Appendix C

Biological Assessment

Biological Assessment
Los Angeles International Airport
Proposed Runway 6R-24L Runway Safety Area Improvements Project

Prepared for:
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1.0 INTRODUCTION

The Los Angeles World Airports (LAWA) is planning Runway Safety Area (RSA) improvements and associated improvements of the Runway 6R-24L RSA at Los Angeles International Airport (LAX). Sapphos Environmental, Inc. previously prepared a Biological Assessment examining the biological resources for Runway 6R-24L and 6L-24R. However, improvements identified in that project did not bring Runway 6R-24L RSA into full compliance with Federal Aviation Administration (FAA) design standards. The proposed Runway 6R-24L Safety Area Improvements Project (proposed project) is being undertaken by LAWA in response to the requirements of *The Transportation, Treasury, Housing and Urban Development, the Judiciary, The District of Columbia, and Independent Agencies Appropriations Act* (Public Law 109-115),[1] which states that all RSAs at 14 Code of Federal Regulations (CFR) Part 139 airports[2] must meet FAA design standards by December 31, 2015.

1.1 Purpose and Need of the Biological Assessment

The RSA improvements under consideration by LAWA are subject to review and approval by the FAA; therefore, the RSA improvements constitute a proposed action pursuant to the National Environmental Policy Act (NEPA) (40 CFR 1508.18), requiring the consideration of the potential to affect federally proposed and listed threatened or endangered plant and wildlife species that have the potential to be present within the direct or indirect impact area (study area) of the proposed action. This Biological Assessment is to be used in fulfillment of FAA's responsibilities under Section 7(a)(2) of the federal Endangered Species Act (ESA) (16 USC 1536[c]). The objectives of this Biological Assessment are to evaluate the potential effects of the proposed action to be undertaken by FAA on proposed and listed species, to determine whether such species are likely to be adversely affected by the action, to evaluate cumulative effects on other state or federally designated sensitive species, and to determine whether formal consultation is required.

1.2 Location

LAX is located in the southwestern portion of Los Angeles County, adjacent to Dockweiler State Beach, and approximately 0.6 miles inland from the Pacific Ocean and 14 miles southwest of downtown Los Angeles (Figure 1.2-1, *Regional Location Map*). Reference point coordinates for the airport are 33° 56′ north latitude by 118° 24′ west longitude. The LAX airfield is entirely located in the City of Los Angeles, County of Los Angeles, California, as depicted on Figure 1.2-2, *Local Vicinity Map*. It is located entirely within the U.S. Geological Survey (USGS) 7.5-Minute Series, Venice, California, Topographic Quadrangle, Range 15 West and Township 2 South. The airfield is located east of Pershing Drive and is separated from the State Beach and Santa Monica Bay by the Los Angeles/El Segundo Dunes. LAX encompasses approximately 3,351 acres with a field elevation of 126 feet above mean sea level (msl). LAX constitutes a large industrial district presently made up of four runways; domestic and international terminals; cargo areas; administrative and support facilities; and limited open space, including 307 acres of Los Angeles/El Segundo Dunes. Up to 180.95 acres would be used for access, egress, staging, and construction activities during construction of the proposed project. Of the 180.95 acres that could be affected

[1] *The Transportation, Treasury, Housing and Urban Development, the Judiciary, The District of Columbia, and Independent Agencies Appropriations Act, 2006* (Public Law [P.L.] 109-115), November 30, 2005.

[2] 14 Code of Federal Regulations (CFR) Part 139 airports are U.S. airports that are certified by FAA to allow commercial passenger aircraft operations.

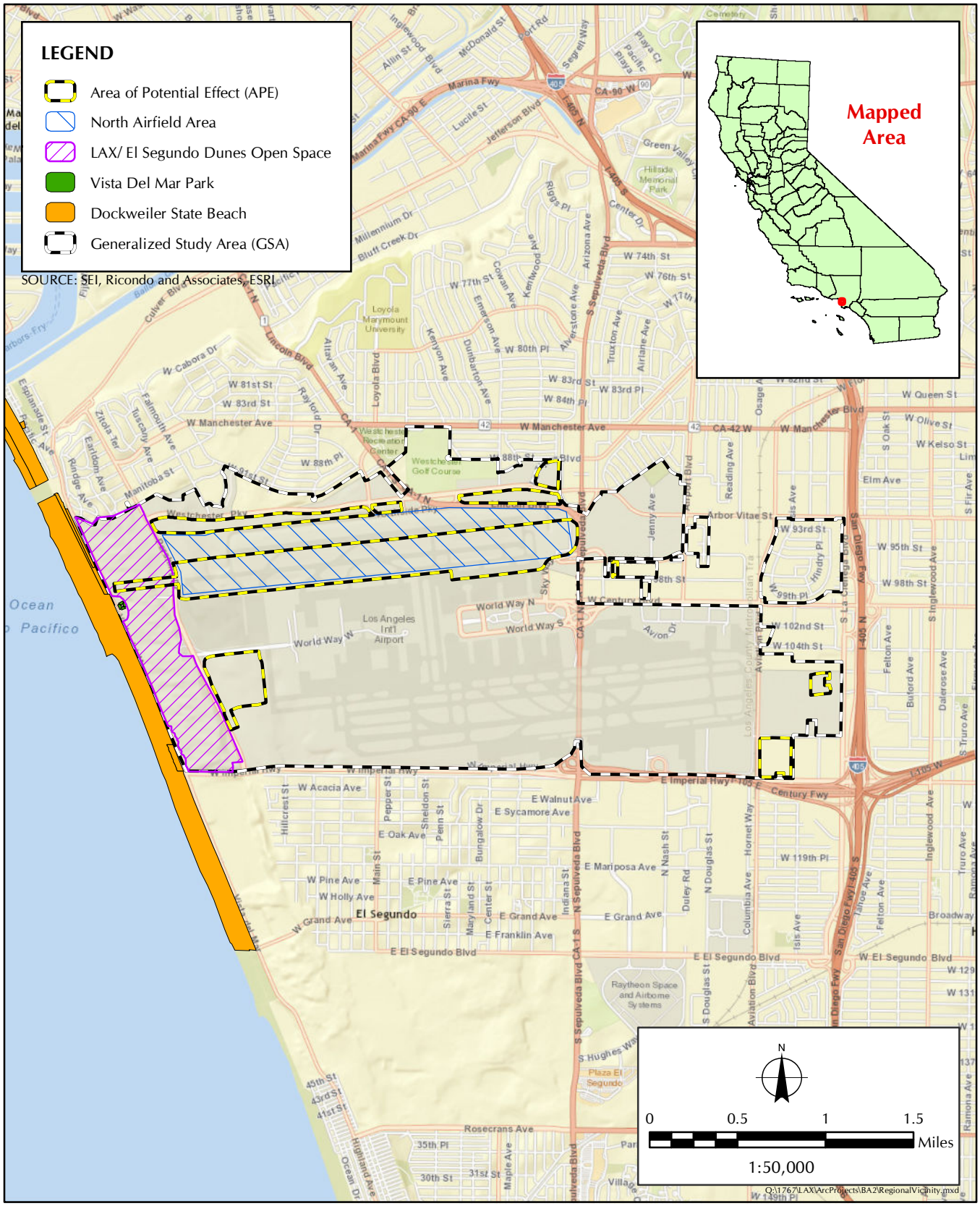

FIGURE 1.2-1

Regional Location Map

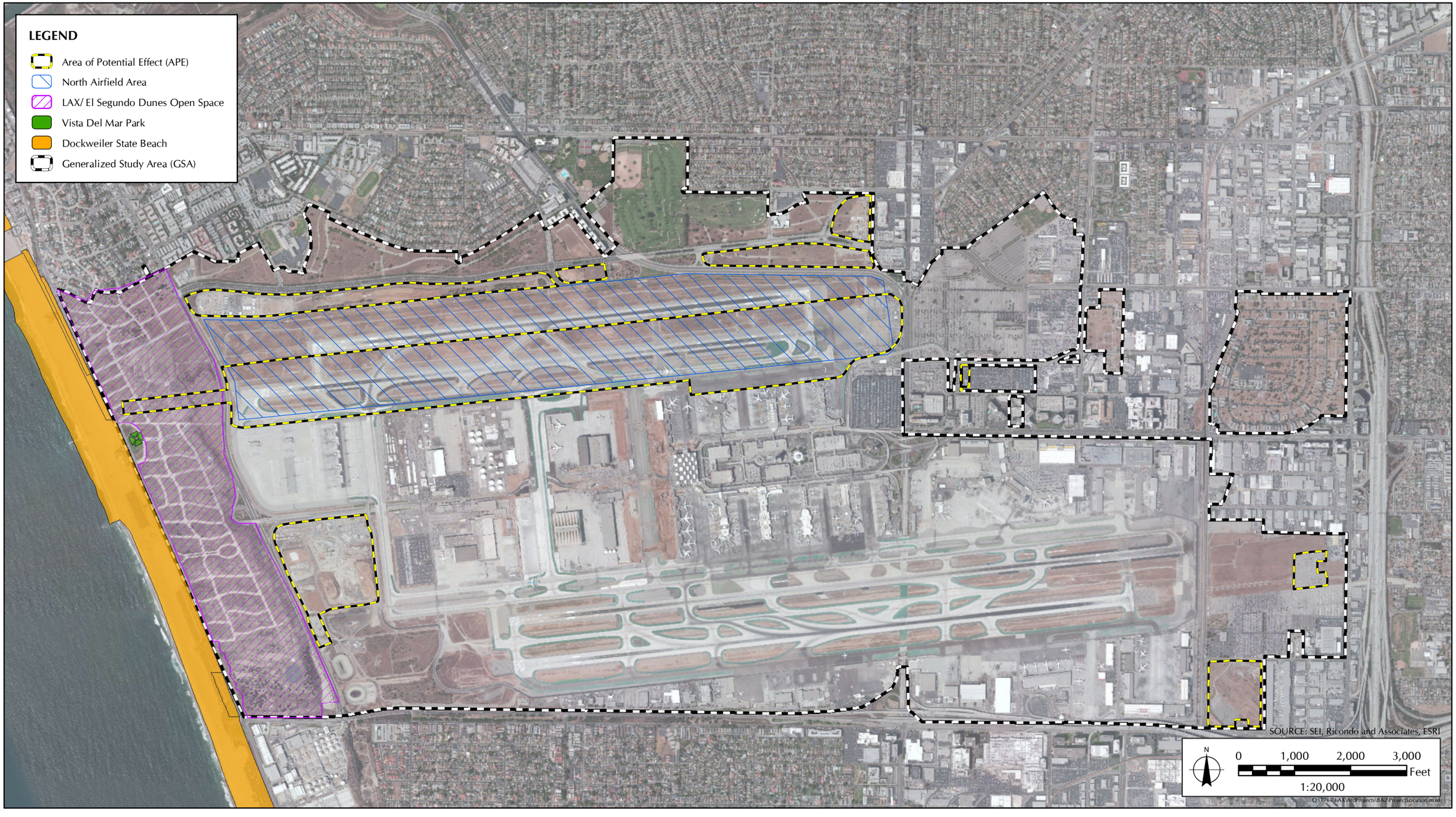

FIGURE 1.2-2
Local Vicinity Map

during construction, up to 180.21 acres would be temporarily impacted and 0.74 acre would be permanently dedicated to the proposed project (Figure 1.2-3, *Runway 6R-24L RSA Improvements*).

1.3 Scope of Biological Assessment

The scope of the Biological Assessment is to evaluate the potential impacts of the proposed project at LAX on federally listed species and species proposed for listing as threatened and endangered species pursuant to the ESA. This Biological Assessment also takes into consideration proposed and designated critical habitat for federally listed species. Direct, indirect, and cumulative impacts resulting from construction, operation, and maintenance of the proposed project were evaluated for all federally listed species and species proposed for listing as threatened and endangered species potentially occurring at LAX. Impacts on other federally, state, or locally designated sensitive species were evaluated to determine if implementation of the proposed project could catalyze the need for federal listing of a species.

1.4 Species Considered

The list of species to be considered in this Biological Assessment was based on the results of a comprehensive literature review, discussion with knowledgeable individuals, field surveys, and a review of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB).[3]

1.5 Findings and Conclusions

As a result of the literature review, surveys were undertaken to assess the potential for the proposed project to affect 22 federally listed endangered, threatened, or candidate species with the potential to occur within the study area. Of the 22 species, 12 are plant species and were determined to be absent in the study area as a result of habitat assessment and focused surveys (Appendix A, *Other Sensitive Plant Species*).

The remaining 10 of the 22 are wildlife species. One of the 10 wildlife species, coastal California gnatcatcher (*Polioptila californica californica*), was determined to be potentially present in the study area because of the presence of marginally suitable nesting habitat for the species within the location for the proposed project. The remaining nine (9) wildlife species, including the El Segundo blue butterfly (*Euphilotes battoides allyni*), were determined to be absent in the study area because there is no suitable habitat for the species within the location for the proposed project.

Occupied habitat for El Segundo blue butterfly and coastal California gnatcatcher is located in open space, administered by LAWA, west of Pershing Drive in the El Segundo Blue Butterfly Habitat Restoration Area, approximately 0.1 miles south of the location of the study area. The El Segundo blue butterfly's host plant, coast buckwheat (*Eriogonum parvifolium*), was not observed within the study area and coastal California gnatcatcher were not observed within the study area during 2013 protocol surveys.

[3] California Department of Fish and Wildlife. 2014. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

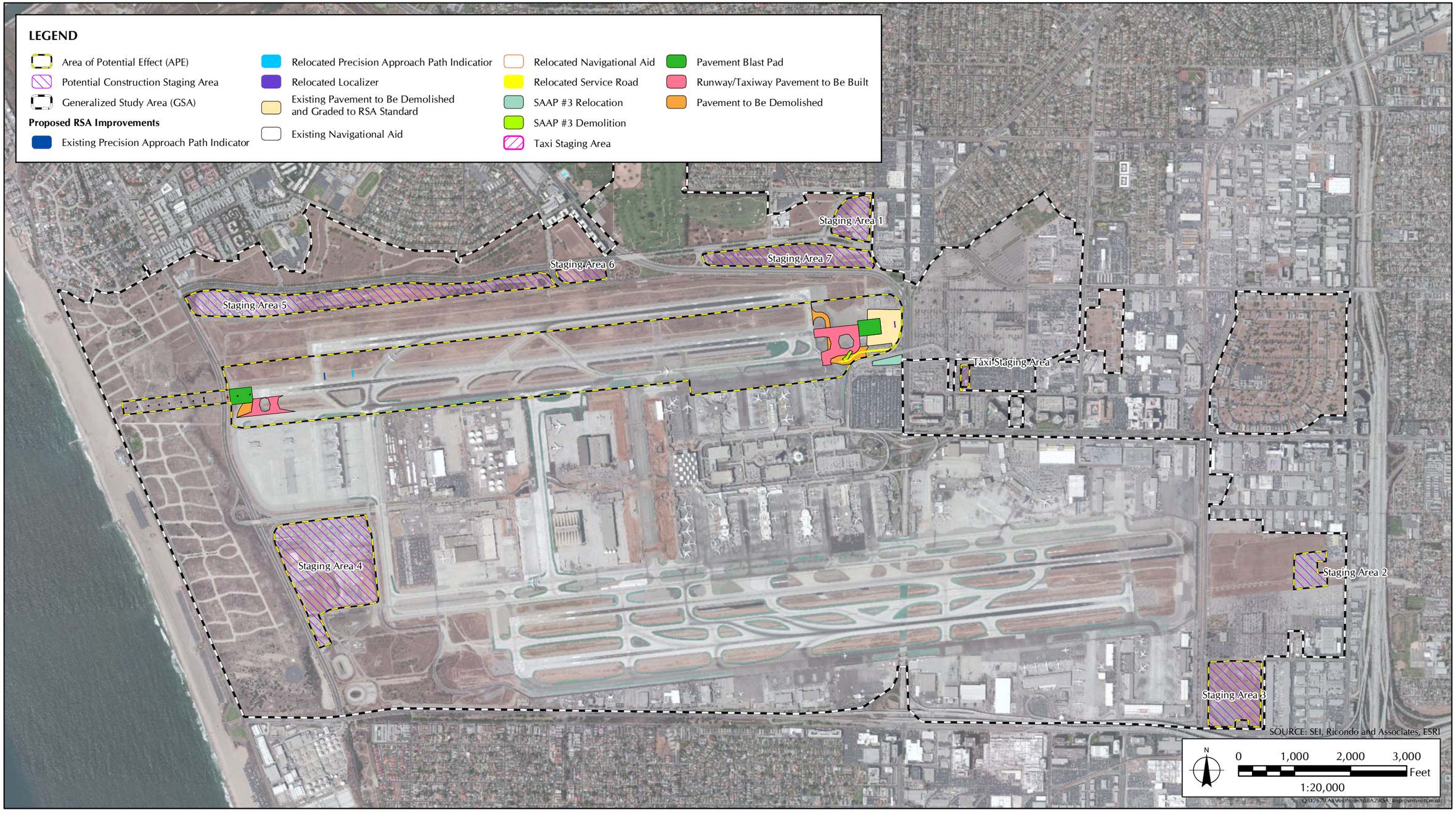

FIGURE 1.2-3

Runway 6R-24L RSA Improvements

Although El Segundo blue butterfly and coastal California were not observed in the study area, they may be affected if present at the time when construction activities are initiated and warrant the consideration of recommendations to ensure that they are avoided during the construction phase of the proposed project. Once construction of the proposed project is completed, there would be no effect on the El Segundo blue butterfly and minimal to no effect on coastal California gnatcatcher during the operations and maintenance phases of the proposed project due to the lack of potentially suitable habitat or presence of marginally suitable habitat within the area. The remaining eight (8) wildlife species were determined to be absent in the study area as a result of habitat assessment and focused surveys (Appendix B, *Other Sensitive Wildlife Species*).

There is one state-designated sensitive plant community, Silver Dune Lupine–Mock Heather Scrub (Southern Dune Scrub), in the study area. It is located in the portion of the study area west of Pershing Drive in the Los Angeles / El Segundo Dunes. Of the 8.46 acres of Silver Dune Lupine–Mock Heather Scrub within the study area, less than 0.01 acre will be permanently impacted and up to 0.12 acre will be temporarily impacted.

Two special status plant species were observed within the study area: Lewis' evening primrose (*Camissoniopsis lewisii*) and south coast branching phacelia *(Phacelia ramosissima* var. *austrolitoralis*). Although the study area does not include areas that are typically considered to be suitable habitat for the Lewis' evening primrose, the species was observed within disturbed / annual brome grassland, which accounts for 114.38 acres of the study area. There are 8.46 acres of suitable habitat in the form of Silver Dune Lupine–Mock Heather Scrub for the south coast branching phacelia within the study area. Although not afforded federal status pursuant to the federal Endangered Species Act, or state status under the California Endangered Species Act, these two plant species are designated as List 3 on the California Native Plant Society List of Rare and Endangered Plants. List 3 plants are those for which the California Native Plant Society has determined that additional information is needed.

One special status wildlife species, burrowing owl (*Athene cunicularia*), was observed in the study area at the northwestern-most staging area near the intersection of Northside Parkway and Westchester Parkway. The burrow associated with this observation will be avoided during construction activities. There are 155.93 acres of suitable habitat within the study area. Although not afforded federal status pursuant to the federal ESA, the CDFW has designated burrowing owl as a Species of Special Concern, and it is afforded additional protection pursuant to the Migratory Bird Treaty Act.

A pair of red foxes (*Vulpes vulpes*) along with their burrow was observed on the southeastern-most portion of the study area, which is located at the corner of Aviation Boulevard and Imperial Highway. Although a non-native species and not afforded federal status pursuant to the federal Endangered Species Act or state status pursuant to the California Department of Fish and Wildlife, the red fox is still afforded protection pursuant to the fur-bearing mammals act (California Fish and Game Code §4000–4012). LAWA will consult with the U.S. Department of Agriculture (USDA) Wildlife Services to manage red fox.

2.0 PROJECT DESCRIPTION

The study area consists of the paved Runway 6R-24L and shoulder areas, and includes taxiways and service roadways separated by unpaved sections of maintained grass and low scrub vegetation. The eastern portion of the study area includes two on-airport parking areas utilized for the staging of construction vehicles and other equipment used at LAX, a partially graveled area, and a grassy area at the east end of Runway 24R (Figure 1.2-2). This area also includes the Air Operations Area (AOA) fence and a service road (El Manor Drive, previously a residential street), both of which are located on airport property and are closed to the public. The western portion of the study area includes Medium Intensity Approach Lighting System with Runway Alignment Indicator (MALSR) instrumentation, associated with Runway 6R-24L, positioned on coastal dunes west of the runway.

LAWA is proposing to improve the RSA of Runway 6R-24L at LAX in response to *The Transportation, Treasury, Housing and Urban Development, the Judiciary, the District of Columbia, and Independent Agencies Appropriations Act* (Public Law 109-115).[4] This act requires completion of RSA improvements by airport sponsors that hold a certificate under Title 14, CFR, Part 139, Certification and Operations: Land Airports Serving Certain Air Carriers; these improvements must comply with FAA design standards by December 31, 2015.

The components of the proposed project are:

Runway 6R

- Shift Runway 6R endpoint approximately 200 feet to the east; existing landing threshold would be shifted 420 feet to the east, resulting in an approximate 550-foot displaced threshold
  - Construct a blast pad 400 feet long and 280 feet wide
  - Construct retaining wall and add fill graded to RSA standards
  - Shift existing connector Taxiways E16 and E17 to the east
  - Construct new and rehabilitate existing runway and taxiway pavement, modify airfield signage, lighting, and markings
  - Relocate navigational aids, including the glide slope antenna, and precision approach path indicators (PAPI)
  - Abandon two approach light system (MALSR) stations and shift light stations to the east to coincide with existing light station locations

Runway 24L

- Shift Runway 24L endpoint by construction approximately 800 feet of new runway pavement to the east; landing threshold will remain in current location and pavement will be marked as a displaced threshold:
  - Shift Taxiway E endpoint approximately 500 feet to the east with 400-foot separation from the runway
  - Remove existing Taxiway E7 including the existing loop westbound that joins Taxiway V between Runways 24L and 24R
  - Construct new connector Taxiways E7 and E6

[4] *The Transportation, Treasury, Housing and Urban Development, the Judiciary, the District of Columbia, and Independent Agencies Appropriations Act, 2006* (Public Law [P.L.] 109-115), 30 November 2005.

