

**SANTA BARBARA AIRPORT,  
SANTA BARBARA, CALIFORNIA  
TAXIWAY H EXTENSION PROJECT**

**BIOLOGICAL ASSESSMENT  
FOR  
CONSULTATION WITH U.S. FISH AND WILDLIFE SERVICE**



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## **1.0 Introduction**

The purpose of this biological assessment (BA) is to review the proposed Santa Barbara Airport (Airport) Taxiway H Extension Project ("project" or "action") in sufficient detail to determine the extent that the proposed action may affect any threatened, endangered, proposed, or candidate species regulated by the U.S. Fish and Wildlife Service (USFWS). A separate BA is being submitted to the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) to assist in their review of potential project-related impacts on the southern California Distinct Population Segment steelhead (*Oncorhynchus mykiss irideus*; population 10) and its designated critical habitat. This BA was prepared in accordance with the legal requirements set forth under Section 7 of the Endangered Species Act (16 U.S.C. 1536 (c)). The Federal Aviation Administration (FAA) is the lead federal agency for this project pursuant to the National Environmental Policy Act, and the U.S. Army Corps of Engineers (USACE or Corps) is a cooperating agency pursuant to Title 40, Code of Federal Regulations (CFR) Part 1500 - 1508.

The FAA has identified four "hot spots" on the Airport where the potential for runway incursions is considered to be high. The Taxiway H Extension Project has been designed to address one of these hot spots that involves a non-standard intersection of Taxiway C with Runway 7-25. The proposed project would increase Airport safety by extending Taxiway H to provide a full-length parallel taxiway on the north side of the runway and create two new intersections that meet current FAA standards. The action area evaluated for this project also includes relocation of a glideslope antenna, construction of a hold pad, staging areas to be used during construction, haul routes, potential storm drain improvements, and habitat restoration within the Airport property.

### **1.1 Federally Listed, Proposed or Candidate Species and Designated Critical Habitat**

An official list of federally regulated species that may occur within the action area, which may be affected either directly or indirectly by the proposed project was provided by the USFWS Ventura Fish and Wildlife Office on April 4, 2023 (Project Code: 2022-0002081). The federally listed species considered in this document were derived from the official species list and a summary of effects determinations are provided below in Table 1. Candidate species are shown in Table 2 and designated critical habitat for federally listed species adjacent to the action area is shown in Table 3. For those species in which the project is considered to have "no effect" because they are not expected to occur in the action area, the justification behind this rationale is provided in Section 2.1 and those species are not discussed further in the document. Those species considered to have potential to occur in the action area and critical habitat present within the action area are evaluated for potential project effects within Sections 4.0 and 5.0.



**Table 1. Federally Listed Species Summary**

<b>Species</b>	<b>Federal Status</b>	<b>Determination</b>
California condor ( <i>Gymnogyps californianus</i> )	Endangered	No effect
California least tern ( <i>Sterna antillarum browni</i> )	Endangered	May affect, but not likely to adversely affect
Least Bell's vireo ( <i>Vireo bellii pusillus</i> )	Endangered	May affect, but not likely to adversely affect
Light-footed clapper rail ( <i>Rallus longirostris levipes</i> )	Endangered	No effect
Marbled murrelet ( <i>Brachyramphus marmoratus</i> )	Threatened	No effect
Southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> )	Endangered	No effect
Western snowy plover ( <i>Charadrius nivosus nivosus</i> )	Threatened	No effect
Yellow-billed cuckoo ( <i>Coccyzus americanus</i> )	Threatened	No effect
California red-legged frog ( <i>Rana draytonii</i> )	Threatened	No effect
Foothill yellow-legged frog ( <i>Rana boylei</i> )	Proposed Endangered	No effect
Tidewater goby ( <i>Eucyclogobius newberryi</i> )	Endangered	May affect, but not likely to adversely affect
Vernal pool fairy shrimp ( <i>Branchinecta lynchi</i> )	Threatened	No effect
Contra Costa goldfields ( <i>Lasthenia conjugens</i> )	Endangered	No effect
Gambel's watercress ( <i>Rorippa gambelii</i> )	Endangered	No effect
Marsh sandwort ( <i>Arenaria paludicola</i> )	Endangered	No effect
Salt marsh bird's-beak ( <i>Cordylanthus maritimus</i> ssp. <i>maritimus</i> )	Endangered	No effect

Candidate species are those plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them as listed under the ESA, but which listing is precluded by other higher priority actions. Consultation with the USFWS under Section 7 of the ESA is not required for Candidate species as they have no statutory protection under the Act. Therefore, the following Candidate species is not discussed further within this document.



**Table 2. Candidate Species Summary**

Species	Federal Status	Determination
Monarch butterfly ( <i>Danaus plexippus</i> )	Candidate	Consultation not required; no suitable overwintering habitat present in the action area.

The following critical habitat unit occurs within the action area of the Taxiway H Extension Project.

**Table 3. Critical Habitat Summary**

Species	Critical Habitat Unit	Determination
Tidewater goby	SB-9	May affect, but not likely to adversely affect

## 1.2 Project Location

The Airport is located in the central portion of Santa Barbara County approximately 275 feet north of the Pacific Ocean in a modified portion of the Goleta Slough (Figure 1). The proposed project is located in a small part of the Airport property currently zoned as G-S-R, Goleta Slough Reserve Zone in Title 29 of the Airport Zoning Ordinance and Component 9 of the Local Coastal Program (LCP). The Goleta Slough Reserve Zone coincides with the designation of the Goleta Slough Ecological Reserve (GSER). Lands surrounding the Airport property are mostly developed for educational, industrial, commercial, residential, and recreational uses. The northern portion of the Airport is surrounded by the City of Goleta, and beyond the southern boundary is the University of California, Santa Barbara (UCSB; Figure 2). The Airport is bordered on the north by Hollister Avenue, on the south by Mesa Road and Goleta Beach County Park, on the west by South Los Carneros Road, and on the east by South Fairview Avenue. The taxiway extension action area is located south of Carneros Creek, north of Runway 7-25, west of Runway 15R/33L, and east of Tecolotito Creek (Figure 2 and Appendix A). The action area includes the project site where the taxiway will be constructed and the area between Carneros Creek and Hollister Avenue proposed for wetland habitat restoration, which is anticipated to be required mitigation pursuant to the Clean Water Act Section 404 permit issuance.

The 948-acre property is owned and operated by the City of Santa Barbara. Portions of the Airport property not occupied by facilities are included within the approximately 400-acre GSER, which was established in 1987 and is managed by the California Department of Fish and Wildlife (CDFW). The Goleta Slough State Marine Conservation Area, established in 2007, is composed of 160 acres below the mean high tide line in Goleta Slough and Atascadero Creek, and also is managed by CDFW (Goleta Slough Management Committee [GSMC] 2015).

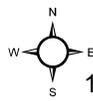




Action Area Boundary



Source: Esri 2022



### 1.3 Existing Environment

Goleta Slough is the northernmost estuary in southern California. Historically, it was a protected bay approximately 18 square miles in size, which gradually filled in with sediment that washed down from the Santa Ynez Mountains in the streams that empty into it. Extensive sedimentation occurred due to severe storms following fires and overgrazing during early European settlement (GSMC 2015). The harbor filled with sediment until there was only a shallow lagoon remaining. By the 1860s, it was described as a "mosaic of tidal salt marsh, channels, and mudflats, intergrading with alluvial fans in the upper part of the estuary" (GSMC 2015). Today Goleta Slough exists in a highly modified condition resulting from the filling of hundreds of acres of creeks, wetlands and transitional habitats, creating flood control channels and diking portions of the slough into basins that are cutoff from tidal inundation (GSMC 2015). Much of the fill material used to construct the Airport was obtained by mining Mescalitan Island, which had been located at the confluence of San Jose, San Pedro and Atascadero creeks at the mouth of the slough. Additional areas of the slough were filled for the construction of the Goleta Sanitary District sewage treatment and the Southern California Gas Company facilities. The Santa Barbara County Flood Control District (SBCFCD) has maintained each of the creeks flowing into Goleta Slough for more than 40 years by excavating sediment from the modified channels and stockpiling it adjacent to the channels (Padre Associates 2010). The location and configuration of the Tecolotito and Carneros creek channels were modified originally during the initial construction of the Airport, which began in 1938 (GSMC 2015). In addition to engineering formerly tidal areas to create buildable land, Airport safety measures have required the removal and/or management of infield wetland habitat and regular mowing.

The Goleta Slough LCP describes the current conditions of Goleta Slough as an area of approximately 400 acres, of which 189 acres are classified as tidal marsh subject to tidal inundation through natural channels or culverts. The habitat types within the slough include open water, pickleweed marsh, coastal salt marsh, mud/salt flats, seasonal wetlands/pools, grassland, riparian woodland, shrub-scrub thicket, coastal scrub, and ornamental trees and landscaping associated with developed areas (California Coastal Commission [CCC] 2003, Dudek et al. 2016). Ruderal habitat is present on the artificial dikes and berms constructed along the creek channels and basins. The extent of estuarine wetlands has been reduced by diking and filling, and the remaining portion of estuarine habitat is primarily the portion of lower Tecolotito Creek south of Runway 7-25 (CCC 2003).

Under natural conditions, a beach berm forms at the inlet mouth at Goleta Beach, closing the slough's connection to the ocean. Waves overtopping the berm and freshwater input from the creeks cause the water level in the slough to rise until the berm breaches, restoring tidal exchange (GSMC 2015). Since the mid-1990s, the SBCFCD has routinely removed the sandbar that forms across the mouth of the slough channel within two weeks of its closing. This practice was intended to reduce the risk of flooding and increase water circulation, but also resulted in creating habitats that were subject to daily tidal fluctuations. In early 2013, the NMFS required that the berm be removed only when there is an imminent threat of flooding (GSMC 2015).

The action area has been previously filled and graded, but wetland and grassland habitats have become established (Figure 3). Additionally, two drainages are located to the north and west of the proposed construction activities. Carneros Creek falls within the action area and Tecolotito Creek occurs to the west. Both drainages are at the upstream limits of estuarine habitat as they segue into riverine habitat (Kevin Merk Associates [KMA] 2020). The portion of Carneros Creek within the

Habitat Types	Total (acres)	Perm. Impact (acres)	Temp. Impact (acres)
Annual Grassland	30.09	5.98	10.80
Big Saltbush - Menzies' Goldenbush	0.71	0.00	0.02
Coastal Scrub	4.33	0.00	0.79
Curly Dock - Alkali Mallow - Bulrush	4.15	0.00	0.46
Giant Reed	0.88	0.00	0.88
Introduced Perennial Grassland	2.08	0.00	2.08
Mediterranean Barley - Italian Ryegrass	6.32	1.92	4.34
Ornamental	0.42	0.00	0.00
Pickleweed - Alkali Weed and Non-Vegetated Flats	8.91	0.61	7.15
Riparian Scrub	12.38	0.00	0.36
Ruderal/Developed	35.62	1.95	3.90
Southern Tarplant	0.13	0.00	0.11
<b>Total Area</b>	<b>106.02</b>	<b>10.46</b>	<b>30.89</b>

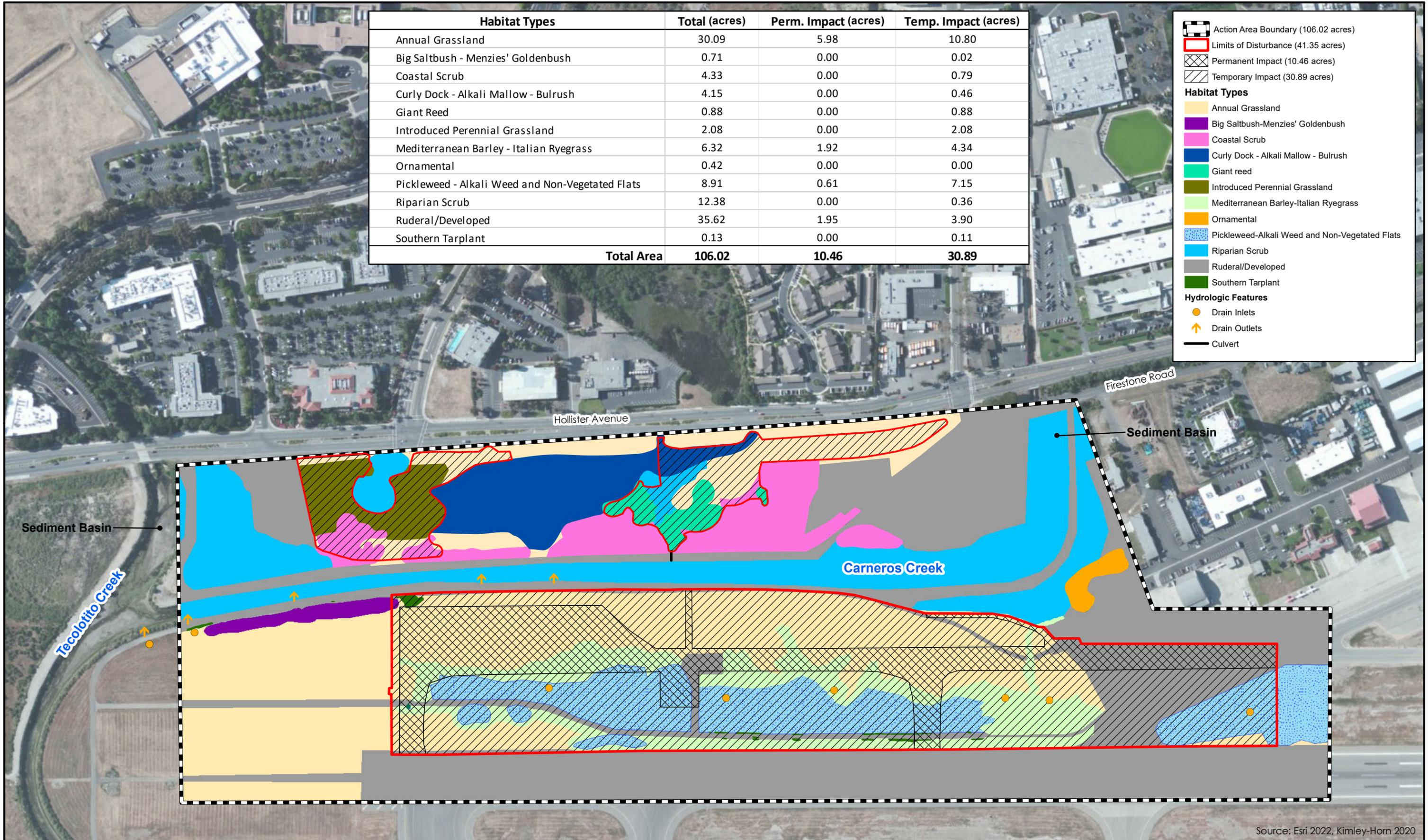
Action Area Boundary (106.02 acres)  
 Limits of Disturbance (41.35 acres)  
 Permanent Impact (10.46 acres)  
 Temporary Impact (30.89 acres)

