts to biological resources.

The project site was surveyed for botanical resources following the applicable guidelines outlined in the U.S. Fish and Wildlife Service (Service) *Guidelines for Conducting and Reporting Botanical Inventories for Federally listed, Proposed and Candidate Plants* (Service, 2000), the California Department of Fish and Wildlife (CDFW) *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW, 2018c), and the California Native Plant Society (CNPS) *Botanical Survey Guidelines* (CNPS, 2001). All special-status plant species identified were mapped using a Trimble Pro XH GPS unit. Populations of plants with more than five individuals were mapped as a polygon and the density of the population was documented. Densities were recorded as low (1-33% cover), medium (34-66% cover), and high (67-100% cover). Individual plants or populations of five or fewer individuals were mapped as a point and a count of the number of individual plants was documented. Populations included all individuals within approximately three feet of another individual; individual plants further than three feet apart were mapped as a separate polygon or point. General and sensitive vegetation types were also mapped during the survey effort using a combination of GPS and hand drawing on aerial maps, which were later digitized using ArcGIS software.

DD&A Senior Environmental Scientist Josh Harwayne conducted a wetland assessment of the project site in Spring 2019. The wetland assessment was conducted in accordance with ACOE protocols, including *The Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual* and the *2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*.

### 2.2 Sensitive Habitats

Sensitive habitats include riparian corridors, wetlands, habitats for legally protected species, areas of high biological diversity, areas supporting rare or special-status wildlife habitat, and unusual or regionally restricted vegetation types. Vegetation communities considered sensitive include those listed on CDFW's *California Natural Communities List* (i.e., those habitats that are rare or endangered within the borders of California) (CDFW, 2018a), those that are occupied by species listed under the federal Endangered Species Act (ESA) or are critical habitat in accordance with ESA, and those that are defined as an Environmentally Sensitive Habitat Area (ESHA) under the California Coastal Act (CCA). Specific habitats may also be identified as sensitive in city or county general plans or ordinances. Sensitive habitats are regulated under federal regulations (such as the Clean Water Act [CWA] and Executive Order [EO] 11990 – Protection of

Wetlands), state regulations (such as CEQA and the CDFW Streambed Alteration Program), or local ordinances or policies (such as city or county tree ordinances and general plan policies).

### 2.3 Special-Status Species

Special-status species are those plants and animals that have been formally listed or proposed for listing as endangered or threatened, or are candidates for such listing under ESA or the California Endangered Species Act (CESA). Listed species are afforded legal protection under the ESA and CESA. Species that meet the definition of rare or endangered under the CEQA Guidelines Section 15380 are also considered special-status species. Animals on the CDFW's list of "species of special concern" (most of which are species whose breeding populations in California may face extirpation if current population trends continue) meet this definition and are typically provided management consideration through the CEQA process, although they are not legally protected under the ESA or CESA. CDFW also includes some animal species that are not assigned any of the other status designations in the California Natural Diversity Database (CNDDB) "Special Animals" list; however, these species have no legal or protection status and are not analyzed in this document.

Plants listed as rare under the California Native Plant Protection Act (CNPPA) or included in CNPS California Rare Plant Ranks (CRPR; formerly known as CNPS Lists) 1A, 1B, 2A, and 2B are also treated as special-status species as they meet the definitions of Sections 2062 and 2067 of the CESA and in accordance with CEQA Guidelines Section 15380.<sup>4</sup> In general, the CDFW requires that plant species on CRPR 1A (Plants presumed extirpated in California and Either Rare or Extinct Elsewhere), CRPR 1B (Plants rare, threatened, or endangered in California and elsewhere), CRPR 2A (Plants presumed extirpated in California, but more common elsewhere); and CRPR 2B (Plants rare, threatened, or endangered in California, but more common elsewhere) of the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2019) be fully considered during the preparation of environmental documents relating to CEQA.<sup>5</sup> CNPS CRPR 4 species (plants of limited distribution) may, but generally do not, meet the definitions of Sections 2062 and 2067 of CESA, and are not typically considered in environmental documents relating to CEQA. While other species (i.e., CRPR 3 or 4 species) are sometimes found in database searches or within the literature, these do not meet the definitions of Section 2062 and 2067 of CESA and are not analyzed in this document.

Raptors (e.g., eagles, hawks, and owls) and their nests are protected in California under Fish and Game Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy the nest or eggs of any such bird except otherwise provided by this code or any regulation adopted pursuant thereto." In addition, fully protected species under the Fish and Game Code Section 3511 (birds), Section 4700 (mammals), Section 5515 (fish), and Section 5050 (reptiles and amphibians) are also considered special-status animal species. Species with no formal special-status designation but thought by experts to be rare or in serious decline may also be considered special-status animal species in some cases, depending on project-specific analysis and relevant, localized conservation needs or precedence.

<sup>4</sup> CNPS initially created five CRPR to categorize degrees of concern; however, to better define and categorize rarity in California's flora, the CNPS Rare Plant Program and Rare Plant Program Committee have developed the new CRPR 2A and CRPR 2B.

<sup>5</sup> CRPR 3 species (Plants about which we need more information - a review list) and CRPR 4 species (Plants of limited distribution - a watch list) may, but generally do not, meet the definitions of Sections 2062 and 2067 of CESA, and are not typically considered in environmental documents relating to CEQA.



## 2.4 Data Sources

The primary literature and data sources reviewed to determine the presence or potential presence of special-status species at the project site include:

- Current agency status information from the Service and CDFW for species listed, proposed for listing, or candidates for listing as threatened or endangered under ESA or CESA, and those considered CDFW “species of special concern”, including:
  - CNDDDB occurrences reports from the Marina quadrangle and the six surrounding quadrangles, including Monterey, Moss Landing, Prunedale, Salinas, Seaside, and Spreckels (**Appendix B**; CDFW, 2019); and
  - The Service’s Information for Planning and Consultation (IPaC) Resource List (**Appendix C**; Service, 2019).
- The CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2019);
- The *Flora and Fauna Baseline Study of Fort Ord* (ACOE, 1992); and
- The *Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord* (HMP) (ACOE, 1997).

From these resources, a list of special-status plant and wildlife species known or with the potential to occur in the vicinity of the project site was created (**Appendix A**). This list presents these species along with their legal status, habitat requirements, and a brief statement of the likelihood to occur.

### 2.4.1 Botany

Vegetation types identified in *A Manual of California Vegetation* (Sawyer et.al., 2009) were utilized to determine if vegetation types identified as sensitive on CDFW’s *California Natural Communities List* (CDFW, 2018a) are present within the project site. Information regarding the distribution and habitats of local and state vascular plants was also reviewed (Howitt and Howell, 1964 and 1973; Munz and Keck, 1973; Baldwin et al., 2012; Matthews and Mitchell, 2015; Jepson Flora Project, 2019). All plants observed within the project site during the surveys were identified to species or intraspecific taxon necessary to eliminate them as being special-status species using keys and descriptions in *The Jepson Manual: Vascular Plants of California, Edition 2* (Baldwin et al., 2012) and *The Plants of Monterey County an Illustrated Field Key* (Matthews and Mitchell, 2015). Scientific nomenclature for plant species identified within this document follows Baldwin, et. al, (2012); common names follow Matthews and Mitchell (2015). A full botanical inventory was recorded for the project site and the dominant species within each habitat were noted. Dominant plant species are those which are more numerous than its competitors in an ecological community or makes up more of the biomass; generally, the species that are most abundant. Most ecological communities are defined by their dominant species.

The California Invasive Plant Council (Cal-IPC) Inventory (Cal-IPC, 2019) was reviewed to determine if any invasive plant species are present within the project site.

### 2.4.2 Wildlife

The following literature and data sources were reviewed: CDFW reports on special-status wildlife (Remsen, 1978; Williams, 1986; Jennings and Hayes, 1994; Thelander, 1994; Thomson et. al, 2016); California Wildlife Habitat Relationships Program species-habitat models (Zeiner et al., 1988 and 1990); and general wildlife references (Stebbins, 1972, 1985, and 2003).



## 2.5 Regulatory Setting

The following regulatory discussion describes the major laws that may be applicable to the project.

### 2.5.1 Federal Regulations

#### *Federal Endangered Species Act*

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

The U.S. Army's decision to close and dispose of the Fort Ord military base was considered a major federal action that could affect listed species under the ESA. The Service issued a Final Biological Opinion (BO) on the disposal and reuse of former Fort Ord on October 19, 1993. The Service issued five additional BOs and one amendment between 1999 and 2014 as a result of consultation reinitiated by the Army. On May 28, 2015, the Service issued a Programmatic BO that superseded the previous BOs. Then on June 7, 2017, the Service issued a reinitiated Programmatic BO that supersedes the 2015 Programmatic BO. The 2017 Programmatic BO is the current and relevant BO for activities at the former Fort Ord; the 2017 Programmatic BO contains additional conservation measures and recommendations relating to environmental cleanup actions at former Fort Ord cleanup sites.

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

#### *Executive Order 13112 - Invasive Species*

EO 13112 - Invasive Species requires the prevention of introduction and spread of invasive species. Invasive species are defined as "alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health." Each federal agency whose actions may affect the status of invasive species on a project site shall, to the extent practicable and permitted by law, subject to the availability of appropriations, use relevant programs and authorities to: 1) prevent the introduction of invasive species; 2) detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner; 3) monitor invasive species populations accurately and reliably; 4) provide for restoration of native species and habitat conditions in ecosystems that have been invaded; 5)

conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species; and 6) promote public education on invasive species and the means to address them. A national invasive species management plan was prepared by the National Invasive Species Council and the Invasive Species Advisory Committee (ISAC) that recommends objectives and measures to implement the EO.

### 2.5.2 State Regulations

#### *California Endangered Species Act*

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

#### *California Native Plant Protection Act*

The CNPPA of 1977 directed CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and Endangered plants in the State." The CNPPA prohibits importing rare and Endangered plants into California, taking rare and Endangered plants, and selling rare and Endangered plants. The CESA and CNPPA authorized the Fish and Game Commission to designate endangered, threatened, and rare species and to regulate the taking of these species (§2050-2098, Fish and Game Code). Plants listed as rare under the CNPPA are not protected under CESA; however, these plants may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research.

#### *California Fish and Game Code*

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

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

**Species of Special Concern.** As noted above, the CDFW also maintains a list of wildlife "species of special concern." Although these species have no legal status, the CDFW recommends considering these species

during analysis of project impacts to protect declining populations and avoid the need to list them as endangered in the future.

### 2.5.3 Local Regulations

#### *Fort Ord Habitat Management Plan*

The U.S. Army's decision to close and dispose of the Fort Ord military base was considered a major federal action that could affect listed species under the ESA. In 1993, the Service issued a BO on the disposal and reuse of former Fort Ord requiring that an HMP be developed and implemented to reduce the incidental take of listed species and loss of habitat that supports these species (Service, 1993, updated to Service, 2017). The HMP was prepared to assess impacts on vegetation and wildlife resources and provide mitigation for their loss associated with the disposal and reuse of former Fort Ord (ACOE, 1997).

The HMP establishes guidelines for the conservation and management of species and habitats on former Fort Ord lands by identifying lands that are available for development, lands that have some restrictions with development, and habitat reserve areas. The intent of the plan is to establish large, contiguous habitat conservation areas and corridors to compensate for future development in other areas of the former base. The HMP identifies what type of activities can occur on each parcel at former Fort Ord; parcels are designated as "development with no restrictions," "habitat reserves with management requirements," or "habitat reserves with development restrictions." The HMP sets the standards to assure the long-term viability of former Fort Ord's biological resources in the context of base reuse so that no further mitigation should be necessary for impacts to species and habitats considered in the HMP. This plan has been approved by the Service; the HMP, deed restrictions, and Memoranda of Agreement between the Army and various land recipients provide the legal mechanism to assure HMP implementation. It is a legally binding document, and all recipients of former Fort Ord lands are required to abide by its management requirements and procedures.

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

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

The project site is located within a designated “development” parcel. Parcels designated as “development” have no management restrictions. However, the 2017 Programmatic BO and HMP require the identification of sensitive botanical resources within the development parcels that may be salvaged for use in restoration activities in reserve areas (Service, 2017 and ACOE, 1997).

*Habitat Conservation Plans or NCCP*

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

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### 3. RESULTS

#### 3.1 Vegetation Communities

Vegetation communities mapped within the project site include white-tip clover swale and ruderal/disturbed; however, most of the project site is developed (**Figure 4**). A brief description of each vegetation community, along with a statement of the presence or potential presence of special-status species within each, is included below.

##### 3.1.1 Developed

- *A Manual of California Vegetation* classification(s): None
- CDFW *California Natural Communities List*: Not Sensitive

Most of the project site (23.2 acres) is developed with paved roads and aircraft parking aprons (**Figure 4**). No vegetation is present within developed areas and they are considered to have little biological value. California horned lark individuals were observed foraging on the parking aprons during the 2019 biological surveys of the project site. No other special-status species were observed within developed areas during 2019 biological surveys of the project site, and none are expected to occur due to lack of suitable habitat.