- Construct new and rehabilitate existing runway and taxiway pavement, modify airfield signage, lighting and markings
- Relocate the existing ILS localizer antenna to the east
- Demolish and relocate existing Secure Area Access Post (SAAP) #3
- Protect in place existing storm sewer
- Relocate Air Operations Area (AOA) fence
- Construct 400-foot long jet blast pad; and
- Relocate taxicab holding/staging area and associated buildings

- Implement declared distances
- Extend and realign existing vehicle service road(s) south of Taxiway E, which will require closure of Alverstone Drive and Davidson Drive, as well as adjacent parking lot; remove and grade pavement within RSA

Shift Runway 6R End. Construction of the proposed project will require a shift of the Runway 6R end by approximately 200 feet to the east. The shift of the runway also requires shifts to taxiways, allowing aircraft to enter and exit the runway, and shifts to aircraft navigational aids that are fixed by function in relation to the runway threshold. LAWA proposes to remove existing Taxiways E16 and E17 that provide access to the existing end of Runway 6R and construct new taxiway connectors E16 and E17 to provide access to the shifted end of Runway 6R (Figure 1.2-2). The runway and taxiway lightings and markings associated with the end of Runway 6R will need to be modified to reflect the shift in the Runway 6R threshold. The shift in the Runway 6R threshold will require the relocation of portions of the instrument landing system (ILS) and approach lighting system, namely the glide slope antenna, PAPI, and MALSR.

MALSR. Construction activities for the proposed improvements, mainly modifications of the MALSR system, would occur in areas west of the runway, within the Los Angeles Airport/El Segundo Dunes, and north of the El Segundo blue butterfly occupied habitat. The required improvements would be designed to minimize disturbance of the Los Angeles Airport/El Segundo Dunes and are anticipated to include the following:

- Remove two approach light system (MALSR) stations and shift of light stations to the east coincident with existing light station locations to accommodate the proposed relocated runway end and approximate 550 foot displaced threshold;
  - The two western-most stations, including concrete pads and underground ducts, would be removed. Towers, lights and equipment control boxes and concrete pads would be removed. Concrete pads would be excavated and areas would be restored to natural habitat;
  - Relocate the "1,000-foot light bar" (supported by three separate towers) to a location immediately east of Pershing Drive (outside of the coastal zone). The northern and southern concrete pads which currently support the "1,000-foot light bar" would be excavated, removed and restored to native habitat. The central pad would be retained in order to support a new single-pole light station tower at this location; and
  - Pending funding approval, FAA will replace the entire approach light system (towers, lights and equipment control boxes) for Runway 6R. To the extent possible, FAA will utilize the existing concrete pads. However, FAA will need to replace the existing concrete support pads at three light stations, FAA has determined that only one light station will require an expansion of the existing concrete pad by approximately 1 square feet to provide foundation for a flasher control box.

Shift Runway 24L End. To maintain the existing runway length for departures (10,285 feet), LAWA proposes to shift the Runway 24L end by approximately 800 feet to the east, but in order to maintain the existing touchdown point on Runway 24R in the existing location, LAWA will also implement a displaced threshold of approximately 800 feet. The shift of the runway end results in the requirement to shift taxiways, allowing aircraft to enter and exit the runway, and to shift aircraft navigational aids that are fixed by function in relation to the runway threshold. The endpoint of Taxiway E will also be shifted 500 feet to the east. LAWA proposes to remove existing Taxiway E7 located east of the existing end of Runway 24L and construct new taxiway E7 and E6 (Figure 1.2-2). The taxiway lightings and markings associated with the end of Runway 24L will need to be modified to reflect the shift in the Runway 24L threshold. The shift in Taxiway E would impact the existing SAAP #3, which would fall within the Taxiway Object Free Area (TOFA). This will require the relocation of SAAP #3 which will remain in the general area, but details of the ultimate SAAP #3 site are dependent on the final design (Figure 1.2-2). With the eastern shift in the Runway 24L end and associated RSA, the Runway 6R ILS localizer also needs to be shifted to the east. The approach light system for Runway 24L will require modification and will be a combination of in-pavement fixtures and elevated fixtures.

Declared Distances. Declared distances are "the distances the airport operator declares available and suitable for satisfying an aircraft's takeoff run, takeoff distance, accelerate-stop distance, and landing distance requirements."[5] The FAA defines four types of declared distances: the Take-Off Run Available (TORA), the Take-Off Distance Available (TODA), the Accelerate-Stop Distance Available (ASDA), and the Landing Distance Available (LDA).[6] Aircraft operators use these declared distances, along with weather data, aircraft performance characteristics, and market segments for flight planning, including the determination of payload and range restrictions. Pilots and airplane operators' performance engineers need this information for calculating their allowable takeoff and landing weights and speeds.[7] Essentially, declared distances represent the maximum runway distances available to safely takeoff or reject a takeoff (TORA, TODA, and ASDA), or to land (LDA). Shortening the usable runway length would allow for the full RSA dimensions to be available in the event of an aircraft's excursion from the runway during an overrun, undershoot, or veer-off.

Service Roads. Portions of service roads currently located within the 6R-24L RSA would be relocated or realigned in order to meet RSA standards and to ensure that service vehicles operate outside of the RSA. An existing vehicle service road located southeast of Taxiway E would be relocated and realigned east around the shifted RSA. This would require closure of LAWA-owned Alverstone Drive and Davidson Drive (which are closed to the public), as well as the taxicab staging lot. It is assumed that the existing pavement located within the shifted RSA will need to be demolished and the area graded to meet RSA grading standards. The AOA fence would need to be relocated along the southeastern portion of the north runway complex in order to accommodate the realigned service roads described above. The AOA fence realignment is depicted on Figure 1.2-2.

[5] U.S. Department of Transportation, Federal Aviation Administration, Advisory Circular 150/5300-13A, *Airport Design*, February 26, 2014.

[6] U.S. Department of Transportation, Federal Aviation Administration, Advisory Circular 150/5300-13A, *Airport Design*, February 26, 2014.

[7] U.S. Department of Transportation, Federal Aviation Administration, CERTALERT, *Reporting Declared Distances to Aeronautical Information Services*, March 6, 2009.

The realignment of service roads and the AOA fence outside the RSA along the eastern side of the north runway complex, along with the relocated Runway 6R ILS Localizer, would make it necessary to close the taxi and shuttle staging area, located east of Runway 6R-24L. This parking area is located inside the LAX property boundary, east of Alverstone Drive, and is used for taxi and shuttle staging; it is not open to the public. This parking area totals approximately 95,500 square feet in area and contains paved surface parking; the pavement would be demolished and graded to RSA standards (Figure 1.2-2). The taxicab holding lot would be relocated to an existing LAWA-owned parking lot located between West 96th Street and West 98th Street, approximately 200 feet east of Vicksburg Avenue.

Construction Staging Areas. Construction staging areas would be necessary due to the limited space available for storage of materials and equipment within the airfield area. Locations of the potential construction staging areas for this project are illustrated in Figure 1.2-2. Only a portion of these construction staging areas would be used during construction of the proposed project. However, specific construction staging areas for this proposed project have not been determined at the present time; therefore, all potential staging areas are being considered in this analysis. Construction staging areas would be located in previously disturbed areas and would result in minimal ground disturbance.

2.1 Surrounding Land Uses and Constraints

LAX is bounded on the north by the communities of Westchester and Playa del Rey; on the south by Imperial Highway, the City of El Segundo, and the community of Del Aire in unincorporated Los Angeles County; on the east by Aviation Boulevard, the City of Inglewood, and the community of Lennox in unincorporated Los Angeles County; on the west by Vista del Mar Street, Dockweiler State Beach, and the Santa Monica Bay.

The communities surrounding LAX constitute a diverse mix of land uses. The predominant land use is residential to the north and primarily commercial/industrial to the east. In general, this tends to be low-density, single-family residential development, supported by a full range of neighborhood and regional commercial and institutional uses. There are large areas of mixed single-family and multifamily uses in the City of Hawthorne and the unincorporated County area known as Lennox. Concentrations of multifamily residential areas are located in the Cities of El Segundo and Inglewood and the southwestern portion of Westchester and the Playa del Rey area of the City of Los Angeles. Commercial uses generally occur as strip development along the major streets. Industrial uses are clustered adjacent to LAX, particularly within the City of El Segundo. Industrial and public land uses are scattered throughout the entire area.

Below are the primary communities surrounding LAX by area:

North/Northeast:

- The City of Los Angeles encompasses 302,596 acres with a 2010 resident population of 3,792,627.
- The Westchester / Playa del Rey area of the City of Los Angeles directly borders LAX property to the north, west, and east. This area encompasses 9,281 acres with a 2010 resident population of 60,000.

South/Southeast/Southwest:

- The City of El Segundo is located adjacent to the southern boundary of LAX. El Segundo encompasses 3,495 acres with a 2010 resident population of 16,654.

- The City of Hawthorne is located approximately 1 mile southeast of LAX. Hawthorne encompasses 2,752 acres with a 2010 resident population of 84,293.

- Del Aire is an unincorporated area of Los Angeles County located directly south of LAX, east of Aviation Boulevard, between the City of El Segundo to the west and south and the City of Hawthorne to the east. Del Aire encompasses 530 acres with a 2010 resident population of 10,001.

- The City of Los Angeles operates two facilities in the area to the south and southwest of LAX: the Hyperion Sewage Treatment Plant located immediately south of the Restoration Area and the Los Angeles Department of Water and Power Scattergood Generating Station. In addition, a Southern California Edison generating station and a coastal portion of the Chevron refinery are located in this area.

East:

- The City of Inglewood is located adjacent to the east boundary of LAX, partially beneath the flight approach paths for LAX. Inglewood encompasses 5,664 acres with a 2010 resident population of 109,673.

- Lennox is an unincorporated area of Los Angeles County located directly east of the LAX south runway complex. Lennox encompasses 800 acres with a 2010 resident population of 22,753.

West/Dunes/Coast:

- West and southwest of LAX, most of the coastline is occupied by the City of Los Angeles. Immediately to the west of the LAX airfield and west of Pershing Drive lies the 307-acre Los Angeles/El Segundo Dunes area. The El Segundo Blue Butterfly Habitat Restoration Area (Restoration Area) makes up approximately 200 acres of the Los Angeles/El Segundo Dunes area (the southern two-thirds), serving as habitat for the federally listed endangered El Segundo blue butterfly (*Euphilotes battoides allyni*) and its host food plant, coast buckwheat (*Eriogonum parvifolium*).[8,9] The remaining 100 acres are north of the Restoration Area and are zoned for a restricted open space land use (nature preserve and accessory uses only). Dockweiler State Beach, located directly west of LAX along the Pacific Ocean, is a 3.7-linear-mile, 288-acre, sandy beach with public use amenities. Built improvements include 1,440 parking spaces on 19 acres of paved lots; a 118-space, 5-acre, recreational vehicle (RV) park; 12 restrooms; playground equipment;

[8] United States Fish and Wildlife Service. 1977. *Proposed Determination of Critical Habitat for Six Butterflies and Two Plants*. Washington D.C. Available at http://ecos.fws.gov/docs/federal_register/fr11.pdf

[9] United States Fish and Wildlife Service. 1998. *Recovery Plan for the El Segundo Blue Butterfly (Euphilotes battoides allyni)*. Washington D.C. Available at http://www.fws.gov/ecos/ajax/docs/recovery_plan/980928d.pdf

volleyball courts; bicycle path; picnic area; concession stand; and lifeguard facilities.

3.0 STUDY METHODS

3.1 Database Searches

Prior to conducting the field survey, database and literature searches were performed to inform the survey. Database searches were conducted to compile a list of sensitive plants and wildlife with the potential to be present within the study area. A search was conducted of the CNDDB and the California Native Plant Society (CNPS) Online Inventory for the USGS 7.5-minute series topographic quadrangle in which the study area is located (Venice), as well as those that are adjacent to the study area (Beverly Hills, Hollywood, Inglewood, Torrance, and Redondo Beach) to determine reported occurrences of rare, threatened, and endangered species.[10,11] Previously recorded species, as taken from the LAX Master Plan, LAX Specific Plan Amendment Study (SPAS), and Runway 6L-24R and Runway 6R-24L Runway Safety Area and Associated Improvements Project EIR, were included in the compiled list.[12,13,14,15] This list of species was evaluated with respect to the habitats present at the study area. Species not expected to occur at the property were identified on the list of species to be evaluated, and the remainder were considered to be potentially present. Critical habitat data, as determined by the U.S. Fish and Wildlife Service (USFWS), were searched to determine the proximity of critical habitat to the study area.[16] *The Jepson Manual* was consulted for detailed biological, distributional, and phenological information, and was used as a standard for nomenclature.[17]

3.2 Plant Communities

The evaluation of plant communities was undertaken in a two-phase effort consisting of a preliminary in-house mapping effort, followed by verification and refinement of plant community mapping in the field. The description of plant communities followed the classification system provided in *A Manual of California Vegetation*.[18] Botanical names and common names followed *The Jepson Manual*. The field verification was conducted by a team of two biologists, a wildlife

[10] California Department of Fish and Wildlife. 2013. Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database. Sacramento, CA. Available at http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[11] California Native Plant Society. 2013. *Inventory of Rare and Endangered Plants*, online ed., version 8-02. Sacramento, CA. Available at: http://www.rareplants.cnps.org/

[12] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[13] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Final EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[14] Los Angeles World Airports. 2012. *Los Angeles International Airport Specific Plan Amendment Study Project – Mitigation Monitoring and Reporting Program*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[15] United States Department of Transportation, Federal Aviation Administration and City of Los Angeles, Los Angeles World Airports. 2004. *LAX Master Plan EIS/EIR*. Available at: http://www.ourlax.org/pub_finalMP.aspx

[16] United States Fish and Wildlife Service. 2013. Critical Habitat Mapper. Washington D.C. Available at http://criticalhabitat.fws.gov/crithab/flex/crithabMapper.jsp?

[17] Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. *The Jepson Manual: Vascular Plants of California,* 2nd Ed. Berkeley, CA: University of California Press.

[18] Sawyer, J.O., T. Keeler-Wolf and J.M. Evans. 2009. *A Manual of California Vegetation,* 2nd Ed. Sacramento, CA: California Native Plant Society.

biologist and a botanist, and supported by a geographic information systems (GIS) specialist on May 8, June 14, December 18, 2013, and August 21, 2014. During plant community mapping, existing roads and other man-made facilities were mapped as developed.

3.3 Special Status Plant Surveys

Concurrent with the field verification of the plant community map, a special status plant survey was conducted along project elements to determine the presence or absence of individuals and habitat potentially suitable for supporting the target special-status plant species identified through the CNDDB and CNPS search and literature review. The habitat assessment served as the tool for identification of areas within the study area with the potential to support sensitive and non-status occurring plant species. During field visits, observations of special-status plant species were recorded on aerial photographs and the locations recorded on global positioning system (GPS) units. The results of the field mapping were incorporated into the plant community map and special status map using GIS. An inventory of all plant species observed was compiled into the floral compendia (Attachment A-1).

3.4 General Wildlife Surveys

General wildlife surveys were conducted on May 8, June 17, December 18, 2013, and August 21, 2014, between the hours of 7:00 a.m. and 3:00 p.m. within the study area. Weather conditions ranged from cloudy to partially sunny, with temperatures ranging from 58 degrees to 76 degrees Fahrenheit. The field surveys were conducted by a botanical specialist and a wildlife biologist. Survey personnel were experienced in the undertaking of biological field surveys and knowledgeable of the identification and ecology of target sensitive species. The biological resources surveys were conducted by walking all accessible areas anticipated to be affected by the proposed project. Surveyed areas were limited to non-paved areas (Figure 3.4-1, *2013 Survey Area*). The survey area was identified to assess all areas that could be potentially affected by the proposed project. Because the study area includes an active Aircraft Movement Area with frequent arrivals of turbojet aircraft on Runway 6R-24L and taxiing on the taxiways, several portions of the study area could not be thoroughly inspected during the surveys; instead, these areas were surveyed by sight with the naked eye as well as binoculars. All plants and wildlife encountered during the surveys were identified to the lowest taxonomic level possible, including that level necessary for a sensitive species determination. An inventory of all wildlife species observed was compiled into the faunal compendia (attached in Attachment B-1).

The survey team was equipped with a GPS unit for mapping the location of any potential sensitive biological resource. If observed, any sensitive species encountered was immediately mapped as a point. The location points were later digitized onto a GIS overlay to produce a map of the distribution of sensitive species observations. Observation data were recorded on California Native Species Field Survey Forms to be submitted to the CNDDB upon completion of the final survey report. Representative photographs were taken of each sensitive species encountered.

Several field guides were carried for reference during the survey, including *The Jepson Manual*, the *Sibley Guide to Birds*, and *Field Guide to Amphibians and Reptiles of California*.[19,20] Additional

[19] Sibley, D.A. *The Sibley Guide to Birds*. 2000. Alfred A. Knopf. New York, NY.

[20] Stebbins, R.C. and S.M. McGinnis. 2012. *Field Guide to Amphibians and Reptiles of California Revised Edition*. University of California Press. Berkeley, CA.

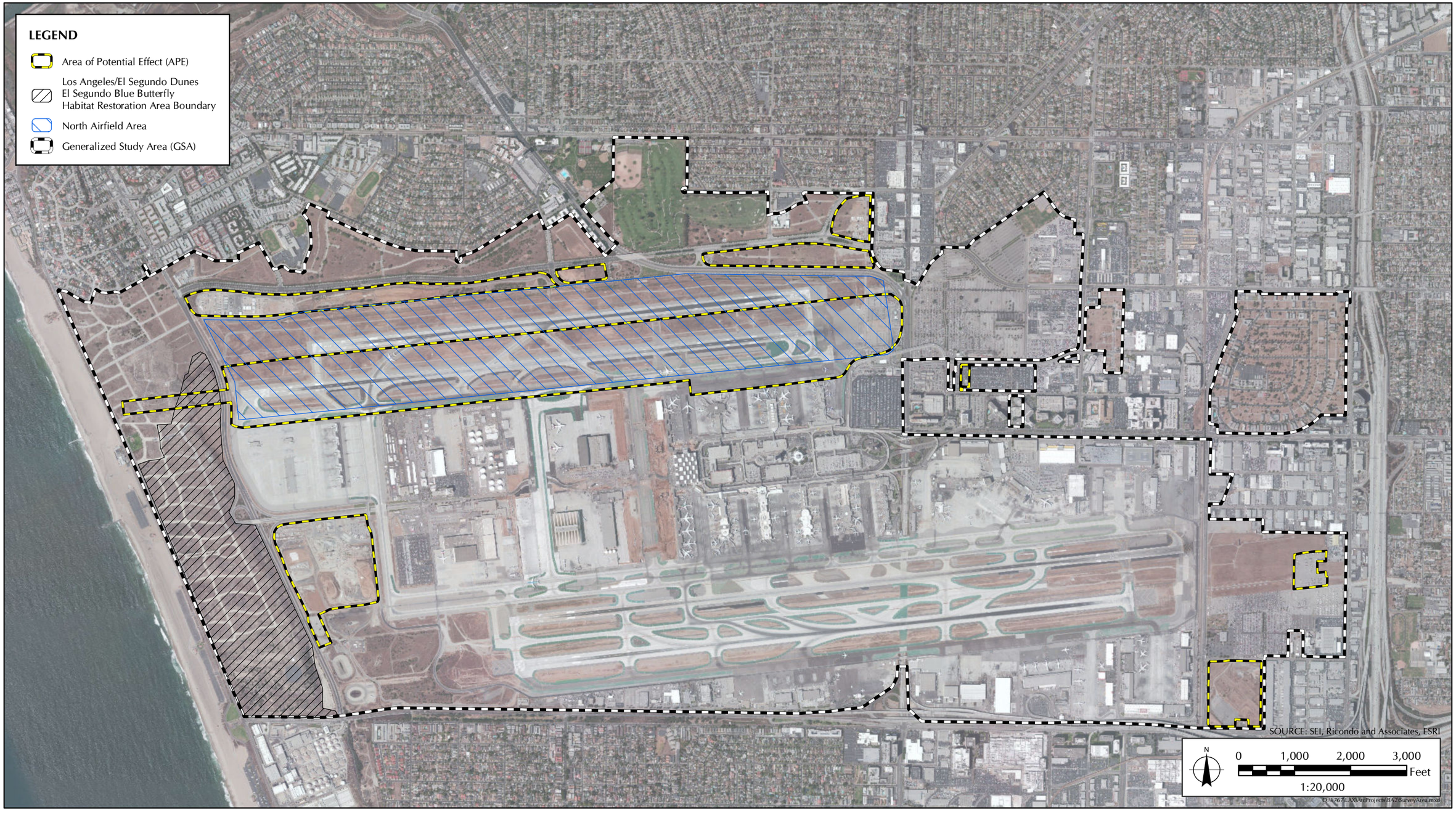

FIGURE 3.4-1
2013 Survey Area

guides used to help identify observed wildlife species included the *National Audubon Society Field Guide to North American Mammals* and the *National Audubon Society Field Guide to North American Reptiles and Amphibians*.[21,22]

3.5 Wetlands and Waters of the United States

USGS topographical maps and National Wetlands Inventory (NWI) maps were reviewed to identify areas potentially subject to the jurisdiction of U.S. Army Corps of Engineers (USACOE), Regional Water Quality Control Board (RWQCB), and CDFW.[23] Features identified as blue-line drainages on the topographical maps or wetland features on the NWI were analyzed for jurisdiction by the USACOE under Section 404 of the Clean Water Act and for jurisdiction by the CDFW under Section 1600 of the State Fish and Game Code.