**Habitat Types**

- Annual Grassland
- Big Saltbush-Menzies' Goldenbush
- Coastal Scrub
- Curly Dock - Alkali Mallow - Bulrush
- Giant reed
- Introduced Perennial Grassland
- Mediterranean Barley-Italian Ryegrass
- Ornamental
- Pickleweed-Alkali Weed and Non-Vegetated Flats
- Riparian Scrub
- Ruderal/Developed
- Southern Tarplant

**Hydrologic Features**

- Drain Inlets
- Drain Outlets
- Culvert



Source: Esri 2022, Kimley-Horn 2020



**Taxiway H Extension Project**  
Santa Barbara Airport

**Figure 3**  
Habitat Impact Map

action area contains a sediment basin that is actively managed and maintained by the SBCFCD, and another sediment basin is present on Tecolotito Creek just outside the action area also downstream from Hollister Avenue (Figure 3). During periods when the slough is open to the ocean, tidal influence can reach Hollister Avenue on Tecolotito and Carneros creeks (GSMC 2015). At other times, such as when the berm forms across the mouth preventing tidal inflow, the upper reaches in the action area may be entirely freshwater. URS Corporation (2001) reported that the Tecolotito Creek sediment basin area supports freshwater species, including water boatmen, arroyo chub (*Gila orcuttii*), mosquitofish (*Gambusia affinis*) and northern Pacific treefrog (*Pseudacris regilla*) tadpoles. Although these drainages are heavily modified, they support wetland and riparian scrub vegetation, and provide both wildlife habitat and connectivity between the brackish water estuarine environment and upstream freshwater stream habitats.

Tecolotito Creek is the second largest creek on the Airport property, and has a watershed area of 3,470 acres (Coffman Associates 2013). It has three sub-watersheds in the upper reaches: West Fork of Glen Annie, Glen Annie Canyon, and McCoy Canyon. It is commonly called "Glen Annie Creek" above Highway 101 and "Tecolotito Creek" downstream from Highway 101. It enters the Airport property through a culvert under Hollister Avenue, and traverses Goleta Slough through modified channels for the first two-thirds of its length, and thereafter is in a natural channel. It exits the Airport property at a bike path bridge at the end of Moffett Place and goes under Ward Memorial Drive where it joins San Pedro, San Jose and Atascadero creeks before discharging into the Pacific Ocean at Goleta Beach. The width of the creek ranges from 45 to 150 feet, and the depth is up to 20 feet (CCC 2003). The total length of the creek on Airport property is approximately 9,700 feet.

When the Airport was constructed, the Tecolotito Creek channel was excavated and channelized to convey floodwaters around the airfield. These modifications increased sedimentation of the channel during storm events, and high flows overtop the berms depositing sediment in the surrounding marsh (CCC 2003). The berms along the lower reach are vegetated by estuarine vegetation and experience limited tidal circulation, with the lowermost area within Goleta Slough having large mudflats that are exposed at the lowest tides (CCC 2001, Coffman Associates 2013). Within the middle reaches on Airport property, the banks support hydrophytic vegetation dominated by big saltbush (*Atriplex lentiformis*), Italian rye grass (*Festuca perrenis*), and Menzie's golden bush (*Isocoma menziesii* var. *vernonioides*). Salt grass (*Distichlis spicata*) and alkali heath (*Frankenia salina*) occur in select areas along the berms lining the channel. Above the Ordinary High Water Mark, the berm slopes are dominated by pickleweed (*Sarcocornia pacifica*) (Dudek 2012). The pickleweed-alkali weed (*Cressa truxillensis*) association in the action area corresponds to the palustrine emergent wetland type (KMA 2020). The levees along the creek realignment area (described below) were configured to have depressions along the top of the berms that capture rainwater, and support alkali heath, beardless wild rye (*Elymus triticoides*), salt grass, and pickleweed (Coffman Associates 2013).

Immediately downstream from Hollister Avenue in Tecolotito Creek is a constructed and maintained sediment management basin that contains periods of prolonged standing water. This basin is designed to be 100 feet wide, 550 feet long and eight (8) feet deep (Padre Associates 2010). Sediment is removed by the SBCFCD on an as-needed basis, which is approximately every three years, and involves operating a crane with a dragline from either side of the channel (URS Corporation 2001). During years when sediment is not removed from the basin, stands of California bulrush (*Schoenoplectus californicus*), alkali bulrush (*Bolboschoenus maritimus*), broadleaf cattail (*Typha latifolia*), iris-leaved rush (*Juncus xiphioides*), watercress (*Rorippa*

*nasturtium aquatica*) and open water are present throughout the basin (CCC 2001, Padre Associates 2010). While the surrounding levees are sparsely vegetated, the banks contain scattered willows (*Salix* spp.), mugwort (*Artemisia douglasiana*), big saltbush, and non-native shrubs such as castor bean (*Ricinus communis*) and non-native palms that intergrade with coastal scrub trending into the upland habitat. Upstream from Hollister Avenue, Tecolotito Creek is contained in a channelized and armored channel, and is bordered by riparian forest composed of dense willows and mature California sycamore (*Platanus racemosa*). The riparian zone extends upstream to Highway 101, after which the stream is contained in an open concrete channel. The upstream reach known as Glen Annie Canyon follows Glenn Annie Road and is generally within its natural channel, bordered by riparian and oak woodland.

Carneros Creek has a watershed area of 2,740 acres (Coffman Associates 2013). It enters the Airport property just east of the intersection of Hollister Avenue and Aero Camino, where there is a sediment basin to the south of Firestone Road, then it bends west and joins Tecolotito Creek to the northwest of the action area (Figure 3). The sediment basin appears to support ponded water during most winter rain seasons, and when sediment is removed it is estimated to provide a potential ponding area approximately six feet deep (Padre Associates 2010). It is surrounded by riparian scrub composed of arroyo willow (*Salix lasiolepis*), mulefat (*Baccharis salicifolia*), mugwort, California blackberry (*Rubus ursinus*), narrowleaf willow (*Salix exigua*), pickleweed, salt marsh baccharis (*Baccharis glutinosa*), California bulrush and occasional California sycamore, and is bordered by coyote brush (*Baccharis pilularis*) (KMA 2020, CCC 2001, Padre Associates 2010). The banks of Carneros Creek contain stands of riparian scrub intermixed with wetland habitat. The Big Saltbush-Menzies' Goldenbush association, corresponding to palustrine scrub-shrub wetland habitat was observed as a component of riparian scrub habitat along the banks (Figure 3). There are also small patches of southern tarplant (*Centromadia parryi* ssp. *australis*) growing on the Ruderal/Developed levee road (Figure 3 and KMA 2020). Patches of open water range from four to 24 inches deep and contain stands of California bulrush, alkali bulrush, and cattail (*Typha* sp.) (Coffman Associates 2013). There is an abrupt change in vegetation from freshwater to estuarine species near the confluence with Tecolotito Creek. Unpaved access roads parallel the creek channel beyond the berms on either side of the channel. Upstream from Firestone Road and Hollister Avenue, Carneros Creek is in a trapezoidal concrete channel and lacks natural vegetation along its edges. Upstream from Highway 101 and west of North Los Carneros Road, the stream occurs in its natural channel and is bordered by riparian vegetation, with orchard and grassland in upland habitats adjacent to the channel.

In 2006, the Tecolotito and Carneros creek channels were moved to accommodate shifting Runway 7-25 to the west, as well as extending runway safety areas along either side and constructing new service roads and drainage improvements (City of Santa Barbara 2017a). This project involved the abandonment and filling of approximately 4.62 acres of the stream channels in the runway footprint and creating new channels around the perimeter. Tecolotito Creek was moved approximately 1,800 feet to the west along Los Carneros Road, and the confluence with Carneros Creek was also shifted to the west. Excavation of the new channels took place in fill that was formerly placed when the Airport was constructed (FAA 2002). The project likely changed flow conditions in Tecolotito Creek by creating a longer and wider (45-foot-wide by 8 feet deep) channel than its former condition. The constructed channel reduced or eliminated the capacity for overbank flow during flood events, and also resulted in a net gain of 4.65 acres of habitat for fish and other aquatic organisms due to the increased length and width of the constructed channel (FAA 2002). While the project Final Environmental Impact Report (EIR) described mitigation for the loss of wetland habitat, impacts on the stream channel and aquatic biota were considered to be "self-

mitigating" as a result of natural recolonization after the project was completed. The CCC (2003) placed additional mitigation requirements for habitat restoration resulting in a requirement for 39.3 acres of wetlands, 9.4 acres of tidal wetlands, and 12.0 acres of upland habitat mitigation (URS Corporation 2003, City of Santa Barbara 2010). Restoration also included replanting the banks of the sediment basins (Padre Associates 2010).

Five drainages that empty into Goleta Slough are routinely cleared of sediment by the SBCFCD for flood control maintenance (City of Santa Barbara 2017a). Dragline desilting and hydraulic dredging are used to remove accumulated silt from the channels on an as-needed basis, usually after large storm events and wildfires (Padre Associates 2010). These activities remove an average of 105,000 cubic yards of material per season (Padre Associates 2010). In addition to sediment removal at the basins downstream from Hollister Avenue, the SBCFCD clears the Tecolotito and Carneros creek channels to their confluence (Padre Associates 2010).

While the action area includes the creek channel and adjacent riparian scrub along Carneros Creek, no work will occur in this area (Figure 3). The development area is a generally flat terrace that was graded during runway construction to create a gentle swale-like basin with storm drain inlets in the lowest topographic points. Stormwater runoff from runways and developed areas is directed into the topographic low areas, where it is conveyed via pipes to Carneros Creek. Although storm drain system inlets are located throughout the area, the low areas collect seasonal surface water and maintain prolonged periods of saturated soils. Tidal and groundwater fluctuation also inhibits surface drainage during rain events. These areas support Pickleweed-Alkali Weed wetland habitat and Non-vegetated Flats encrusted with salts (Figure 3, KMA 2020). Mesic grassland habitat surrounds the wetland areas and is dominated by facultative species, such as Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), Italian ryegrass, and curly dock (*Rumex crispus*). The mesic grassland transitioned to upland annual grassland composed of barnyard foxtail (*Hordeum murinum* ssp. *leporinum*), wild oat (*Avena barbata*), brome species (*Bromus diandrus* and *B. hordeaceus*), common beet (*Beta vulgaris*), summer mustard (*Hirschfeldia incana*) and bull mallow (*Malva nicaeensis*) (Figure 3 and KMA 2020). The action area, including portions of the site proposed for wetland habitat restoration north of Carneros Creek and south of Hollister Avenue, are regularly mowed, keeping vegetation height low and reducing available resources for wildlife. Maintaining low vegetation height and minimizing areas of prolonged ponded water that could be used by waterfowl are consistent with the Airport's wildlife hazard management program.

#### **1.4 Action Area**

The action area for this project includes the limits of disturbance, taxiway object free area (TOFA), Carneros Creek from Hollister Avenue downstream to approximately 800 feet west of the end of the new taxiway, and drainage improvement areas and restoration sites north of Carneros Creek to Hollister Avenue (Figure 3). Habitat restoration activities in the northern part of the action area will re-establish, rehabilitate and enhance wetland and upland habitats to compensate for those lost as a result of the project. It is envisioned that the restored habitats will have better ecological functions and values once the project is completed. Habitat restoration activities around the new taxiway corridor will consist of a mix of native herbaceous species applied to temporarily disturbed areas that will improve the biodiversity of the action area, while maintaining the current management regime to meet requirements established in the FAA Advisory Circular (AC) 150/5200-33C *Hazardous Wildlife Attractants on or near Airports*.