##### 3.1.2 Ruderal/Disturbed

- *A Manual of California Vegetation* classification(s): Poison Hemlock or Fennel Patches (*Conium maculatum* – *Foeniculum vulgare*) Semi-Natural Herbaceous Stands and Upland mustards (*Brassica nigra* and Other Mustards) Semi-Natural Herbaceous Stands
- CDFW *California Natural Communities List*: Not Sensitive

Ruderal areas are those areas which have been disturbed by human activities and are dominated by non-native annual grasses and other “weedy” species. Ruderal areas within the project site include areas dominated by hottentot fig (*Carpobrotus* sp.), silvery hairgrass (*Aira caryophyllea*), slender wild oat (*Avena barbata*), Italian thistle (*Carduus pycnocephalus*), filaree (*Erodium* sp.), bur clover (*Medicago* sp.), and sheep sorrel (*Rumex acetosella*). Ruderal areas have low biological value because they are generally dominated by non-native plant species and consist of relatively low-quality habitat from a wildlife perspective. Approximately 2.0 acres of ruderal vegetation is present within the project site (**Figure 4**).





Monterey spineflower was the only special-status plant species identified within this vegetation community during focused botanical surveys in April, May, and June 2019 (**Figure 5**). No special-status wildlife species was identified within this community; however, suitable habitat is present for coast horned lizard, California legless lizard, and California horned lark.

##### 3.1.3 White-Tip Clover Swale




- *A Manual of California Vegetation* classification(s): White-Tip Clover Swales (*Trifolium variegatum* Herbaceous Alliance)
- CDFW *California Natural Communities List*: Sensitive

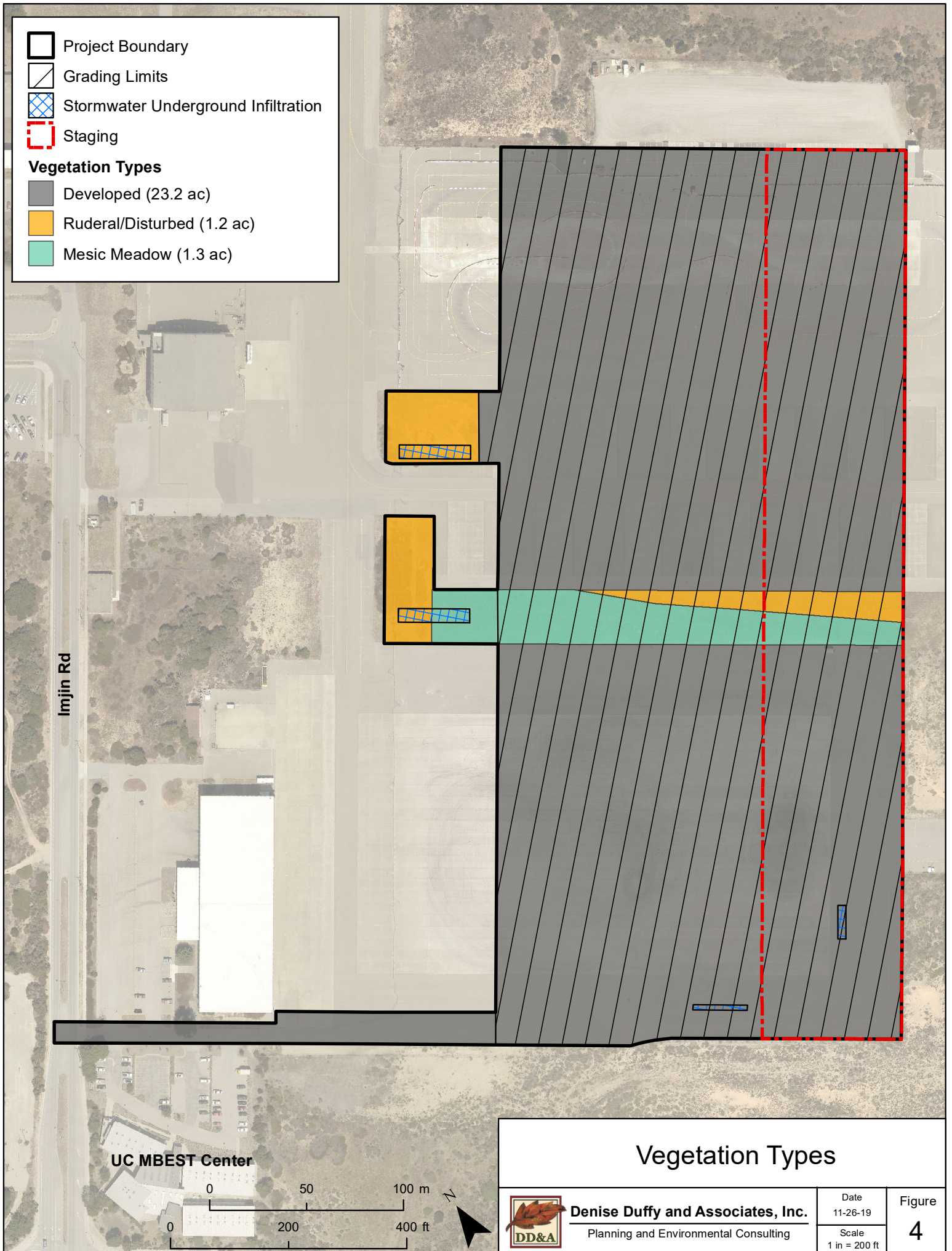
Approximately 0.5 acre of white-tip clover swale is present within the project site (**Figure 4**). *A Manual of California Vegetation* identifies that stands of this vegetation type form in swales, seeps, moist grassy flats, and intermittent stream channels with a conspicuous mix of native and non-native plants. White-tip clover (*Trifolium variegatum*) is the indicator species for this vegetation types; however, it varies in dominance



-  Project Boundary
-  Grading Limits
-  Stormwater Underground Infiltration
-  Staging

**Vegetation Types**

-  Developed (23.2 ac)
-  Ruderal/Disturbed (1.2 ac)
-  Mesic Meadow (1.3 ac)



## Vegetation Types



**Denise Duffy and Associates, Inc.**

Planning and Environmental Consulting

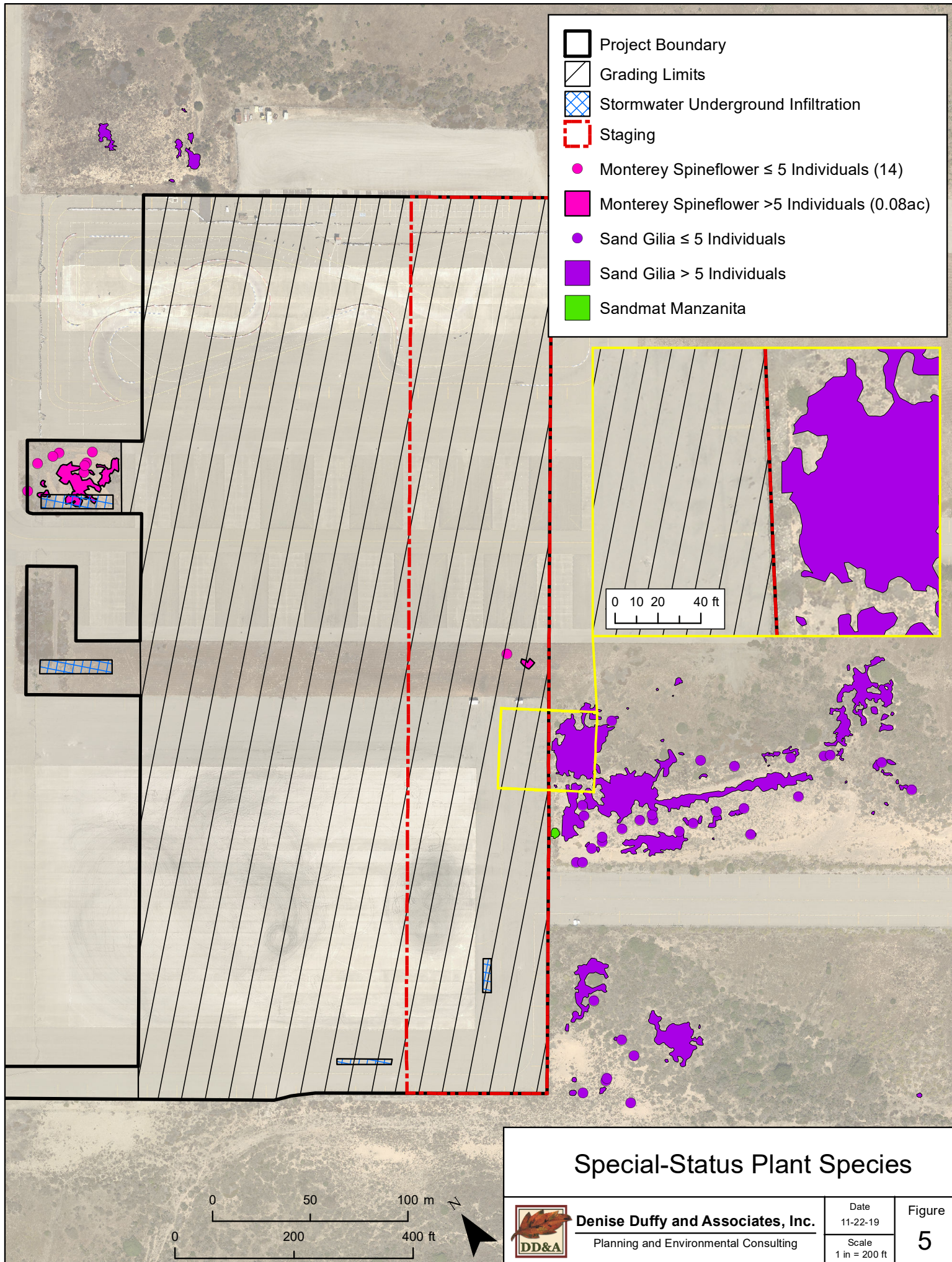
Date  
11-26-19

Scale  
1 in = 200 ft

Figure

4





both spatially and temporally, and in some years or in certain locations, non-native annual grasses or other native forb species may surpass its abundance and cover. In fact, less than 10 percent cover, or merely presence, of this species is required for classification of this vegetation type. Within the project site, the dominant species within this vegetation community are bracted popcornflower (*Plagiobothrys bracteatus*), and annual hairgrass (*Deschampsia danthonoides*), and slightly less dominant, nutsedge (*Cyperus eragrostis*), round-fruited toad rush (*Juncus bufonius* var. *occidentalis*), quillwort (*Isoetes* sp.), and elegant microseris (*Microseris elegans*); most of these species are identified as species associated with this vegetation type in *A Manual of California Vegetation*. Several *Trifolium* species are also present throughout this vegetation type, including the white-tip clover indicator species; however, they were not dominant at the time of the survey.

No special-status plant species were identified within this vegetation community during focused botanical surveys in April, May, and June 2019 (**Figure 5**). Additionally, no special-status wildlife species were identified within this community; however, suitable habitat is present for California legless lizard and California horned lark.

As identified above, this vegetation type is classified as sensitive on CDFW's *California Natural Communities List*. Additionally, many of the plant species observed within this vegetation type are typical of wetlands; however, DD&A conducted a wetland assessment of the project site in Spring 2019 and determined that the site does not meet the ACOE parameters to be considered a jurisdictional wetland.

### 3.2 Sensitive Habitats

White-tip clover swale is listed as sensitive in CDFW's *California Natural Communities List* (CDFW, 2018a). Approximately 0.5 acre of this sensitive habitat is present within the project site. Additionally, DD&A conducted a wetland assessment of this area in Spring 2019 and determined that the swale does not meet the ACOE parameters to be considered a jurisdictional wetland due to the lack of wetland soil indicators.

### 3.3 Special-Status Species

Published occurrence data within the project area and surrounding USGS quadrangles were evaluated to compile a table of special-status species known to occur in the vicinity of the project site (see "Methods" and **Appendix A**). Each of these species was evaluated for their likelihood to occur within and immediately adjacent to the site. The special-status species that are known to or have been determined to have a moderate or high potential to occur within or immediately adjacent the project site are discussed below. All other species are assumed unlikely to occur or have a low potential to occur based on the species-specific reasons presented in **Appendix A**, are therefore unlikely to be impacted by the project, and are not discussed further.

#### 3.3.1 Special-Status Wildlife

##### *Northern California Legless Lizard*

The northern California legless lizard is a CDFW species of special concern and an HMP species<sup>6</sup>. This fossorial (burrowing) species typically inhabits sandy or loose (friable) soils. Habitats known to support

<sup>6</sup> The HMP identifies this species as black-legless lizard (*Anniella pulchra* ssp. *nigra*) in order to differentiate it from the previously identified silvery-legless lizard (*A. p. ssp. pulchra*). Currently, CDFW identifies both subspecies as the northern California legless lizard and this document, therefore, follows the current regulatory identification.

northern California legless lizard include (but are not limited to) coastal dunes, valley and foothill grasslands, chaparral, and coastal scrub at elevations from near sea level to approximately 1800 meters (6000 feet). The northern California legless lizard forages on invertebrates beneath the leaf litter or duff layer at the base of bushes and trees or under wood, rocks, and slash in appropriate habitats. The diet of this species likely overlaps to some extent with that of juvenile alligator lizards and perhaps some other salamanders. This species may be preyed upon by alligator lizards, snakes, birds, and small mammals. Little is known about the specific habitat requirements for courtship and breeding; however, the mating season for this species is believed to begin late spring or early summer, with one to four live young born between September and November.