[21] Whitaker, J.O. *National Audubon Society Field Guide to North American Mammals*. 2005. Alfred A. Knopf. New York, NY.

[22] Whitaker, J.O. *National Audubon Society Field Guide to North American Reptiles and Amphibians*. 1998. Alfred A. Knopf. New York, NY.

[23] United States Fish and Wildlife Service. 2013. *National Wetlands Inventory*. Washington D.C. Available at http://www.fws.gov/wetlands/

4.0 EXISTING CONDITIONS

4.1 Los Angeles International Airport

LAX is located along the western margin of the Los Angeles Basin where the coastal plain approaches the Pacific Ocean. Historical land uses of the area were predominantly agricultural. In the early 1920s, the Bennett Rancho farmed soybeans on a 640-acre field, which was later leased by William M. Mines for use as an aircraft landing strip, which became known as Los Angeles Airport in 1941. Today, LAX constitutes a large industrial district presently made up of four parallel runways; domestic and international terminals; cargo areas; administrative and support facilities; and limited open space, including the 307-acre Los Angeles/El Segundo Dunes.

4.1.1 Study Area

The north Airfield Area, specifically Runway 6R-24L, is where most of the proposed project activities are proposed to occur. The study area is a highly developed area consisting of a paved runway, several paved taxiways and roads, dirt roads, and several semi-natural unpaved areas. Paved areas are frequently used by aircraft and support vehicles. Unpaved areas are located between runways and taxiways with larger unpaved areas occurring to the west and north of Runway 6R-24L, as well as in between the two runways and areas west of Pershing Drive. All unpaved areas within the north Airfield Area are annually or semiannually subject to wildlife hazards maintenance activities that include mowing, trimming, discing, and other vegetation removal procedures. Additional staging areas are located outside the north Airfield Area and consist of semi-natural unpaved areas, paved roads, and paved parking lots.

Up to 180.95 acres would be used for access, egress, staging and construction activities during construction of the Runway 6R-24L RSA improvements. Of the 180.95 acres that could be affected during construction, up to 180.21 acres would be temporarily impacted, and 0.74 acres would be permanently dedicated to the proposed project (Figure 1.2-3, *Runway 6R-24L RSA Improvements*).

4.2 Los Angeles/El Segundo Dunes

The 307-acre site known today as the Los Angeles/El Segundo Dunes housed 822 residences between 1945 and 1964, at which time they were included in the areas to be acquired by the Airport due to noise impacts. The site was once an extensive complex of coastal dune, coastal sage, coastal prairie, and coastal strand habitat fringing the Santa Monica Bay. Windblown sand deposits extend inland from the coast for up to 4 miles and underlie much of current LAX. These sandy deposits form soils quite distinct from the surrounding clay and silt-derived soils of the coastal plain and adjacent slopes. The sand dune system itself historically was known to support a distinctive flora, and the sand-derived soils inland from the dunes apparently supported a largely herbaceous grassland community. Distinctive fauna known to inhabit the dunes include the El Segundo blue butterfly (*Euphilotes battoides allyni*) and coastal California gnatcatcher (*Polioptila californica californica*) (Figure 4.2-1, *Occupied Habitat for El Segundo Blue Butterfly and Coastal California Gnatcatcher*).

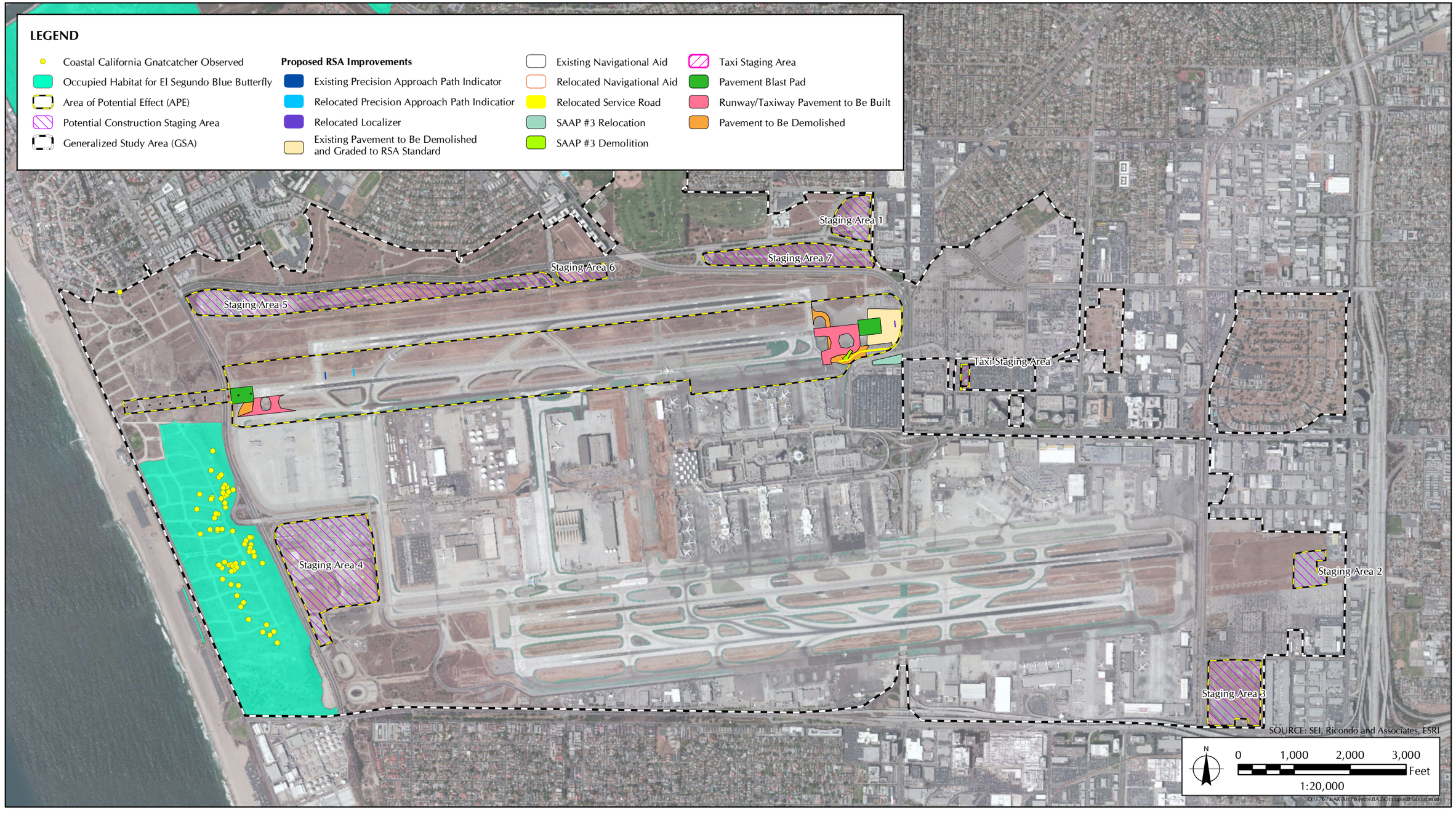

FIGURE 4.2-1

Occupied Habitat for El Segundo Blue Butterfly and Coastal California Gnatcatcher

In 1976, Los Angeles County designated the El Segundo Dunes as a Significant Ecological Area (SEA No. 28) and revised the Los Angeles County General Plan.[24] Two independent studies of El Segundo blue butterfly populations were performed in 1984, both indicating serious and deteriorating habitat conditions. After completion of detailed biological inventories and analysis in 1989,[25] the City adopted the concept and boundaries of the 200-acre El Segundo Blue Butterfly Habitat Restoration Area and initiated revisions to the Airport Dunes Specific Plan in 1991, indicating the habitat restoration area south of Ocean Vista Boulevard and a northern 100-acre parcel for a proposed golf course or other recreational uses (City of Los Angeles Ordinance No. 167940). The Airport Dunes Specific Plan was not approved by the California Coastal Commission, which required additional information before the approval could take place. Before this occurred, the City of Los Angeles protected the remaining 100 acres of the Los Angeles/El Segundo Dunes by restricting its use to nature preserve and accessory uses only (City of Los Angeles Ordinance No. 169767), thereby creating a contiguous 307-acre coastal dunes nature preserve.

The Los Angeles/El Segundo Dunes have been historically classified as a mixture of southern foredune (Dune Mat) and southern dune scrub (Silver Dune Lupine–Mock Heather Scrub). Dune Mat plant communities are typically dominated by perennial species with a high proportion of suffrutescent (slightly woody at base) plants up to 30 centimeters tall. Species such as sand verbena (*Abronia maritima*), beach bur (*Ambrosia chamissonis*), and the nonnative sea rocket (*Cakile* sp.) usually occur in exposed sites, and pink sand verbena (*Abronia umbellata*) and morning-glory (*Calystegia macrostegia* and *soldanella*) occur in less exposed sites.

Silver Dune Lupine–Mock Heather Scrub is a dense coastal scrub community of scattered shrubs, subshrubs, and herbs that are generally less than 1 meter in height, often developing considerable cover, and often succulent. Characteristic species include saltbush (*Atriplex leucophylla*), California croton (*Croton californicus*), coast goldenbush (*Isocoma menziesii* var. *vernonioides*), bush lupine (*Lupinus chamissonis*), prickly pear (*Opuntia littoralis*), and lemonade-berry (*Rhus integrifolia*).

4.3 Database Searches

As a result of the literature review and database searches, 96 sensitive plant and wildlife species were identified as having the potential to occur within the Venice USGS 7.5-minute series topographic quadrangle or adjacent quadrangles. Twenty-two of the 96 species identified during the database search are federally listed or candidate species. Twelve of the 22 species are plants (Appendix A):

- marsh sandwort (*Arenaria paludicola*)
- Braunton's milk-vetch (*Astragalus brauntonii*)
- Ventura Marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*)
- coastal dunes milk-vetch (*Astragalus tener* var. *titi*)
- San Fernando Valley spineflower (*Chorizanthe parryi* var. *Fernandina*)

[24] Los Angeles County Department of Regional Planning. 2012. *Draft General Plan 2035*. Available at: http://planning.lacounty.gov/generalplan/draft2012

[25] City of Los Angeles, Department of Airports (DOA). 1990. *Species Diversity and Habitat Evaluation Across the El Segundo Sand Dunes at LAX*. Prepared by Mattoni, R.H.T., Agresearch, Inc. Prepared for: Los Angeles Environmental Affairs Department. The Board of Airport Commissioners, One World Way West, Los Angeles, California 90009.

- salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*)
- Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*)
- Gambel's water cress (*Nasturtium gambelii*)
- spreading navarretia (*Navarretia fossalis*)
- California orcutt grass (*Orcuttia californica*)
- Lyon's pentachaeta (*Pentachaeta lyonii*)
- Brand's star phacelia (*Phacelia stellaris*)

Ten of the 22 species are wildlife species (Appendix B):

- El Segundo blue butterfly (*Euphilotes battoides allyni*)
- Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*)
- southern steelhead – Southern California DPS (*Oncorhynchus mykiss irideus*)
- Mohave tui chub (*Siphateles bicolor mohavensis*)
- western snowy plover (*Charadrius alexandrinus nivosus*)
- southwestern willow flycatcher (*Empidonax traillii extimus*)
- coastal California gnatcatcher (*Polioptila californica californica*)
- California least tern (*Sternula antillarum browni*)
- least Bell's vireo (*Vireo bellii pusillus*)
- Pacific pocket mouse (*Perognathus longimembris pacificus*)

There is no designated critical habitat or areas proposed for designation for critical habitat for federally listed plants within the study area (Appendix A). Critical habitat was identified for four plant species within 50 miles of the study area: Braunton's milk-vetch, Ventura Marsh milk-vetch, spreading navarretia, and Lyon's pentachaeta.

There is no designated critical habitat or areas proposed for designation for critical habitat for federally listed wildlife within the study area (Appendix B). Critical habitat was proposed for the El Segundo blue butterfly in 1997 in the Los Angeles/El Segundo Dunes but was never adopted. Critical habitat was identified for seven wildlife species within 35 miles of the study area: El Segundo blue butterfly, Palos Verdes blue butterfly, southern steelhead, western snowy plover, southwestern willow flycatcher, coastal California gnatcatcher, and least Bell's vireo.

4.4 Plant Communities

Four distinct plant communities were identified within the study area: Silver Dune Lupine–Mock Heather Scrub, Perennial Ryegrass Field, disturbed / Annual Brome Grassland, and disturbed vegetation. The remainder of the area is developed and was categorized into three mapping units: ornamental plantings, active construction area, and developed areas (Figures 4.4-1A through 4.4-1D, *Plant Community Map*). Developed areas include paved areas, buildings, and other man-made structures.

Silver Dune Lupine–Mock Heather Scrub

The approximately 8.46 acres located at the westernmost end of the study area and west of Pershing Drive were classified as Silver Dune Lupine–Mock Heather Scrub (Figure 4.4-1D, *Plant Community Map*). This area encompassed an area historically disturbed by residential uses and was dominated by a mix of mock heather (*Ericameria ericoides*) and silver dune lupine (*Lupinus*