The action area includes an approximately 100-foot buffer around the project impact area in order to evaluate indirect effects of the project. As stated above, no work is planned to take place within the stream channels or along their banks, but work will occur in close proximity to creek banks and around the existing storm drain inlets that empty into Carneros Creek. Impacts evaluated within this BA for the operations and maintenance phases include only the airfield area south of Carneros Creek. The habitat restoration efforts proposed to occur north of Carneros Creek will be detailed under a Habitat Mitigation and Monitoring Plan required under the Clean Water Act Section 404 permitting effort, and will be designed consistent with 150/5200-33C *Hazardous Wildlife Attractants on or near Airports*. Maintenance of the Carneros Creek channel would continue to be conducted by SBCFCD consistent with current practices. Disturbance to the creek and associated resources from creek channel maintenance is outside of the scope of the subject project. The natural areas surrounding the taxiway and runway zones will continue to be mowed on an on-going basis as part of site maintenance for the TOFA and wildlife hazard abatement. The taxiway will continue to experience airplane use and maintenance activities, and the surrounding area will be mowed and otherwise managed to discourage the use of wildlife, including bird hazing to prevent collisions with aircraft.

## **2.0 Federally Protected Species and Critical Habitat**

An official species list was obtained from the Ventura Fish and Wildlife Office for this project (April 4, 2023; Project Code: 2022-0002081). The California Natural Diversity Data Base (CNDDDB) was also queried for special-status species occurrences recorded in the project vicinity (i.e., Goleta, Dos Pueblos Canyon, and Santa Barbara quadrangles) to ensure that all potential occurrences were evaluated during preparation of this report. Various online, unpublished and published sources were also consulted. This involved biological resources studies that have been conducted on the Airport over the last 20 years. Designated critical habitat for species listed under the federal Endangered Species Act (FESA) was identified and mapped based upon information provided in *Environmental Conservation Online System* (USFWS 2023). CNDDDB records and designated critical habitat within five miles of the action area were mapped (Figure 4). Habitat conditions within and surrounding the action area were evaluated during site reconnaissance surveys and through review of time-series aerial photography. A literature review of the natural history and distribution for each of the species on the USFWS official species list was conducted. This evaluation determined that based on the presence of suitable habitat and occurrence records, the federally listed species that may occur in the action area include the California least tern, least Bell's vireo, and tidewater goby. Designated critical habitat for the southern California Distinct Population Segment (DPS) steelhead and tidewater goby are within the action area, but confined to aquatic habitats within Tecolotito and Carneros Creeks. The southern California DPS steelhead is covered under a separate BA for submittal to NMFS. A description of the natural history and ecology of these species is provided in Section 2.2 below.



Critical habitat is designated for species listed under FESA, and is areas that contain the physical or biological features which are essential to the conservation of those species and may need special management or protection. A 2018 Supreme Court ruling further defined critical habitat as those areas that provide habitat for the relevant species, exempting areas that are not currently occupied. In addition to determining the geographical areas occupied, designated critical habitat contains the following Primary Constituent Elements (PCEs):

- Space for individual and population growth and for normal behavior;
- Food, water, air, light, minerals, or other nutritional or physiological requirements;
- Cover or shelter;
- Sites for breeding, reproduction, or rearing (or development) of offspring; and
- Habitats that are protected from disturbance or are representative of the historical, geographical, and ecological distributions of a species.

The following sections contain the evaluation of which federally protected species and designated critical habitat could or do occur within the action area, or are in close enough proximity to it that they could be indirectly affected by the project. Those resources that are present, potentially present or are in close proximity and could be affected are then evaluated for potential effects from the proposed project in Section 4.0.

## **2.1 Federally Listed Species Not Expected to Occur in the Action Area**

Federally listed species that were contained within the official species list, but which are not expected to occur in the action area, include the California condor, light-footed clapper rail, marbled murrelet, southwestern willow flycatcher, western snowy plover, yellow-billed cuckoo, foothill yellow-legged frog, California red-legged frog, vernal pool fairy shrimp, Contra Costa goldfields, Gambel's water cress, marsh sandwort, and salt marsh bird's-beak. Because these species do not occur in the vicinity of the action area, there would be no effects of the proposed project. A summary of the analysis that led to the evaluation that these species would not occur in the action area is as follows:

- The **California condor** (*Gymnogyps californianus*) is an endangered species that once had a wide range in western North America but by around 1950 were restricted in California to six counties north of Los Angeles, including eastern Santa Barbara County (USFWS 2013d). After a loss of wild populations, a captive breeding program began releasing condors that re-established populations in central and southern California. California condors primarily forage in open terrain of foothill grassland and oak savanna habitats and along the Big Sur coast, and they nest in steep, remote mountain areas and canyons with rock escarpments (USFWS 2013d). Between 1880 and 1910, a few pairs were documented nesting in the southern slopes of the Santa Ynez Mountains near Santa Barbara (Hamber 1977, Lehman 2022). Their current range in Santa Barbara County consists of mountainous areas of the San Rafael and Sierra Madre mountains (USFWS 2013d). Released condors fitted with GPS radios are known to fly through and occasionally roost in the Santa Barbara County backcountry using a flyway between the Hopper Canyon and Bitter Creek release areas (Lehman 2022). GPS records and sightings occur as far south as the Santa Ynez River (Lehman 2022). Therefore, the action area is outside of the current distribution of the species and no suitable habitat is present on the site for any lifestage.

- The **light-footed Ridgway's rail** (*Rallus obsoletus levipes*), formerly called the light-footed clapper rail (*Rallus longirostris levipes*) is an endangered species that formerly bred at Goleta Slough, but was last recorded there in 1974 and is considered to be extirpated from this site (Coffman Associates 2013, City of Santa Barbara 2017a, CDFW 2022a, USFWS 2020a). Numerous surveys conducted between 1975 and 2012 yielded no observations of the species (CDFW 2022a). Focused surveys for this species on the Airport property in December 2014 also resulted in no detection (Dudek et al. 2016). This species nests in estuarine marshes where nests are constructed on a platform of saltmarsh stems that allows the nest to float up during high tides but is woven into the surrounding vegetation so that it does not float away with the tide (USFWS 2020a). The construction of berms in the Goleta Slough that have isolated areas of the pickleweed salt marsh from tidal circulation have likely made the slough unsuitable for the species (Dudek 2012). The species is not expected to occur in the action area.
- The threatened **marbled murrelet** (*Brachyramphus marmoratus*) forages in marine subtidal and pelagic habitats along the Pacific Coast (CDFW 2022b). They nest and roost in inland areas on tall trees within mature forests of redwood and Douglas-fir (CDFW 2022b). The furthest south that they nest is the Monterey Bay area to Big Sur (USFWS 2019). They may disperse south after breeding, but are rarely found further south than Point Sal in Santa Barbara County (CDFW 2022b). There are several observations from Goleta and Santa Barbara beaches (Lehman 2022); however, no federal records were found documenting this species occurrence in the action area and the CNDDB does not contain any records from this area (CDFW 2022a), suggesting they are rare in the vicinity. Focused surveys for this species at 15 locations on the Airport property were conducted four times per month over the period of one year starting in December 2014, and no detections were made (Dudek et al. 2016). This species may fly along the shore and forage in nearshore waters in the vicinity of the action area, but because they do not feed in estuaries or freshwater, they are not expected to occur in the action area. No suitable habitat is present for nesting or roosting, and they do not nest in this area.
- The endangered **southwestern willow flycatcher** (*Empidonax traillii extimus*) is a small, insect-eating neotropical migrant (USFWS 2013b). They nest from May to September (USFWS 2013b). This species requires dense willow thickets for nesting and roosting, and it occurs near streams, rivers, wet meadows, ponds or backwaters (CDFW 2022b). Breeding males defend territories during the breeding season and can be detected by their singing behavior (USFWS 2013b). During migration, they may be found in riparian habitats that lack sufficient structure, height or which occur in small patches and would be unsuitable for nesting (USFWS 2013b). They may also use weedy and brushy areas during migration (Lehman 2022). They eat a wide range of invertebrate prey, including flying, terrestrial and aquatic insects (USFWS 2017). This species is thought to exist and interact as groups of metapopulations, where geographically separated breeding populations are connected by immigration and emigration (USFWS 2013b).

The southwestern willow flycatcher breeds in riparian habitats of the lower Santa Ynez River, Santa Clara River in Ventura County, the Owens Valley, and South Fork of the Kern River (Craig and Williams 1998, CDFW 2022b). They occur in the Santa Barbara south coast region only as an uncommon transient during migration and they do not breed in this area (Lehman 2022). Records from the Goleta area during spring migration are from late-April

through June and during fall migration from August through October, but the most recent record is from 2001 (Lehman 2022). Additionally, there are no federal records or documented observations in the CNDDDB from near the action area (CDFW 2022a), suggesting they are rare in the vicinity. Individuals potentially could occur as transients in the dense riparian habitat surrounding the Carneros Creek sediment basin or in the riparian scrub along the section of Carneros Creek to the north of the action area during migration, but they would be extremely rare and would not nest in or near the action area.

- The **western snowy plover** (*Charadrius nivosus nivosus*) Pacific coast population is a threatened species that is restricted to coastal beaches from southern Washington to southern Baja California, and includes those individuals that nest adjacent to marine habitats to 50 miles inland (USFWS 2012). The population consists of both resident and migratory birds; some birds winter in the same areas used for breeding, and others are migratory and travel either north or south within their coastal range. They breed on sandy beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at river and creek mouths, dredge material disposal sites, estuaries, tidal marshes, salt pans at lagoons and estuaries, salt ponds, mud flats, offshore islands, bays, and coastal rivers (USFWS 2012). Breeding season is from early-March to late-September, and eggs are laid in shallow depressions scraped in the sand usually near a conspicuous feature such as a piece of driftwood (USFWS 2012). Nest depressions may be lined with small pebbles, shell fragments, plant debris and mud chips (USFWS 2007b). After the first brood fledges, or if they lose a clutch, they may attempt to re-nest. Individuals may nest at multiple locations in the same year (USFWS 2007b). In winter, they continue to occupy the same sites where they nest, or may move north or south along the coast and use areas where nesting does not occur such as salt ponds, estuaries, mud flats, sand spits, and dune-backed beaches (USFWS 2007b). They forage for small invertebrates on sandy beaches, low foredunes, salt pans, and freshwater or brackish wetlands such as river mouths, estuaries and tidal marshes (USFWS 2012). Individuals concentrate in areas of suitable habitat, with numbers of adults ranging up to 315 (USFWS 2007b).

The Pacific coast population of the western snowy plover currently breeds in Santa Barbara County along the north coast, Hollister Ranch, and Coal Oil Point (Dudek 2012), and infrequently at Santa Barbara Harbor (Lehman 2022). There are a few breeding records at Devereux Slough from 1965 to 1984, and then this site was re-occupied with consistent nesting beginning in 2001 (USFWS 2012, Lehman 2022; CDFW 2022a). Thirty-nine adults were observed during the 2006 breeding season at Devereux Slough (USFWS 2007b). Large numbers of nesting pairs were present on Goleta Beach in 1910-1911; 24 pairs were recorded in 1927; and 16 egg sets collected between 1909 and 1947 (Lehman 2022). However, they no longer nest on Goleta Beach likely due to high disturbance from humans and their dogs (Dudek 2012) and high numbers of predators (Lehman 2022). Winter roosting has been documented on Goleta Beach as recently as 2017 (CDFW 2022a). Records from "Goleta Slough Flats" on the Airport property extending out to Goleta Beach (Figure 4) consist of two egg sets collected in 1934-1936 and wintering birds 1969-1972 (Lehman 2022; CDFW 2022a). Other wintering localities in the region include the Santa Maria River mouth and Vandenberg Air Force Base, Jalama Beach, outlet of Devereux Slough, Santa Barbara Harbor sandspit and nearby beaches (Lehman 2022, CDFW 2022a). During southbound migration, individuals have often been recorded at Goleta and Santa Barbara beaches, with approximately 75 individuals counted each year in 2013 and 2017 at Goleta Beach County Park (Lehman 2022). Focused surveys for this species at 15 locations

on the Airport property were conducted four times per month over the period of one year starting in December 2014, and no detections were made (Dudek et al. 2016). Regular site maintenance and lack of suitable habitat appears to preclude the species from the action area.

- The **yellow-billed cuckoo** (*Coccyzus americanus*) western distinct population segment is a federally threatened species. It is a migratory species that winters in Central and South America and breeds in North America. Breeding habitat is riparian woodland with patches of cottonwood (*Populus* spp.) and willow (*Salix* spp.) along low-gradient streams in broad floodplains (USFWS 2021a). Foraging is near breeding sites in riparian habitat and adjacent uplands (USFWS 2021a). Nesting by this species has not been recorded in Santa Barbara County (Lehman 2022, CDFW 2022b). Transient individuals during migration have rarely been found along streams that empty into the Goleta Slough in the 1980s and 1990s (Lehman 2022). This species is not expected to occur because there is no suitable riparian habitat and it is highly unlikely that any individuals would occur during migration.
- The **California red-legged frog** (*Rana draytonii*) is a federally threatened species that requires aquatic habitats for reproduction and inhabits aquatic sites most of the year. The types of aquatic habitats they use include seasonal and permanent ponds, intermittent and perennial streams, springs, well boxes, artificial impoundments (i.e., stock ponds, reservoirs), marshes, dune ponds and lagoons. Preferred aquatic habitat is characterized by dense shoreline or emergent vegetation, such as willows, cattails, and bulrushes, with still or slow-moving water at least 2.3 feet (0.7 meter) deep (Hayes and Jennings 1989). However, they also occupy ponds or pools with little or no emergent vegetation. Other features in stream habitats that appear to be important for refuge are undercut banks and willow rootballs (USFWS 2010). Ephemeral sites must retain water at least into July/August in order for the tadpoles to reach metamorphosis. In rare instances, California red-legged frog tadpoles have been found to overwinter and transform the following year (Fellers et al. 2001), but they generally metamorphose between July and September (Jennings and Hayes 1994). Sites that dry completely every few years may have higher quality habitat value because desiccation eliminates their predators, such as non-native fish (Centrarchids and Ictalurids), American bullfrogs (*Lithobates catesbeianus*) and crayfish (*Procambarus* sp.), and maintains higher quality breeding habitat by limiting dense growth of emergent vegetation along the margins (Scott and Rathbun 2001, Doubledee et al. 2003).