The CNDDDB reports 56 occurrences of northern California legless lizard within the quadrangles reviewed, including an occurrence that overlaps with a portion of the project site, and this species is known to occur in several areas of Fort Ord. Suitable habitat for this species is present throughout all undeveloped areas of the project site where appropriate soil conditions occur. Therefore, there is a high potential for the northern California legless lizard to occur within the project site.

#### *Coast Horned Lizard*

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

The CNDDDB reports five occurrences of the coast horned lizard within the quadrangles reviewed, all within 1.5 miles of the project site. Additionally, this species was observed immediately adjacent to the project site by DD&A biologists during the 2019 surveys. Suitable habitat for this species is present within the ruderal areas of the site.

#### *California Horned Lark*

The California horned lark is listed on the CDFW's Watch List. California horned larks are a common to abundant resident in a variety of open habitats and are frequently found in grasslands with low, sparse vegetation. This species builds a grass-lined cup nest in a depression on the ground, generally in the open. Breeding occurs between March and July, with peak activity occurring in May. California horned larks often form large flocks which forage and roost gregariously after breeding. This species eats mainly insects, snails, and spiders during the breeding season, and add grass and forb seeds (as well as other plant material) to their diet seasonally.

The CNDDDB reports two occurrences of the California horned lark within the quadrangles reviewed, both within 1.5 miles of the project site. Additionally, this species was observed foraging on the tarmac within the project site by DD&A biologists during 2019 surveys. Suitable nesting habitat for this species is present within the white-tip clover swale and ruderal areas of the site.



### 3.3.2 Special-Status Plant Species

#### *Monterey Spineflower*

Monterey spineflower is a federally threatened, CNPS CRPR 1B, and HMP species. It is a small, prostrate annual herb in the Polygonaceae family that blooms from April to June. Monterey spineflower typically occurs on open sandy or gravelly soils on relic dunes in coastal dune, coastal scrub, and maritime chaparral habitats, though it can also be associated with cismontane woodlands and valley and foothill grasslands, within a range of 3 to 450 meters in elevation.

Approximately 0.08 acre and 14 individuals of Monterey spineflower were identified within the project site during 2019 botanical surveys (**Figure 5**).

### 3.3.3 Special-Status Plants Adjacent to the Project Site

Several special-status plant species, including Monterey spineflower, sandmat manzanita (*Arctostaphylos pumila*), and sand gilia (*Gilia tenuiflora* ssp. *arenaria*) were identified directly adjacent to the project site during 2019 botanical surveys<sup>7</sup> (**Figure 5**<sup>8</sup>). Suitable habitat for other special-status plants, such as seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*), marsh microseris (*Microseris paludosa*), curly-leaved monardella (*Mondardella undulata*), and Yadon's piperia (*Piperia yadonii*), is also present directly adjacent to the project site; however, surveys were not conducted during the appropriate blooming period for these species within adjacent areas.

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<sup>7</sup> Spring botanical surveys were conducted within a larger area than the project site described in this document. Summer surveys were conducted only within the project site.

<sup>8</sup> Please note that the Monterey spineflower populations which were identified directly adjacent to the project site were not mapped using GPS, and are not included in Figure 5.

## **4. IMPACTS AND MITIGATION MEASURES**

### **4.3 Thresholds of Significance**

For the purposes of this analysis, an impact is considered to be significant and require mitigation if it would result in any of the following:

- a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or the Service;
- b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or the Service;
- c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling hydrological interruption, or other means;
- d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native nursery sites;
- e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

### **4.4 Approach to Analysis**

The following impact analysis addresses direct and indirect impacts that may result from implementation of the project. Direct impacts are those effects of a project that occur at the same time and place of project implementation, such as removal of habitat from ground disturbance. Indirect impacts are those effects of a project that occur either later in time or at a distance from the project location but are reasonably foreseeable, such as loss of aquatic species from upstream effects on water quality. Direct and indirect impacts can also vary in duration and result in temporary, short-term, and long-term effects on biological resources. A temporary effect would occur only during the activity. A short-term effect would last from the time an activity ceases to some intermediate period of approximately one to five years (i.e., repopulation of habitat following restoration). A long-term or permanent effect would last longer than five years after an activity ceases. Long-term effects may include the ongoing maintenance and operation of a project, or may result in a permanent change in the condition of a resource, in which case it could be considered a permanent impact.

### **4.5 Areas of No Impact**

Criterion “c” is not evaluated for construction or operational impacts to state or federally protected wetlands, as none are present within or adjacent the project site, and thus would not be impacted by the project.

#### 4.6 Impacts and Mitigation Measures

**Impact BIO-1:** *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or the Service.*

##### HMP Special-Status Species

The project site is located within an HMP parcel designated as “development” (Parcel L5.1). Through implementation of the HMP, impacts to HMP species and habitats occurring within the designated development parcel were anticipated and mitigated through the establishment of habitat reserves and corridors and the implementation of habitat management requirements within habitat reserve parcels on the former Fort Ord. As described above, parcels designated as “development” have no management restrictions. However, the 2017 Programmatic BO and HMP require the identification of sensitive botanical resources within these parcels that may be salvaged for use in restoration activities in reserve areas (Service, 2017 and ACOE, 1997).

One HMP annual plant species, Monterey spineflower, is known to occur within the project site. Implementation of the project would result in take of this species (approximately 0.08 ac and 14 individuals) and loss of habitat for this species. Additionally, one HMP wildlife species, northern California legless lizard, has a high potential to occur within the undeveloped areas of the project site. With the designated habitat reserves and corridors and habitat management requirements of the HMP in place, the loss of these species is not expected to jeopardize the long-term viability of these species and their populations on the former Fort Ord (Service, 1993). This is such because the recipients of disposed land with restrictions or management guidelines designated by the HMP will be obligated to implement those specific measures through the HMP and deed covenants. The proposed project is:

1. Located within a designated “development” parcel;
2. Required to comply with the habitat management restrictions identified in the HMP; and
3. Would not result in any additional impacts to HMP species and habitats beyond those anticipated in the HMP.

Joby is required to implement HMP requirements in accordance with the deed covenants, which apply to the project parcel. Implementation of **Mitigation Measure BIO-1** will ensure compliance with the HMP. Therefore, impacts to Monterey spineflower and northern California legless are less than significant.

Two additional HMP species, sandmat manzanita and sand gilia, are known to occur directly adjacent to the project site. In addition, suitable habitat for other HMP plant species, including seaside bird’s-beak, is present directly adjacent to the project site in areas where summer surveys were not conducted in 2019. Impacts to sandmat manzanita resulting from the project would be considered less-than-significant; however, as described above, Joby would be required to implement HMP requirements. Implementation of **Mitigation Measure BIO-2** would avoid impacts to sandmat manzanita and avoid the need to implement HMP requirements for this species.

Although sand gilia and seaside bird’s-beak are HMP species, the HMP does not exempt existing or future land recipients from the federal and state requirements of ESA and CESA and impacts to these species would be considered a significant impact. As described in Section 2.5 “Regulatory Setting,” if there is the



potential for incidental take of a state listed plant or wildlife species, take of the listed species can be authorized through the incidental take permit process. Therefore, if the project would result in impacts to sand gilia or seaside bird's-beak, Joby would be required to comply with CESA by retaining a 2081 incidental take permit from CDFW or by waiting to begin construction until the base-wide HCP is approved. Implementation of **Mitigation Measure BIO-2** will ensure that state-listed HMP species known or with the potential to occur directly adjacent to the project site will be avoided and the impact reduced to less than significant.

**Mitigation Measures BIO-3, BIO-4, and BIO-6** will reduce potentially significant impacts to non-HMP special-status species; however, HMP special-status species would also benefit from the implementation of these measures. These measures would reduce construction-related impacts through a combination of protective measures during construction, education, monitoring, and invasive species controls. Please see the "Non-HMP Special-Status Species" discussion below for details regarding these measures.

#### Non-HMP Special-Status Species

Suitable habitat for two non-HMP special-status species is present within the project site. The non-HMP species that are known or have a moderate to high potential to occur within and be impacted by the project include coast horned lizard and California horned lark. Project implementation could result in direct impacts to individuals and loss of habitat for these species. Construction-related activities (e.g., removal of vegetation, equipment noise, vibration) could also result in California horned lark nest abandonment. These are potentially significant impacts. Implementation of **Mitigation Measures BIO-3 through BIO-6**, which avoid and minimize impacts through implementing construction best management practices, pre-construction surveys, monitoring, and invasive species controls, would reduce potentially significant impacts to these species to a less than significant level.

#### Special-Status Species Habitat

Implementation of the project would result in impacts to approximately 2.5 acres of low quality habitat for special-status species (i.e., the undeveloped areas of the project site). As discussed in the "Regulatory Setting" section, the Fort Ord HMP establishes guidelines for the conservation and management of species and habitats on former Fort Ord lands by identifying lands that are available for development, lands that have some restrictions with development, and habitat reserve areas. The intent of the plan is to establish large, contiguous habitat conservation areas and wildlife corridors to compensate for future development in other areas of the former base. The HMP sets the standards to assure the long-term viability of former Fort Ord's biological resources in the context of base reuse so that no further mitigation should be necessary for impacts to species and habitats considered in the HMP. This plan has been approved by the Service; the HMP, deed restrictions, and Memoranda of Agreement between the Army and various land recipients provide the legal mechanism to assure HMP implementation. It is a legally binding document, and all recipients of former Fort Ord lands are required to abide by its management requirements and procedures.

The project is located within a designated development parcel. Therefore, implementation of the project would not have a significant impact on special-status species habitat, particularly when taken into context with the over 18,500 acres of preserved habitat for special-status species within the former Fort Ord. This is a less than significant impact. No mitigation is required.

***Mitigation Measure BIO-1: Monterey Spineflower Salvage***

Seed shall be collected from Monterey spineflower plants occurring within the development site during the appropriate time of year, as determined by qualified biologists. The collected seeds shall be used to revegetate temporarily disturbed construction areas or reseed and restoration efforts on- or off-site, as determined appropriate by the qualified biologists.

***Mitigation Measure BIO-2: Adjacent Undeveloped Areas***

Undeveloped areas adjacent to the tarmac shall be avoided due to the known presence of state-listed sand gilia and potential for other special-status plant species. Undeveloped areas adjacent to the tarmac shall be protected prior to and during construction to the maximum possible through the use of exclusionary fencing and/or flagging. A biological monitor will supervise the installation of protective fencing/flagging and monitor to ensure that the protective fencing/flagging remains intact, as described in Mitigation Measure BIO-3.

***Mitigation Measure BIO-3: Construction-Phase Monitoring***

Joby will retain a qualified biologist to monitor all ground disturbing construction activities (i.e., vegetation removal, grading, excavation, or similar activities) to protect any special-status species encountered. Any handling and relocation protocols of special-status wildlife species will be determined in coordination with CDFW prior to any ground disturbing activities, and will be conducted by a qualified biologist with appropriate scientific collection permit. After ground disturbing project activities are complete, the qualified biologist will train an individual from the construction crew to act as the on-site construction biological monitor. The construction biological monitor will be the contact for any special-status wildlife species encounters, will conduct daily inspections of equipment and materials stored on site and any holes or trenches prior to the commencement of work, and will ensure that all installed fencing stays in place throughout the construction period. The qualified biologist will then conduct regular scheduled and unscheduled visits to ensure the construction biological monitor is satisfactorily implementing all appropriate mitigation protocols. Both the qualified biologist and the construction biological monitor have the ability cease construction contractor work and/or redirect project activities to ensure protection of resources and compliance with all environmental conditions of the project.

***Mitigation Measure BIO-4: Construction Best Management Practices***

The following best management practices will be implemented during all identified phases of construction (i.e., pre-, during, and post-) to reduce impacts to special-status plant and wildlife species:

- A qualified biologist will conduct an Employee Education Program for the construction crew prior to any construction activities. The qualified biologist will meet with the construction crew at the onset of construction at the project site to educate the construction crew on the following: 1) the appropriate access route(s) in and out of the construction area and review project boundaries; 2) how a biological monitor will examine the area and agree upon a method which will ensure the safety of the monitor during such activities, 3) the special-status species that may be present; 4) the specific mitigation measures that will be incorporated into the construction effort; 5) the general provisions and protections afforded by CDFW; and 6) the proper procedures if a special-status species is encountered within the project site.

- Grading, excavating, and other activities that involve substantial soil disturbance will be planned and implemented in consultation with a qualified hydrologist, engineer, or erosion control specialist, and will utilize standard erosion control techniques to minimize erosion and sedimentation to native vegetation adjacent to the project site (pre-, during, and post-construction).
- No firearms will be allowed on the project site at any time.
- All food-related and other trash will be disposed of in closed containers and removed from the project area at least once a week during the construction period, or more often if trash is attracting avian or mammalian predators. Construction personnel will not feed or otherwise attract wildlife to the area.