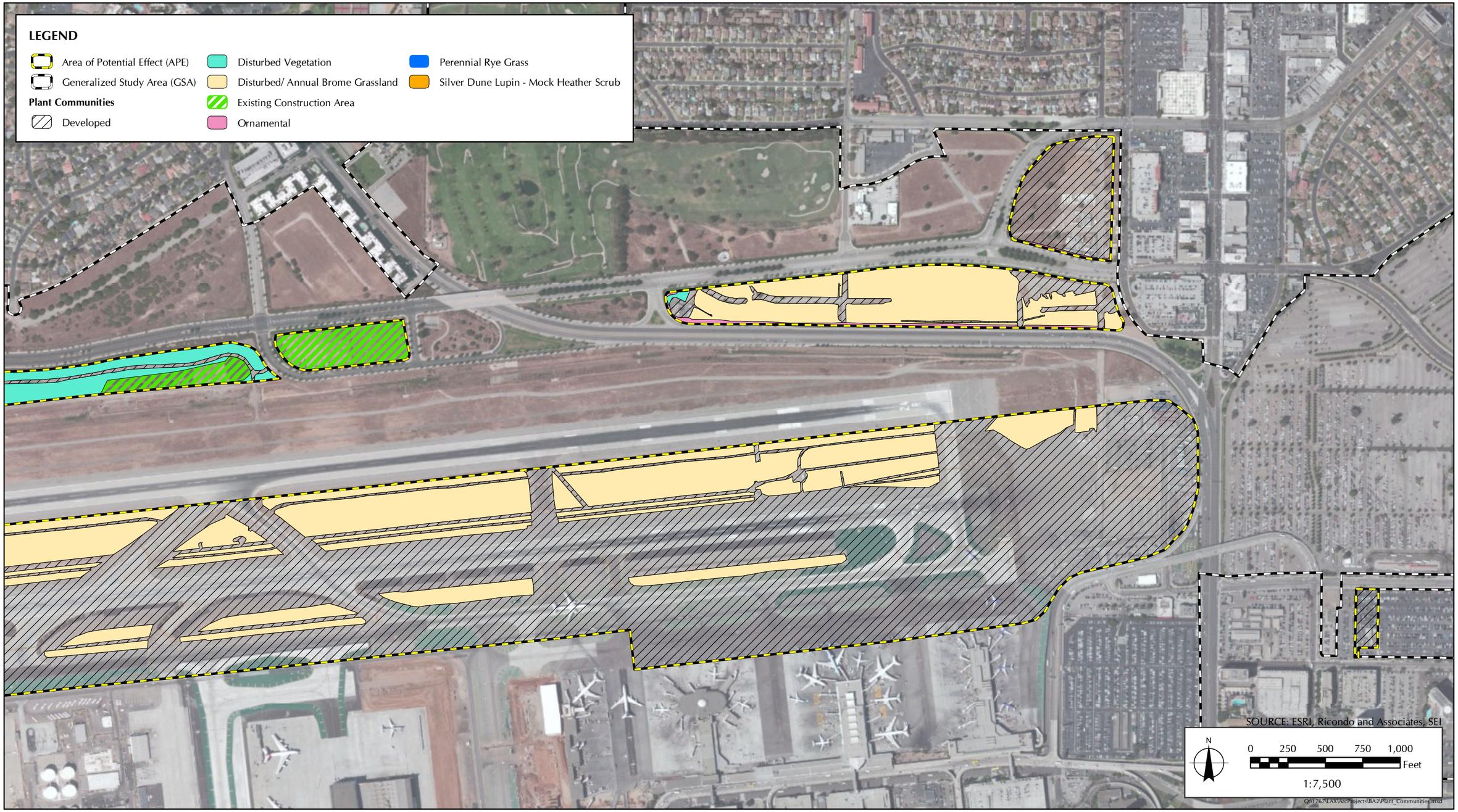

FIGURE 4.4-1A

Plant Community Map

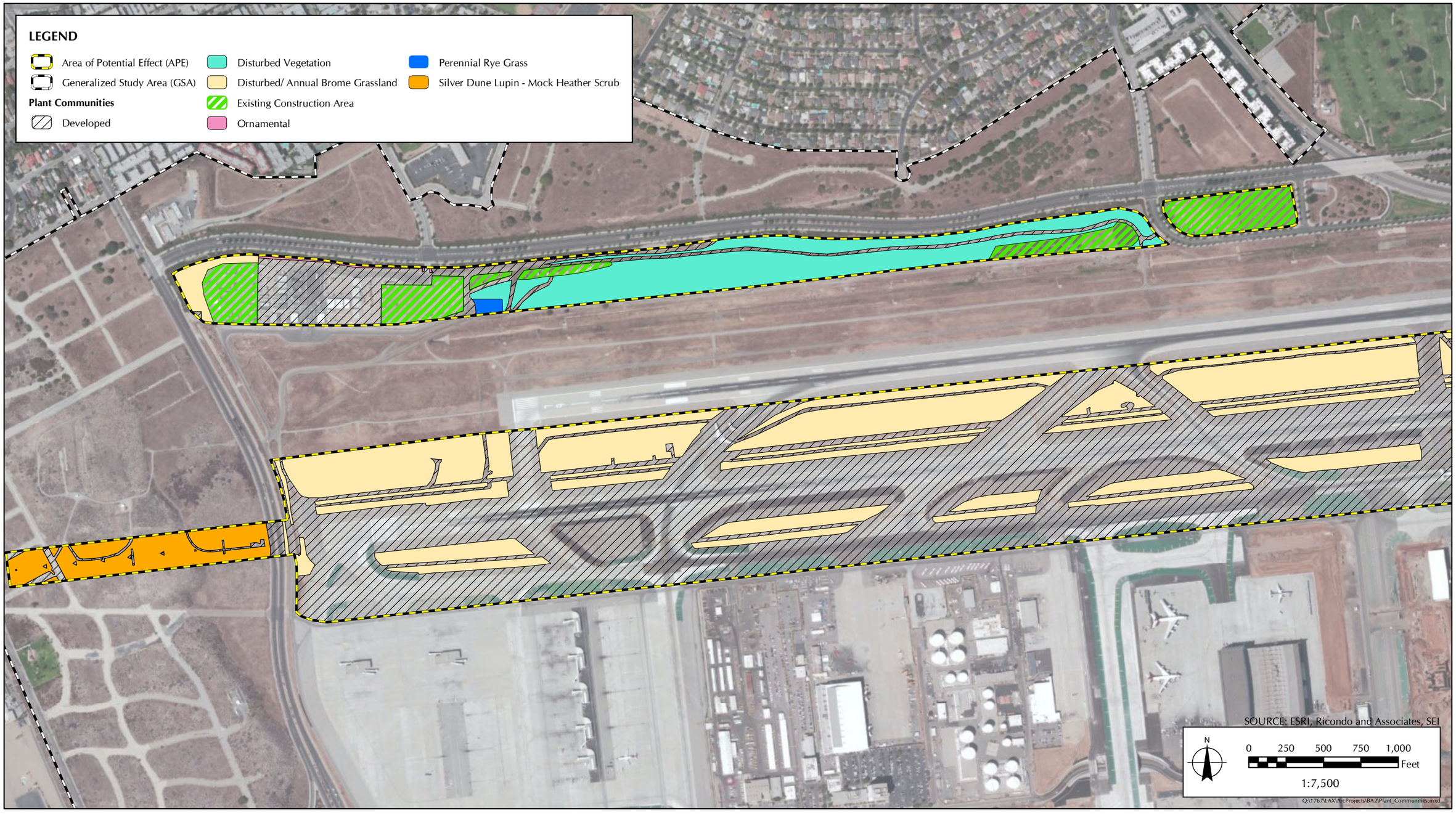

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FIGURE 4.4-1B

Plant Community Map

FIGURE 4.4-1C

Plant Community Map

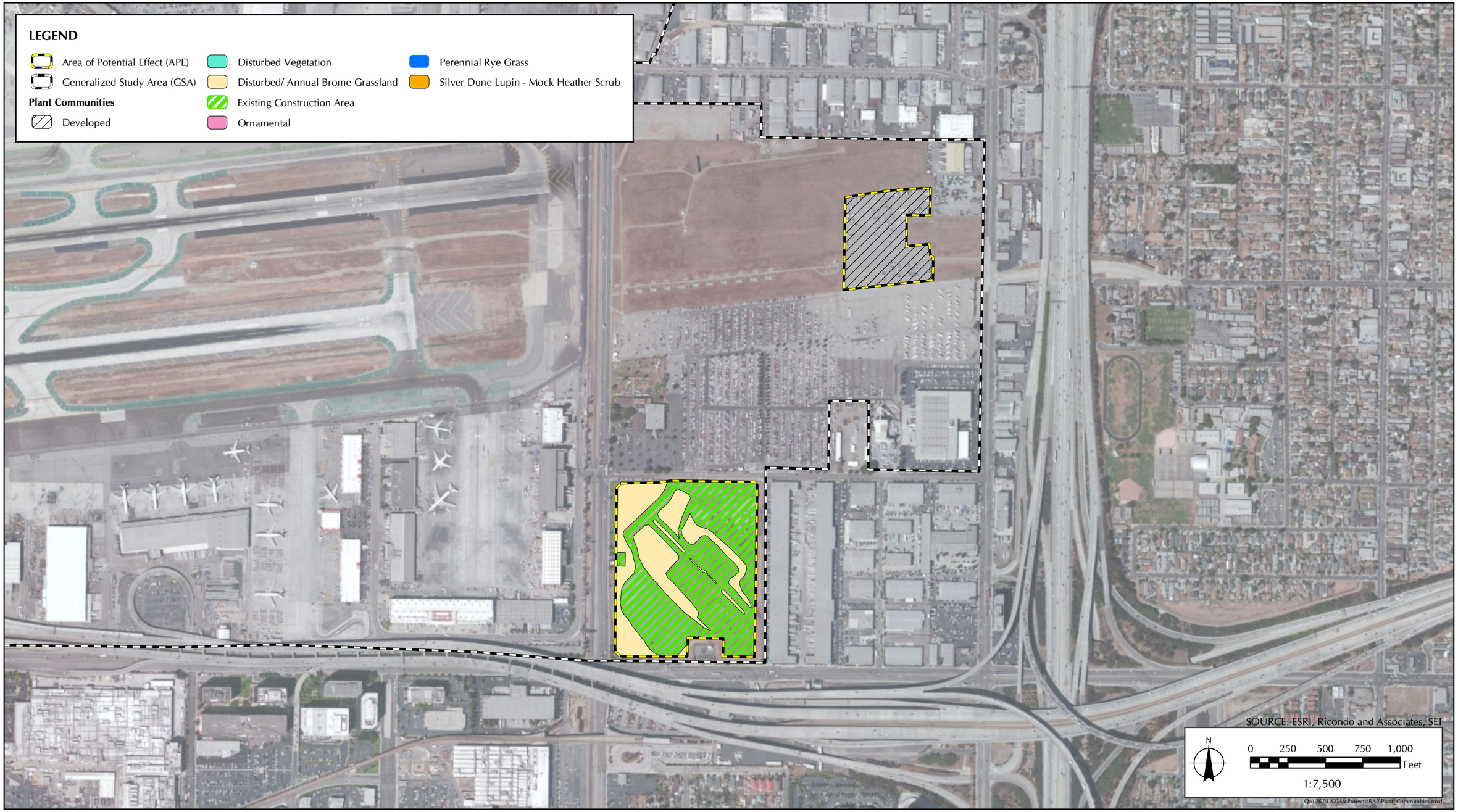

FIGURE 4.4-1D

Plant Community Map

chamissonis) (Figure 4.4-2, *Site Photographs, Silver Dune Lupine–Mock Heather Scrub*). Coast buckwheat was absent from this plant community within the study area. The overall plant community contains several non-native species, most likely due to the historical disturbance regime. This community corresponds to the *Lupinus chamissonis–Ericameria ericoides* Alliance (32.160.03), which has a global and state rarity ranking of 3.[26,27] This plant community may also be classified as Southern Dune Scrub (21330), which has the most sensitive plant community ranking, a global and state ranking of 1. According to CDFW, only plant communities with a ranking of S1, S2, or S3 are considered a sensitive plant community, with a ranking of S1 being the most sensitive rank. A plant community with a rank higher than S3 is not considered a sensitive plant community. The Los Angeles/El Segundo Dunes are virtually the only remaining example of Southern Dune Scrub in mainland Southern California.

Disturbed / Annual Brome Grassland

Vegetation characteristic of disturbed / Annual Brome Grassland areas can be seen in the large open space area west of and surrounding the runway. Although consistently maintained, vegetation has become established due to the lack of continuous soil impacts. There are approximately 114.38 acres of disturbed / Annual Brome Grassland plant community in this area. Plant species associated with disturbed / Annual Brome Grassland plant community were primarily annual non-native species, which included hottentot fig (*Carpobrotus edulis*), redstem filaree (*Erodium cicutarium*), wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis*), and perennial rye-grass (*Lolium multiflorum*) (Figure 4.4-3, *Site Photographs, Disturbed / Annual Brome Grassland*). Vegetation in disturbed / Annual Brome Grassland areas has been and will continue to be routinely maintained or removed as part of the LAWA's ongoing program to prevent wildlife hazardous to aircraft operations from entering the airfield.

Perennial Ryegrass Field

Approximately 0.42 acres of the study area was classified as Perennial Ryegrass Field (Figure 4.4-1). This plant community was confined to a small area north of the Argo Ditch and was dominated by perennial rye-grass (*Festuca perrenis*) (Figure 4.4-4, *Site Photographs, Perennial Ryegrass Field*). This community corresponds to the *Festuca perennis* Semi-natural Stands (41.321.00), which does not have a global or state rarity ranking.[28] This plant community may also be classified as Non-native Grassland (42200). According to CDFW, only plant communities with a ranking of S1, S2, or S3 are considered to be a sensitive plant community, with a ranking of S1 being the most sensitive rank. A plant community with a rank higher than S3 is not considered a sensitive plant community.

[26] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[27] California Native Plant Society. 2013. *The CNPS Ranking System*. Available at: http://www.cnps.org/cnps/rareplants/ranking.php

[28] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

PHOTO 1

FIGURE 4.4-2
Site Photographs, Silver Dune Lupine-Mock Heather Scrub

PHOTO 2

FIGURE 4.4-2
Site Photographs, Silver Dune Lupine-Mock Heather Scrub

PHOTO 1

PHOTO 2

FIGURE 4.4-3
Site Photographs, Disturbed / Annual Brome Grassland

FIGURE 4.4-4
Site Photographs, Perennial Ryegrass Field

Disturbed Vegetation

Vegetation characteristic of disturbed vegetation areas can be seen in small patches outside runway areas. Soil in disturbed vegetation areas has been frequently and recently placed, moved, or removed in disturbed areas. There are approximately 32.67 acres of disturbed vegetation plant community in this area. Plant species associated with disturbed vegetation plant community were primarily annual non-native species, which included redstem filaree (*Erodium cicutarium*), wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis*), and telegraph weed (*Heterotheca grandiflora*) (Figure 4.4-5, *Site Photographs, Disturbed Vegetation*). Vegetation in disturbed vegetation areas has been and will continue to be routinely maintained, removed, or covered as part of the ongoing airport construction activities.

Ornamental

Approximately 2.07 acres of the study area were classified as ornamental (Figure 4.4-1). These areas were confined to areas along paved city streets and included ornamental plants typically found in landscaping including oleander (*Nerium oleander*) and Mexican fan palm (*Washingtonia robusta*) (Figure 4.4-6, *Site Photographs, Ornamental*).

Existing Construction Area

Existing construction areas within the study area occupy approximately 61.7 acres and consist of existing staging areas or other areas where construction activities are currently taking place (Figure 4.4-7, *Site Photographs, Existing Construction Area*). The grading, excavating, or movement of construction equipment within this community makes it difficult for vegetation to establish.

Developed

Developed areas within the study area occupy approximately 300.66 acres and consist of paved areas and man-made structures such as runways; taxiways; roads; buildings; airfield signage; navigational equipment; and runway, taxiway, and airfield lighting (Figure 4.4-8, *Site Photographs, Developed*). The hardscape associated with this community make it unsuitable to support vegetation.

4.5 Plants

Seventy-four plant species from 28 families were identified during the survey. Thirty-six of the identified plant species are native to California, with the remaining 38 plant species being non-native (Attachment A-1, *Floral Compendium*). Non-native plants dominated most of the surveyed area in and around the runways and staging areas, with native patches occurring west of Pershing Drive. This may be due to the continual disturbance regime that occurs throughout the study area and the Los Angeles/El Segundo Dunes being protected as a Significant Ecological Area and Habitat Restoration Area. Human presence is limited to authorized personnel throughout the study area and frequent in the portion east of Pershing Drive. Human presence is infrequent in the portion of the study area west of Pershing Drive in the Los Angeles/El Segundo Dunes.

PHOTO 1

PHOTO 2

FIGURE 4.4-5
Site Photographs, Disturbed Vegetation

PHOTO 1

FIGURE 4.4-6
Site Photographs, Ornamental

PHOTO 2

FIGURE 4.4-6
Site Photographs, Ornamental

PHOTO 1

PHOTO 2

FIGURE 4.4-7
Site Photographs, Existing Construction Area

PHOTO 1

PHOTO 2

FIGURE 4.4-8
Site Photographs, Developed

4.6 Federally Listed and Candidate Plant Species

All 12 of the federally listed sensitive plant species that were identified as potentially occurring in the vicinity of the study area were determined to be absent as a result of directed surveys (Table 4.6-1, *Federally Listed and Candidate Plant Species Potentially Occurring in the Northern Runway Safety Area Improvements Study Area*). An account of each of these species is provided below. These plant species are listed as endangered, threatened, or candidate under the federal ESA. Distributions of extant populations of sensitive species near the study area are shown in Figure 4.6-1, *Federally Listed Plant Species Records*. Critical habitat for federally listed plant species is shown in Figure 4.6-2, *Plants Critical Habitat Map*.

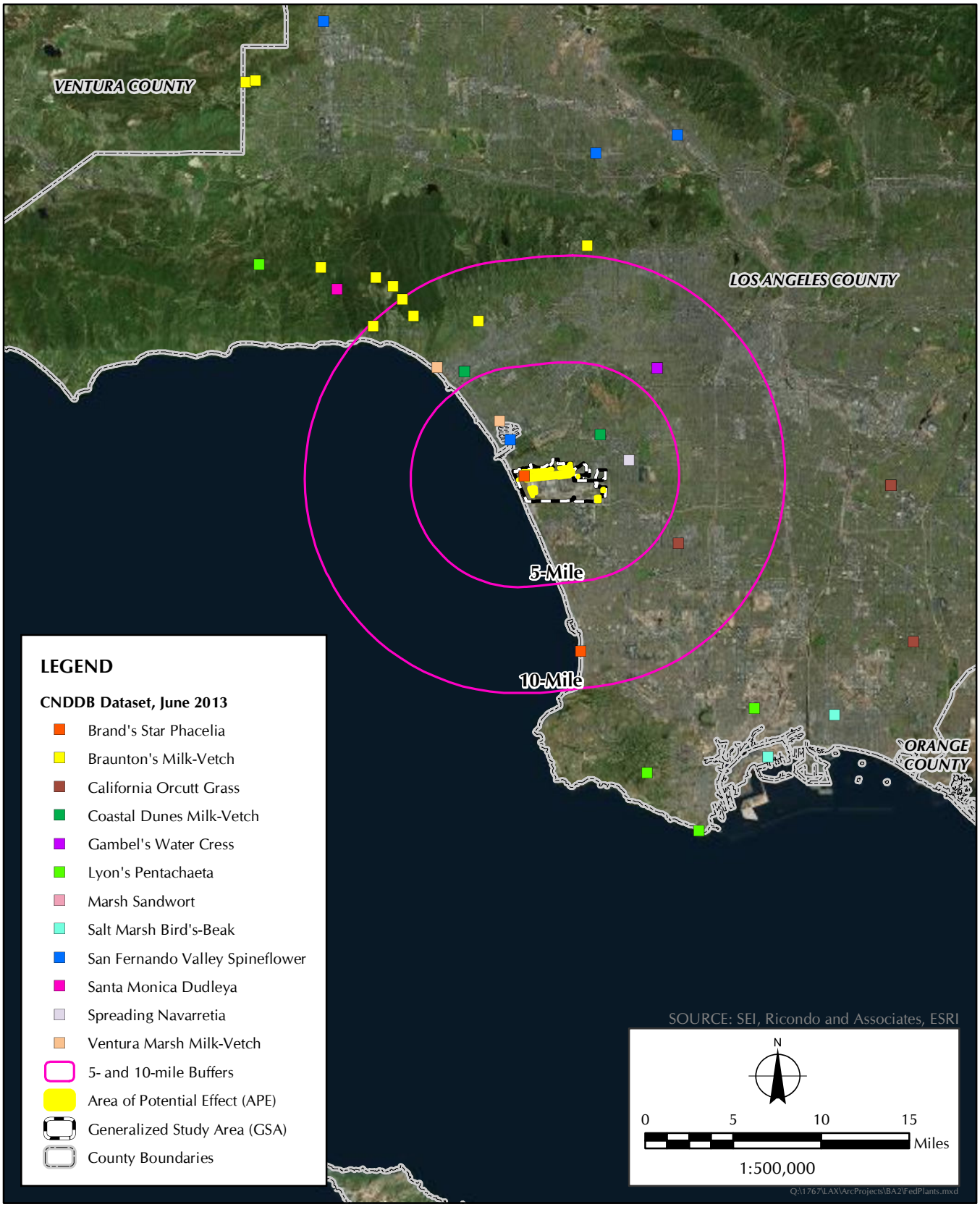

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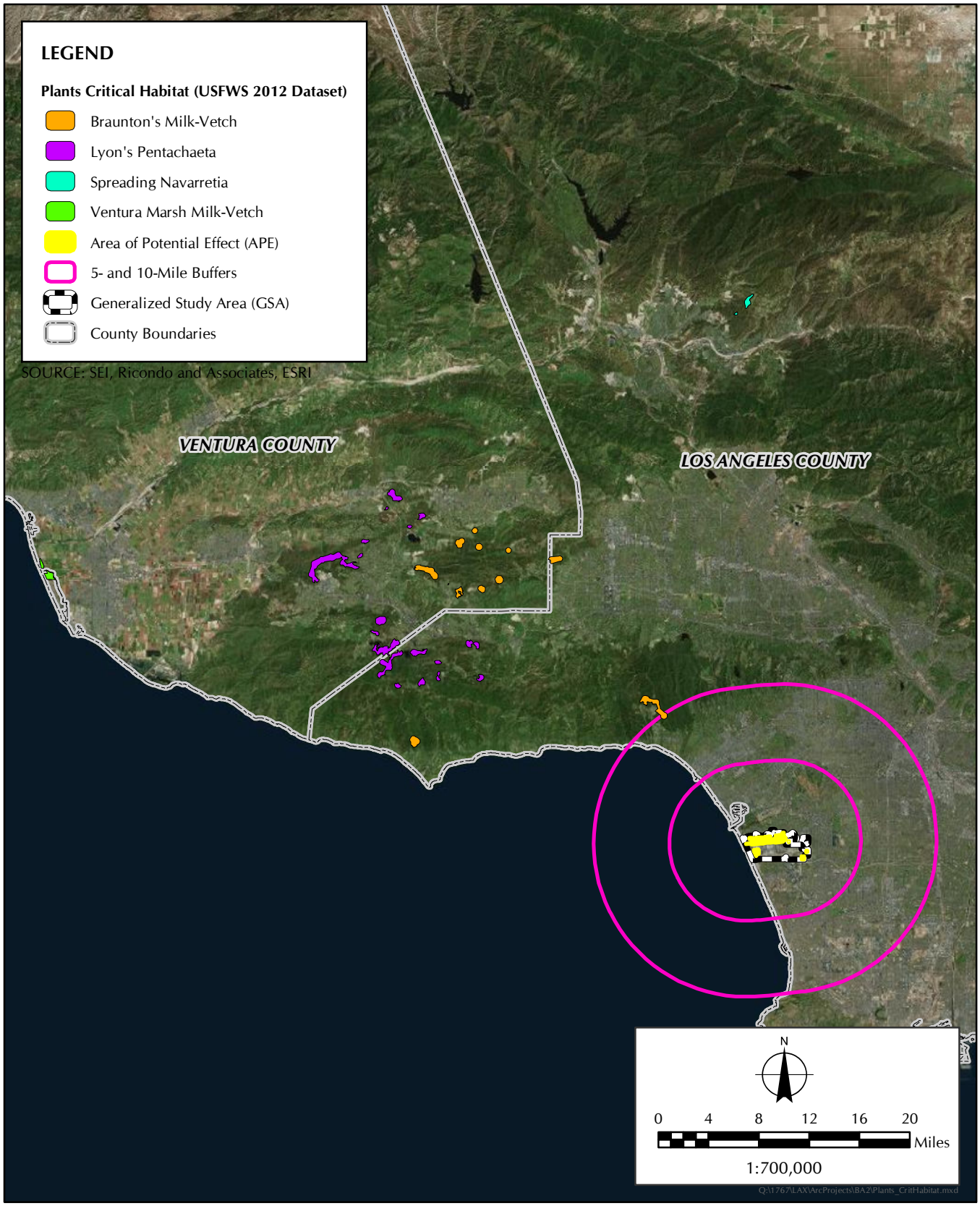
FIGURE 4.6-1

Federally Listed Plant Species Records



RICONDO & ASSOCIATES

FIGURE 4.6-2

Plants Critical Habitat Map

TABLE 4.6-1
Federally Listed and Candidate Plant Species Potentially Occurring in the North Runway Safety Area Improvements Study Area

Name	Status	Habitat	Survey Results
Marsh sandwort *Arenaria paludicola*	FE, SE, CNPS 1B.2	Freshwater marsh, marsh and swamp, wetland	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 6.3 miles northeast of the study area. Currently, there is no established or proposed critical habitat for this species.
Braunton's milk-vetch *Astragalus brauntonii*	FE CNPS 1B.1	Chaparral, closed-cone coniferous forest, coastal scrub, limestone, valley and foothill grassland	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 6.3 miles northeast of the study area. The nearest critical habitat is located approximately 10 miles to the northwest.
Ventura Marsh milk-vetch *Astragalus pycnostachyus* var. *lanosissimus*	FE, SE, CNPS 1B.1 Egregious	Marsh and swamp, salt marsh, wetland	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 2.8 miles northwest of the study area. The nearest critical habitat is located approximately 49 miles to the northwest.
Coastal dunes milk-vetch *Astragalus tener* var. *titi*	FE, SE, CNPS 1B.1	Coastal bluff scrub, coastal dunes	Determined to be absent. There is suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Potentially suitable habitat is limited to the nearby Los Angeles/El Segundo Dunes. Nearest CNDDB record is located approximately 2.2 miles northeast of the study area. Currently, there is no established or proposed critical habitat for this species.
San Fernando Valley spineflower *Chorizanthe parryi* var. *Fernandina*	FC, SE, CNPS 1B.1	Coastal scrub	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Potentially suitable habitat is limited to the nearby Los Angeles/El Segundo Dunes. Nearest CNDDB record is located approximately 1.8 miles northwest of the study area. Currently, there is no established or proposed critical habitat for this species.
Salt marsh bird's-beak *Chloropyron maritimum* ssp. *Maritimum*	FE, SE, CNPS 1B.1	Coastal dunes, marsh and swamp, salt marsh, wetland	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Potentially suitable habitat is limited to the nearby Los Angeles/El Segundo Dunes. Nearest CNDDB record is located approximately 5.7 miles northwest of the study area. Currently, there is no established or proposed critical habitat for this species.
Santa Monica dudleya *Dudleya cymosa* ssp. *Ovatifolia*	FT, CNPS 1B.2	Chaparral, coastal scrub	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Potentially suitable habitat is limited to the nearby Los Angeles/El Segundo Dunes. Nearest CNDDB record is located approximately 12.5 miles northwest of the study area. Currently, there is no established or proposed critical habitat for this species.
Gambel's water cress *Nasturtium gambelii*	FE, ST, CNPS 1B.1	Brackish marsh, freshwater marsh, marsh and swamp, wetland	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 6.3 miles northeast of the study area. Currently, there is no established or proposed critical habitat for this species.
Spreading navarretia *Navarretia fossalis*	FT, CNPS 1B.1	Alkali playa, chenopod scrub, marsh and swamp, vernal pool, wetland	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 2.8 miles east of the study area. The nearest critical habitat is located approximately 35 miles to the north.
California Orcutt grass *Orcuttia californica*	FE, SE, CNPS 1B.1	Vernal pool, wetland	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 6 miles southeast of the study area. Currently, there is no established or proposed critical habitat for this species.
Lyon's pentachaeta *Pentachaeta lyonii*	FE, SE, CNPS 1B.1	Chaparral, coastal scrub, valley and foothill grassland	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 14.1 miles southeast of the study area. The nearest critical habitat is located approximately 20 miles to the northwest.
Brand's star phacelia *Phacelia stellaris*	FC CNPS 1B.1	Coastal dunes, coastal scrub	Determined to be absent. There is suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Potentially suitable habitat is limited to the nearby Los Angeles/El Segundo Dunes. Nearest CNDDB record is located approximately 0.2 miles west of the study area. Currently, there is no established or proposed critical habitat for this species.

KEY: CNDDB = California Natural Diversity Database; CNPS = California Native Plant Society; FE = federally endangered; FT = federally threatened; FC = federal candidate; SE = state endangered; ST = state threatened
NOTES: Critical habitat is only afforded to those species that are listed under the Federal Endangered Species Act as endangered or threatened.
CNPS California Rare Plant Rank categories:

List 1B: Rare, threatened, or endangered in California and elsewhere
0.1: Seriously endangered in California
0.2: Fairly endangered in California
0.3: Not very endangered in California
List 2: Rare, threatened, or endangered in California, but more common elsewhere
0.2: Fairly endangered in California
List 3: Review list, more information required
List 4: Limited distribution (Watch List)
0.1: Seriously endangered in California
0.2: Fairly Endangered in California
0.3: Not very endangered in California

SOURCES: Sapphos Environmental Inc. January 2001. *Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources, Memoranda for the Record on Floral and Faunal Surveys.*
Glenn Lukos Associates. July 2012. *Appendix D-1 LAX Specific Plan Amendment Study, Floral and Faunal Compendium and Sensitive Plants and Wildlife.*
Frank Hovore & Associates. September 28, 1998. *Report of sensitive arthropod surveys, Los Angeles International Airport 2015 Master Plan Study Area, 1996-1998.*

Marsh sandwort (*Arenaria paludicola*) is a perennial herb that blooms from May to August. It is found in sandy openings in marshes and swamps (freshwater or brackish). It is a federal and state-listed endangered species. The nearest CNDDB occurrence for the species is located approximately 6.3 miles northeast of the study area.[29] Marsh sandwort was not observed during May and June 2013 surveys. Additionally, marsh sandwort was not observed during previous surveys.[30,31] Currently, there is no established or proposed critical habitat for this species.