This species uses the mouths of streams subject to periodic tidal inundation. The frogs move up and down drainages, using slough and lagoon habitats when freshwater conditions are present, such as during winter when sandbars have washed out and there are substantial flows from precipitation (Rathbun et al. 1993). Adult frogs behaviorally avoid water with salinity levels greater than 6.5 parts per thousand (ppt) and can tolerate up to 9.0 ppt (Jennings and Hayes 1990, Rathbun et al. 1993). Reproduction does not take place in brackish water, but tadpoles can tolerate salinities up to 7.0 ppt (Rathbun et al. 1993). Laboratory studies have shown that salinity lower than 4.5 ppt is required for survival of embryos, and although egg masses in the field were often found to be laid in areas with 4.2 to 5.2 ppt, these likely did not survive (Jennings and Hayes 1990).

California red-legged frogs also use a variety of upland habitats. Adults can be far from water during the winter during migrations between aquatic sites or for aestivation; they move away from aquatic sites when they dry down in the late summer or fall; and, post-

metamorphic juveniles disperse away from aquatic sites where they remain in uplands for an unknown number of years. The adult migratory period is late-October through mid-May, and they are nocturnal and undergo movements at night (Bulger et al. 2003). They move into upland habitats in response to rain events (Christopher 2000, Bulger et al. 2003).

The California red-legged frog occurs throughout both coastal inland drainages and ponds in Santa Barbara County (Jennings and Hayes 1994). Santa Barbara County is part of the Central Coast Recovery Unit, which is considered to have "high" recovery status, indicating that there are large numbers of existing populations and areas of high habitat suitability, but is located outside of a core area of their distribution (USFWS 2002). They presently are documented to occur in several of the coastal creek systems in the Goleta area, including: Eagle Canyon Creek, Tecolote Canyon, Bell Canyon/Winchester Canyon, McCoy Canyon (tributary of Tecolotito Creek), San Pedro Creek, and a pond on a tributary to San Pedro Creek (CDFW 2022a).

This species is known to be extant in the middle reaches of the Tecolotito and San Pedro drainages, which flow into the Airport property. However, the modified conditions of the drainages through the developed areas of Goleta makes these reaches of poor suitability. Tecolotito Creek and San Pedro Creek localities are 3.7 and 3.3 miles (5.9 and 5.3 kilometers) respectively, from the action area, which are well beyond the known dispersal distance of the species. Recent surveys by SBCFCD during sediment removal activities at the basins in Carneros and Tecolotito Creeks did not detect this species (personal communication with Maureen Spencer). Based on known locations of red-legged frog being over three miles from the action area and ongoing surveys by SBCFCD not observing the species in the nearby sediment basins, the species is not expected to occur in this lower reach of the drainage system and would not be in the action area and affected by the project.

- The **foothill yellow-legged frog** (*Rana boylei*) South Coast Distinct Population Segment (DPS) is proposed for endangered status. This species inhabits foothill and mountain streams and rivers from sea level to approximately 5,000 feet in elevation, which flow through a variety of woodland, riparian, mixed conifer, chaparral and meadow habitats (USFWS 2021b). Their microhabitat is described as partly-shaded, shallow, low-gradient, with cobble to boulder-sized rocky substrate (Hayes and Jennings 1989, Gosolin 2010). Most populations breed along mainstem drainages and overwinter in tributaries (USFWS 2021b). Although they are usually found in perennial drainages, they can also be found in ephemeral and intermittent streams (Bourque 2008, Gosolin 2010). When the species occurs in ephemeral habitats, there are usually perennial reaches downstream and individuals move back and forth along the stream corridor. Migrations are made to and from breeding sites in late-April to early-May (GANDA 2008, Gosolin 2010). Breeding is usually in sunny, wide and shallow reaches of streams, with low velocity and rocky substrate (Kupferberg 1996). They time their egg-laying to avoid fluctuations in flow rate and attempt to select areas that will retain water through the larval period, which they return to annually (Kupferberg 1996, Gosolin 2010). Individuals usually remain close (within 10 feet) to the water's edge, and they select sunny areas with limited canopy cover, gravel bars, and riffles and pools (Hayes and Jennings 1989, Gosolin 2010). They are active both during the day and at night. The historical range of the DPS included the south coast of Santa Barbara County (USFWS 2021b). By 1981, all California Coast Range and coastal valley occurrences south of northern San Luis Obispo County to Los Angeles County had been extirpated (USFWS 2021b). This species is not expected to occur in the action area because it has been extirpated from this region and no suitable habitat is present.

- The threatened **vernal pool fairy shrimp** (*Branchinecta lynchi*) has not been recorded in the vicinity of the action area. A query of the CNDDDB revealed no records from the following quadrangles: Goleta, Santa Barbara, Little Pine Mountain, San Marcos Pass, Lake Cachuma, Dos Pueblos Canyon, Tajiguas, and Gaviota (CDFW 2022a). Their distribution as reported in USFWS (2007a) does not include the Santa Barbara County south coast and the nearest record is Cachuma Canyon north of Lake Cachuma. The USFWS iPac list generated species county wide compared to the action area, and due to USFWS staff shortages and excessive workloads, the computer generated list included a more extensive list of species than are expected to occur onsite. Temporary ponded water in the action area is likely to be too saline to support this species, as the wettest areas are dominated by halophytes (pickleweed and alkali weed) and the open, unvegetated flats were encrusted with salts. This species is not expected to occur in the action area because the site is outside of their known distribution and no suitable vernal pool habitat is present.
- **Contra Costa goldfields** (*Lasthenia conjugens*) is an endangered species associated with vernal pools, which do not occur in the action area as the only temporary ponded water is likely to be too saline as described above. This species was collected pre-development in 1879, 1909 and 1950 from the area that is now Isla Vista, and is thought to be extirpated from these localities due to development (CDFW 2022a). Additionally, the Santa Barbara south coast region is now outside of the current known distribution of the species. The nearest populations are from Fort Ord near Monterey Bay, and the majority of populations are from inland areas of San Francisco Bay (Calflora 2022). The USFWS (2013a) considers this species to be completely extirpated from Santa Barbara County, and therefore, it is not expected to occur in the action area.
- **Gambel's watercress** (*Rorippa [=Nasturtium] gambelii*) is an endangered species documented from only one locality in the site vicinity, which was from an unknown location "near the city of Santa Barbara", was last found in 1886 and is considered to be extirpated due to development (CDFW 2022a, USFWS 2022b). This species is associated with freshwater and brackish marshes, where it occurs on the margins of lakes, ponds and streams (USFWS 2022b). Although it once had a wide range in central and southern California, it is now considered to be reduced to two extant populations, on Vandenberg Air Force Base and Oso Flaco Lake (USFWS 2022b). Although potentially suitable habitat is present in the Goleta Slough, it is considered not expected to occur in the action area because the site is outside of the species' current range and it has not been observed through the various surveys on the action area.
- **Marsh sandwort** (*Arenaria paludicola*) is an endangered species that has not been recorded in the vicinity of the action area in the CNDDDB (CDFW 2022a) and there are no records from Santa Barbara County in Calflora (2020). It was historically known from 16 occurrences from San Francisco to Los Angeles counties, but has not been recorded in Santa Barbara County, and all but one of these occurrences are confirmed or presumed to be extirpated (USFWS 2020b). The USFWS identifies potentially suitable habitat in Southern California even though it has not been observed in the region. As such, the USFWS has included it in the iPac list for all of Santa Barbara County. It has been established at several new locations throughout its range from propagation and out-planting. One of these projects is being undertaken by the UCSB Cheadle Center for Biodiversity and Ecological

Restoration, with plants designated to be out-planted at the East Stork Wetland in the Goleta area. Other out-plantings have occurred in Marin and San Luis Obispo Counties (USFWS, 2019). The only known, extant, wild population is Oso Flaco Lake in San Luis Obispo County, well to the north of the action area (Calflora 2022, USFWS 2020b). This species is associated with freshwater swamps and marshes with perennial moisture and peat-type substrate (USFWS 2020b), and this type of habitat is not present in the project disturbance area. Additionally, because the site is outside of the species' native distribution and the disturbance area will not affect aquatic habitat with Carneros or Tecolotito Creeks, it is not expected to be affected by the proposed project.

- **Salt marsh bird's-beak** (*Cordylanthus* [=*Chloropyron*] *maritimus* ssp. *maritimus*) is an endangered species that is found in coastal salt marshes subject to high tidal influence, and it occurs at disjunct locations in central and southern California. It is currently known to persist at only seven sites, and the nearest to the action area is Carpinteria Salt Marsh (USFWS 2020c, CDFW 2022a). Field work for this analysis did not observe this species. Because the site is highly disturbed from Airport construction and maintenance, the small remnant elements of salt marsh habitat present within the action area are not suitable to support this species. Further, because the site is outside of the historic range of the species, it is not expected to occur in this area.

## 2.2 Federally Listed Species Known to Occur in or near the Action Area

Federally listed species determined to have potential to occur in the action area are based upon the background literature review coupled with site field surveys conducted over many years for various Airport projects. Information is provided on the natural history and status of these species used for the basis of this evaluation. Although focused surveys for these species were not conducted on the site for the preparation of this BA, numerous surveys have occurred on the action area in support of the wetland delineation and previous projects undertaken by the Airport to provide information as to the potential occurrence of the species and their potential to be affected by the project. The status of these species in the action area is based upon direct observation of site conditions in concert with a desktop review of past survey data and available ecological information.

### 2.2.1 California Least Tern

The California least tern (*Sterna antillarum browni*) is listed as endangered. This species is migratory, arriving along the central and southern California coast in mid-April to early-May and leaving in mid-October (CDFW 2022b). They breed along marine and estuarine shores on sandy beaches and gravelly shores away from human disturbance. Formerly, sandy beaches were the preferred nest sites, but due to human activity on beaches, they have switched to using mud and sand flats away from the ocean and anthropogenic habitats such as landfills and airports (USFWS 1985).

They form loose nesting colonies with average nesting colony size of 25 pairs (USFWS 2006a). Nests are small depressions in the sand or substrate and are often lined with small fragments of shells and pebbles (USFWS 1985). If initial nests fail, individuals may re-nest from mid-June to early August (USFWS 1985). Young are preyed on by coyotes, Norway rats, skunks, red fox, ravens, and crows, domesticated dogs and cats, and they are also susceptible to extreme weather (USFWS 1985). Fledglings accompany the adults at various shallow-water habitats, including freshwater

and estuarine marshes, before migrating south (USFWS 1985). They feed in shallow estuaries, bays, lagoons, sloughs and open ocean on small fish (CDFW 2022b). The majority of least tern foraging in the ocean is within 1 mile of shore in water less than 60 feet deep (Atwood and Minsky 1983). Individuals roost at night on beaches within 0.25 mile of nesting colony sites prior to incubating eggs, and thereafter on the actual nest site (USFWS 1985). They are gregarious, and in addition to nesting, they forage, roost and migrate in colonies (USFWS 2006a).

Until the late 1950s, this species bred along the Santa Barbara County south coast. Former breeding sites were located in Carpinteria, Summerland, Santa Barbara and Goleta (Lehman 2022, CDFW 2022a). They continue to breed, although often with poor success, along the Santa Barbara County north coast. Breeding took place at what is now Goleta Beach County Park into the 1930s and near Devereux Slough until 1959/1960. Thereafter, a period occurred in which they only occurred in this region as very rare transients during migration. At the time the species' recovery plan and 5-year review were prepared, no breeding pairs were known in the Santa Barbara County south coast (USFWS 1985, 2006a). Nesting at Devereux Slough/Coal Oil Point Reserve was documented to resume around 2005, but in recent years only individuals have been observed during the summer without nesting on the reserve (Lehman 2022, CDFW 2022a, The Cornell Lab of Ornithology 2022). They have continued to be very rare spring migrants and uncommon post-breeding visitors at Carpinteria Salt Marsh, Santa Barbara harbor, UCSB lagoon, Coal Oil Point, and Devereux Slough, and the "Goleta" area (Lehman 2022). There are records of several individuals from 2018 on the UCSB campus close to Goleta Slough, and numerous records over the years from Campus Lagoon and Goleta Point (The Cornell Lab of Ornithology 2022). Focused surveys for this species at 15 locations on the Airport property were conducted four times per month over the period of one year starting in December 2014, and no detections were made (Dudek et al. 2016). Suitable foraging habitat is present in Goleta Slough and the streams in and adjacent to the action area, and could be used periodically by California least terns during migration. They are unlikely to breed on the nearby beaches at Goleta Beach County Park and UCSB due to human disturbance.

Because they have been documented to breed in the region and potential exists for the species to utilize the Goleta Slough as foraging and nesting habitat, a potential exists for individuals to occur in the action area. Individuals have been recorded in recent years at sites surrounding the action area, and therefore, they could occur in the action area as transients while foraging or moving through the region, as well as nesting in slough habitats within close proximity to the action area.