***Mitigation Measure BIO-5: Pre-Construction Surveys for California Horned Lark***

Construction activities that may directly (e.g., vegetation removal) or indirectly (e.g., noise/ground disturbance) affect California horned lark will be timed to avoid the breeding and nesting season. Specifically, vegetation removal can be scheduled after September 16 and before January 31. Alternatively, a qualified biologist will be retained by the project applicant to conduct pre-construction surveys for California horned lark nests within 300 feet of proposed construction activities if construction occurs between February 1 and September 15. Pre-construction surveys will be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August).

If California horned lark nests are identified during the pre-construction surveys, the qualified biologist will notify the project applicant and an appropriate no-disturbance buffer will be imposed within which no construction activities or disturbance should take place (generally 300 feet in all directions) until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

***Mitigation Measure BIO-6: Non-Native, Invasive Species Controls***

The following measures will be implemented to reduce the introduction and spread of non-native, invasive species:

- Any landscaping or replanting required for the project will not use species listed as noxious by the California Department of Food and Agriculture (CDFA) or invasive by the California Invasive Plant Council (Cal-IPC).
- Bare and disturbed soil will be landscaped with CDFA recommended seed mix or plantings from locally adopted species to preclude the invasion on noxious weeds in the project site.
- All non-native, invasive plant species will be removed from disturbed areas prior to replanting.

***Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or the Service.***

White-tip clover swale is listed as a sensitive natural community on the CDFW's *California Natural Communities List*. Approximately 0.5-acre of white-tip clover swale occurs within the project site and would be permanently impacted by the project. This is a potentially significant impact. Implementation of **Mitigation Measure BIO-7**, which mitigates for impacts through soil preservation and placement within the detention basin following construction, would reduce potentially significant impacts to this sensitive habitat to a less than significant level.

***Mitigation Measure BIO-7: White-Tip Clover Swale Soil Preservation***

The top two to three inches of topsoil within the white-tip clover swale area shall be collected and reserved on-site. The reserved soil shall be placed on top of an impermeable surface, such as a tarp, and shall be covered to prevent wind erosion or spread of invasive weeds into the stockpile. Following construction, reserved topsoil shall be placed in the detention basin over an area no less than 0.5 acre (1:1).

***Impact BIO-3: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native nursery sites.***

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

The 2010 Monterey County General Plan EIR identified a number of significant wildlife movement corridors and linkages within the vicinity of the former Fort Ord, including Linkage 308: Fort Ord – Ventana; Linkage 322: Highway 68 Western Crossing; Linkage 350: Sierra de Salinas – Toro Peak; Linkage 339: Salinas Valley Floor; and Linkage 378: Salinas River – Pinnacles National Monument (County of Monterey, 2010). Of particular importance for wildlife movement from the former Fort Ord lands to outlying areas are Linkages 308 and 322. Specifically, Linkage 322 runs along El Toro Creek in the southeastern portion of former Fort Ord and through a large, bridge undercrossing Highway 68. This corridor has been identified as a significant wildlife corridor for mammals, amphibians, and reptiles moving between former Fort Ord lands and connecting to the Sierra de Salinas and Santa Lucia Ranges.

The HMP considered conservation area connectivity as an essential component of the design of the conservation areas and corridors within the former Fort Ord. The HMP created conservation areas and corridors with the purpose of linking the plant and animal populations in the northern portion of the former base at the Marina Municipal Airport to the populations in the south to the Fort Ord National Monument and the El Toro Creek undercrossing of Highway 68. The implementation of the HMP preserves over

18,500 acres of a variety of habitats supporting a variety of common and special-status plant species, and maintains a north-south wildlife corridor across the former Fort Ord lands to connect with the primary, significant wildlife linkages.

The project site is located within the Airport property which is enclosed by security fencing that serves the dual purpose of preventing people and large wildlife species, such as deer, from entering the airport for safety reasons. As such, the project site is not within an area that is used as a corridor for large wildlife species. Small wildlife species that are able to pass over or through the fencing, such as birds, rodents, and reptiles, may utilize the undeveloped areas as habitat while moving through the site. However, the project site is mostly in developed with only small areas of vegetation and provides very little habitat value to wildlife. The implementation of the proposed project would involve impacts to these vegetation communities; however, the project would impact only a very small percentage of wildlife habitat within the former Fort Ord. The HMP preserves approximately 18,500 acres of large, contiguous areas of wildlife habitat that will remain on the former Fort Ord and will be preserved in perpetuity. Therefore, the development of the project, would not disconnect, fragment, or otherwise impeded wildlife movement in the primary, significant wildlife movement corridors between the former Fort Ord lands and other lands. This is a less-than-significant impact. No mitigation is required.

***Impact BIO-4: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.***

The Project would be required to comply with all applicable guidelines in the Fort Ord HMP. In addition, no trees are present within the project site and the project will not conflict with a tree preservation policy or ordinance. No impact will occur and no mitigation is required.

***Impact BIO-5: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.***

The project site is not located within an approved HCP or NCCP area. However, it is located within the Fort Ord HMP boundaries and the plan area associated with the Draft HCP. The project site is designated for development (with no restrictions) in the HMP for Fort Ord and is located within a designated development area in the Draft HCP. As described in the “Approach to Analysis”, the proposed project is consistent with the approved HMP. This is a less-than-significant impact. No mitigation is required.

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## **APPENDIX A**

### Special-Status Species Table

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### Special-Status Species Table

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

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<b>MAMMALS</b>			
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-- / CSC / --	Found primarily in rural settings from inland deserts to coastal redwoods, oak woodland of the inner Coast Ranges and Sierra foothills, and low to mid-elevation mixed coniferous-deciduous forests. Typically roost during the day in limestone caves, lava tubes, and mines, but can roost in buildings that offer suitable conditions. Night roosts are in more open settings and include bridges, rock crevices, and trees.	<b>Unlikely</b> No suitable habitat within project site.
<i>Neotoma macrotis luciana</i> Monterey dusky-footed woodrat	-- / CSC / --	Forest and oak woodland habitats of moderate canopy with moderate to dense understory. Also occurs in chaparral habitats.	<b>Unlikely</b> No suitable habitat within project site.
<i>Taxidea taxus</i> American badger	-- / CSC / --	Dry, open grasslands, fields, pastures savannas, and mountain meadows near timberline are preferred. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated grounds.	<b>Unlikely</b> No suitable habitat within project site.
<b>BIRDS</b>			
<i>Agelaius tricolor</i> Tricolored blackbird (nesting colony)	-- / ST / --	Nest in colonies in dense riparian vegetation, along rivers, lagoons, lakes, and ponds. Forages over grassland or aquatic habitats.	<b>Unlikely</b> No suitable habitat within project site.
<i>Asio flammeus</i> Short-eared owl (nesting)	-- / CSC / --	Usually found in open areas with few trees, such as annual and perennial grasslands, prairies, meadows, dunes, irrigated lands, and saline and freshwater emergent marshes. Dense vegetation is required for roosting and nesting cover. This includes tall grasses, brush, ditches, and wetlands. Open, treeless areas containing elevated sites for perching, such as fence posts or small mounds, are also needed. Some individuals breed in northern California.	<b>Low</b> Marginal foraging habitat present within project site. The CNDDDB reports only one occurrence of this species within the quadrangles reviewed, located 7.4 miles from the site.
<i>Athene cunicularia</i> Burrowing owl (burrow sites & some wintering sites)	-- / CSC / --	Year-round resident of open, dry grassland and desert habitats, and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Frequent open grasslands and shrublands with perches and burrows. Use rodent burrows (often California ground squirrel) for roosting and nesting cover. Pipes, culverts, and nest boxes may be substituted for burrows in areas where burrows are not available.	<b>Low</b> Marginal habitat present within project site; however, no suitable mammal burrows were observed during surveys in 2019.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Brachyramphus marmoratus</i> Marbled murrelet	FT / SE / --	Occur year-round in marine subtidal and pelagic habitats from the Oregon border to Point Sal. Partial to coastlines with stands of mature redwood and Douglas-fir. Requires dense mature forests of redwood and/or Douglas-fir for breeding and nesting.	<b>Unlikely</b> No suitable habitat within project site.
<i>Buteo regalis</i> Ferruginous hawk (wintering)	-- / WL / --	An uncommon winter resident and migrant at lower elevations and open grasslands in the Modoc Plateau, Central Valley, and Coast Ranges and a fairly common winter resident of grassland and agricultural areas in southwestern California. Frequent open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats. Does not breed in California.	<b>Unlikely</b> No suitable habitat within project site.
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	FT / CSC / --	Sandy beaches on marine and estuarine shores, also salt pond levees and the shores of large alkali lakes. Requires sandy, gravelly or friable soil substrate for nesting.	<b>Unlikely</b> No suitable habitat within project site.
<i>Coturnicops noveboracensis</i> Yellow rail	-- / CSC / --	Wet meadows and coastal tidal marshes. Occurs year round in California, but in two primary seasonal roles: as a very local breeder in the northeastern interior and as a winter visitor (early Oct to mid-Apr) on the coast and in the Suisun Marsh region	<b>Unlikely</b> No suitable habitat within project site. Not known to breed in the region.
<i>Cypseloides niger</i> Black swift	-- / CSC / --	Regularly nests in moist crevice or cave on sea cliffs above the surf, or on cliffs behind, or adjacent to, waterfalls in deep canyons. Forages widely over many habitats.	<b>Unlikely</b> No suitable habitat within project site.
<i>Elanus leucurus</i> White-tailed kite (nesting)	-- / CFP / --	Open groves, river valleys, marshes, and grasslands. Prefer such area with low roosts (fences etc.). Nest in shrubs and trees adjacent to grasslands.	<b>Low</b> Foraging habitat present within project site; however, no suitable nesting habitat present. The CNDDDB reports only one occurrence of this species within the quadrangles reviewed, located 9.8 miles from the site; however, this species has been observed in the vicinity of the site by DD&A biologists.
<i>Empidonax traillii eximius</i> Southwestern willow flycatcher	FE / SE / --	Breeds in riparian habitat in areas ranging in elevation from sea level to over 2,600 meters. Builds nest in trees in densely vegetated areas. This species establishes nesting territories and builds, and forages in mosaics of relatively dense and expansive areas of trees and shrubs, near or adjacent to surface water or underlain by saturated soils. Not typically found nesting in areas without willows ( <i>Salix sp.</i> ), tamarisk ( <i>Tamarix ramosissima</i> ), or both.	<b>Unlikely</b> No suitable habitat within project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Eremophila alpestris actia</i> California horned lark	-- / WL / --	Variety of open habitats, usually where large trees and/or shrubs are absent. Found from grasslands along the coast to deserts at sea-level and alpine dwarf-shrub habitats are higher elevations. Builds open cup-like nests on the ground.	<b>Present</b> Suitable habitat present within project site. The CNDDDB reports two occurrences of this species within the quadrangles reviewed, both within 1.5 miles of the site. Additionally, this species was observed within the project site during surveys in 2019
<i>Falco mexicanus</i> Prairie falcon (nesting)	-- / WL / --	Associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areas. Uses open terrain for foraging; nests in open terrain with canyons, cliffs, escarpments, and rock outcrops.	<b>Unlikely</b> No suitable habitat within project site.
<i>Falco peregrinus anatum</i> American peregrine falcon (nesting)	-- / CFP / --	Forages for other birds over a variety of habitats. Breeds primarily on rocky cliffs.	<b>Unlikely</b> No suitable habitat within project site.
<i>Gymnogyps californianus</i> California condor	FE / SE / --	Roosting sites in isolated rocky cliffs, rugged chaparral, and pine covered mountains 2000-6000 feet above sea level. Foraging area removed from nesting/roosting site (includes rangeland and coastal area - up to 19 mile commute one way). Nest sites in cliffs, crevices, potholes.	<b>Unlikely</b> No suitable habitat within project site.
<i>Laterallus jamaicensis coturniculus</i> California black rail	-- / ST&CFP / --	Inhabits freshwater marshes, wet meadows & shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that does not fluctuate during the year & dense vegetation for nesting habitat.	<b>Unlikely</b> No suitable habitat within project site.
<i>Pelecanus occidentalis californicus</i> California brown pelican	-- / CFP / --	Found in estuarine, marine subtidal, and marine pelagic waters along the California coast. Usually rests on water or inaccessible rocks, but also uses mudflats, sandy beaches, wharfs, and jetties.	<b>Unlikely</b> No suitable habitat within project site.
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	FE / SE&CFP / --	Salt and brackish marshes.	<b>Unlikely</b> No suitable habitat within project site.
<i>Riparia riparia</i> Bank swallow (nesting)	-- / ST / --	Nest colonially in sand banks. Found near water; fields, marshes, streams, and lakes.	<b>Unlikely</b> No suitable habitat within project site.
<i>Sterna antillarum brownii</i> California least tern	FE / SE / --	Prefers undisturbed nest sites on open, sandy/gravelly shores near shallow-water feeding areas in estuaries. Sea beaches, bays, large rivers, bars.	<b>Unlikely</b> No suitable habitat within project site.
<i>Vireo bellii pusillus</i> Least Bell's Vireo	FE / SE / --	Riparian areas and drainages. Breed in willow riparian forest supporting a dense, shrubby understory. Oak woodland with a willow riparian understory is also used in some areas, and individuals sometimes enter adjacent chaparral, coastal sage scrub, or desert scrub habitats to forage.	<b>Unlikely</b> No suitable habitat within project site. The site is very likely outside of the current range of this species.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<b>REPTILES AND AMPHIBIANS</b>			
<i>Ambystoma californiense</i> California tiger salamander	FT / ST / --	Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Need underground refuges and vernal pools or other seasonal water sources.	<b>Unlikely</b> Low quality upland habitat is present; however, the project site is outside of the dispersal range of known breeding resources. The nearest known breeding resource is approximately 2.2km from the project site within the detention basin at East Garrison.
<i>Ambystoma macrodactylum croceum</i> Santa Cruz long-toed salamander	FE / SE&CFP / --	Preferred habitats include ponderosa pine, montane hardwood-conifer, mixed conifer, montane riparian, red fir and wet meadows. Occurs in a small number of localities in Santa Cruz and Monterey Counties. Adults spend the majority of the time in underground burrows and beneath objects. Larvae prefer shallow water with clumps of vegetation.	<b>Unlikely</b> Low quality upland habitat within project site. The nearest CNDDDB occurrence of this species is reported 7.1 miles from the site, beyond the known dispersal range for the species.
<i>Anniella pulchra</i> Northern California legless lizard	-- / CSC / --	Requires moist, warm habitats with loose soil for burrowing and prostrate plant cover, often forages in leaf litter at plant bases; may be found on beaches, sandy washes, and in woodland, chaparral, and riparian areas.	<b>High</b> This species is known to occur throughout the Former Fort Ord where loose sandy soils occur. The nearest CNDDDB occurrence is approximately 500 feet from the project site.
<i>Emys marmorata</i> Western pond turtle	-- / CSC / --	Associated with permanent or nearly permanent water in a wide variety of habitats including streams, lakes, ponds, irrigation ditches, etc. Require basking sites such as partially submerged logs, rocks, mats of vegetation, or open banks.	<b>Unlikely</b> No suitable habitat within project site.
<i>Phrynosoma blainvillii</i> Coast horned lizard	-- / CSC / --	Associated with open patches of sandy soils in washes, chaparral, scrub, and grasslands.	<b>High</b> Suitable habitat present within project site. The CNDDDB reports five occurrences of this species within the quadrangles reviewed, all within 1.5 miles of the site. Additionally, several individuals were observed immediately adjacent to the project site during surveys in 2019.
<i>Rana boylei</i> Foothill yellow-legged frog	-- / SC&CSC / --	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats, including hardwood, pine, and riparian forests, scrub, chaparral, and wet meadows. Rarely encountered far from permanent water.	<b>Unlikely</b> No suitable habitat within project site.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Rana draytonii</i> California red-legged frog	FT / CSC / --	Lowlands and foothills in or near permanent or late-season sources of deep water with dense, shrubby, or emergent riparian vegetation. During late summer or fall adults are known to utilize a variety of upland habitats with leaf litter or mammal burrows.	<b>Low</b> The nearest CNDDDB occurrence is approximately two miles from with project site within the Salinas River; however, suitable habitat for this species may occur within other areas of the Salinas River as close as 0.5 mile from the project site. Undeveloped areas of the project site may provide dispersal habitat; however, no breeding or suitable upland habitat are present.
<i>Taricha torosa</i> Coast Range newt	-- / CSC / --	Occurs mainly in valley-foothill hardwood, valley-foothill hardwood-conifer, coastal scrub, and mixed chaparral but is known to occur in grasslands and mixed conifer types. Seek cover under rocks and logs, in mammal burrows, rock fissures, or man-made structures such as wells. Breed in intermittent ponds, streams, lakes, and reservoirs.	<b>Unlikely</b> No suitable habitat within project site.
<i>Thamnophis hammondi</i> Two-striped garter snake	-- / CSC / --	Associated with permanent or semi-permanent bodies of water bordered by dense vegetation in a variety of habitats from sea level to 2400m elevation.	<b>Unlikely</b> No suitable habitat within project site.
<b>FISH</b>			
<i>Eucyclogobius newberryi</i> Tidewater goby	FE / CSC / --	Brackish water habitats; found in shallow lagoons and lower stream reaches. Tidewater gobies appear to be naturally absent (now and historically) from three large stretches of coastline where lagoons or estuaries are absent and steep topography or swift currents may prevent tidewater gobies from dispersing between adjacent localities. The southernmost large, natural gap occurs between the Salinas River in Monterey County and Arroyo del Oso in San Luis Obispo County.	<b>Not Present</b> No suitable habitat within project site.
<i>Oncorhynchus mykiss irideus</i> Steelhead (south-central California coast DPS)	FT / -- / --	Cold headwaters, creeks, and small to large rivers and lakes; anadromous in coastal streams.	<b>Not Present</b> No suitable habitat within project site.
<i>Spirinchus thaleichthys</i> Longfin smelt	FC / ST / --	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefers salinities of 15-30 PPT, but can be found in completely freshwater to almost pure seawater.	<b>Not Present</b> No suitable habitat within project site.
<b>INVERTEBRATES</b>			
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT / -- / --	Requires 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.	<b>Not Present</b> No suitable habitat within project site.



Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Euphilotes enoptes smithi</i> Smith's blue butterfly	FE / -- / --	Most commonly associated with coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz Counties. Plant hosts are <i>Eriogonum latifolium</i> and <i>E. parvifolium</i> .	<b>Not Present</b> No suitable habitat within project site. The plant host species were not identified during 2019 botanical surveys.
<b>PLANTS</b>			
<i>Agrostis lacuna-vernalis</i> Vernal pool bent grass	-- / -- / 1B	Vernal pool Mima mounds at elevations of 115-145 meters. Annual herb in the Poaceae family; blooms April-May. Known only from Butterfly Valley and Machine Gun Flats of Ft. Ord National Monument.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Allium hickmanii</i> Hickman's onion	-- / -- / 1B	Closed-cone coniferous forests, maritime chaparral, coastal prairie, coastal scrub, and valley and foothill grasslands at elevations of 5-200 meters. Bulbiferous perennial herb in the Alliaceae family; blooms March-May.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i> Hooker's manzanita	-- / -- / 1B	Closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub on sandy soils at elevations of 85-536 meters. Evergreen shrub in the Ericaceae family; blooms January-June.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Arctostaphylos montereyensis</i> Toro manzanita	-- / -- / 1B	Maritime chaparral, cismontane woodland, and coastal scrub on sandy soils at elevations of 30-730 meters. Evergreen shrub in the Ericaceae family; blooms February-March.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Arctostaphylos pajaroensis</i> Pajaro manzanita	-- / -- / 1B	Chaparral on sandy soils at elevations of 30-760 meters. Evergreen shrub in the Ericaceae family; blooms December-March.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Arctostaphylos pumila</i> Sandmat manzanita	-- / -- / 1B	Openings of closed-cone coniferous forests, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils at elevations of 3-205 meters. Evergreen shrub in the Ericaceae family; blooms February-May.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Arenaria paludicola</i> Marsh sandwort	FE / SE / 1B	Known from only two natural occurrences in Black Lake Canyon and at Oso Flaco Lake. Sandy openings of freshwater of brackish marshes and swamps at elevations of 3-170 meters. Stoloniferous perennial herb in the Caryophyllaceae family; blooms May-August.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Astragalus tener</i> var. <i>tener</i> Alkali milk-vetch	-- / -- / 1B	Playas, valley and foothill grassland on adobe clay, and vernal pools on alkaline soils at elevations of 1-60 meters. Annual herb in the Fabaceae family; blooms March-June.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Astragalus tener</i> var. <i>titi</i> Coastal dunes milk-vetch	FE / SE / 1B	Sandy soils in coastal bluff scrub, coastal dunes, coastal prairie (mesic); elevation 3-164 feet. Annual herb in the Fabaceae family; blooms March-May.	<b>Not Present</b> Not identified during 2019 botanical surveys.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Bryoria spiralifera</i> Twisted horsehair lichen	-- / -- / 1B	California North Coast coniferous forest at elevations of 0–30 meters. Often found on conifers, including <i>Picea sitchensis</i> , <i>Pinus contorta</i> var. <i>contorta</i> , <i>Pseudotsuga menziesii</i> , <i>Abies grandis</i> , and <i>Tsuga heterophylla</i> . Fruticose lichen in the Parmeliaceae family.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Castilleja ambigua</i> var. <i>insalutata</i> Pink Johnny-nip	-- / -- / 1B	Coastal prairie and coastal scrub at elevations of 0-100 meters. Annual herb in the Orobanchaceae family; blooms May-August.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Centromadia parryi</i> ssp. <i>congdonii</i> Congdon’s tarplant	-- / -- / 1B	Valley and foothill grassland on heavy clay, saline, or alkaline soils at elevations of 0-230 meters. Annual herb in the Asteraceae family; blooms May-November.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Chorizanthe minutiflora</i> Fort Ord spineflower	-- / -- / 1B	Sandy openings of maritime chaparral and coastal scrub at elevations of 55-150 meters. Only known occurrences on Fort Ord National Monument. Annual herb in the Polygonaceae family; blooms April-July.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Chorizanthe pungens</i> var. <i>pungens</i> Monterey spineflower	FT / -- / 1B	Maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils at elevations of 3-450 meters. Annual herb in the Polygonaceae family; blooms April-July.	<b>Present</b> Identified during 2019 botanical surveys.
<i>Chorizanthe robusta</i> var. <i>robusta</i> Robust spineflower	FE / -- / 1B	Openings in cismontane woodland, coastal dunes, maritime chaparral, and coastal scrub on sandy or gravelly soils at elevations of 3-300 meters. Annual herb in the Polygonaceae family; blooms April-September.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Clarkia jolonensis</i> Jolon clarkia	-- / -- / 1B	Cismontane woodland, chaparral, riparian woodland, and coastal scrub at elevations of 20-660 meters. Annual herb in the Onagraceae family; blooms April-June.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Collinsia multicolor</i> San Francisco collinsia	-- / -- / 1B	Closed-cone coniferous forest and coastal scrub, sometimes on serpentinite soils, at elevations of 30-250 meters. Annual herb in the Plantaginaceae family; blooms March-May.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i> Seaside bird’s-beak	-- / SE / 1B	Closed-cone coniferous forests, maritime chaparral, cismontane woodlands, coastal dunes, and coastal scrub on sandy soils, often on disturbed sites, at elevations of 0-425 meters. Annual hemi-parasitic herb in the Orobanchaceae family; blooms April-October.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Delphinium californicum</i> ssp. <i>interius</i> Hospital Canyon larkspur	-- / -- / 1B	Openings in chaparral, coastal scrub, and mesic areas of cismontane woodland at elevations of 230-1095 meters. Perennial herb in the Ranunculaceae family; blooms April-June.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Delphinium hutchinsoniae</i> Hutchinson’s larkspur	-- / -- / 1B	Broadleaved upland forest, chaparral, coastal scrub, and coastal prairie at elevations of 0-427 meters. Perennial herb in the Ranunculaceae family; blooms March-June.	<b>Not Present</b> Not identified during 2019 botanical surveys.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Delphinium umbraculorum</i> Umbrella larkspur	-- / -- / 1B	Cismontane woodland at elevations of 400-1600 meters. Perennial herb in the Ranunculaceae family; blooms April-June.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Ericameria fasciculata</i> Eastwood's goldenbush	-- / -- / 1B	Openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 30-275 meters. Evergreen shrub in the Asteraceae family; blooms July-October.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Eriogonum nortonii</i> Pinnacles buckwheat	-- / -- / 1B	Chaparral and valley and foothill grassland on sandy soils, often on recent burns, at elevations of 300-975 meters. Annual herb in the Polygonaceae family; blooms May-September.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Erysimum ammophilum</i> Sand-loving wallflower	-- / -- / 1B	Openings in maritime chaparral, coastal dunes, and coastal scrub on sandy soils at elevations of 0-60 meters. Perennial herb in the Brassicaceae family; blooms February-June.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Erysimum menziesii</i> Menzies' wallflower	FE / SE / 1B	Coastal dunes at elevations of 0-35 meters. Perennial herb in the Brassicaceae family; blooms March-September.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Fritillaria liliacea</i> Fragrant fritillary	-- / -- / 1B	Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland, often serpentinite, at elevations of 3-410 meters. Bulbiferous perennial herb in the Liliaceae family; blooms February-April.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i> Sand gilia	FE / ST / 1B	Openings in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub on sandy soils at elevations of 0-45 meters. Annual herb in the Polemoniaceae family; blooms April-June.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Hesperocyparis goveniana</i> Gowen cypress	FT / -- / 1B	Closed-cone coniferous forest and maritime chaparral at elevations of 30-300 meters. Evergreen tree in the Cupressaceae family. Natively occurring only at Point Lobos near Gibson Creek and the Huckleberry Hill Nature Preserve near Highway 68.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Hesperocyparis macrocarpa</i> Monterey cypress	-- / -- / 1B	Closed-cone coniferous forest at elevations of 10-30 meters. Evergreen tree in the Cupressaceae family. Natively occurring only at Cypress Point in Pebble Beach and Point Lobos State Park; widely planted and naturalized elsewhere.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Holocarpha macradenia</i> Santa Cruz tarplant	FT / SE / 1B	Coastal prairies and valley foothill grasslands, often clay or sandy soils, at elevations of 10-220 meters. Annual herb in the Asteraceae family; blooms June-October.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Horkelia cuneata</i> ssp. <i>sericea</i> Kellogg's horkelia	-- / -- / 1B	Openings of closed-cone coniferous forests, maritime chaparral, coastal dunes, and coastal scrub on sandy or gravelly soils at elevations of 10-200 meters. Perennial herb in the Rosaceae family; blooms April-September.	<b>Not Present</b> Not identified during 2019 botanical surveys.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Horkelia marinensis</i> Point Reyes horkelia	-- / -- / 1B	Coastal dunes, coastal prairie, and coastal scrub on sandy soils at elevations of 5-350 meters. Perennial herb in the Rosaceae family; blooms May-September.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Lasthenia conjugens</i> Contra Costa goldfields	FE / -- / 1B	Mesic areas of valley and foothill grassland, alkaline playas, cismontane woodland, and vernal pools at elevations of 0-470 meters. Annual herb in the Asteraceae family; blooms March-June.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Layia carnosa</i> Beach layia	FE / SE / 1B	Coastal dunes and coastal scrub on sandy soils at elevations of 0-60 meters. Annual herb in the Asteraceae family; blooms March-July.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Legenere limosa</i> Legenere	-- / -- / 1B	Vernal pools and wetlands at elevations of 1-880 meters. Annual herb in the Campanulaceae family; blooms April- June.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Lupinus tidestromii</i> Tidestrom's lupine	FE / SE / 1B	Coastal dunes at elevations of 0-100 meters. Perennial rhizomatous herb in the Fabaceae family; blooms April-June.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Malacothamnus palmeri</i> var. <i>involucratus</i> Carmel Valley bush-mallow	-- / -- / 1B	Chaparral, cismontane woodland, and coastal scrub at elevations of 30-1100 meters. Perennial deciduous shrub in the Malvaceae family; blooms May-October.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i> Carmel Valley malacothrix	-- / -- / 1B	Chaparral and coastal scrub on rocky soils at elevations of 25-1036 meters. Perennial rhizomatous herb in the Asteraceae family; blooms June-December.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Meconella oregana</i> Oregon meconella	-- / -- / 1B	Coastal prairie and coastal scrub at elevations of 250-620 meters. Annual herb in the Papaveraceae Family; blooms March-April.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Microseris paludosa</i> Marsh microseris	-- / -- / 1B	Closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland at elevations of 5-300 meters. Perennial herb in the Asteraceae family; blooms April-July.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Monardella sinuata</i> ssp. <i>nigrescens</i> Northern curly-leaved monardella	-- / -- / 1B	Chaparral, coastal dunes, coastal scrub, and lower montane coniferous forest (ponderosa pine sandhills) on sandy soils at elevations of 0-300 meters. Annual herb in the Lamiaceae family; blooms April-September.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Monolopia gracilens</i> 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.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Pinus radiata</i> Monterey pine	-- / -- / 1B	Closed-cone coniferous forest and cismontane woodland at elevations of 25-185 meters. Evergreen tree in the Pinaceae family. Only three native stands in CA at Año Nuevo, Cambria, and the Monterey Peninsula; introduced in many areas.	<b>Not Present</b> Not identified during 2019 botanical surveys.