Braunton's milk-vetch (*Astragalus brauntonii*) is a perennial herb that blooms from March to July. It is found in chaparral, coastal scrub, and valley and foothill grassland. It is a federally listed endangered species. The nearest CNDDB occurrence for the species is located approximately 6.3 miles northeast of the study area.[32] Braunton's milk-vetch was not observed during May and June 2013 surveys. Additionally, Braunton's milk-vetch was not observed during previous surveys.[33,34] The nearest critical habitat is located approximately 10 miles to the northwest.

Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*) is a perennial herb that blooms from July to October. It is found in coastal dunes, coastal scrub, and edges of marshes and swamps (coastal salt or brackish). It is a federal and state-listed endangered species. The nearest CNDDB occurrence for the species is located approximately 2.8 miles northwest of the study area.[35] Ventura marsh milk-vetch was not observed during June 2013 surveys. Additionally, Ventura marsh milk-vetch was not observed during previous surveys.[36,37] The nearest critical habitat is located approximately 49 miles to the northwest.

Coastal dunes milk-vetch (*Astragalus tener* var. *titi*) is an annual herb with purple flowers that blooms from March to June. It is found in moist, sandy depressions near the coast, typically coastal bluffs or dunes.[38] It is state-listed endangered and a potential candidate for federal listing as

[29] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[30] Sapphos Environmental, Inc. 2001 Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources. Memoranda for the Record on Floral and Faunal Surveys.

[31] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[32] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[33] Sapphos Environmental, Inc. 2001 Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources. Memoranda for the Record on Floral and Faunal Surveys.

[34] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[35] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[36] Sapphos Environmental, Inc. 2001 Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources. Memoranda for the Record on Floral and Faunal Surveys.

[37] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[38] Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. *The Jepson Manual: Vascular Plants of California,* 2nd Ed. Berkeley, CA: University of California Press.

endangered. Historical records indicate it occurred in the study area.[39] The nearest CNDDB occurrence for the species is located approximately 2.2 miles northeast of the study area.[40] Coastal dunes milk-vetch was not observed during May and June 2013 surveys. Additionally, coastal dunes milk-vetch was not observed during previous surveys.[41,42] Currently, there is no established or proposed critical habitat for this species.

San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) is an annual herb that blooms from April to June. It is found in coastal scrub and valley and foothill grassland. It is a federal candidate species and state-listed endangered species. The nearest CNDDB occurrence for the species is located approximately 1.8 miles northwest of the study area.[43] San Fernando Valley spineflower was not observed during May and June 2013 surveys. Additionally, San Fernando spineflower was not observed during previous surveys.[44,45] Currently, there is no established or proposed critical habitat for this species.

Salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*) is an annual herb that blooms from May to October. It is found in coastal dunes and marshes and swamps (coastal salt). It is a federal candidate species and state-listed endangered species. The nearest CNDDB occurrence for the species is located approximately 5.7 miles northwest of the study area.[46] Salt marsh bird's beak was not observed during May and June 2013 surveys. Additionally, salt marsh bird's beak was not observed during previous surveys.[47,48] Currently, there is no established or proposed critical habitat for this species.

Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*) is a perennial herb that blooms from May to June. It is found in chaparral and coastal scrub. It is a federal threatened species. The nearest CNDDB occurrence for the species is located approximately 12.5 miles northwest of the study

[39] Pierce, W.D., and D. Pool. 1938. "The Fauna and Flora of the El Segundo Sand Dunes." *Bulletin of the Southern California Academy of Sciences*, *37*: 93–97.

[40] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[41] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[42] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[43] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[44] Sapphos Environmental, Inc. 2001 Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources. Memoranda for the Record on Floral and Faunal Surveys.

[45] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[46] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[47] Sapphos Environmental, Inc. 2001 Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources. Memoranda for the Record on Floral and Faunal Surveys.

[48] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

area.[49] Santa Monica dudleya was not observed during May and June 2013 surveys. Additionally, Santa Monica dudleya was not observed during previous surveys.[50,51] Currently, there is no established or proposed critical habitat for this species.

Gambel's water cress (*Nasturtium gambelii*) is a perennial rhizomatous herb that blooms from May to August. It is found in marshes and swamps (freshwater or brackish). It is a federally listed endangered and state-listed threatened species. The nearest CNDDB occurrence for the species is located approximately 6.3 miles northeast of the study area.[52] Gambel's water cress was not observed during May and June 2013 surveys. Additionally, Gambel's water cress was not observed during previous surveys.[53,54] Currently, there is no established or proposed critical habitat for this species.

Spreading navarretia (*Navarretia fossalis*) is an annual herb that blooms from April to June. It is found in chenopod scrub, marshes and swamps, playas, and vernal pools. It is a federally listed threatened species. The nearest CNDDB occurrence for the species is located approximately 2.8 miles east of the study area.[55] Spreading navarretia was not observed during May and June 2013 surveys. Additionally, spreading navarretia was not observed during previous surveys.[56,57] The nearest critical habitat is located approximately 35 miles to the north.

California orcutt grass (*Orcuttia californica*) is a prostrate and glandular annual grass that blooms April through August. It is found in vernal pools. It is both a federally and state-listed endangered species. The nearest CNDDB occurrence for the species is located approximately 6 miles southeast of the study area.[58] California orcutt grass was not observed in the study area as a result

[49] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[50] Sapphos Environmental, Inc. 2001 Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources. Memoranda for the Record on Floral and Faunal Surveys.

[51] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[52] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[53] Sapphos Environmental, Inc. 2001 Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources. Memoranda for the Record on Floral and Faunal Surveys.

[54] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[55] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[56] Sapphos Environmental, Inc. 2001 Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources. Memoranda for the Record on Floral and Faunal Surveys.

[57] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[58] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

of surveys in May and June 2013. Additionally, California orcutt grass was not observed during previous surveys.[59,60] Currently, there is no established or proposed critical habitat for this species.

Lyon's pentachaeta (*Pentachaeta lyonii*) is an annual herb that blooms from March to August. It is found in chaparral, coastal scrub and valley and foothill grassland. It is a federally and state-listed endangered species. The nearest CNDDB occurrence for the species is located approximately 14.1 miles southeast of the study area.[61] Lyon's pentachaeta was not observed during May and June 2013 surveys. Additionally, Lyon's pentachaeta was not observed during previous surveys.[62,63] The nearest critical habitat is located approximately 20 miles to the northwest.

Brand's star phacelia (*Phacelia stellaris*) is an annual herb that blooms from March to May. It is found in coastal dunes and coastal scrub. It is a federal candidate species. The nearest CNDDB occurrence for the species is located approximately 0.2 miles west of the study area.[64] Brand's star phacelia was not observed during May and June 2013 surveys. Additionally, Brand's star phacelia was not observed during previous surveys.[65,66] Currently, there is no established or proposed critical habitat for this species.

4.7 Other Special-Status Plant Species

Two special status plant species were observed within the study area: Lewis' evening primrose (*Camissoniopsis lewisii*) and south coast branching phacelia *(Phacelia ramosissima* var. *austrolitoralis*). Not typically considered suitable habitat for the Lewis' evening primrose, the species was observed within disturbed / Annual Brome Grassland, which accounts for 114.38 acres of the study area. There are 8.46 acres of suitable habitat in the form of Silver Dune Lupine–Mock Heather Scrub for the south coast branching phacelia within the study area (Figure 4.7-1, *Locations of Other Special-Status Plant Species*). Although not afforded federal status pursuant to the federal ESA, or State status under the California Endangered Species Act, these two plant species are designated as List 3 on the California Native Plant Society List of Rare and Endangered Plants. List 3 plants are those for which the California Native Plant Society has determined that additional information is needed.

[59] Sapphos Environmental, Inc. 2001 Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources. Memoranda for the Record on Floral and Faunal Surveys.

[60] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[61] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[62] Sapphos Environmental, Inc. 2001 Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources. Memoranda for the Record on Floral and Faunal Surveys.

[63] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[64] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[65] Sapphos Environmental, Inc. 2001 Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources. Memoranda for the Record on Floral and Faunal Surveys.

[66] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

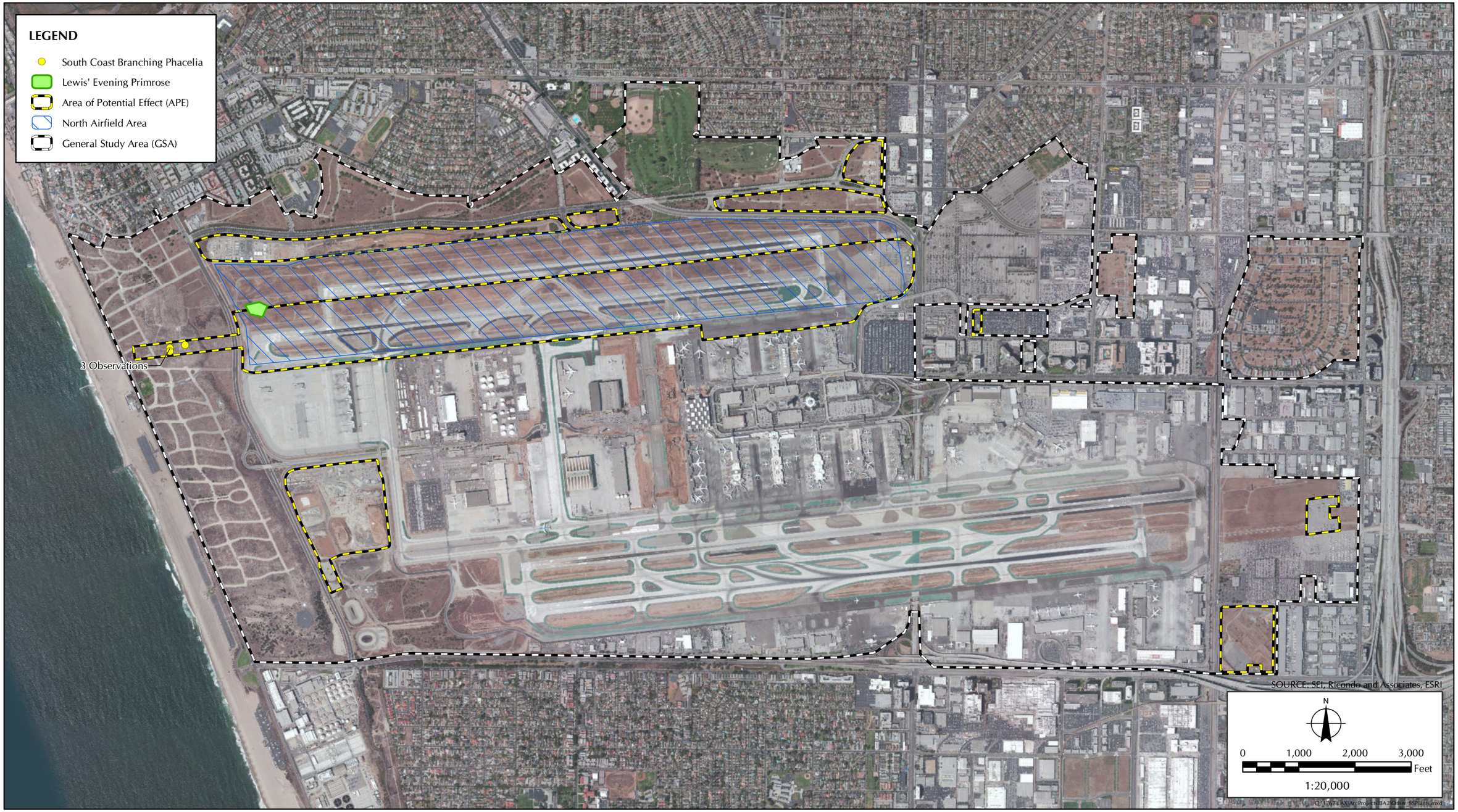


FIGURE 4.7-1

Locations of Other Special-Status Plant Species

4.8 Wildlife

Twenty-four wildlife species were observed during the 2013 surveys. There were 2 insect species, 3 reptile species, 18 bird species, and 1 mammal species recorded within the study area (Appendix B, Table B-1). Overall, the abundance of wildlife was considered low, with flying wildlife, such as butterflies and birds, accounting for most wildlife observations. Terrestrial wildlife was limited to a total of 3 reptile and 1 mammal species observations. No fish or amphibian species were observed during the surveys (Figure 4.8-1, *Locally Sensitive Wildlife Species Records*). A single burrowing owl along with its burrow was observed just south of Westchester Parkway near the intersection of Westchester Parkway and Northside Parkway, where it was utilizing a broken up concrete pipe (Figure 4.8-2, *Locally Sensitive and Protected Wildlife Species Observations*). The burrow associated with this observation will be avoided during construction activities. A pair of red foxes (*Vulpes vulpes*) along with their burrow was observed on the southeastern-most portion of the survey area, which is located at the corner of Aviation Boulevard and Imperial Highway. Although a non-native species and not afforded federal status pursuant to the federal ESA or state status pursuant to the California Endangered Species Act, the red fox is still afforded protection pursuant to the fur-bearing mammals act (California Fish and Game Code §4000–4012).

Portions of the study area adjacent to the runway lie within an active management area identified in the LAX Wildlife Hazard Management Plan (WHMP) prepared by an FAA-qualified wildlife biologist on behalf of the airport. The goal of an airport's WHMP is to minimize the risk to aviation safety, airport structures or equipment, or human health posed by populations of hazardous wildlife on and around the airport. The WHMP identifies hazardous wildlife attractants on or near the airport and the appropriate wildlife damage management techniques to minimize the wildlife hazard. The grass between runways are identified as hazardous wildlife attractants at LAX that contain vegetation that are managed under the WHMP to minimize wildlife hazards at LAX. In addition, some prey species around the runways are also actively managed to minimize wildlife hazards under the WHMP. LAX holds a current Federal Fish and Wildlife Service Depredation Permit, which allows for the limited take, temporary possession, and transport of migratory birds and nests at the airport to relieve or prevent injurious situations impacting public safety. The USDA Wildlife Services actively manages the airport property to reduce its attractiveness to red fox and other species. California Fish and Game Code Sections 4000–4012, 4152, and 4180 allow for USDA wildlife biologists to take fur-bearing mammals to protect property at the airport including the red fox. If the staging area where red fox have been previously observed is proposed to be used for the project, USDA will be consulted with to determine the presence and potential removal of red fox.

4.9 Federally Listed and Candidate Wildlife Species

All 10 of the federally listed sensitive wildlife species that were identified as potentially occurring in the vicinity of the study area were determined to be absent as a result of directed surveys (Table 4.9-1, *Federally Listed and Candidate Wildlife Species Potentially Occurring in the North Runway Safety Area Improvements Study Area*). However, occupied habitat for two species, El Segundo blue butterfly and coastal California gnatcatcher, is present in close proximity to the study area. An account of each of the 10 species is provided below.

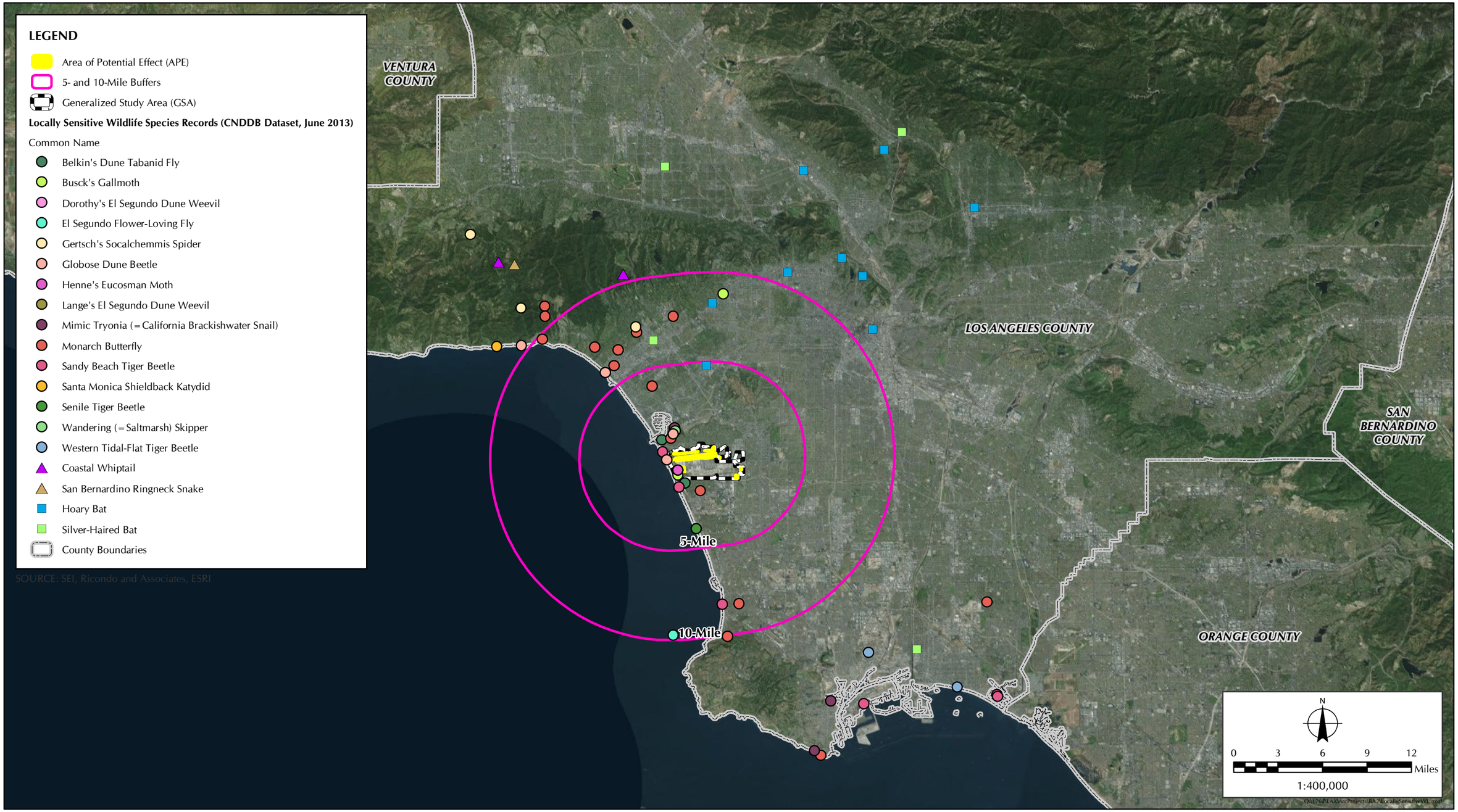


FIGURE 4.8-1
Locally Sensitive Wildlife Species Records

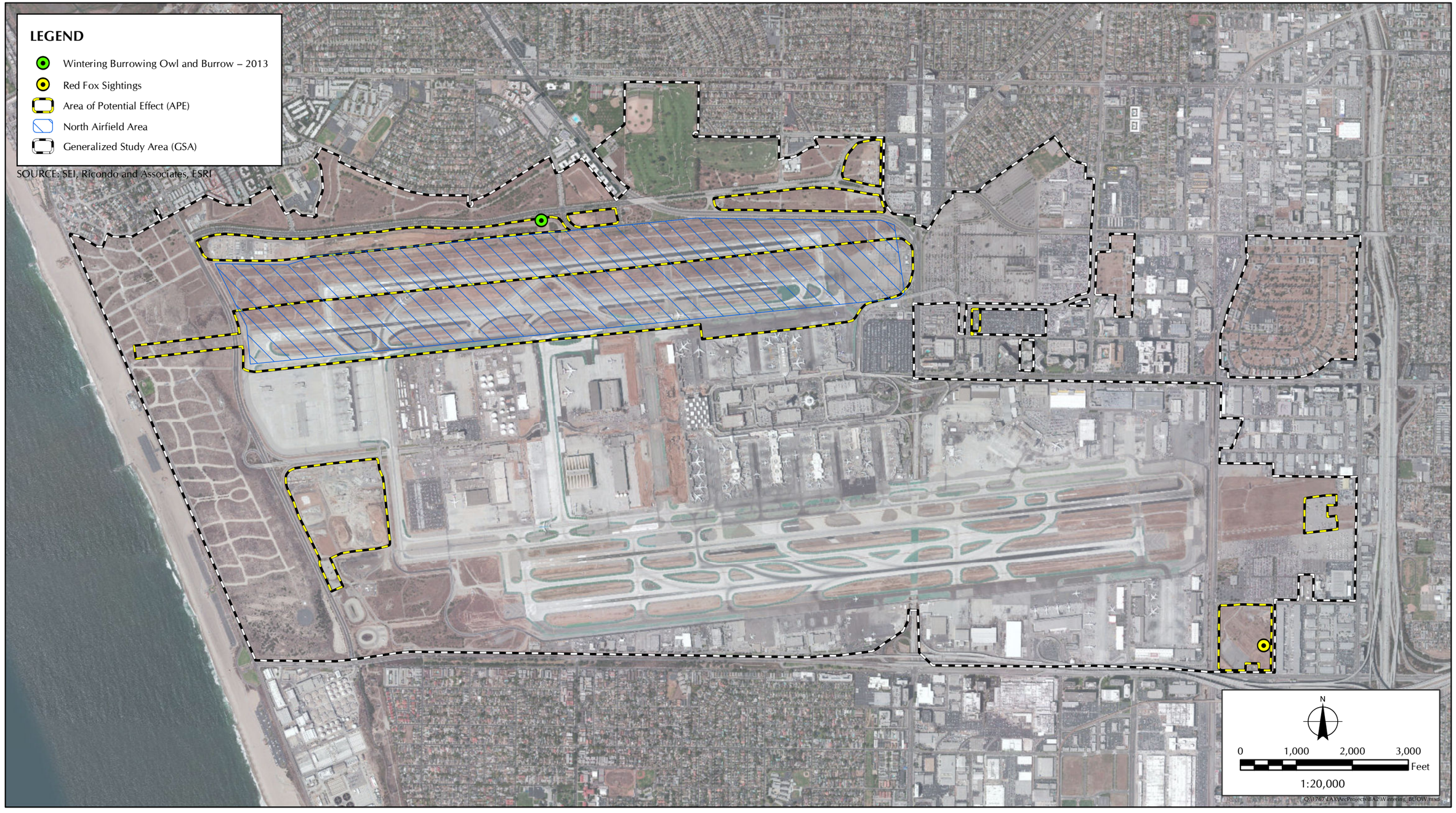


FIGURE 4.8-2

Locally Sensitive and Protected Wildlife Species Observations

TABLE 4.9-1
Federally Listed and Candidate Wildlife Species Potentially Occurring in the North Runway Safety Area Improvements Study Area