### 2.2.2 Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*) is an endangered species and an obligate riparian breeder. This species was historically widespread throughout riparian woodlands of the Central Valley and low elevation river valleys to Baja California (USFWS 1998). It currently occurs below 2000 feet in elevation in dense valley foothill riparian habitat from Santa Barbara County south with the largest number of territories in San Diego County, extending east through Riverside and San Bernardino counties (USFWS 2006b). They are migratory, arriving from wintering areas by late-March and leaving by the end of August (CDFW 2022b). Egg laying is May to early-June. This species usually breeds in dense, shrubby riparian forest near permanent water or intermittent streams. They are associated with willow, cottonwood, mulefat, blackberry, mugwort and mesquite (Olson and Gray 1989, CDFW 2022b). Nests may also be located on terraces in the floodplain that are vegetated by upland species such as summer mustard, coast live oak, star thistle and annual grasses, and at the edge of riparian and upland habitats (USFWS 1998, Olson and Gray 1989). Microhabitat components include complexity in vegetation species and heights, shrubby willows in the

understory, and relatively high cover in the overstory (Olson and Gray 1989). Early successional riparian habitat provides dense shrub cover for nesting and a structurally diverse canopy for foraging (USFWS 1998). They feed on insects that they glean from foliage and branches within 18 feet of the ground (USFWS 1998).

Although historically a common and widespread summer resident throughout riparian habitats in Santa Barbara County, least Bell's vireos currently breed in only a few locations along the Santa Ynez River. The middle Santa Ynez River breeding population, which was between the confluence of Mono Creek to Gibraltar Reservoir, was fairly substantial in the 1980s and 1990s but declined rapidly in the early 2000s and has not recovered (Lehman 2022). The species' population in Santa Barbara County is considered to have declined by 79% since its post-listing peak in 1986 (USFWS 2006b). The decline has been attributed to loss of riparian habitat and increased brood-parasitism by brown-headed cowbirds. They are now considered to be a casual fall migrant on the Santa Barbara south coast (Lehman 2022). There is a record of a least Bell's vireo from the action area — one individual was reported as singing and potentially establishing breeding territory in the willows along Carneros Creek north of runway 7-25, from May 18 to June 10, 2005 (Dudek 2012; SBMNH rare bird records). Individuals have been found at Atascadero Creek near Goleta Slough in 2000 and 2002, and Devereux Slough in 2007 (Lehman 2022, The Cornell Lab of Ornithology 2022). Another individual was reported from the Bella Vista area of northern Goleta in 2016 (The Cornell Lab of Ornithology 2022). No records of this species from the action area are in the CNDDDB (CDFW 2022a). This species could occur onsite as a transient during migration, and there is a chance that they could breed in more dense riparian habitat along Carneros Creek, such as near the sediment basin. Suitable habitat for this species would not be directly affected, but potential indirect effects could occur with construction activities occurring near the riparian scrub habitat.

### 2.2.3 Tidewater Goby

The tidewater goby (*Eucyclogobius newberryi*) is a federally endangered species that is a small (rarely exceeding two inches long), gray brown, euryhaline (salt-tolerant), benthic fish. The species is endemic to coastal lagoons, estuaries, stream mouths, and backwater marshes of California, and rarely occurs in the open ocean. It historically occurred from Del Norte County to San Diego County (Swift et al. 1989). Of 135 known localities, the species is considered extirpated from 16 percent and at risk at up to 50 percent of these sites (USFWS 2005, 2013b).

All life stages of the tidewater goby are found within the estuarine habitat of lower reaches of coastal streams (USFWS 2005). These habitats are dynamic environments due to sandbar formation across stream mouths during late spring when stream flow declines and a lagoon forms where sediment settles out, followed by scouring flows in winter that wash out the sediment and sandbar. Suitable habitat conditions for tidewater goby include shallow water with little to no flow, and fine sediment such as sand, mud, or muddy gravel. They tend to avoid currents and concentrate in slack-water areas with depths less than 3.3 feet (1.0 meter) (USFWS 2005). The tidewater goby is most commonly found in waters with relatively low salinities (less than 10 to 12 ppt), but can tolerate a wide range of salinities and is frequently found in coastal habitats with higher salinity levels up to 42 ppt (USFWS 2005). They also occur upstream from brackish habitats in areas with salinities less than 0.5 ppt (USFWS 2005). They are able to survive dramatic changes in salinity and dissolved oxygen caused by changing input of tidal flow and freshwater sources (Swift et al. 1989).

In coastal areas with steep topography and relatively low precipitation, habitats occupied by

tidewater goby may only be a few acres in size and extend a few hundred feet inland from the ocean. Where topography is more gradual and precipitation higher, and waterways are larger, the coastal lagoons or estuaries that they inhabit may be hundreds of acres in size including extensive backwater marshes (USFWS 2005). Tidewater gobies migrate upstream into tributaries as far as 0.5 mile from the estuary (USFWS 2005). In some areas, the tidewater goby can occur 1.6 to 7.3 miles upstream from the ocean environment (USFWS 2005).

Reproduction peaks in the early-spring and mid-summer, but may occur year-round (USFWS 2005). Males dig nests in sand or silt substrates, and females attach eggs to the substrate (Swift et al. 1989). Females are more brightly colored and aggressive, and they roam widely courting individual males at their burrows (Swift et al. 1989). Males remain at the burrows to guard the eggs and care for the embryos for 9 to 11 days until they hatch (Swift et al. 1989). Larvae inhabit the water column, and as they mature, they occupy benthic areas. Individuals live only about one year. They feed off the substrate on ostracods, amphipods, snails and chironomid larvae and pupae (Swift et al. 1989).

Populations are highly variable and are occasionally extirpated by dry conditions or extreme floods, and thereafter are recolonized by individuals from other nearby streams (Lafferty et al. 1999). Groups of local populations are best characterized as metapopulations (Lafferty, et al. 1999, USFWS 2013c). Many populations along the California coast seemingly isolated by open ocean are subject to intermittent extirpation and are recolonized during chance events in which individuals from other area streams are washed into the ocean and find their way back to those streams (USFWS 2005). Therefore, some level of regular or intermittent migration between populations in a region is required to maintain a metapopulation.

The tidewater goby is known to inhabit coastal reaches of creeks along the coast of Santa Barbara County. This species was documented in Goleta Slough in the 1960s (Speth et al. 1970), but was not detected during collecting efforts in the 1990s and was considered extirpated in 2005 (USFWS 2005). However, tidewater gobies were found in Tecolotito and Carneros creeks in 2006 for the Airport's Creek Realignment Project, and formal consultation with USFWS was initiated resulting in a Biological Opinion for this species (USFWS, 2006). Pre-construction clearance surveys for tidewater gobies and other native fishes were conducted in August and September 2006 throughout all areas of Tecolotito and Carneros creeks that were affected by the project, and 1,502 tidewater gobies were captured and relocated downstream of the work area (URS 2007, 2008a). Tidewater gobies were found as far upstream as the sediment basins near Hollister Avenue, and the highest numbers of gobies were captured from the upstream portions of Tecolotito Creek. Post-creek realignment, the species was detected in the new segments of both streams during monitoring surveys (URS 2007, 2008a; GSMC 2015). Following an algal bloom that caused anoxic conditions, sampling failed to produce tidewater gobies in August 2008 (URS 2008a), but post-construction surveys to evaluate the success of the project's relocation efforts documented 57 adults and 214 juveniles in September 2010 (CDFW 2022a). Annual surveys by SBCFCD have confirmed the presence of tidewater goby in this area (personal communication with Maureen Spencer, SBCFCD, 2021).

During a tidal basin habitat creation project adjacent to Tecolotito Creek in the northwestern end of Goleta Slough, one adult was captured in 2010, and one adult and four juveniles in 2011 (CDFW 2022a). This species is presumed to be present in Tecolotito and Carneros creeks throughout and adjacent to the action area based on the presence of suitable habitat. The CNDDDB shows tidewater goby locations from the Tecolotito Creek sediment basin downstream to where Tecolotito Creek

empties into the Goleta Slough, and extending up Carneros Creek a short distance (Figure 4). Tidewater gobies have also been detected in Atascadero Creek (Figure 4), but surveys of San Jose and San Pedro creeks in August 2008 did not detect the species there (URS 2008b, City of Santa Barbara 2010, CDFW 2022a). Other nearby localities include Eagle Canyon Creek, Tecolote Canyon, Bell Canyon (the lower 1.5 miles of Winchester/Ellwood Canyon), Devereux Slough, Arroyo Burro, Mission Creek, and Sycamore Creek (CDFW 2022a), indicating that there is potential for recolonization of suitable coastal streams in the Santa Barbara/Goleta area if local extirpations occur.

Project activities will occur away from suitable habitat, and the creek corridors will be protected during construction to avoid direct impacts to the species. Drainage infrastructure is present in the action area that directs surface runoff into adjacent creeks. While drainage inlets will be protected during construction, should protection measures be compromised, it is possible that sediment laden water could discharge into the neighboring aquatic habitat resulting in impacts to this species and its habitat.

## **2.3 Critical Habitat**

### **2.3.1 Western Snowy Plover**

Designated critical habitat for the Pacific Coast western snowy plover includes sandy beaches, dune systems immediately inland of active beach faces, salt flats, mud flats, seasonally exposed gravel bars, artificial salt ponds and adjoining levees, and dredge spoil sites (USFWS 2012). Critical habitat Unit CA 34 Devereaux Beach comprises 52 acres (USFWS 2012). Its eastern limit is Isla Vista County Park and it follows the beach around Coal Oil Point to the beach adjacent to the end of Santa Barbara Shores Drive, for a distance of 1.8 miles (USFWS 2012). The project site does not occur within critical habitat for the snowy plover, and the site is 1.5 miles to the southeast of the limits of the critical habitat unit (Figure 4).

### **2.3.2 Tidewater Goby**

The final ruling on critical habitat for the tidewater goby was established by the USFWS on February 6, 2013. This ruling directed the following specific physical or biological features essential for the conservation of tidewater goby as:

- Space for individual and population growth and for normal behavior — consisting of saline aquatic habitat; appropriate water depth, velocity and temperature; freshwater habitat; and, sandbars.
- Food.
- Cover or shelter.
- Sites for breeding, reproduction, or rearing (or development) of offspring.
- Habitats protected from disturbance or representative of the historical, geographical, and ecological distributions of the species.

Based upon the current knowledge of the physical or biological features and habitat characteristics required to sustain this species through all of its life history requirements, the USFWS determined the following PCE for the tidewater goby:

1. Persistent, shallow (0.3 to 6.6 feet) still to slow-moving lagoons, estuaries, and coastal streams with salinity up to 12 ppt, which provide adequate space for normal behavior and individual and population growth that contain one or more of the following:

- (a) Substrates (e.g., sand, silt, mud) suitable for the construction of burrows for reproduction;
- (b) Submerged and emergent aquatic vegetation, such as pondweed (*Potamogeton pectinatus*), ditch grass (*Ruppia maritima*), cattails (*Typha latifolia*), and tules (*Scirpus* spp.), that provides protection from predators and flow events; or,
- (c) Presence of a sandbar(s) across the mouth of a lagoon or estuary during the late spring summer and fall that closes or partially closes the lagoon or estuary, thereby providing relatively stable water levels and salinity.

Goleta Slough comprises Critical Habitat Unit SB-9, and the area designated is a total of 190 acres. Although the slough was considered to be unoccupied at the time the species was listed and the streams that converge in Goleta Slough were originally excluded from designated critical habitat in 2008, the finding of tidewater gobies during the Airport's Creek Realignment Project resulted in the final designation including all five creeks that flow into it (USFWS 2013c). This unit is considered to be essential for the conservation of the species because it provides habitat, allows for connectivity between source populations from nearby units, supports gene flow, and provides for metapopulation dynamics within the Conception Recovery Unit, as described below (USFWS 2013c). This unit meets the requirement of the PCE needed support the tidewater goby. PCE 1a and 1b occur throughout the unit, although these resources may change in precise location over time. A sandbar across the mouth of the lagoon is present on an intermittent basis, meeting the requirement of PCE 1c (USFWS 2013c). Tidewater goby critical habitat in and near the action area includes all tidally influenced areas of Goleta Slough and the channels of Tecolotito and Carneros creeks up to Hollister Avenue (Figure 4). Therefore, the PCE occurs in the portion of Carneros Creek within the action area and the portion of Tecolotito Creek adjacent to the action area.

Goleta Slough is listed within the Conception Recovery Unit, Sub-unit CO 3 in the Recovery Plan for this species (USFWS 2005). This sub-unit extends from Point Arguello along the Santa Barbara south coast to the Sea Cliff (Rincon Creek) area of Ventura County. Of the 28 small areas of suitable habitat along this region, 24 were known to be occupied at the time that the recovery plan was developed. Goleta Slough is considered to be Sub-unit CO 3r, and was one of the sites where they had not yet been detected, but that was considered to have potential for reintroduction. The extent of suitable habitat in Goleta Slough is considered to be five (5) to 12.5 acres, which is a relatively large area (USFWS 2005). However, Goleta Slough is considered to be negatively affected by pollutants, habitat degradation, and predators/competitors (USFWS 2005).