Species	Status (Service/CDFW/CNPS)	General Habitat	Potential Occurrence within Project Site
<i>Piperia yadonii</i> Yadon's rein orchid	FE / -- / 1B	Sandy soils in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral at elevations of 10-510 meters. Annual herb in the Orchidaceae family; blooms February-August.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> Choris' popcorn-flower	-- / -- / 1B	Mesic areas of chaparral, coastal prairie, and coastal scrub at elevations of 15-160 meters. Annual herb in the Boraginaceae family; blooms March-June.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Potentilla hickmanii</i> Hickman's cinquefoil	FE / SE / 1B	Coastal bluff scrub, closed-cone coniferous forests, vernal mesic meadows and seeps, and freshwater marshes and swamps at elevations of 10-149 meters. Perennial herb in the Rosaceae family; blooms April-August.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Ramalina thrausta</i> Angel's hair lichen	-- / -- / 2B	North coast coniferous forest on dead twigs and other lichens. Epiphytic fructose lichen in the Ramalinaceae family. In northern CA it is usually found on dead twigs, and has been found on <i>Alnus rubra</i> , <i>Calocedrus decurrens</i> , <i>Pseudotsuga menziesii</i> , <i>Quercus garryana</i> , and <i>Rubus spectabilis</i> . In Sonoma County it grows on and among dangling mats of <i>R. menziesii</i> and <i>Usnea</i> spp.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Rosa pinetorum</i> Pine rose	-- / -- / 1B	Closed-cone coniferous forest at elevations of 2-300 meters. Perennial shrub in the Rosaceae family; blooms May-July. Possible hybrid of <i>R. spithamea</i> , <i>R. gymnocarpa</i> , or others; further study needed.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	-- / -- / 1B	Broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and openings in valley and foothill grassland, sometimes on serpentinite, at elevations of 10-500 meters. Annual herb in the Asteraceae family; blooms April-May.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Trifolium buckwestiorum</i> Santa Cruz clover	-- / -- / 1B	Gravelly margins of broadleaved upland forest, cismontane woodland, and coastal prairie at elevations of 105-610 meters. Annual herb in the Fabaceae family; blooms April-October.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Trifolium hydrophilum</i> Saline clover	-- / -- / 1B	Marshes and swamps, mesic and alkaline valley and foothill grassland, and vernal pools at elevations of 0-300 meters. Annual herb in the Fabaceae family; blooms April-June.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Trifolium polyodon</i> Pacific Grove clover	-- / SR / 1B	Mesic areas of closed-cone coniferous forest, coastal prairie, meadows and seeps, and valley and foothill grassland at elevations of 5-120 meters. Annual herb in the Fabaceae family; blooms April-July.	<b>Not Present</b> Not identified during 2019 botanical surveys.
<i>Trifolium trichocalyx</i> Monterey clover	FE / SE / 1B	Sandy openings and burned areas of closed-cone coniferous forest at elevations of 30-240 meters. Annual herb in the Fabaceae family; blooms April-June.	<b>Not Present</b> Not identified during 2019 botanical surveys.

## **STATUS DEFINITIONS**

### **Federal**

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

### **State**

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

### **California Native Plant Society**

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

## **POTENTIAL TO OCCUR**

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

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## **APPENDIX B**

California Natural Diversity Database Report

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# Selected Elements by Scientific Name

## California Department of Fish and Wildlife

### California Natural Diversity Database



**Query Criteria:** Quad<span style='color:Red'> IS </span>(Marina (3612167)<span style='color:Red'> OR </span>Monterey (3612158)<span style='color:Red'> OR </span>Moss Landing (3612177)<span style='color:Red'> OR </span>Prunedale (3612176)<span style='color:Red'> OR </span>Salinas (3612166)<span style='color:Red'> OR </span>Seaside (3612157)<span style='color:Red'> OR </span>Spreckels (3612156))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Agelaius tricolor</i></b> tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
<b><i>Agrostis lacuna-vernalis</i></b> vernal pool bent grass	PMPOA041N0	None	None	G1	S1	1B.1
<b><i>Allium hickmanii</i></b> Hickman's onion	PMLIL02140	None	None	G2	S2	1B.2
<b><i>Ambystoma californiense</i></b> California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
<b><i>Ambystoma macrodactylum croceum</i></b> Santa Cruz long-toed salamander	AAAAA01082	Endangered	Endangered	G5T1T2	S1S2	FP
<b><i>Anniella pulchra</i></b> northern California legless lizard	ARACC01020	None	None	G3	S3	SSC
<b><i>Arctostaphylos hookeri ssp. hookeri</i></b> Hooker's manzanita	PDERI040J1	None	None	G3T2	S2	1B.2
<b><i>Arctostaphylos montereyensis</i></b> Toro manzanita	PDERI040R0	None	None	G2?	S2?	1B.2
<b><i>Arctostaphylos pajaroensis</i></b> Pajaro manzanita	PDERI04100	None	None	G1	S1	1B.1
<b><i>Arctostaphylos pumila</i></b> sandmat manzanita	PDERI04180	None	None	G1	S1	1B.2
<b><i>Asio flammeus</i></b> short-eared owl	ABNSB13040	None	None	G5	S3	SSC
<b><i>Astragalus tener var. tener</i></b> alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
<b><i>Astragalus tener var. titi</i></b> coastal dunes milk-vetch	PDFAB0F8R2	Endangered	Endangered	G2T1	S1	1B.1
<b><i>Athene cunicularia</i></b> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<b><i>Bombus caliginosus</i></b> obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
<b><i>Bombus occidentalis</i></b> western bumble bee	IIHYM24250	None	None	G2G3	S1	
<b><i>Bryoria spiralifera</i></b> twisted horsehair lichen	NLTEST5460	None	None	G3	S1S2	1B.1
<b><i>Buteo regalis</i></b> ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
<b><i>Castilleja ambigua var. insalutata</i></b> pink Johnny-nip	PDSCR0D403	None	None	G4T2	S2	1B.1



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



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>Central Dune Scrub</b> Central Dune Scrub	CTT21320CA	None	None	G2	S2.2	
<b>Central Maritime Chaparral</b> Central Maritime Chaparral	CTT37C20CA	None	None	G2	S2.2	
<b>Centromadia parryi ssp. congdonii</b> Congdon's tarplant	PDAST4R0P1	None	None	G3T1T2	S1S2	1B.1
<b>Charadrius alexandrinus nivosus</b> western snowy plover	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
<b>Chorizanthe minutiflora</b> Fort Ord spineflower	PDPGN04100	None	None	G1	S1	1B.2
<b>Chorizanthe pungens var. pungens</b> Monterey spineflower	PDPGN040M2	Threatened	None	G2T2	S2	1B.2
<b>Chorizanthe robusta var. robusta</b> robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
<b>Clarkia jolonensis</b> Jolon clarkia	PDONA050L0	None	None	G2	S2	1B.2
<b>Coastal and Valley Freshwater Marsh</b> Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	G3	S2.1	
<b>Coastal Brackish Marsh</b> Coastal Brackish Marsh	CTT52200CA	None	None	G2	S2.1	
<b>Coelus globosus</b> globose dune beetle	IICOL4A010	None	None	G1G2	S1S2	
<b>Collinsia multicolor</b> San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
<b>Cordylanthus rigidus ssp. littoralis</b> seaside bird's-beak	PDSCR0J0P2	None	Endangered	G5T2	S2	1B.1
<b>Corynorhinus townsendii</b> Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
<b>Coturnicops noveboracensis</b> yellow rail	ABNME01010	None	None	G4	S1S2	SSC
<b>Cypseloides niger</b> black swift	ABNUA01010	None	None	G4	S2	SSC
<b>Danaus plexippus pop. 1</b> monarch - California overwintering population	IILEPP2012	None	None	G4T2T3	S2S3	
<b>Delphinium californicum ssp. interius</b> Hospital Canyon larkspur	PDRAN0B0A2	None	None	G3T3	S3	1B.2
<b>Delphinium hutchinsoniae</b> Hutchinson's larkspur	PDRAN0B0V0	None	None	G2	S2	1B.2
<b>Delphinium umbraculorum</b> umbrella larkspur	PDRAN0B1W0	None	None	G3	S3	1B.3
<b>Elanus leucurus</b> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP



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



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Emys marmorata</i></b> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<b><i>Eremophila alpestris actia</i></b> California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
<b><i>Ericameria fasciculata</i></b> Eastwood's goldenbush	PDAST3L080	None	None	G2	S2	1B.1
<b><i>Eriogonum nortonii</i></b> Pinnacles buckwheat	PDPGN08470	None	None	G2	S2	1B.3
<b><i>Erysimum ammphilum</i></b> sand-loving wallflower	PDBRA16010	None	None	G2	S2	1B.2
<b><i>Erysimum menziesii</i></b> Menzies' wallflower	PDBRA160R0	Endangered	Endangered	G1	S1	1B.1
<b><i>Eucyclogobius newberryi</i></b> tidewater goby	AFCQN04010	Endangered	None	G3	S3	SSC
<b><i>Euphilotes enoptes smithi</i></b> Smith's blue butterfly	IILEPG2026	Endangered	None	G5T1T2	S1S2	
<b><i>Falco mexicanus</i></b> prairie falcon	ABNKD06090	None	None	G5	S4	WL
<b><i>Falco peregrinus anatum</i></b> American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
<b><i>Fritillaria liliacea</i></b> fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
<b><i>Gilia tenuiflora ssp. arenaria</i></b> Monterey gilia	PDPLM041P2	Endangered	Threatened	G3G4T2	S2	1B.2
<b><i>Hesperocyparis goveniana</i></b> Gowen cypress	PGCUP04031	Threatened	None	G1	S1	1B.2
<b><i>Hesperocyparis macrocarpa</i></b> Monterey cypress	PGCUP04060	None	None	G1	S1	1B.2
<b><i>Holocarpha macradenia</i></b> Santa Cruz tarplant	PDAST4X020	Threatened	Endangered	G1	S1	1B.1
<b><i>Horkelia cuneata var. sericea</i></b> Kellogg's horkelia	PDROS0W043	None	None	G4T1?	S1?	1B.1
<b><i>Horkelia marinensis</i></b> Point Reyes horkelia	PDROS0W0B0	None	None	G2	S2	1B.2
<b><i>Lasiurus cinereus</i></b> hoary bat	AMACC05030	None	None	G5	S4	
<b><i>Lasthenia conjugens</i></b> Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
<b><i>Laterallus jamaicensis coturniculus</i></b> California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
<b><i>Layia carnosa</i></b> beach layia	PDAST5N010	Endangered	Endangered	G2	S2	1B.1