Name	Status	Habitat	Survey Results
Invertebrates			
El Segundo blue butterfly *Euphilotes battoides allyni*	FE	Coastal sand dunes with coast buckwheat.	Determined to be absent. Known to be present in the vicinity. Determined to be absent in the study area. There is no suitable habitat within the study area. The species was not observed in the study area during 2013 biological surveys or previous surveys in the study area. Occupied habitat is limited to the nearby Los Angeles/El Segundo Dunes, approximately 0.6 mile south of the study area, as documented in the CNDDB. Occupied habitat for the species is located 0.1 miles south of the study area in the Los Angeles/El Segundo Dunes.
Palos Verdes blue butterfly *Glaucopsyche lygdamus palosverdesensis*	FE	Coastal scrub	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 9.8 miles south of the study area. The nearest critical habitat is located approximately 10 miles to the northwest.
Fish			
Southern steelhead - southern California DPS *Oncorhynchus mykiss irideus*	FE, SSC	Aquatic, south coast flowing waters	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 12 miles northwest of the study area. The nearest critical habitat is located approximately 10 miles to the northwest.
Mohave tui chub *Siphateles bicolor mohavensis*	FE, SE, FP	Aquatic, artificial flowing waters, artificial standing waters	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 12 miles southeast of the study area. Currently, there is no established or proposed critical habitat for this species.
Birds			
Western snowy plover *Charadrius alexandrinus nivosus*	FT, SSC, BCC	Great Basin standing waters, sand shore, wetland	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 0.8 mile northwest of the study area. The nearest critical habitat is located approximately 1,000 feet to the west. Known to nest on Dockweiler State Beach where a protective enclosure exists for their nesting.
Southwestern willow flycatcher *Empidonax traillii extimus*	FE, SE	Riparian woodland	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 10.6 miles southeast of the study area. The nearest critical habitat is located approximately 22 miles to the north.
Coastal California gnatcatcher *Polioptila californica californica*	FT, SSC	Coastal bluff scrub, coastal scrub	Determined to be potentially present. Known to be present in the vicinity. Determined to be potentially present in the study area. There is marginal suitable habitat for nesting within the study area. Occupied habitat is limited to the nearby Los Angeles/El Segundo Dunes, approximately 2.8 miles northeast of the study area, as documented in the CNDDB. Previous observations have occurred approximately 800 feet to the south of the study area in the Los Angeles/El Segundo Dunes. The nearest critical habitat is located approximately 10 miles to the south.
California least tern *Sternula antillarum browni*	FE, SE, FP	Alkali playa, wetland	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 1.2 miles northwest of the study area. Currently, there is no established or proposed critical habitat for this species.
Least Bell's vireo *Vireo bellii pusillus*	FE, SE	Riparian forest, riparian scrub, riparian woodland	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 14.7 miles northeast of the study area. The nearest critical habitat is located approximately 35 miles to the north.
Mammals			
Pacific pocket mouse *Perognathus longimembris pacificus)*	FE, SSC	Coastal scrub	Determined to be absent. There is no suitable habitat within the study area. The species was not observed during 2013 biological surveys or previous surveys in support of the LAX Master Plan.[1] Potentially suitable habitat is limited to the Los Angeles/El Segundo Dunes. Nearest CNDDB record is located approximately 1.1 miles south of the study area. Currently, there is no designated or proposed critical habitat for this species.

KEY: CNDDB = California Natural Diversity Database; CNPS = California Native Plant Society; FE = federally endangered; FT = federally threatened; FC = federal candidate; FD = federally delisted; BCC = birds of conservation concern; SE = state endangered; ST = state threatened; SSC = state species of special concern; FP = state fully protected; SD = state delisted

NOTE: Critical habitat is only afforded to those species that are listed under the Federal Endangered Species Act as endangered or threatened.

SOURCES: Sapphos Environmental Inc. January 2001. *Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources, Memoranda for the Record on Floral and Faunal Surveys.*
Glenn Lukos Associates. July 2012. *Appendix D-1 LAX Specific Plan Amendment Study, Floral and Faunal Compendium and Sensitive Plants and Wildlife.*
Frank Hovore & Associates. September 28, 1998. *Report of sensitive arthropod surveys, Los Angeles International Airport 2015 Master Plan Study Area, 1996-1998.*

[1] U.S. Department of Transportation, Federal Aviation Administration and City of Los Angeles, Los Angeles World Airports. April 2004. *LAX Master Plan EIS/EIR*. Available at: http://www.ourlax.org/pub_finalMP.aspx

These wildlife species are listed as endangered, threatened, or candidate under the federal ESA. Distributions of extant populations of sensitive species near the project site are shown in Figure 4.9-1, *Federal Listed Wildlife Species Records*. Critical habitat for federal-listed wildlife species is shown in Figure 4.9-2, *Wildlife Critical Habitat Map*.

El Segundo blue butterfly (*Euphilotes battoides allyni*) is a federally listed endangered species. This species typically occurs in coastal sand dunes with coast buckwheat. The study area occurs partially within the El Segundo Blue Butterfly Habitat Restoration Area. Habitat, including coast buckwheat, for the species was not observed within the study area. Occupied habitat for the species has been documented on approximately 200 acres within the Los Angeles/El Segundo Dunes south of the study area where its host plant occurs. Individuals, sign, or their host plant were not observed in the study area during 2013 biological surveys. Additionally, El Segundo blue butterfly was not observed in the study area during previous surveys.[67,68] El Segundo Blue Butterfly was recently observed at Ballona Wetlands and along the coastal strand at the coastal restoration sites by Dr. Richard Arnold. The El Segundo blue butterfly is known from only two other small localities. One locality is a 1.5-acre site at the Chevron Refinery Preserve and the other is a 0.5-acre site at Malaga Cove. The Dunes population represents approximately 90 percent of the known population of this species. The nearest CNDDB occurrence for the species is located approximately 0.6 miles south of the study area.[69] Critical habitat was proposed for this species on February 8, 1977 (42 FR 7972), but was never designated. An additional population was observed on Vandenberg Air Force Base in Santa Barbara County and is discussed in the 5-year review for the species.[70] However, it was unclear whether the population identified in Santa Barbara County is the El Segundo blue butterfly.

Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*) is a federally listed endangered species and typically occurs in coastal scrub communities. Habitat for the species was not observed within the study area, but is known to be present in the Los Angeles/El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys or previous surveys in the study area. The nearest CNDDB occurrence for the species is located approximately 9.8 miles south of the study area.[71] The Palos Verdes blue butterfly is known to inhabit the Palos Verdes Peninsula located approximately 10 miles south of the study area where its critical habitat can be found.

The Southern California distinct population segment (DPS) of the southern steelhead (*Oncorhynchus mykiss irideus*) is a federally listed endangered species and CDFW species of special concern. It is aquatic and typically occurs in south coast flowing waters. There is no suitable habitat for this species within the study area. This species is not present within the study

[67] Sapphos Environmental, Inc. 2001 Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources. Memoranda for the Record on Floral and Faunal Surveys.

[68] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[69] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[70] USFWS. 2008. *El Segundo Blue Butterfly (Euphilotes battoides allynii) 5-Year Review: Summary and Evaluation*. Carlsbad, CA.

[71] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

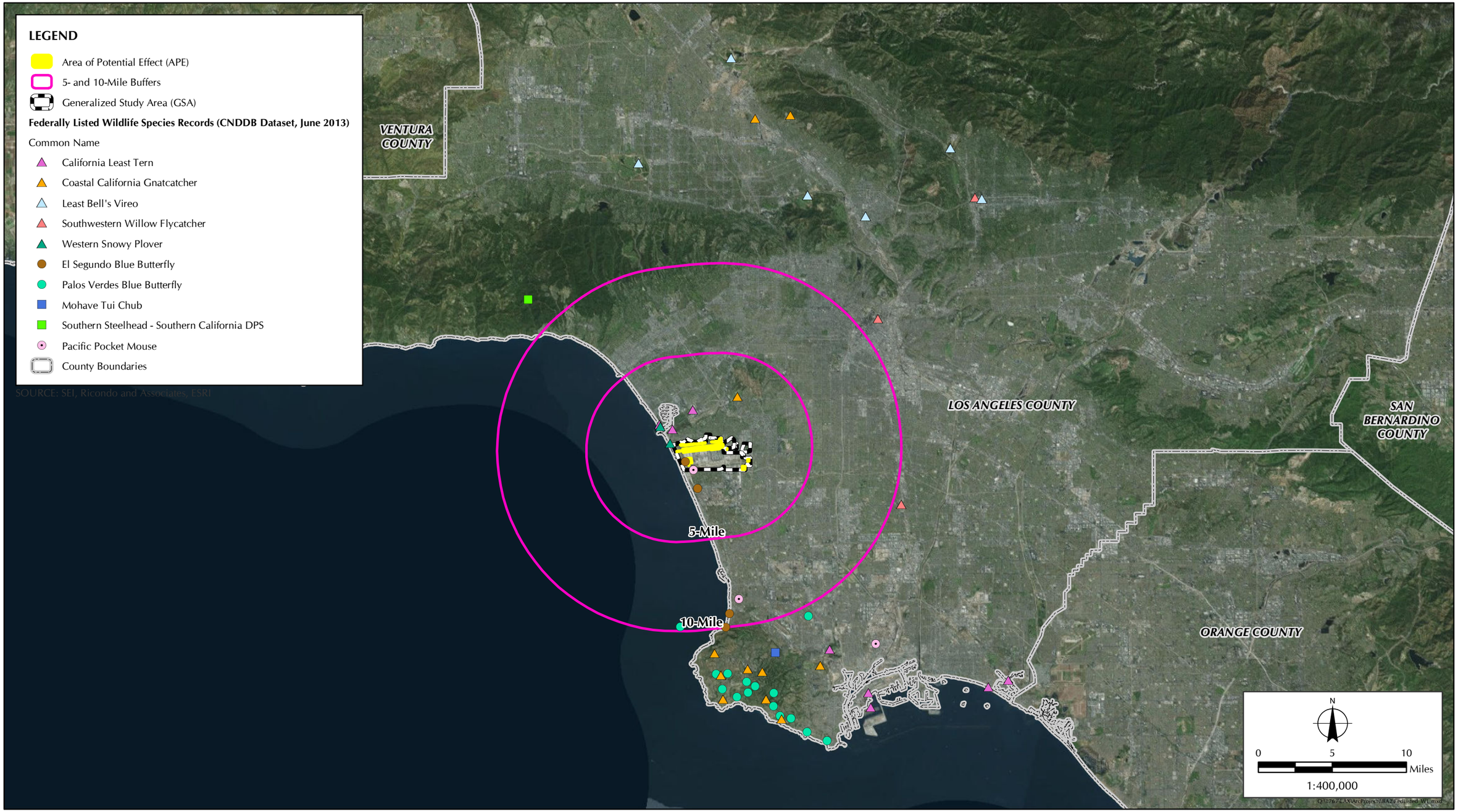


FIGURE 4.9-1

Federally Listed Wildlife Species Records

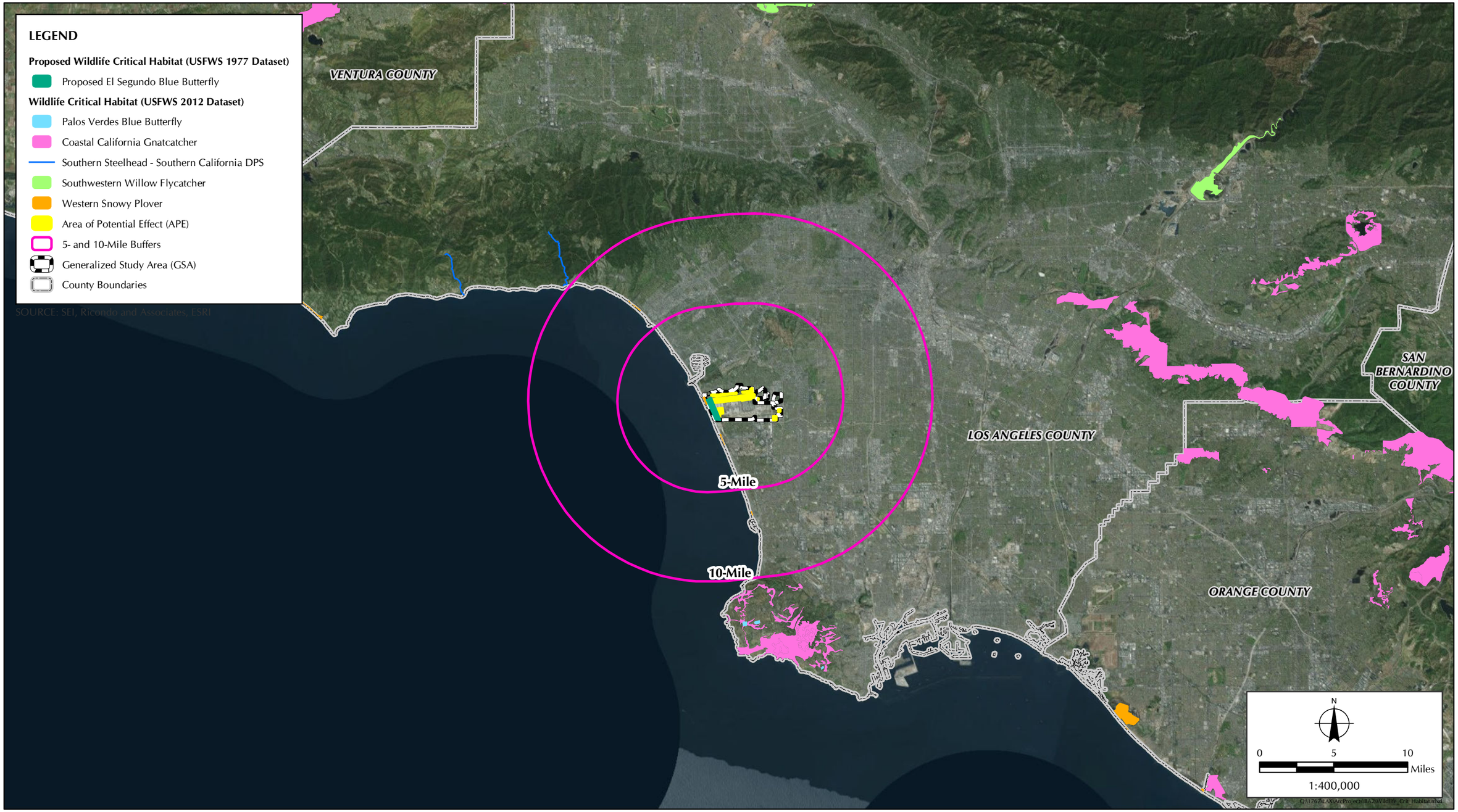


FIGURE 4.9-2
Wildlife Critical Habitat Map

area. The nearest CNDDB occurrence for the species is located approximately 12 miles northwest of the study area.[72] The nearest critical habitat is located approximately 10 miles to the northwest.[73]

Mohave tui chub (*Siphateles bicolor mohavensis*) is a federally and state-listed endangered species. It is aquatic and typically occurs in artificial flowing waters and artificial standing water. There is no suitable habitat for this species within the study area. This species is not present within the study area. The nearest CNDDB occurrence for the species is located approximately 12 miles southeast of the study area.[74] Currently, there is no established or proposed critical habitat for this species.

Western snowy plover (*Charadrius alexandrinus nivosus*) is a federally listed threatened species and CDFW species of special concern. It typically occurs in great basin standing waters, sand shore, and wetland communities. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. The nearest CNDDB occurrence for the species is located approximately 0.8 miles northwest of the study area.[75] The nearest critical habitat is located approximately 1,000 feet to the west.

Southwestern willow flycatcher (*Empidonax trailii extimus*) is a federally and state-listed endangered species. It is known to breed in limited riparian areas throughout the Southwest. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. The nearest CNDDB occurrence for the species is located approximately 10.6 miles southeast of the study area.[76] The nearest critical habitat is located approximately 22 miles to the north.

Coastal California gnatcatcher (*Polioptila californica californica*) is a federally listed threatened species and CDFW species of special concern. It typically occurs in coastal bluff scrub and coastal scrub. Marginally suitable nesting habitat for the species was observed in the study area. Suitable habitat is known to be present in the nearby Los Angeles/El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys. At least one pair was observed nesting in the Los Angeles/El Segundo Dunes in 2013 south of the study area with the nearest individual observation occurring approximately 800 feet south of the study area. The nearest CNDDB

[72] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[73] National Marine Fisheries Service. 2005. Endangered and Threatened Species; Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California. Washington D.C. Available at http://www.gpo.gov/fdsys/pkg/FR-2005-09-02/pdf/05-16389.pdf#page=1

[74] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[75] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[76] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

occurrence for the species is located approximately 2.8 miles northeast of the study area.[77] The nearest critical habitat is located approximately 10 miles to the south.

California least tern (*Sterna antillarum browni*) is a federally and state listed endangered species. It typically occurs in alkali playa and wetlands. It nests along the coast from San Francisco south into Baja California, Mexico. This species is a bird of the open ocean and near-shore waters. It is known to breed at a colony 3 miles north of the study area. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. The nearest CNDDB occurrence for the species is located approximately 1.2 miles northwest of the study area.[78]

Least Bell's vireo (*Vireo bellii pusillus*) is a federally and state-listed endangered species. It typically occurs in riparian forest, riparian scrub, and riparian woodland. Habitat, individuals, or sign were not observed during 2013 biological surveys or previous surveys. The nearest CNDDB occurrence for the species is located approximately 14.7 miles northeast of the study area.[79] Nearest critical habitat is located approximately 35 miles to the north.

Pacific pocket mouse (*Perognathus longimembris pacificus*) is a federally listed endangered species and CDFW species of special concern. It typically occurs in coastal scrub communities. It is known from only three localities in coastal Southern California. Attempts to locate this species at the Los Angeles/El Segundo Dunes have been unsuccessful. The dunes contain the largest remaining area of historically occupied habitat. Habitat was not observed within the study area and is not known to be present in the Los Angeles/El Segundo Dunes. Individuals or sign were not observed during 2013 biological surveys. Additionally, Pacific pocket mouse was not observed in the study area during previous surveys.[80,81] The nearest CNDDB occurrence for the species is located approximately 1.1 miles south of the study area.[82] Currently, there is no established or proposed critical habitat for this species.

4.10 Wetlands and Waters of the United States

There are no wetlands or waters of United States within the study area or areas identified as being under the jurisdiction of USACOE, RWQCB, or CDFW. As a result of the review of the 7.5-minute series topographic quadrangles and the NWI map, and field reconnaissance of the study area, it

[77] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[78] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[79] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[80] Sapphos Environmental, Inc. 2001 Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources. Memoranda for the Record on Floral and Faunal Surveys.

[81] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

[82] California Department of Fish and Wildlife. 2013. *Rarefind 4.0: A Database Application for the Use of California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

was determined that there are no wetlands or other "waters of the United States" present within the study area.

4.11 Designated Conservation Areas

There are no current or proposed Habitat Conservation Plans or Natural Community Conservation Plan areas covering or adjacent to the study area.[83,84] However, the far western portion of the study area is located within the County of Los Angeles General Plan's El Segundo Dunes Significant Ecological Area (8.99 acres) and the Los Angeles/El Segundo Dunes El Segundo Blue Butterfly Habitat Restoration Area Boundary (4.14 acres) (Figures 4.11-1, *State and County Designated Conservation Areas*, and 4.11-2, *City Designated Conservation Areas*). The Los Angeles/El Segundo Dunes was also identified as an important natural resource and as an open space nature preserve in the City of Los Angeles General Plan and Ordinances No. 167940 and 169767. The City of Los Angeles General Plan delegates responsibility for the conservation of the Los Angeles/El Segundo Dunes to the City of Los Angeles Department of Airports, also known as LAWA, the department responsible for the LAX facility.

The Dockweiler State Beach Habitat Restoration Area occurs approximately 0.6 miles south of the westernmost portion of the study area and is focused on restoring coastal dune habitat for the El Segundo blue butterfly.