### **3.0 Project Description**

The Taxiway H Extension Project would correct the existing non-standard intersection of Taxiway C with Runway 7-25 by extending Taxiway H to the west, and has the goals of increasing Airport safety and compliance with FAA standards. The intersection has been designated a "hot spot" by the FAA, which is a location with the potential risk of collision or runway incursion. This project has been included in the Santa Barbara Airport Master Plan (Master Plan; Coffman Associates, Inc. 2014). It would involve the construction of the extended taxiway, existing pavement would be removed at the site of the current intersection, a glideslope antenna would be relocated and a hold pad would be constructed. The project incorporates mitigation and minimization measures for

federally protected species, which are incorporated into the project description. Because protected wetland resources would be impacted, compensatory mitigation for those impacts will be required as part of the Clean Water Act permitting process, and those areas proposed for habitat restoration are included within the action area evaluated for this project.

### **3.1 Description of the Proposed Action**

The proposed project would extend the Airport's existing partial parallel Taxiway H west 3,050 feet to the Runway 7-25 approach end, providing a full parallel taxiway on the north side of Runway 7-25 (Appendix A). The new taxiway would be 50 feet wide with 20-foot shoulders (90 feet wide in total). Taxiway H would connect at the Runway 7 threshold and include a holding bay. Taxiway C would be closed south of Taxiway H. A new runway-Taxiway H connector would be constructed between Taxiways N and F.

The following actions would also be completed as part of the proposed project:

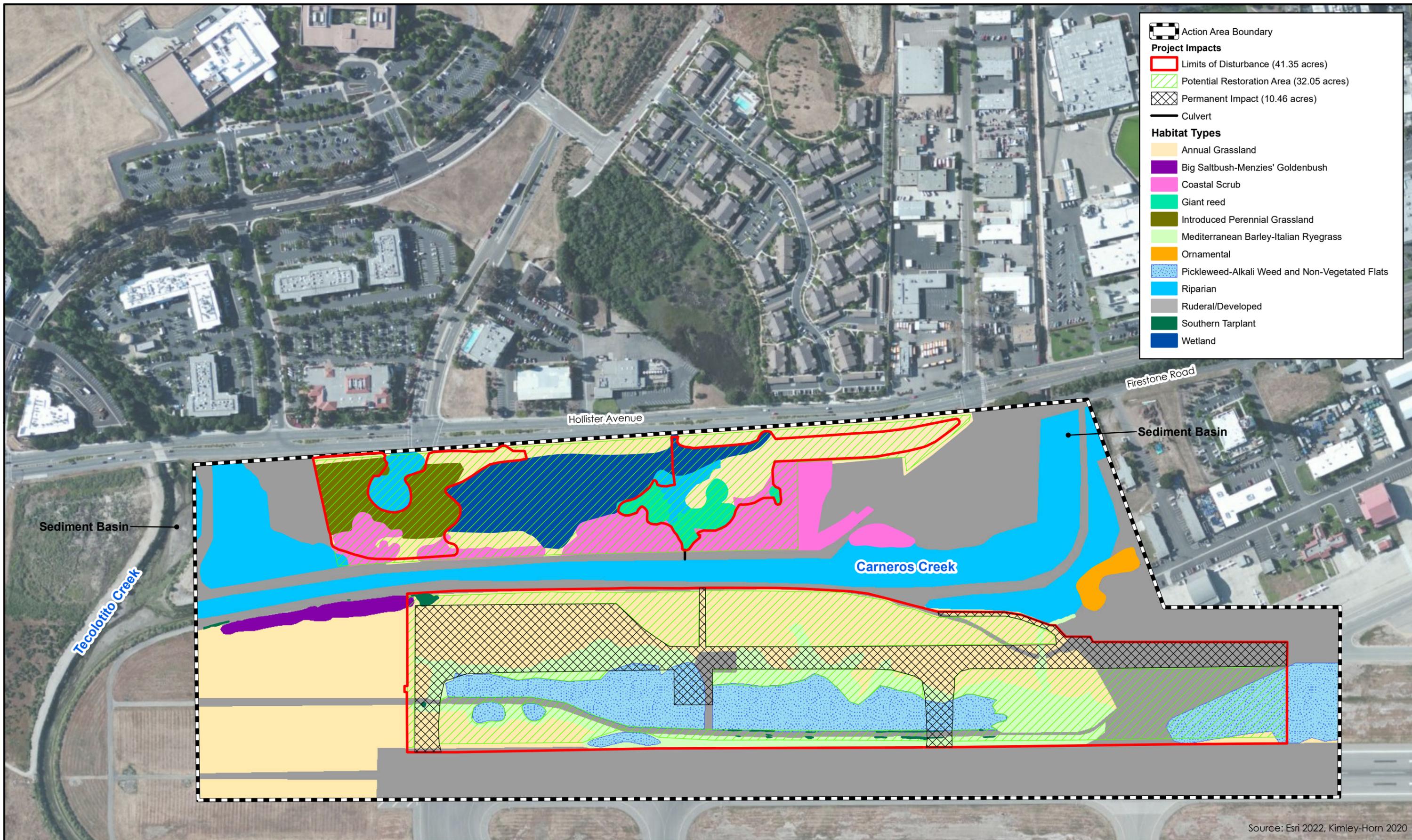
- Remove pavement associated with Taxiway C and existing apron pavement south of extended Taxiway H.
- Relocate glideslope antenna out of the path of the extended Taxiway H.
- Construct Taxiway H holding pad at the approach end of Runway 7-25.
- Relocated runway and taxiway edge lighting and signage, and remark pavement as part of the removal and placement of pavement.
- Replace existing underground storm drains parallel to Runway 7 and south of proposed Taxiway H (in-kind) with the inlets adjusted to new infield grades.
- Install additional storm drainpipes or swales north of the proposed Taxiway H in the vicinity of the existing ditch conveying stormwater to Carneros Creek. (No work would occur within the existing outfall to Carneros Creek.)
- Regrade the areas between the runway and the new taxiway and north of the new taxiway to FAA taxiway safety standards. Vegetation temporarily impacted during re-contouring would be re-established.
- Enhance an existing vegetated area between Carneros Creek and Hollister Avenue by removing non-native species, such as giant reed (*Arundo donax*) and Harding grass (*Phalaris aquatica*). Contour grading to promote positive drainage toward Carneros Creek where existing culverts are located would also occur to remove standing water that currently attracts waterfowl. The area would then be seeded with native species characteristic of seasonal and perennial wetland habitat consistent with wetland areas impacted by the taxiway project. A set of management guidelines would be developed to assist airport personnel with maintenance of the area, including seasonal removal of non-native vegetation, mowing, and trash/debris removal, as well as removal of sediment at the culverts. This habitat restoration would not only mitigate wetland habitat impacts of the proposed project but would reduce flooding and wildlife hazards currently present in this

area. This area will be included as an appropriate area for wetland habitat mitigation as part of the permitting requirements of the U.S. Army Corps of Engineers (Clean Water Act Section 404), as well as local and state agency requirements.

The proposed project's overall area of disturbance would be 59 acres; the civil design grading limits (i.e., areas of major construction) would be 20 acres (refer to Appendix A). The proposed project would remove 0.8 acre of apron and replace it with taxiway and shoulder pavement. Another 1.3 acres of apron and Taxiway C pavement would be removed. Overall, 7.0 acres of taxiway and 3.0 acres of taxiway shoulder pavement would be constructed. The net increase of impervious surface from the proposed project would be 7.9 acres. A contractor staging area would be provided on the western end of the existing north GA ramp; haul routes would occur on existing paved areas and dirt roads already present on the Airport. A former landscaping nursery located south of Hollister Avenue would be repurposed as a staging area for the proposed habitat restoration activities along Hollister Avenue.

The project will result in 10.46 acres of permanent habitat impacts associated with airfield improvements, primarily impacting non-native annual grassland (Figure 3). Temporary impacts would occur from grading during construction, and these areas would be restored using native species appropriate for airfield management practices (Figure 5). The existing acute-angled entrance to Runway 7-25 at the end of Taxiway C, included in ruderal/developed habitat, would have pavement removed and restored with native habitat, and thus, fall within the temporary impact area shown on Figure 3. Habitat restoration will also occur in the temporarily impacted areas surrounding the new taxiway (Figure 5). Temporarily disturbed ground will be returned to a natural grade and seeded with appropriate native species that can be managed consistent with current airport operations and maintenance to meet requirements established in the AC 150/5200-33C *Hazardous Wildlife Attractants on or near Airports*.

The proposed project would be accomplished in several phases to minimize disruption to Airport operations and use of the primary runway. The proposed project is anticipated to take a total of 13 months to complete. Night work would be used to avoid daytime closures of Runway 7-25 when construction is scheduled to occur within the runway safety areas.



Source: Esri 2022, Kimley-Horn 2020



**Taxiway H Extension Project**  
Santa Barbara Airport

**Figure 5**  
Habitat Restoration Overview Map

### **3.2 Minimization Measures for Federally Listed Species Known to Occur in or near the Action Area**

The project as proposed includes a suite of pre-construction survey requirements to avoid and minimize impacts to federally listed species. The measures to avoid potential direct and indirect impacts on special-status bird species are incorporated into the project description. As such, construction shall not occur during the avian breeding season, February 1 to September 1, unless nesting bird surveys conducted by a qualified biologist confirm that no active nests of federal-listed species are present within 500 feet of the disturbance area. Consistent with avoidance measures developed for the Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), pre-construction surveys for nesting birds are to be conducted by a qualified biologist every seven days for eight consecutive weeks prior to the initiation of construction activities. This level of survey effort would be sufficient to detect bird species identified herein to ensure avoidance of any active nest site of a federal-listed species. Construction activities shall not begin until the following have been met: 1) any active nests identified within 500 feet from the disturbance limits become inactive; 2) the young have fledged and are no longer reliant on the nest; 3) the young no longer require being fed by the parents; and, 4) the young have left the area and will not be impacted by the project.

Initial ground disturbance activities will be monitored by a qualified biologist until all potentially suitable nesting habitat has been removed. After construction activities begin and all surface disturbance has occurred, the action area shall be monitored a minimum of once a week by the qualified biologist. Monitoring is to include evaluating construction noise levels in addition to other best management practices (BMPs) such as the efficacy of erosion controls (e.g., silt fencing) and dust suppression. These measures would minimize project impacts on federally listed bird species known to occur in or near the action area (i.e., California least tern and least Bell's vireo), and as such, are considered in the evaluation of effects detailed in Section 4.0 below.

The proposed project does not contain minimization measures for direct effects on the tidewater goby because no activities would be conducted in creek corridors where the species may be present in aquatic habitat. While the potential exists for the project to indirectly affect suitable aquatic habitat in the adjacent creeks from uncontrolled stormwater runoff containing sediment or pollutants, construction of the project will comply with the General Construction permit from the Regional Water Quality Control Board (RWQCB), which includes erosion and sediment controls to protect drain inlets and slopes from sediment laden water entering the creeks. In addition, measures to be developed in the Coastal Development Permit (CDP) from the CCC would be expected to include a detailed erosion and sediment control plan prepared by a qualified individual along with a spill response plan that would be sufficient to minimize construction-related effects to potentially suitable tidewater goby habitat in Carneros Creek. All drain inlets will be protected during construction and protection measures actively monitored by construction personnel.

Another key component to the protection of federally-listed species is the incorporation of an environmental awareness training program. A qualified biologist will prepare a Worker Environmental Awareness Program that will be presented to all project personnel. This program will detail measures to avoid and minimize impacts on federally-listed species and other important biological resources in the action area. It will include a description of all special-status species potentially occurring in the action area and their natural history; the status of the species and their protection under environmental laws and regulations; and, the penalties for take. Protocols will

also be provided for site personnel to use should a federal-listed species be found on the project site during construction.

#### **4.0 Effects**

The overall action area is regularly maintained and mowed to provide clearance for Airport operations and to discourage wildlife use, and therefore has minimal value as wildlife habitat that could support listed species. Although the TOFA is specified as 93 feet, the current management practice involves mowing up to the access road along the outer edge of the Carneros Creek levee. Therefore, the project will be constructed entirely in an area that is human modified and frequently disturbed. Despite the regular maintenance, some of the vegetation that will be impacted would be classified as wetland (KMA 2020), and the proposed project would result in the permanent loss of approximately 5.98 acres of Annual Grassland, 1.92 acres of Mediterranean Barley-Italian Ryegrass grassland, 0.61 acre of Pickleweed-Alkali Weed and Non-vegetated Flats, and 1.95 acres of Ruderal/Developed land (Figure 3). Wildlife species that occur in open habitats could use this area on a transitory basis, and may be affected by construction activities associated with the project. An in-depth analysis of these potential effects on federally protected species is provided in the sections below.

The new taxiway would not be expected to result in additional affects to listed wildlife species since the Airport will continue to implement the Wildlife Hazard Management Plan (WHMP; City of Santa Barbara 2017b). The native seed mix to be used in restoration of temporarily disturbed areas adjacent to the new taxiway will be tailored to promote an increase in biodiversity with herbaceous plants that can be mowed on a regular basis to ensure that low vegetation height can be maintained throughout the year consistent with recommendations in AC 150/5200-33C. Hazing will continue to be used after the project is constructed to decrease the occurrence of birds within the airfield. Operations staff haze flocks of birds near the runways using vehicles and a horn. When this technique is not effective, Airport Patrol may fire shotguns with blanks/cracker rounds to deter birds from the site. The response by personnel to birds on the airfield varies based upon risk, and because birds hazed from one location may fly a short distance to another area on the airfield where they are more of a hazard (Dudek et al. 2016). Hazing activities would continue to disrupt the behavior of birds on the airfield, and are likely to increase their chance of survival by avoiding airplane strike.