Selected Elements by Scientific Name  
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Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Legenere limosa</i></b> legenere	PDCAM0C010	None	None	G2	S2	1B.1
<b><i>Linderiella occidentalis</i></b> California linderiella	ICBRA06010	None	None	G2G3	S2S3	
<b><i>Lupinus tidestromii</i></b> Tidestrom's lupine	PDFAB2B3Y0	Endangered	Endangered	G1	S1	1B.1
<b><i>Malacothamnus palmeri</i> var. <i>involucratus</i></b> Carmel Valley bush-mallow	PDMAL0Q0B1	None	None	G3T2Q	S2	1B.2
<b><i>Malacothrix saxatilis</i> var. <i>arachnoidea</i></b> Carmel Valley malacothrix	PDAST660C2	None	None	G5T2	S2	1B.2
<b><i>Meconella oregana</i></b> Oregon meconella	PDPAP0G030	None	None	G2G3	S2	1B.1
<b><i>Microseris paludosa</i></b> marsh microseris	PDAST6E0D0	None	None	G2	S2	1B.2
<b><i>Monardella sinuata</i> ssp. <i>nigrescens</i></b> northern curly-leaved monardella	PDLAM18162	None	None	G3T2	S2	1B.2
<b><i>Monolopia gracilens</i></b> woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
<b>Monterey Cypress Forest</b> Monterey Cypress Forest	CTT83150CA	None	None	G1	S1.2	
<b>Monterey Pine Forest</b> Monterey Pine Forest	CTT83130CA	None	None	G1	S1.1	
<b>Monterey Pygmy Cypress Forest</b> Monterey Pygmy Cypress Forest	CTT83162CA	None	None	G1	S1.1	
<b>Northern Bishop Pine Forest</b> Northern Bishop Pine Forest	CTT83121CA	None	None	G2	S2.2	
<b>Northern Coastal Salt Marsh</b> Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
<b><i>Oncorhynchus mykiss irideus</i> pop. 9</b> steelhead - south-central California coast DPS	AFCHA0209H	Threatened	None	G5T2Q	S2	
<b><i>Pelecanus occidentalis californicus</i></b> California brown pelican	ABNFC01021	Delisted	Delisted	G4T3T4	S3	FP
<b><i>Phrynosoma blainvillii</i></b> coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
<b><i>Pinus radiata</i></b> Monterey pine	PGPIN040V0	None	None	G1	S1	1B.1
<b><i>Piperia yadonii</i></b> Yadon's rein orchid	PMORC1X070	Endangered	None	G1	S1	1B.1
<b><i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i></b> Choris' popcornflower	PDBOR0V061	None	None	G3T1Q	S1	1B.2
<b><i>Potentilla hickmanii</i></b> Hickman's cinquefoil	PDROS1B0U0	Endangered	Endangered	G1	S1	1B.1



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



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Rallus obsoletus obsoletus</i></b> California Ridgway's rail	ABNME05011	Endangered	Endangered	G5T1	S1	FP
<b><i>Ramalina thrausta</i></b> angel's hair lichen	NLLEC3S340	None	None	G5	S2?	2B.1
<b><i>Rana boylei</i></b> foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
<b><i>Rana draytonii</i></b> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<b><i>Reithrodontomys megalotis distichlis</i></b> Salinas harvest mouse	AMAFF02032	None	None	G5T1	S1	
<b><i>Riparia riparia</i></b> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<b><i>Rosa pinetorum</i></b> pine rose	PDROS1J0W0	None	None	G2	S2	1B.2
<b><i>Sidalcea malachroides</i></b> maple-leaved checkerbloom	PDMAL110E0	None	None	G3	S3	4.2
<b><i>Spirinchus thaleichthys</i></b> longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	SSC
<b><i>Stebbinsoseris decipiens</i></b> Santa Cruz microseris	PDAST6E050	None	None	G2	S2	1B.2
<b><i>Taricha torosa</i></b> Coast Range newt	AAAAF02032	None	None	G4	S4	SSC
<b><i>Taxidea taxus</i></b> American badger	AMAJF04010	None	None	G5	S3	SSC
<b><i>Thamnophis hammondi</i></b> two-striped gartersnake	ARADB36160	None	None	G4	S3S4	SSC
<b><i>Trifolium buckwestiorum</i></b> Santa Cruz clover	PDFAB402W0	None	None	G2	S2	1B.1
<b><i>Trifolium hydrophilum</i></b> saline clover	PDFAB400R5	None	None	G2	S2	1B.2
<b><i>Trifolium polyodon</i></b> Pacific Grove clover	PDFAB402H0	None	Rare	G1	S1	1B.1
<b><i>Trifolium trichocalyx</i></b> Monterey clover	PDFAB402J0	Endangered	Endangered	G1	S1	1B.1
<b><i>Tryonia imitator</i></b> mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	
<b>Valley Needlegrass Grassland</b> Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	

Record Count: 101



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## **APPENDIX C**

### **IPaC Resource List**

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# IPaC resource list

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

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

## Location

Monterey County, California



## Local office

Ventura Fish And Wildlife Office

☎ (805) 644-1766

📠 (805) 644-3958

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

# Endangered species

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

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

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

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

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

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

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

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

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

## Birds

NAME

STATUS

## California Condor *Gymnogyps californianus* Endangered

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

<https://ecos.fws.gov/ecp/species/8193>

## California Least Tern *Sterna antillarum browni* Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/8104>

## Least Bell's Vireo *Vireo bellii pusillus* Endangered

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

<https://ecos.fws.gov/ecp/species/5945>

## Marbled Murrelet *Brachyramphus marmoratus* Threatened

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

<https://ecos.fws.gov/ecp/species/4467>

## Southwestern Willow Flycatcher *Empidonax traillii extimus* Endangered

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

<https://ecos.fws.gov/ecp/species/6749>

## Western Snowy Plover *Charadrius nivosus nivosus* Threatened

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

<https://ecos.fws.gov/ecp/species/8035>

# Amphibians

NAME	STATUS
<b>California Red-legged Frog</b> <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>	Threatened
<b>California Tiger Salamander</b> <i>Ambystoma californiense</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. <a href="https://ecos.fws.gov/ecp/species/2076">https://ecos.fws.gov/ecp/species/2076</a>	Threatened
<b>Santa Cruz Long-toed Salamander</b> <i>Ambystoma macrodactylum croceum</i> There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available. <a href="https://ecos.fws.gov/ecp/species/7405">https://ecos.fws.gov/ecp/species/7405</a>	Endangered

## Fishes

NAME	STATUS
<p>Tidewater Goby <i>Eucyclogobius newberryi</i></p> <p>There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat.</p> <p><a href="https://ecos.fws.gov/ecp/species/57">https://ecos.fws.gov/ecp/species/57</a></p>	Endangered

## Insects

NAME	STATUS
<p>Smith's Blue Butterfly <i>Euphilotes enoptes smithi</i></p> <p>There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available.</p> <p><a href="https://ecos.fws.gov/ecp/species/4418">https://ecos.fws.gov/ecp/species/4418</a></p>	Endangered

## Crustaceans

NAME	STATUS
<p>Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i></p> <p>There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat.</p> <p><a href="https://ecos.fws.gov/ecp/species/498">https://ecos.fws.gov/ecp/species/498</a></p>	Threatened

## Flowering Plants

NAME	STATUS
<p>Contra Costa Goldfields <i>Lasthenia conjugens</i></p> <p>There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat.</p> <p><a href="https://ecos.fws.gov/ecp/species/7058">https://ecos.fws.gov/ecp/species/7058</a></p>	Endangered
<p>Marsh Sandwort <i>Arenaria paludicola</i></p> <p>No critical habitat has been designated for this species.</p> <p><a href="https://ecos.fws.gov/ecp/species/2229">https://ecos.fws.gov/ecp/species/2229</a></p>	Endangered
<p>Menzies' Wallflower <i>Erysimum menziesii</i></p> <p>No critical habitat has been designated for this species.</p> <p><a href="https://ecos.fws.gov/ecp/species/2935">https://ecos.fws.gov/ecp/species/2935</a></p>	Endangered
<p>Monterey Gilia <i>Gilia tenuiflora</i> ssp. <i>arenaria</i></p> <p>No critical habitat has been designated for this species.</p> <p><a href="https://ecos.fws.gov/ecp/species/856">https://ecos.fws.gov/ecp/species/856</a></p>	Endangered



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

Threatened

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

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

**Yadon's Piperia** *Piperia yadonii*

Endangered

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

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

## Critical habitats

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

This location overlaps the critical habitat for the following species:

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

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

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

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

Additional information can be found using the following links:

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

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ

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

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

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

#### Allen's Hummingbird *Selasphorus sasin*

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

<https://ecos.fws.gov/ecp/species/9637>

Breeds Feb 1 to Jul 15

#### Bald Eagle *Haliaeetus leucocephalus*

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

<https://ecos.fws.gov/ecp/species/1626>

Breeds Jan 1 to Aug 31

#### Burrowing Owl *Athene cunicularia*

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

<https://ecos.fws.gov/ecp/species/9737>

Breeds Mar 15 to Aug 31

#### California Thrasher *Toxostoma redivivum*

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

Breeds Jan 1 to Jul 31

<b>Clark's Grebe</b> <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
<b>Common Yellowthroat</b> <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/2084">https://ecos.fws.gov/ecp/species/2084</a>	Breeds May 20 to Jul 31
<b>Golden Eagle</b> <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a>	Breeds Jan 1 to Aug 31
<b>Lawrence's Goldfinch</b> <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9464">https://ecos.fws.gov/ecp/species/9464</a>	Breeds Mar 20 to Sep 20
<b>Lewis's Woodpecker</b> <i>Melanerpes lewis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9408">https://ecos.fws.gov/ecp/species/9408</a>	Breeds Apr 20 to Sep 30
<b>Long-billed Curlew</b> <i>Numenius americanus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/5511">https://ecos.fws.gov/ecp/species/5511</a>	Breeds elsewhere
<b>Marbled Godwit</b> <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9481">https://ecos.fws.gov/ecp/species/9481</a>	Breeds elsewhere
<b>Nuttall's Woodpecker</b> <i>Picoides nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9410">https://ecos.fws.gov/ecp/species/9410</a>	Breeds Apr 1 to Jul 20
<b>Oak Titmouse</b> <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9656">https://ecos.fws.gov/ecp/species/9656</a>	Breeds Mar 15 to Jul 15

**Rufous Hummingbird** *selasphorus rufus*

Breeds elsewhere

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

<https://ecos.fws.gov/ecp/species/8002>

**Short-billed Dowitcher** *Limnodromus griseus*

Breeds elsewhere

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

<https://ecos.fws.gov/ecp/species/9480>

**Song Sparrow** *Melospiza melodia*

Breeds Feb 20 to Sep 5

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

**Spotted Towhee** *Pipilo maculatus clementae*

Breeds Apr 15 to Jul 20

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

<https://ecos.fws.gov/ecp/species/4243>

**Tricolored Blackbird** *Agelaius tricolor*

Breeds Mar 15 to Aug 10

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

<https://ecos.fws.gov/ecp/species/3910>

**Whimbrel** *Numenius phaeopus*

Breeds elsewhere

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

<https://ecos.fws.gov/ecp/species/9483>

**Willet** *Tringa semipalmata*

Breeds elsewhere

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

**Wrentit** *Chamaea fasciata*

Breeds Mar 15 to Aug 10

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

## Probability of Presence Summary

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

### Probability of Presence (■)

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

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

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

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

### Breeding Season (■)

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

### Survey Effort (|)

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

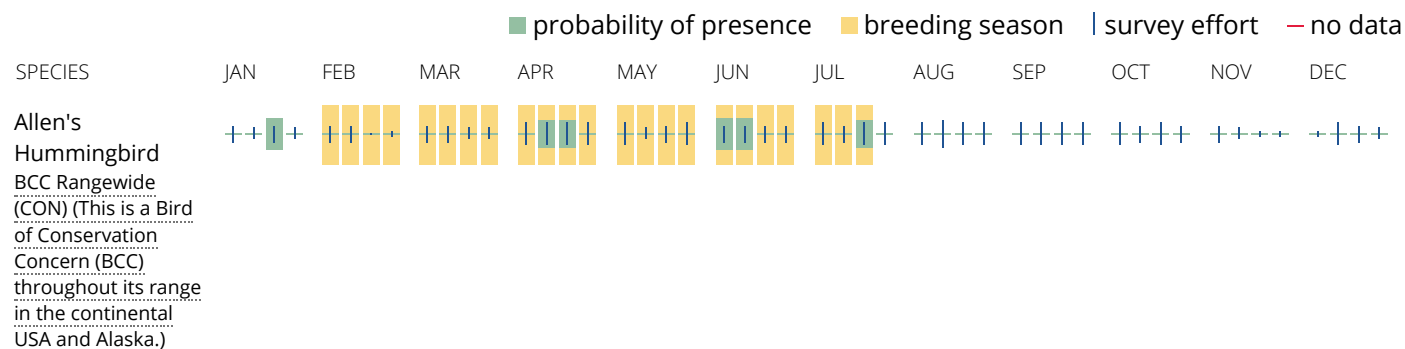
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