[83] United States Fish and Wildlife Service. 2013. *USFWS Habitat Conservation Plan Report*. Available at: http://ecos.fws.gov/conserv_plans/PlanReport

[84] California Department of Fish and Wildlife. 2013. *NCCP Summary Map*. Available at: http://www.dfg.ca.gov/habcon/nccp/

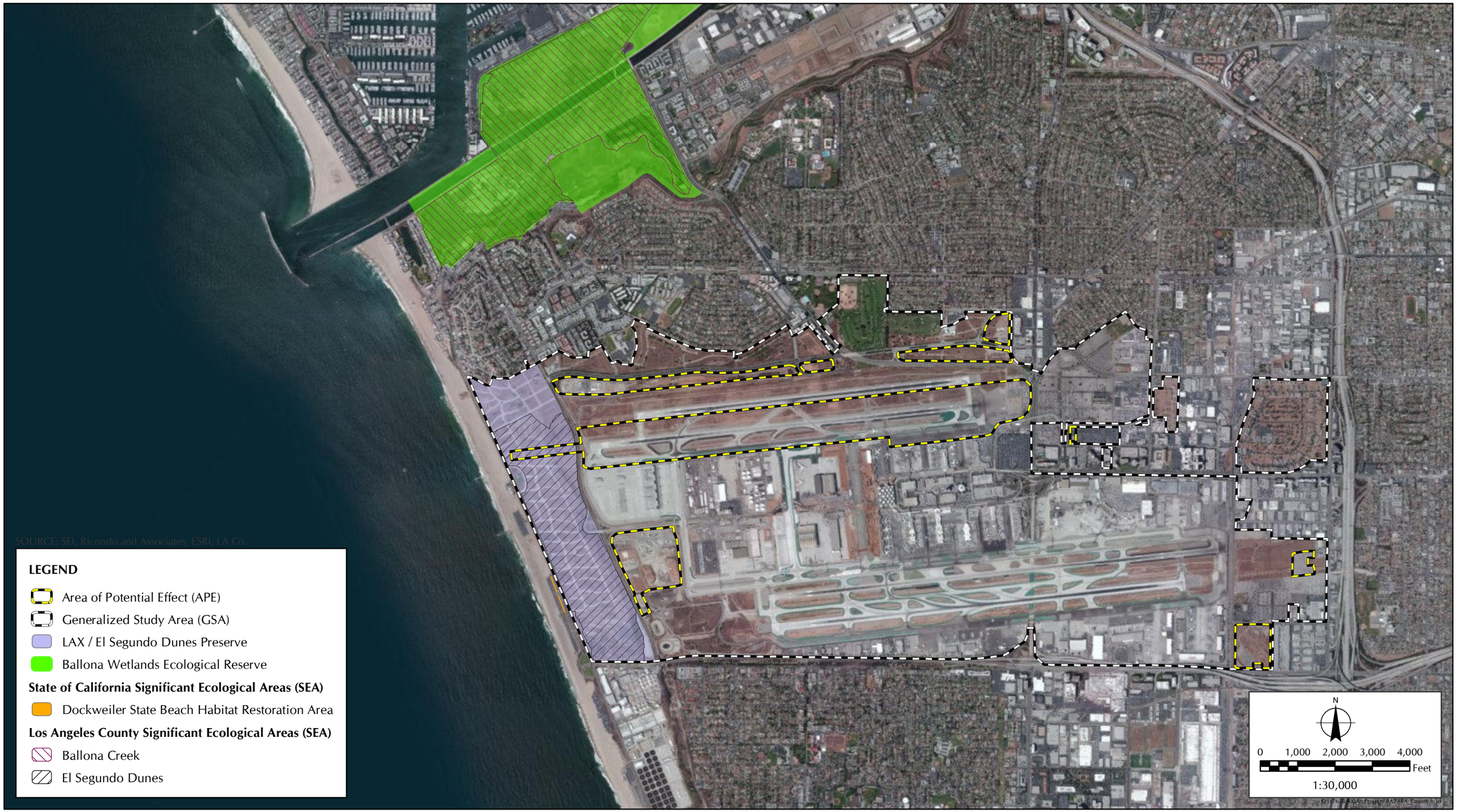


FIGURE 4.11-1
State and County Designated Conservation Areas

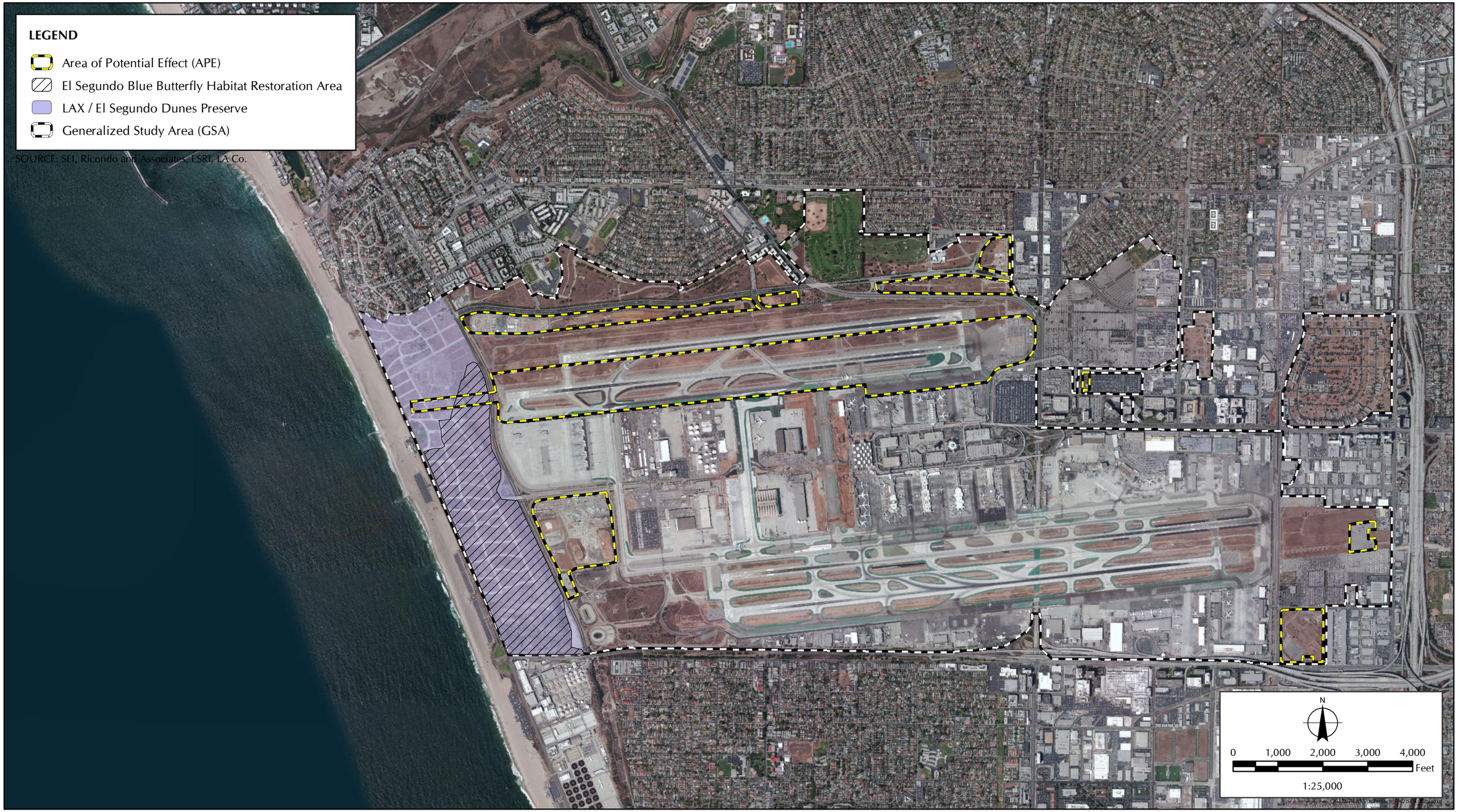


FIGURE 4.11-2
City Designated Conservation Areas

5.0 IMPACTS

Implementation of the proposed project would result in converting approximately 0.71 acres of disturbed / Annual Brome Grassland and less than 0.01 acre of Silver Dune Lupine–Mock Heather Scrub for relocation of taxiways, shifting of the runway end, and construction of a blast pad and retention wall. In addition, a total of 123.65 acres of undeveloped land (32.66 acres of disturbed vegetation, 26.59 acres of disturbed / Annual Brome Grassland, 61.72 acres of active construction area, 2.25 acres of ornamental, and 0.42 acres of perennial rye grass) and 56.55 acres of developed land may be used as staging areas. These activities will not result in impacts to any federally or state-listed threatened or endangered or candidate species. Additionally, project activities will not likely result in impacts to other locally sensitive plant or wildlife species. Impacts are described in greater detail below.

5.1 Plant Communities

Silver Dune Lupine–Mock Heather Scrub (Southern Dune Scrub)

One state-designated sensitive plant community, Silver Dune Lupine–Mock Heather Scrub (Southern Dune Scrub), was found to occur in the study area as a result of general surveys. Potential permanent impacts of less than 0.01 acre (1 square foot) and potential temporary impacts of up to 0.12 acre to this state-designated sensitive plant community would occur from implementation of the project due to construction activities associated with relocation of existing runway approach lights west of Pershing Drive.

5.2 Plants

There are 12 federally listed plant species that were identified as having potential to occur within the study area. Of these 12 species, none were found to occur in the study area as a result of general surveys focused on searching for sensitive plant species. Potential impacts to federally listed or candidate species would not occur from implementation of the proposed project.

Other Sensitive Species

Lewis' Evening Primrose and South Coast Branching Phacelia

Lewis' evening primrose and south coast branching phacelia were observed within the study area adjacent to proposed impact areas as a result of general surveys. Potential impacts to these species may occur from implementation of the project due to construction activities in vegetated areas around Runway 6R-24L and activities associated with relocation of existing runway approach lights west of Pershing Drive.

5.3 Wildlife

There are 10 federally listed wildlife species that were identified during the database search. Of these 10 species, none were observed in the study area as a result of general surveys focused on searching for sensitive wildlife species. However, both the El Segundo blue butterfly and coastal California gnatcatcher are known to frequent the Los Angeles/El Segundo Dunes and occupied habitat for both species occurs to the south of the study area. Potential impacts to these species

may occur from implementation of the project due to construction activities in vegetated areas around the relocation of existing runway approach lights west of Pershing Drive. Potential impacts to the remaining eight federally listed or candidate species would not occur from implementation of the proposed project.

6.0 RECOMMENDATIONS

6.1 General

Nesting Birds

Several species of birds were presumed to be nesting in vegetated areas outside the study area based on behavioral cues. The USFWS has issued a Federal Fish and Wildlife Permit to LAWA for the Depredation of Migratory Birds at Airports, which allows take of native bird species and their nests for those species that are not threatened or endangered. Harassment and/or removal of endangered/threatened species and/or bald and golden eagles require additional permits from the Migratory Bird Permit Office and/or Ecological Services Office.

It is recommended that construction activities take place outside of the breeding season. If clearing or construction takes place during the breeding season in areas that have potential for nesting birds or raptors, an FAA-qualified biologist should provide pre-construction sweeps prior to clearing of vegetation to determine (1) if nests are present and (2) that avifauna present are not threatened or endangered species. Assuming no threatened/endangered species are present, clearing activities can commence under the permit. Netting or other bird exclusion methods should be used to discourage birds from nesting in construction equipment and facilities, if determined by the wildlife biologist to be necessary. Any removal of birds or nests shall be conducted by the LAX USDA Wildlife Services wildlife biologists who have the primary responsibility at LAX for implementing and logging depredation activities and for submitting annual depredation permit reports.

6.2 Plant Communities

Silver Dune Lupine-Mock Heather Scrub

Installation of navigational aids and associated construction impacts may result in permanent impacts of less than 0.01 acre (1 square foot) and temporary impacts of up to 0.12 acre of state-designated sensitive habitat (Silver Dune Lupine–Mock Heather Scrub) within the Los Angeles/El Segundo Dunes adjacent to habitat occupied by the El Segundo blue butterfly. Mitigation for the permanent loss of state-designated sensitive habitat within the Los Angeles/El Segundo Dunes, including the Habitat Restoration Area, shall be replaced at a ratio of 2:1 within the Los Angeles/El Segundo Dunes as described in the Los Angeles/El Segundo Dunes Habitat Restoration Plan. In addition, mitigation for the temporary loss of state-designated sensitive habitat shall include the restoration of the area to the appropriate coastal dune plant community as described in the Los Angeles/El Segundo Dunes Habitat Restoration Plan. The replacement and restoration of state-designated sensitive habitat shall be undertaken through restoration procedures as described in the Los Angeles/El Segundo Dunes Habitat Restoration Plan.

6.3 Plants

Federally Listed Species

Federally listed plant species were not found to occur in the study area; therefore, recommendations are not made.

Other Sensitive Species

Lewis' Evening Primrose and South Coast Branching Phacelia

LAWA has set forth provisions for mitigation of potential impacts to Lewis' evening primrose, which are known to occur in the western portion of the north airfield, between Runways 6L-24R and 6R-24L and south coast branching phacelia, which is known to occur in the Los Angeles/El Segundo Dunes. The proposed improvement areas are located outside the limits of where the two plant species were previously observed; hence, no impacts to these plant species are anticipated to occur from the proposed project based on existing information. Notwithstanding, LAWA proposes to conduct a pre-construction survey for Lewis' evening primrose and south coast branching phacelia to determine the presence/absence of the species and their location in relation to project impact areas. If the species is observed during pre-construction surveys, individuals will be flagged for avoidance where possible. If individuals cannot be avoided and will be impacted by construction activities, mitigation shall occur, as follows:

Mitigation Measure MM-BC-2[85]

LAWA or its designee shall prepare and implement a plan to compensate for the loss of individuals of the Lewis' evening primrose and south coast branching phacelia in coordination with the appropriate resource agencies. LAWA or its designee shall collect seed from those plants to be removed, and properly clean and store the collected seed until used. A mitigation site of suitable habitat equal to the area of impact shall be delineated within areas of the Los Angeles/El Segundo Dunes or equivalent. Collected seed shall be broadcast (distributed) after the first wetting rain following or concurrent with the associated impact, preferentially in the fall or early winter. LAWA or its designee shall implement a monitoring plan to monitor the establishment of individuals of Lewis' evening primrose and south coast branching phacelia for a period of not more than five years. Performance criteria shall include the establishment of an equal number of plants as that impacted following the distribution of seed within the mitigation site. Performance criteria shall also include confirmation of recruitment for two years following the first year that flowering is observed and establishment of individuals throughout the mitigation area within three years following the first year that flowering is observed.

Implementation of MM-BC-2 would compensate for the temporary displacement of plants, such that there would be no net adverse effect on these species, and their potential to survive and recover in the wild.

[85] City of Los Angeles, Los Angeles World Airports, and U.S. Department of Transportation, Federal Aviation Administration. January 2005. *Los Angeles International Airport Master Plan Final Environmental Impact Statement/Environmental Impact Report*.

6.4 Wildlife

Mitigation Measure MM-BC (BWP)-8[86]

To comply with the Migratory Bird Treaty Act, for those areas of the project site that are not actively maintained and have a potential for nesting birds/raptors, if construction is scheduled to occur during the nesting season for birds/raptors (generally February 1 to June 30 for raptors and March 15 to August 15 for nesting birds), vegetation that will be impacted by the proposed project shall be removed outside the nesting season if feasible. If this is not feasible, then a qualified biologist shall inspect the shrubs/trees prior to project activities to ensure that no nesting birds/raptors are present. If the biologist finds an active nest within the construction area and determines that the nest may be impacted, the biologist will delineate an appropriate buffer zone; the size of the buffer zone will depend on the species and the type of construction activity, and will be determined in consultation with CDFW. Only construction activities (if any) that have been approved by a Biological Monitor will take place within the buffer zone until the nest is vacated. The biologist shall serve as a construction monitor during those periods when construction activities shall occur near active nest areas to ensure that no inadvertent impacts on these nests shall occur. These construction avoidance measures will be coordinated with LAWA's USDA Wildlife Hazard Biologist and will be consistent with FAA Advisory Circular No. 150/5200-33 "Hazardous Wildlife Attractants on or Near Airports" and LAWA's "LAX Wildlife Hazard Mitigation Plan" to avoid increasing wildlife hazards to aircraft.

Federally Listed Species

Federally listed wildlife species were not observed within the study area. However, recommendations are made for the El Segundo blue butterfly and coastal California gnatcatcher due to their current and historical occupancy of areas adjacent to the study area west of Pershing Drive.

El Segundo Blue Butterfly

In accordance with LAX Master Plan Mitigation Measure MM-ET-3, El Segundo Blue Butterfly Conservation: Dust Control, and MM-ET-4, El Segundo Blue Butterfly Conservation: Habitat Restoration, and the Biological Opinion for the LAX Master Plan that was issued by the USFWS, impacts to the El Segundo blue butterfly and habitat occupied by the El Segundo blue butterfly shall be addressed through dust control during construction, habitat replacement, and avoidance of project activities during the flight season.

1. Construction activities shall occur outside the flight season for the El Segundo blue butterfly (June 1–September 30). If construction activities occur during the flight season, a qualified biological monitor needs to be present. Construction can continue in the absence of the El Segundo blue butterfly.

2. Construction activities should include the use of water or dust control agent to reduce fugitive dust within 2,000 feet of the Habitat Restoration Area.

[86] City of Los Angeles, Los Angeles World Airports. September 2009. *Los Angeles International Airport Bradley West Project Final Environmental Impact Report*.

3. A qualified environmental monitor shall be present for all construction within 1,000 feet of occupied habitat. Should the environmental monitor identify impacts to the El Segundo Blue butterfly or its habitat, mitigation shall occur.

Implementation of MM-ET-3 and MM-ET-4 would protect nearby occupied habitat from fugitive dust generated during construction and ensure avoidance of all occupied habitat such that there would be no adverse effect on this species and its potential to survive and recover in the wild.

Coastal California Gnatcatcher

This species occurs in areas adjacent to the study area west of Pershing Drive. This species may be affected by implementation of the proposed project. Therefore, several measures to reduce impacts, as identified in the nesting bird recommendation above, are recommended during construction activities west of Pershing Drive and where practical.

Implementation of the specified avoidance plan would avoid conflicts between nesting birds and construction and ensure avoidance of all occupied habitat such that there would be no adverse effect on this species and its potential to survive and recover in the wild.

Other Sensitive Species

Burrowing Owl

Pre-construction surveys are recommended for burrowing owl to be conducted outside the nesting season to determine the presence/absence of potential burrows for the species.[87] Burrows suitable for burrow owl occupation will be closed if located within an area where they may be impacted. If active burrows for the species are observed during the nesting season, they will be flagged for avoidance. If active burrows cannot be avoided and will be impacted by construction activities, mitigation should occur. Mitigation for this species generally consists of passively relocating individuals by creating additional suitable burrows outside the impact area. One potential site for relocation is the Los Angeles/El Segundo Dunes.

Implementation of the specified avoidance plan would avoid conflicts between nesting birds and construction and ensure avoidance of all occupied habitat such that there would be no adverse effect on this species and its potential to survive and recover in the wild.

Red Fox

Pre-construction surveys are recommended for red fox to determine the presence/absence of potential burrows for the species. Coordination with USDA Wildlife Services will occur regarding all potential red fox burrows as they are responsible for actively managing red foxes and other wildlife onsite in accordance with California Fish and Game Code Sections 4000–4012, 4152, and 4180.

Implementation of the specified recommendation would avoid conflicts between red foxes and construction and ensure that there would be no adverse effect on this species and its potential to survive and recover in the wild.

[87] California Department of Fish and Wildlife. 2012. *Staff Report on Burrowing Owl Mitigation*. Sacramento, CA. Available at: http://www.dfg.ca.gov/wildlife/nongame/docs/BUOWStaffReport.pdf

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APPENDIX A
OTHER SENSITIVE PLANT SPECIES

Federally Listed Species

All 12 of the federally listed plant species that were identified as potentially occurring in the vicinity of the project area were not observed during the 2013 surveys. These 12 species include: marsh sandwort (*Arenaria paludicola*), Braunton's milk-vetch (*Astragalus brauntonii*), Ventura Marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), coastal dunes milk-vetch (*Astragalus tener* var. *titi*), San Fernando Valley spineflower (*Chorizanthe parryi* var. *Fernandina*), salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*), Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*), Gambel's water cress (*Nasturtium gambelii*), spreading navarretia (*Navarretia fossalis*), California Orcutt grass (*Orcuttia californica*), Lyon's pentachaeta (*Pentachaeta lyonii*), and Brand's star phacelia (*Phacelia stellaris*).

State-Listed Species

One state-listed plant species was identified as potentially occurring in the vicinity of the project area: beach spectaclepod (*Dithyrea maritime*). This species was not observed during 2013 surveys. This plant species is not listed under the federal ESA. However, it is listed under the state ESA (Table A-1, *Other Sensitive Plant Species with Potential to Occur*). Sixty plant species from 25 families were identified during the 2013 survey (Attachment A-1, *Floral Compendium*).

Other Sensitive Species

Twenty-seven other sensitive plant species were identified as potentially occurring in the vicinity of the project area. Two of these species, Lewis' evening primrose (*Camissoniopsis lewisii*) and south coast branching phacelia (*Phacelia ramosissima* var. *austrolitoralis*), were observed during 2013 surveys in the western portion of the project area. The remaining 25 species were not observed in the vicinity of the project area during 2013 surveys and include: Aphanisma (*Aphanisma blitoides*), south coast saltscale (*Atriplex pacifica*), Parish's brittlescale (*Atriplex parishii*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), slender mariposa-lily (*Calochortus clavatus* var. *gracilis*), Plummer's mariposa-lily (*Calochortus plummerae*), Santa Barbara morning-glory (*Calystegia sepium* ssp. *binghamiae*), Southern tarplant (*Centromadia parryi* ssp. *Australis*), Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*), coastal goosefoot (*Chenopodium littoreum*), many-stemmed dudleya (*Dudleya multicaulis*), island green dudleya (*Dudleya virens* ssp. *insularis*), Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*), mesa horkelia (*Horkelia cuneata* ssp. *puberula*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), white-veined monardella (*Monardella hypoleuca* ssp. *hypoleuca*), California spineflower (*Mucronea californica*), mud nama (*Nama stenocarpum*), prostrate vernal pool navarretia (*Navarretia prostrate*), Ballona cinquefoil (*Potentilla multijuga*), white rabbit-tobacco (*Pseudognaphalium leucocephalum*), Salt Spring checkerbloom (*Sidalcea neomexicana*), estuary seablite (*Suaeda esteroa*), San Bernardino aster (*Symphyotrichum defoliatum*), and Greata's aster (*Symphyotrichum greatae*).