#### **4.1 Direct and Indirect Effects**

##### **4.1.1 California Least Tern**

California least terns are known to breed at the nearby Devereux Slough, and are documented from locations near the action area during migration. Individuals could be present on a transitory basis while moving along the coastline or feeding in the Goleta Slough. The openness of the habitat due to mowing, the presence of mud flats, and the fact that this species has started breeding in disturbed areas, increases the chance that breeding potentially could occur in close proximity to construction activities.

Nesting of the California least tern is not expected to be affected by construction of the project because the project contains minimization measures that would require nesting bird surveys and avoidance of active nests should construction activities take place during the nesting season. Not covered in the effects analysis for this project is the potential impacts to nesting and foraging

individuals that could be affected by ongoing maintenance activities (i.e., mowing), since the taxiway and runway areas will continue to be mowed on an annual basis. Therefore, this risk will not change as a result of the project. Similarly, they could be hazed causing a disruption of normal activities, but this activity is on-going and would not increase because of the project. Least terns may also suffer mortality from airplane strikes during migration and/or foraging within the aquatic habitats nearby, but the construction of the taxiway is not related to increasing the number of flights from the Airport.

The construction of the paved taxiway will result in the permanent loss of approximately 8.51 acres of low quality, atypical breeding habitat. Habitat restoration activities will be provided for the loss of habitat for the taxiway project (shown on Figure 5), but these areas would still be subject to regular maintenance, mowing and hazing. Sedimentation and other construction-related water quality effects are not expected to reach the downstream sections of Goleta Slough because the project will be required to meet stormwater standards established by the City and the City of Santa Barbara's Stormwater Management Plan and the Airport's existing Stormwater Pollution Prevention Plan (SWPPP). In addition, permit requirements by the USACE, RWQCB and CCC to be employed during construction will also help minimize the potential for water quality to affect this species habitat or prey. Drainage and water quality protections including the use of BMPs (protection of drain inlets during construction) and native vegetation will ensure water quality is not adversely affected during project construction. Given the action area's marginal habitat for this species as well as the construction disturbance footprint's proximity to potential nesting habitat, a may affect, but not likely to adversely affect determination was made for the proposed project due to the potential of individuals to occur in the action area and nesting to occur in proximity to the work area and be indirectly affected by construction activities.

#### 4.1.2 Least Bell's Vireo

An observation of an individual vireo calling during the breeding season indicates suitable nesting habitat may be present in the riparian corridors along Carneros and Tecolotito Creeks within or adjacent to the action area. The presence of suitable habitat creates potential for this species to occur in or near the action area during the spring migration and summer breeding seasons. If construction activities take place while vireos are breeding, their nesting behavior could be disrupted, and eggs and young could suffer mortality. Given the avoidance and minimization measures established to protect nesting birds (i.e., pre-construction surveys, nest buffers, and environmental awareness training), least Bell's vireo breeding activities are not expected to be affected by construction of the project. Construction of the taxiway will not directly remove riparian breeding habitat or foraging habitat along the two creeks, but will result in work occurring within 100 feet of riparian habitat and potential to affect nesting due to noise and disturbance in close proximity. Individuals could also occur on a transitory basis in the action area during migration, and be present when construction activities will take place. Individuals could be injured or killed by equipment that will be used to construct the taxiway and other associated activities.

Habitat restoration activities will occur as a component of this project in the area to the north of Carneros Creek. This will involve non-native vegetation removal and minor grading in an area with non-native and native habitat types (Figures 3 and 5). In particular, 0.36 acre of riparian scrub would be temporarily affected during the removal of giant reed. Avoidance and minimization measures including the use of pre-construction surveys and nest buffers will be implemented to ensure bird nesting and transient individuals are not affected. Habitat effects in the northern part of the action area will be temporary as the site will be restored using native species. Therefore, a

may affect, but not likely to adversely affect determination was made for least Bell's vireo for the construction of the proposed project. due to the potential of individuals to occur in the action area and nesting to occur in proximity to the work area and be indirectly affected by construction activities.

#### 4.1.3 Tidewater Goby

The limits of disturbance for the taxiway are planned to be at least 80 feet from the Carneros Creek channel, and would maintain an approximate 20-foot setback from the top of its southern bank. Some grading during construction may extend onto the berm where the dirt access road is located, and BMPs will be in place to minimize encroachment. The action area is located entirely within the 100-year floodplain, and the western portion occurs within the mapped Floodway Area of Carneros and Tecolotito creeks. The Airport's existing storm drain system is comprised of surface swales, drainage inlets, concrete pipes, and outfall structures that drain into the streams that flow into Goleta Slough. Ponding periodically occurs throughout the action area, which is influenced by the tide, groundwater and the water levels of the creeks at the storm drain outlets (City of Santa Barbara 2017a). The project would maintain vegetated areas around the drain inlets to minimize pollutant laden runoff from adversely affecting water quality in Carneros Creek and downstream in the slough. The storm drain inlets will be protected during taxiway improvements to avoid affecting tidewater goby critical habitat. The project will maintain positive drainage away from runway, taxiway, and safety areas to reduce impounded stormwater, and airport maintenance will continue to mow infield areas to a minimum of seven (7) inches.

If not properly protected during the construction phase, drainage infrastructure could discharge uncontrolled stormwater runoff containing sediment and/or pollutants that would negatively affect aquatic habitat supporting tidewater goby in Tecolotito and Carneros creeks. It is also possible that sediment laden water could impact prey resources and thereby affect tidewater gobies in the Goleta Slough that are not present in the action area. Because the project must comply with the City of Santa Barbara's Stormwater Management Plan and the Airport's existing SWPPP, and construction BMPs such as erosion and sediment controls will be required through the project's General Construction Permit to be issued by the RWQCB and LCP policies through the issuance of the CDP, these measures would minimize potential impacts of construction on water quality and aquatic habitat in the creeks. Because the proposed action would not affect aquatic habitat where tidewater gobies could occur, there would be no direct effects during construction. A may affect, but not likely to adversely affect determination was made given the low potential for contaminated runoff entering a storm drain inlet and being discharged to the creek during construction.

#### 4.1.4 Tidewater Goby Critical Habitat

The PCE of tidewater goby critical habitat is *"Persistent, shallow still-to-slow-moving lagoons, estuaries, and coastal streams with salinity up to 12 ppt that contain one or more of the following:*

- a) *substrates (e.g., sand, silt or mud) suitable for the construction of burrows for reproduction;*
- b) *submerged and emergent aquatic vegetation that provides protection from predators and high flow events; and,*
- c) *presence of a sandbar across the mouth of a lagoon or estuary during the late spring, summer, and fall"* (USFWS 2013c).

The proposed action is not expected to directly affect the PCE of tidewater goby critical habitat

because no activities will be conducted within aquatic habitats of the Goleta Slough or its tributary streams. There is potential for adverse effects on water quality due to surface water runoff through the storm drain system during construction of the taxiway, and surface water carrying hazardous substances may affect tidewater goby habitat. Runoff from the taxiway and runway areas will still be directed into vegetated swales that drain into the storm drain inlets that empty into Carneros Creek. Runoff on the northern side of the taxiway and hold pad would be maintained onsite and not allowed to directly discharge to the creek. The proposed action includes habitat restoration for wetland and upland habitats, which would beneficially affect tidewater goby habitat within the designated critical habitat area by removing invasive species and increasing native vegetation that can filter and clean contaminated water from entering the creek channels.

#### 4.2 Cumulative Effects

The federally-listed species evaluated in this BA are dependent on the natural resources within the Goleta Slough ecosystem. The physical structure and ecology of Goleta Slough has been heavily modified by human disturbance in the watersheds that flow into the slough, which resulted in filling in the open water bay, followed by intentional filling and diking to prevent tidal inundation and create buildable lands. These modifications have greatly reduced the estuarine habitat and the area that freshwater mixes with saltwater across a periodically flooded wetland community, such as is required by the tidewater goby. Drainages flowing into the slough are channelized and surrounded by berms, with limited areas of riparian and freshwater marsh habitat that can support birds such as the California least tern and least Bell's vireo. On-going flood control measures include dredging of the channels and removing the sandbar that naturally forms across the mouth of the slough, and these activities negatively affect the habitat for federally listed species known to occur in or near the action area. Development of the City of Goleta and UCSB have removed upland habitats surrounding the slough that would otherwise buffer the effects of development in the area. Expansion of the Airport has continuously included modifications to the structure of the slough and its wildlife as required for airport safety issues and for growth of facilities to meet demand. Environmental laws and regulations protecting wetland habitats have required several wetland creation and restoration projects in the slough in which brackish marsh species have been planted and tidal circulation re-established. Although the habitat functions of the Goleta Slough are greatly altered, it is an important regional biological resource that provides habitat for a variety of estuarine, aquatic, and avian species.

Development in the Goleta Slough is guided by principals outlined in the *Goleta Slough Area Sea Level Rise and Management Plan* (GSMP; GSMC 2015) as well as other local plans and guidance documents. The GSMP details that the risk of flooding and consequently risks to infrastructure and habitats will continue to increase as a result of climate change and sea level rise. Higher sea water levels are predicted to restore intertidal conditions to much of the slough habitats south of the runway that have been cut off from tidal flow through channelization and diking. Aside from these climatic factors that are forecast to affect Goleta Slough, proposed projects anticipated for the future are those contained within the Airport Master Plan (City of Santa Barbara 2017a) and in the City of Goleta (2023) Cumulative Projects List (February 1, 2023) as follows:

- Other Airport safety improvements detailed in the Master Plan include modifications within the footprint of already developed areas of the property, such as changes in taxiway geometry at hot spots; improving taxiway shoulders and lighting; removing an unnecessary, displaced threshold on Runway 15L; upgrading a section of perimeter security fence along South Fairview Avenue; realigning a portion of Taxiway B in the vicinity of the terminal;

removal of existing connector Taxiway K; changes in the pavement and apron at the intersection of Taxiway E and the realigned Taxiway B; and, new shoulder pavement for Taxiways B, D, E, H, and L as well as Runway 15R-33L (City of Santa Barbara 2017a).

- The Master Plan also allows for the expansion of the terminal (16,190 square feet), additional parking areas (1,315 parking spaces), an overflow apron, and extension of the access loop road, as necessary. Two additional gates and three passenger loading bridges could be constructed. A dump station for disposal of sanitary waste from commercial aircraft could be constructed east of the southern end of Taxiway B (City of Santa Barbara 2017a).
- General aviation facilities currently located to the south of the terminal could be moved to the north side of the airfield, in an area that would be redeveloped and is called North Landside Redevelopment. This project, if fully implemented, would consolidate the facilities in an area that is already developed. An existing maintenance yard west of the Carneros Creek siltation basin would be relocated out of the floodway. New hangars would be constructed, and existing buildings would be removed. The Airport Administrative offices would be relocated to the redevelopment area. Existing fuel farms would be expanded. Existing historic hangars and other historic buildings would be retained or moved out of floodway areas (City of Santa Barbara 2017a).
- The Kellogg Crossing Self Storage project is constructing a facility on 2.06 acres near San Jose Creek.
- The Security Paving concrete and asphalt recycling facility is being constructed on approximately 12 acres at 909 South Kellogg Avenue, between San Pedro and San Jose creeks.
- Several new buildings within the Cabrillo Business Park on Navigator Drive and Coromar Drive. The area being developed is in the former upland habitat to the west of Tecolotito Creek, west of Los Carneros Road.
- A new synagogue is proposed on Stow Canyon Road in the upper Las Vegas Canyon area.
- The Honda Dealership on South Kellogg Road is proposing additional commercial structures on 2.6 acres near San Jose Creek.
- The Heritage Ridge project is proposed for north of Calle Koral and west of Los Carneros Road, and consists of 332 apartments on approximately 16 acres.
- A 70,594-square foot industrial building proposed by Skywest would occur on approximately 12 acres between San Pedro and San Jose creeks, at 907 South Kellogg Avenue.
- A 14 residential unit mixed-use development is proposed for 6491 Calle Real on a 0.5-acre lot in the Carneros and Tecolotito creeks watershed.
- The Hangar 5 Relocation project would relocate a hangar building from Airport property to a 3.5-acre site at 115 Castilian Drive near Tecolotito Creek.
- The Willow Industrial Park is proposed for 146,000 square feet of light industrial and 2,587 square feet of office building on approximately 20 acres, between San Pedro and San Jose creeks, at 891 South Kellogg Avenue.

The projects listed above are largely planned within the developed environment or are infill on the edge of developed areas of Goleta, and therefore are unlikely to be in areas that provide habitat for listed species. However, they represent a reduction in the upland habitat and buffer area surrounding Goleta Slough. This type of development can increase the frequency of human encounters with listed species, cause habitat degradation through pollution and sedimentation, increase the chance of introduction of non-native species, increase noise and other disturbance that

could cause wildlife to abandon the area, and increase the number of domestic dogs and cats that are predators on or disrupt wildlife. Such construction constricts and fragments the amount of habitat available for federally listed species by reducing or preventing dispersal from other nearby habitat areas.