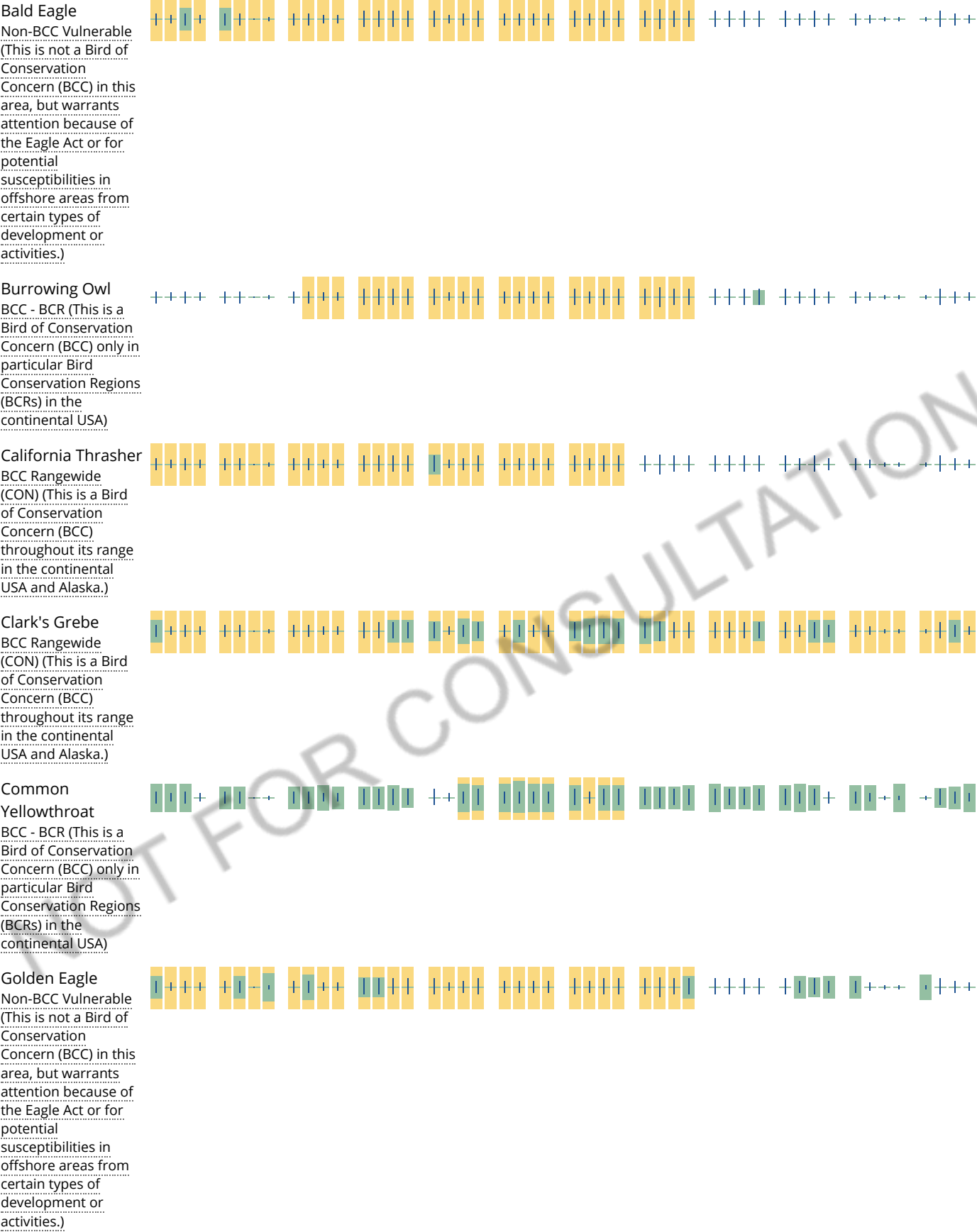
### No Data (—)

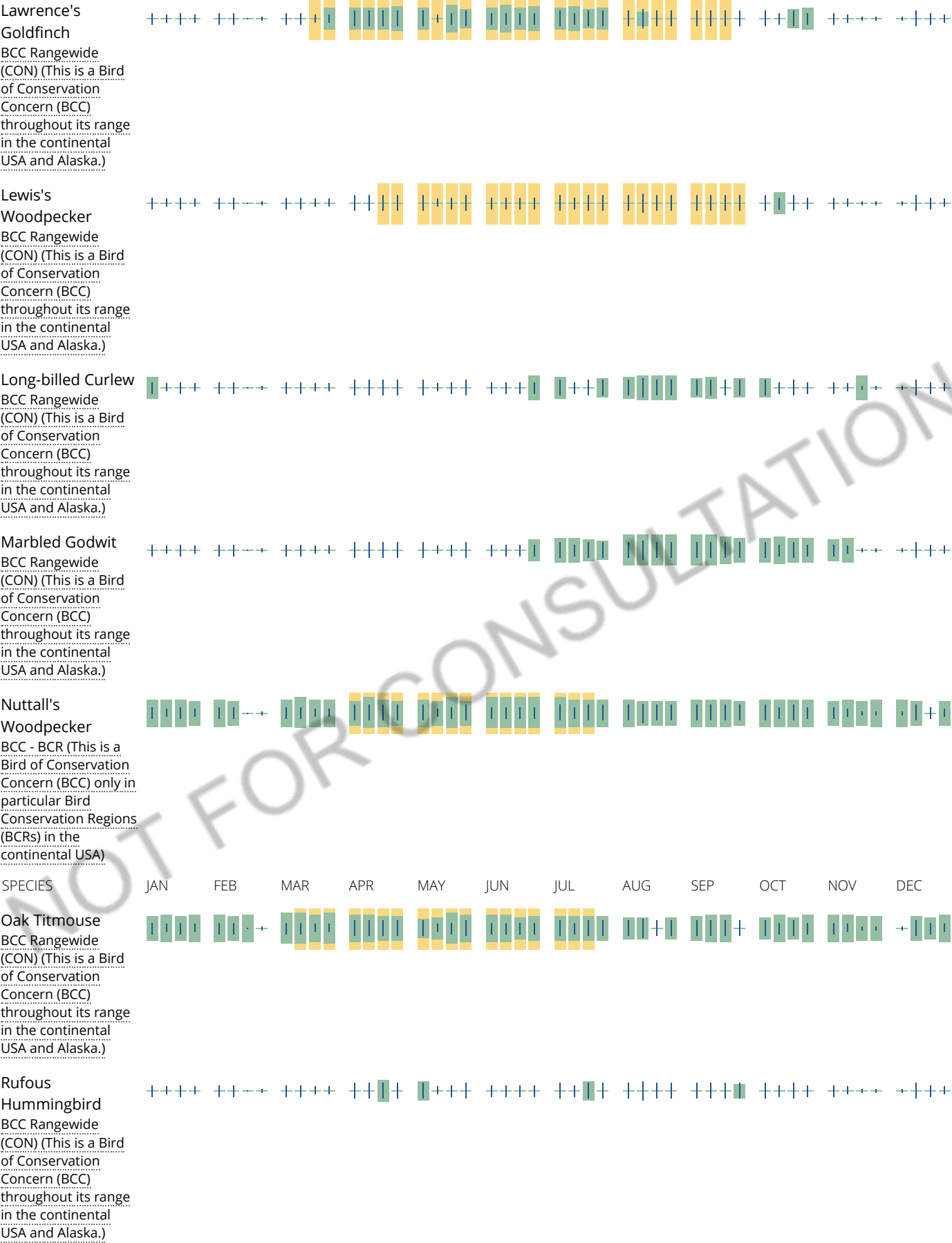
A week is marked as having no data if there were no survey events for that week.

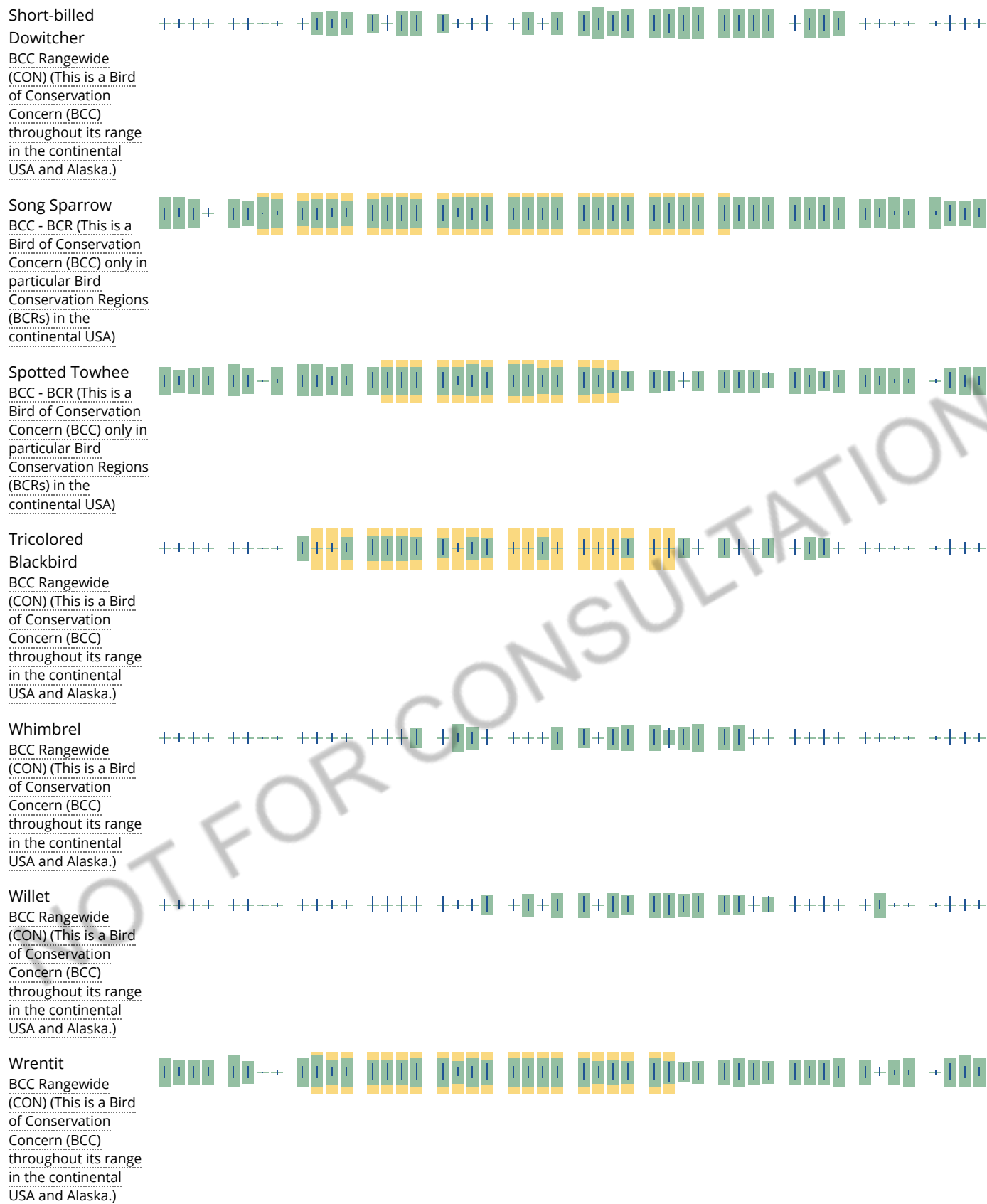
### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.









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

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to



occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

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

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

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

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

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

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

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

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

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

### What are the levels of concern for migratory birds?

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

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

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

## Details about birds that are potentially affected by offshore projects

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

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

## What if I have eagles on my list?

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

## Proper Interpretation and Use of Your Migratory Bird Report

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

# Facilities

## National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

# Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

## Wetlands in the National Wetlands Inventory

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

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

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

### Data limitations

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

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

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

### Data exclusions

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

### Data precautions

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

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