The current project has been designed to be located in an area that is already impacted by Airport operations and where native habitats are minimal. No high quality habitat that could support the three federally listed species determined to have potential to occur in the action area is present in the proposed development area. Any occurrences of federally listed species in the taxiway action area are expected to be transitory, and the project contains minimization measures that would avoid or reduce direct effects on individuals during construction. Other potential effects on these species are related to indirect effects due to the proximity of construction activities adjacent to suitable nesting or aquatic habitats. Because no known, occupied habitats of federally listed species would be affected by the project, and the chance for take of individuals is very low given the minimization measures, there would be no cumulative effects of the proposed action to other projects planned for the region.

## **5.0 Conclusions and Determinations**

An effects analysis is provided below for each of the species that were determined to have potential to occur in the action area. For those species in which this BA determined that the proposed action may affect, but is not likely to adversely affect, concurrence is requested from USFWS.

### **5.1 California Least Tern**

The proposed action may affect, but is not likely to adversely affect the California least tern. This species has not been recorded from the Airport property, but may breed nearby and occur in the action area during migration. The proposed action has incorporated minimization measures to avoid impacts on nesting birds including the California least tern during construction. Pre-construction surveys will cover all suitable habitat areas within and adjacent to construction activities to ensure nesting pairs and individuals are not impacted by the project. Active nests will be buffered from project activities and monitored by a qualified biologist until young are no longer reliant on the site.

### **5.2 Least Bell's Vireo**

The proposed action may affect, but is not likely to adversely affect the least Bell's vireo. Although potential breeding habitat for this species is present along Carneros Creek and signs of potential breeding activity was documented in the vicinity of the action area, the project has incorporated minimization measures to avoid impacts on nesting birds during construction. Transient individuals in the riparian habitat along Carneros Creek could be present during construction activities, but they would not occur in the open areas of the airfield where construction will take place. Habitat restoration activities associated with the project would increase suitable habitat in the northern portion of the action area. Pre-construction surveys will cover all suitable habitat areas adjacent to construction to ensure nesting pairs and individuals are not impacted by the project. Active nests will be buffered from project activities and monitored by a qualified biologist until young are no longer reliant on the site.

### 5.3 Tidewater Goby

The proposed action may affect, but is not likely to adversely affect, the tidewater goby. No construction activities are planned to take place in the aquatic habitat where this species occurs, and stormwater pollution BMPs will be implemented during construction to protect the creek corridor and storm drain system. Still, pollutants generated by taxiway construction could enter the storm drain system and empty into occupied tidewater goby habitat. SWPPP compliance and spill response and remediation will be a component of the project, and all BMPs including storm drain inlet protection devices will be monitored by construction personnel to ensure proper function.

### 5.4 Tidewater Goby Critical Habitat

The proposed action may affect, but is not likely to adversely affect, tidewater goby critical habitat. No PCE of critical habitat would be affected by the project. Although water quality BMPs will be implemented during the construction phase, there is potential for adverse effects if sediment-laden water enters the storm drain system and empties into the creek. As stated above, all BMPs including storm drain inlet protection devices will be monitored by construction personnel to ensure proper function and avoid impacts to water quality in Carneros Creek.

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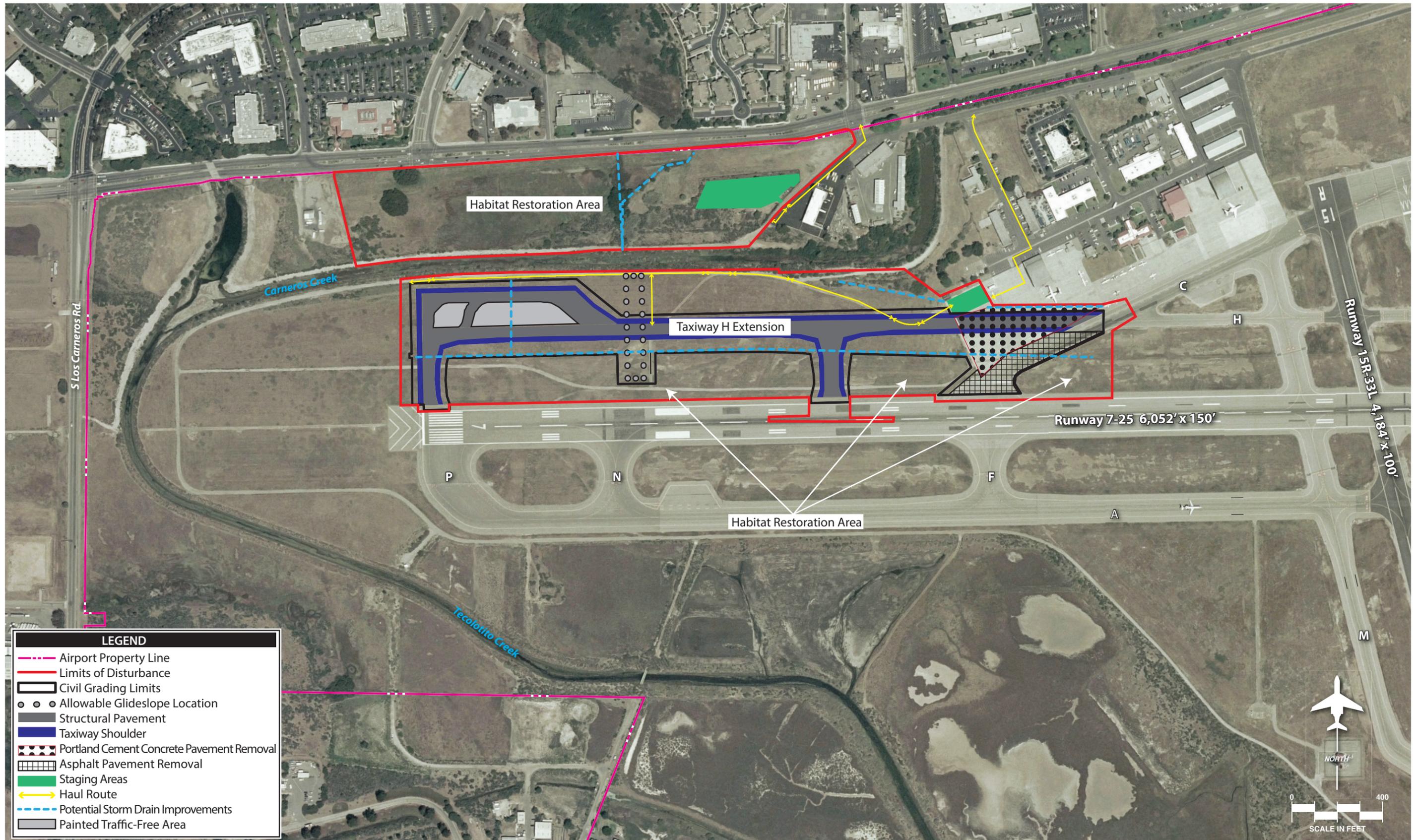
# **APPENDIX A**

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## **Site Plans**





LEGEND	
	Airport Property Line
	Limits of Disturbance
	Civil Grading Limits
	Allowable Glideslope Location
	Structural Pavement
	Taxiway Shoulder
	Portland Cement Concrete Pavement Removal
	Asphalt Pavement Removal
	Staging Areas
	Haul Route
	Potential Storm Drain Improvements
	Painted Traffic-Free Area



# **APPENDIX B**

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## **List of Threatened and Endangered Species USFWS IPaC Report**





# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Ventura Fish And Wildlife Office  
2493 Portola Road, Suite B  
Ventura, CA 93003-7726  
Phone: (805) 644-1766 Fax: (805) 644-3958  
Email Address: [FW8VenturaSection7@FWS.Gov](mailto:FW8VenturaSection7@FWS.Gov)

In Reply Refer To:  
Project Code: 2022-0002081  
Project Name: SBA Taxiway H Extension

April 04, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed list identifies species listed as threatened and endangered, species proposed for listing as threatened or endangered, designated and proposed critical habitat, and species that are candidates for listing that may occur within the boundary of the area you have indicated using the U.S. Fish and Wildlife Service's (Service) Information Planning and Conservation System (IPaC). The species list fulfills the requirements under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the species list should be verified after 90 days. We recommend that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists following the same process you used to receive the enclosed list. Please include the Consultation Tracking Number in the header of this letter with any correspondence about the species list.

Due to staff shortages and excessive workload, we are unable to provide an official list more specific to your area. Numerous other sources of information are available for you to narrow the list to the habitats and conditions of the site in which you are interested. For example, we recommend conducting a biological site assessment or surveys for plants and animals that could help refine the list.

If a Federal agency is involved in the project, that agency has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the project is a major construction project\*, the Federal agency has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species or critical habitat. If the Federal agency determines that a listed species or critical habitat is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species or their critical habitat prior to a

written request for formal consultation. During this review process, the Federal agency may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

Federal agencies are required to confer with the Service, pursuant to section 7(a)(4) of the Act, when an agency action is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10(a)). A request for formal conference must be in writing and should include the same information that would be provided for a request for formal consultation. Conferences can also include discussions between the Service and the Federal agency to identify and resolve potential conflicts between an action and proposed species or proposed critical habitat early in the decision-making process. The Service recommends ways to minimize or avoid adverse effects of the action. These recommendations are advisory because the jeopardy prohibition of section 7(a)(2) of the Act does not apply until the species is listed or the proposed critical habitat is designated. The conference process fulfills the need to inform Federal agencies of possible steps that an agency might take at an early stage to adjust its actions to avoid jeopardizing a proposed species.

When a proposed species or proposed critical habitat may be affected by an action, the lead Federal agency may elect to enter into formal conference with the Service even if the action is not likely to jeopardize or result in the destruction or adverse modification of proposed critical habitat. If the proposed species is listed or the proposed critical habitat is designated after completion of the conference, the Federal agency may ask the Service, in writing, to confirm the conference as a formal consultation. If the Service reviews the proposed action and finds that no significant changes in the action as planned or in the information used during the conference have occurred, the Service will confirm the conference as a formal consultation on the project and no further section 7 consultation will be necessary. Use of the formal conference process in this manner can prevent delays in the event the proposed species is listed or the proposed critical habitat is designated during project development or implementation.

Candidate species are those species presently under review by the Service for consideration for Federal listing. Candidate species should be considered in the planning process because they may become listed or proposed for listing prior to project completion. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required for candidate species. If early evaluation of your project indicates that it is likely to affect a candidate species, you may wish to request technical assistance from this office.

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Wildlife's Natural Diversity Data Base. You can contact the California Department of Fish and Wildlife at (916) 324-3812 for information on other sensitive species that may occur in this area.

[\*A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the

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human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

Attachment(s):

- Official Species List

## **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Ventura Fish And Wildlife Office**

2493 Portola Road, Suite B

Ventura, CA 93003-7726

(805) 644-1766

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## PROJECT SUMMARY

Project Code: 2022-0002081  
Project Name: SBA Taxiway H Extension  
Project Type: Airport - New Construction  
Project Description: The action area is at Santa Barbara Airport in the City of Santa Barbara, CA. Proposed action would extend Taxiway H west 3,050 feet to the Runway 7 end. The environmental assessment is currently being prepared. The new taxiway would be a total of 90 feet wide. Construction is anticipated to start in Fall 2026.

### Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@34.42982905,-119.85173635282065,14z>



Counties: Santa Barbara County, California

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## ENDANGERED SPECIES ACT SPECIES

There is a total of 17 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. [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.
-

**BIRDS**

NAME	STATUS
California Condor <i>Gymnogyps californianus</i> Population: U.S.A. only, except where listed as an experimental population There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8193">https://ecos.fws.gov/ecp/species/8193</a>	Endangered
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8104">https://ecos.fws.gov/ecp/species/8104</a>	Endangered
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5945">https://ecos.fws.gov/ecp/species/5945</a>	Endangered
Light-footed Clapper Rail <i>Rallus longirostris levipes</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6035">https://ecos.fws.gov/ecp/species/6035</a>	Endangered
Marbled Murrelet <i>Brachyramphus marmoratus</i> Population: U.S.A. (CA, OR, WA) There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/4467">https://ecos.fws.gov/ecp/species/4467</a>	Threatened
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6749">https://ecos.fws.gov/ecp/species/6749</a>	Endangered
Western Snowy Plover <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8035">https://ecos.fws.gov/ecp/species/8035</a>	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>	Threatened

**AMPHIBIANS**

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>	Threatened
Foothill Yellow-legged Frog <i>Rana boylei</i> Population: South Coast Distinct Population Segment (South Coast DPS) No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5133">https://ecos.fws.gov/ecp/species/5133</a>	Proposed Endangered

## FISHES

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

## INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## CRUSTACEANS

NAME	STATUS
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/498">https://ecos.fws.gov/ecp/species/498</a>	Threatened

## FLOWERING PLANTS

NAME	STATUS
Contra Costa Goldfields <i>Lasthenia conjugens</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/7058">https://ecos.fws.gov/ecp/species/7058</a>	Endangered
Gambel's Watercress <i>Rorippa gambellii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4201">https://ecos.fws.gov/ecp/species/4201</a>	Endangered
Marsh Sandwort <i>Arenaria paludicola</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2229">https://ecos.fws.gov/ecp/species/2229</a>	Endangered
Salt Marsh Bird's-beak <i>Cordylanthus maritimus ssp. maritimus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6447">https://ecos.fws.gov/ecp/species/6447</a>	Endangered

## CRITICAL HABITATS

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Tidewater Goby <i>Eucyclogobius newberryi</i> <a href="https://ecos.fws.gov/ecp/species/57#crithab">https://ecos.fws.gov/ecp/species/57#crithab</a>	Final

## **IPAC USER CONTACT INFORMATION**

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