These species are not listed under the federal ESA. However, they have been identified by federal and/or state resource agencies and the CNPS as rare or sensitive in all or a portion of their native range (Table A-1).

TABLE A-1
Other Sensitive Plant Species with Potential to Occur

Name	Status	Habitat	Survey Results
Plants			
Aphanisma *Aphanisma blitoides*	CNPS 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 8.5 miles south of the proposed project site.
South coast saltscale *Atriplex pacifica*	CNPS 1B.2	Chenopod scrub, coastal bluff scrub, coastal scrub	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 8.3 miles south of the proposed project site.
Parish's brittlescale *Atriplex parishii*	CNPS 1B.1	Alkali playa, chenopod scrub, meadow and seep, vernal pool, wetland	Determined to be absent. Habitat and individuals were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 5.7 miles northwest of the proposed project site.
Davidson's saltscale *Atriplex serenana* var. *davidsonii*	CNPS 1B.2	Coastal bluff scrub, coastal scrub	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 6.3 miles northeast of the proposed project site.
Slender mariposa-lily *Calochortus clavatus* var. *gracilis*	CNPS 1B.2	Chaparral, coastal scrub	Not likely to occur. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 13.7 miles northeast of the proposed project site.
Plummer's mariposa-lily *Calochortus plummerae*	CNPS 4.2	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 10.7 miles north of the proposed project site.
Santa Barbara morning-glory *Calystegia sepium* ssp. *binghamiae*	CNPS 1B.1	Marsh and swamp, salt marsh, wetland	Determined to be absent. Habitat and individuals were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 6.3 miles northeast of the proposed project site.
*Lewis' evening primrose *Camissoniopsis lewisii*	CNPS 3	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland	Determined to be present. Habitat observed in Los Angeles / El Segundo Dunes. Observed westernmost area enclosed by the two runways and taxiways. Previously detected in Spring 1998 near western end of north runway.
Southern tarplant *Centromadia parryi* ssp. *australis*	CNPS 1B.1	Marshes, swamps, valley and foothill grassland, vernal pools	Determined to be absent. Habitat and individuals were not observed during 2013 biological surveys. Previously detected within Continental City Property and East Contractor Employee Parking Area in fall 2008. Nearest CNDDB record is located approximately 1.8 miles northwest of the proposed project site.
Orcutt's pincushion *Chaenactis glabriuscula* var. *orcuttiana*	CNPS 1B.1	Coastal bluff scrub, coastal dunes	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys. Reported present in LAX Master Plan prior to taxon inclusions of variations. Nearest CNDDB record is located approximately 1.2 miles northwest of the proposed project site.
Coastal goosefoot *Chenopodium littoreum*	CNPS 1B.2	Coastal dunes	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 0.8 mile northwest of the proposed project site.
Beach spectaclepod *Dithyrea maritime*	ST, CNPS 1B.1	Coastal dunes, coastal scrub	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 1.8 miles northwest of the proposed project site.
Many-stemmed dudleya *Dudleya multicaulis*	CNPS 1B.2	Chaparral, coastal scrub, valley and foothill grassland	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 12.6 miles northeast of the proposed project site.
Island green dudleya *Dudleya virens* ssp. *insularis*	CNPS 1B.2	Coastal bluff scrub, coastal scrub	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 14.2 miles south of the proposed project site.
Los Angeles sunflower *Helianthus nuttallii* ssp. *parishii*	CNPS 1A	Freshwater marsh, marsh and swamp, salt marsh, wetland	Determined to be absent. Habitat and individuals were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 6.3 miles northeast of the proposed project site.
Mesa horkelia *Horkelia cuneata* ssp. *puberula*	CNPS 1B.1	Chaparral, cismontane woodland, coastal scrub	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals were not observed during 2013 biological surveys. Reported present in LAX Master Plan prior to taxon inclusions of subspecies. Nearest CNDDB record is located approximately 9.5 miles north of the proposed project site.
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	CNPS 1B.1	Alkali playa, marsh and swamp, salt marsh, valley and foothill grassland, vernal pool, wetland	Determined to be absent. Habitat and individuals were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 1.8 miles northwest of the proposed project site.
White-veined monardella *Monardella hypoleuca* ssp. *hypoleuca*	CNPS 1B.3	Chaparral, cismontane woodland	Determined to be absent. Habitat and individuals were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 11.8 miles northwest of the proposed project site.
*California spineflower *Mucronea californica*	CNPS 4.2	Coastal scrub, chaparral	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys. Previously detected in 1998 in Habitat Restoration Area.
Mud nama *Nama stenocarpum*	CNPS 2.2	Marsh and swamp, wetland	Determined to be absent. Habitat and individuals were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 7.9 miles north of the proposed project site.
Prostrate vernal pool navarretia *Navarretia prostrate*	CNPS 1B.1	Coastal scrub, valley and foothill grassland, vernal pool, wetland	Determined to be absent. Habitat observed in Los Angeles/El Segundo Dunes. Individuals not detected during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 2.8 miles east of the proposed project site.
*South coast branching phacelia *Phacelia ramosissima*	CNPS 3.2	Chaparral, coastal dunes, coastal scrub, coastal salt marshes	Determined to be present west of project area. Habitat observed in Los Angeles / El Segundo Dunes. Observed west of Pershing Drive during 2013 biological surveys. Previously detected in 2011 in Los Angeles / El Segundo Dunes.

TABLE A-1
Other Sensitive Plant Species with Potential to Occur, *Continued*

Name	Status	Habitat	Survey Results
Ballona cinquefoil *Potentilla multijuga*	CNPS 1A	Meadow and seep	Determined to be absent. Habitat and individuals were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 1.8 miles northwest of the proposed project site.
White rabbit-tobacco *Pseudognaphalium leucocephalum*	CNPS 2.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 10.9 miles northeast of the proposed project site.
Salt Spring checkerbloom *Sidalcea neomexicana*	CNPS 2.2	Alkali playa, brackish marsh, chaparral, coastal scrub, lower montane coniferous forest, marsh and swamp, Mojavean desert scrub, wetland	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 5.7 miles northwest of the proposed project sites.
Estuary seablite *Suaeda esteroa*	CNPS 1B.2	Marsh and swamp, salt marsh, wetland	Determined to be absent. Habitat and individuals were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 16.3 miles southeast of the proposed project site.
San Bernardino aster *Symphyotrichum defoliatum*	CNPS 1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, marsh and swamp, meadow and seep, valley and foothill grassland, wetland	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not detected during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 6.3 miles northeast of the proposed project site.
Greata's aster *Symphyotrichum greatae*	CNPS 1B.3	Chaparral, cismontane woodland	Determined to be absent. Habitat and individuals were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 12.6 miles northeast of the proposed project site.
Habitats			
Southern Coast Live Oak Riparian Forest	G4, S4	Riparian forest	Determined to be absent. Habitat not observed during 2013 biological surveys. Nearest CNDDB record is located approximately 12.1 miles northwest of the proposed project site.
Southern Coastal Bluff Scrub	G1, S1.1	Coastal bluff scrub	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes during 2013 biological surveys. Nearest CNDDB record is located approximately 13.3 miles south of the proposed project site.
Southern Coastal Salt Marsh	G2, S2.1	Marsh and swamp, wetland	Determined to be absent. Habitat not observed during 2013 biological surveys. Nearest CNDDB record is located approximately 1.2 miles northwest of the proposed project site.
Southern Dune Scrub	G1, S1.1;	Coastal dunes	Determined to be present west of project area. Habitat observed in Los Angeles / El Segundo Dunes during 2013 biological surveys. Nearest CNDDB record is located approximately 0.9 miles south of the proposed project site.
Southern Sycamore Alder Riparian Woodland	G4, S4	Riparian woodland	Determined to be absent. Habitat not observed during 2013 biological surveys. Nearest CNDDB record is located approximately 8.9 miles northwest of the proposed project site.
California Walnut Woodland	G2, S2.1	Cismontane woodland	Determined to be absent. Habitat not observed during 2013 biological surveys. Nearest CNDDB record is located approximately 12 miles north of the proposed project site.

KEY:

CNDDB = California Natural Diversity Database
CNPS = California Native Plant Society
FE = federally endangered
FT = federally threatened
FC = federal candidate
FD = federally delisted
BCC = birds of conservation concern
SE = state endangered
ST = state threatened
SSC = state species of special concern
FP = state fully protected
SD = state delisted

NOTE:

*Critical habitat is only afforded to those species that are listed under the Federal Endangered Species Act as endangered or threatened. Reports describing previously observed species include the Sapphos Environmental Inc. Memoranda and Glenn Lukos Associates Specific Plan Amendment Study.

CNPS California Rare Plant Rank categories:

List 1B: Rare, threatened, or endangered in California and elsewhere
- 0.1: Seriously endangered in California
- 0.2: Fairly endangered in California
- 0.3: Not very endangered in California

List 2: Rare, threatened, or endangered in California, but more common elsewhere
- 0.2: Fairly endangered in California

List 3: Review list, more information required

List 4: Limited distribution (Watch List)
- 0.1: Seriously endangered in California
- 0.2: Fairly Endangered in California
- 0.3: Not very endangered in California

SOURCE:

Sapphos Environmental Inc. January 2001. *Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources, Memoranda for the Record on Floral and Faunal Surveys.*
Glenn Lukos Associates. July 2012. *Appendix D-1 LAX Specific Plan Amendment Study, Floral and Faunal Compendium and Sensitive Plants and Wildlife.*
Frank Hovore & Associates. September 28, 1998. *Report of sensitive arthropod surveys, Los Angeles International Airport 2015 Master Plan Study Area, 1996-1998.*

*Non-native
+Observed on June 14, 2013 in southern dune scrub

Taxonomic designations follow *The Jepson Manual*.[1]

DICOTS

Aizoaceae – Carpet-Weed Family

*+*Carpobrotus edulis*
hottentot fig

Amaranthaceae – Amaranth Family

*+*Amaranthus albus*
tumbleweed

Anacardiaceae – Sumac or Cashew Family

+*Rhus integrifolia*
lemonade berry

Apiaceae – Carrot Family

**Foeniculum vulgare*
fennel

Apocynaceae – Oleander Family

**Nerium oleander*
oleander

Asteraceae – Sunflower Family

+*Ambrosia chamissonis*
beach bur-sage
Artemisia californica
California sagebrush
+*Baccharis pilularis*
coyote brush
+*Chaenactis glabriuscula* var. *glabriuscula*
yellow pincushion

[1] Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. *The Jepson Manual: vascular plants of California, second edition*. University of California Press, Berkeley.

Centaurea melitensis
tocolote
Centaurea solstitialis
yellow star-thistle
Cichorium intybus
Chicory
Corethrogyne filaginifolia
California aster
+*Ericameria ericoides*
mock heather
+*Erigeron canadensis*
common horseweed
Deinandra fasciculata
fascicled tarplant
*+*Gazania linearis*
gazania
**Glebionis coronaria*
crown daisy
+*Heterotheca grandiflora*
telegraph weed
*+*Hypochaeris glabra*
smooth cat's-ear
**Lactuca serriola*
prickly lettuce
+*Pseudognaphalium biolettii*
two-color rabbit-tobacco
**Sonchus oleraceus*
common sow thistle
Xanthium strumarium
cockleburr

Boraginaceae – Waterleaf Family

+*Phacelia ramosissima* var. *austrolitoralis*
South coast branching phacelia

Brassicaceae – Mustard Family

*+*Brassica tournefortii*
wild turnip
+*Erysimum suffrutescens*
suffrutescent wallflower
*+*Hirschfeldia incana*
shortpod mustard
*+*Raphanus sativus*
radish
**Sisymbrium altissimum*
tumble mustard

Chenopodiaceae – Goosefoot Family

*+*Salsola tragus*
Russian thistle

Convolvulacaceae – Morning Glory Family

**Convulvulus arvensis*
bindweed
Calystegia macrostegia ssp. intermedia
south coast morning glory

Euphorbiaceae – Spurge Family

+*Croton californicus*
California croton
**Euphorbia peplus*
petty spurge
*+*Euphorbia terracina*
Geraldton carnation weed
**Ricinus communis*
castor bean

Fabaceae – Pea Family

**Acacia redolens*
bank catclaw
+*Acmispon glaber*
deerweed
Lotus purshianus
Spanish lotus
Lupinus bicolor
miniature lupine
+*Lupinus chamissonis*
silver dune lupine
**Melilotus indicus*
sourclover
**Trifolium pratense*
red clover

Geraniaceae – Geranium Family

*+*Erodium cicutarium*
redstem filaree

Lauraceae – Laurel Family

**Cinnamomum camphora*
camphortree

Magnoliaceae – Magnolia Family

Magnolia grandiflora
southern magnolia

Malvaceae – Mallow Family

**Malva parviflora*
cheeseweed

Nyctaginaceae – Four O'Clock Family

[+]Abronia umbellata var. *umbellata*
pink sand verbena

Onagraceae – Evening Primrose Family

Camissoniopsis lewisii
Lewis' evening primrose
[+]Camissoniopsis cheiranthifolia subsp. *suffruticosa*
beach evening primrose

Papaveraceae – Poppy Family

[+]Eschscholzia californica
California poppy

Plantaginaceae – Plantain Family

**Plantago lanceolata*
English plantain

Platanaceae – Plane-Tree Family

Platanus sp.
sycamore

Plumbaginaceae – Leadwort Family

**Limonium sinuatum*
winged sea lavender

Polygonaceae – Buckwheat Family

[+]Eriogonum fasciculatum var. *fasciculatum*
coastal California buckwheat
Polygonum aviculare
prostrate knotweed
Rumex crispus
curly dock

Rubiaceae – Madder Family

+*Galium angustifolium* subsp. *angustifolium*
narrow leaved bedstraw

Solanaceae – Nightshade Family

+*Datura wrightii*
Jimson weed
Solanum americanum
common nightshade

Ulmaceae – Elm Family

Ulmus parvifolia
Chinese elm

MONOCOTS

Arecaceae – Palm Family

**Washingtonia robusta*
Mexican fan palm

Poaceae – Grass Family

*+*Arundo donax*
giant reed
*+*Avena fatua*
wild oat
*+*Bromus diandrus*
ripgut brome
**Bromus madritensis*
red brome
**Cortaderia jubata*
pampas grass
+*Cynodon dactylon*
Bermuda grass
**Hordeum murinum*
hare barley
**Lamarckia aurea*
goldentop
**Paspalum dilatatum*
Dallis grass
**Pennisetum setaceum*
crimson fountain grass
**Setaria pumila*
yellow bristle grass

APPENDIX B
OTHER SENSITIVE WILDLIFE SPECIES

Federally Listed Species

All 10 federally listed wildlife species that were identified as potentially occurring in the vicinity of the project area were not observed during the 2013 surveys and include: El Segundo blue butterfly (*Euphilotes battoides allyni*), Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*), southern steelhead – southern California DPS (*Oncorhynchus mykiss irideus*), Mohave tui chub (*Siphateles bicolor mohavensis*), western snowy plover (*Charadrius alexandrinus nivosus*), southwestern willow flycatcher (*Empidonax traillii extimus*), coastal California gnatcatcher (*Polioptila californica californica*), California least tern (*Sternula antillarum browni*), least Bell's vireo (*Vireo bellii pusillus*), and Pacific pocket mouse (*Perognathus longimembris pacificus*).

State-Listed Species

Three state-listed wildlife species were identified as potentially occurring in the vicinity of the project area. None of the three state-listed sensitive wildlife species were observed during 2013 surveys. These species include: California black rail (*Laterallus jamaicensis coturniculus*), Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), and bank swallow (*Riparia riparia*).

These wildlife species are not listed under the federal ESA. However, they are listed under the state ESA (Table B-1, *Other Sensitive Wildlife Species with Potential to Occur*). Twenty-two wildlife species were observed during the 2013 surveys. There were two insect species, three reptile species, and 17 bird species recorded at the project site (Attachment B-1, *Faunal Compendium*).

Other Sensitive Wildlife Species

Eighteen other sensitive wildlife species were identified as potentially occurring in the vicinity of the Project area. One of the 18 other sensitive wildlife species, burrowing owl (*Athene cunicularia*), was observed during 2013 surveys. The remaining 17 species include: silvery legless lizard (*Anniella pulchra pulchra*), Western spadefoot (*Spea hammondii*), western pond turtle (*Emys marmorata*), coast horned lizard (*Phrynosoma blainvillii*), two-striped garter snake (*Thamnophis hammondii*), tricolored blackbird (*Agelaius tricolor*), American peregrine falcon (*Falco peregrinus anatum*), loggerhead shrike (*Lanius ludovicianus*), California brown pelican (*Pelecanus occidentalis californicus*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis californicus*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), south coast marsh vole (*Microtus californicus stephensi*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), big free-tailed bat (*Nyctinomops macrotis*), Southern California saltmarsh shrew (*Sorex ornatus salicornicus*), and American badger (*Taxidea taxus*).

Burrowing owl was also observed during surveys conducted for the Specific Plan Amendment Study Environmental Impact Report in the area north of Runway 6L-24R on airport property.[1]

[1] Los Angeles World Airports. 2012. *LAX Specific Plan Amendment Study – Draft EIR*. Available at: http://www.lawa.org/LAXSPAS/Reports.aspx

These wildlife species are not listed under the federal ESA. However, they have been identified by federal and/or state resource agencies as rare or sensitive in all or a portion of their native range (Table B-1).

Locally Sensitive Wildlife Species

Twenty-four locally sensitive wildlife species were identified as potentially occurring in the vicinity of the project area. None of the 24 locally sensitive wildlife species were observed during 2013 surveys. These species include: Dune scarab beetle (*Aegilla convexa*), Santa Monica shieldback katydid (*Aglaothorax longipennis*), Belkin's dune tabanid fly (*Brennania belkini*), Busck's gallmoth (*Carolella busckana*), western tidal-flat tiger beetle (*Cicindela gabbii*), sandy beach tiger beetle (*Cicindela hirticollis gravida*), senile tiger beetle (*Cicindela senilis frosti*), Globose dune beetle (*Coelus globosus*), Monarch butterfly (*Danaus plexippus*), El Segundo crab spider (*Ebo* sp.), El Segundo sun spider (*Eremobates* sp.), Henne's eucosman moth (*Eucosma hennei*), Lange's El Segundo Dune weevil (*Onychobaris langei*), wandering (=saltmarsh) skipper (*Panoquina errans*), south coast dune beetle (*Psammodius macclayi*), El Segundo flower-loving fly (*Rhaphiomidas terminatus terminates*), Gertsch's socalchemmis spider (*Socalchemmis gertschi*), El Segundo Jerusalem cricket (*Stenopelmatus* sp.), Dorothy's El Segundo Dune weevil (*Trigonoscuta dorothea dorothea*), mimic tryonia (=California brackishwater snail) (*Tryonia imitator*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), San Bernardino ringneck snake (*Diadophis punctatus modestus*), hoary bat (*Lasiurus cinereus*), and silver-haired bat (*Lasionycteris noctivagans*).

These wildlife species are not listed under the federal ESA. However, they have been identified by federal and/or state resource agencies as rare or sensitive in all or a portion of their native range (Table B-1).

TABLE B-1
Other Sensitive Wildlife Species Potentially Occurring in the Study Area

Name	Status	Habitat	Survey Results
Invertebrates			
*Dune scarab beetle *Aegilla convexa*		Ocean beaches, dunes	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals not observed during 2013 biological surveys. Previously detected in 1996–1998 and 2011 in Los Angeles/El Segundo Dunes.
Santa Monica shieldback katydid *Aglaothorax longipennis*		Chaparral	Determined to be absent. Habitat, individuals and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 11.8 miles northwest of the study area.
Belkin's dune tabanid fly *Brennania belkini*		Southern foredune, southern dune scrub	Determined to be absent. Habitat observed in the Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys. Previously detected in Los Angeles/El Segundo Dunes and LAX (1996–1998). Nearest CNDDB record is located approximately 0.6 mile south of the study area.
Busck's gallmoth *Carolella busckana*		Coastal dunes, coastal scrub	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 0.9 mile south of the study area.
Western tidal-flat tiger beetle *Cicindela gabbii*		Estuary, mud shore/flats	Determined to be absent. Habitat, individuals and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 14.1 miles southeast of the study area.
Sandy beach tiger beetle *Cicindela hirticollis gravida*		Coastal dunes	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 0.7 mile northwest of the study area.
Senile tiger beetle *Cicindela senilis frosti*		Mud shore/flats, wetland	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 4 miles south of the study area.
Globose dune beetle *Coelus globosus*		Foredunes, sand hummocks	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys or previous surveys. Previously detected in Los Angeles/El Segundo Dunes (1996–1998). Nearest CNDDB record is located approximately 0.4 mile west of the study area.
Monarch butterfly *Danaus plexippus*		Roosts in wind-protected tree groves (eucalyptus, Monterey pine, and cypress)	Determined to be absent. Habitat, individuals and sign were not observed during the surveys. Previously detected in Los Angeles/El Segundo Dunes. Nearest CNDDB record is located approximately 1.8 miles northwest of the study area.
*El Segundo crab spider *Ebo* sp.		Southern foredune, southern dune scrub	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys. Previously determined to be present (1996–1998).
*El Segundo sun spider *Eremobates* sp.		Dunes	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys. Previously determined to be present (1996–1998).
Henne's eucosman moth *Eucosma hennei*		Coastal dunes	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 0.6 mile south of the study area.
Lange's El Segundo Dune weevil *Onychobaris langei*		Coastal dunes	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys. Nearest CNDDB record is located approximately 0.6 miles south of the study area.
Wandering (=saltmarsh) skipper *Panoquina errans*		Marsh and swamp, wetland	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 1.4 miles north of the study area.
*South coast dune beetle *Psammodius macclayi*		Sand dune systems along coast and flood plain river systems	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys. Previously detected in Los Angeles / El Segundo Dunes (1996–1998).
El Segundo flower-loving fly *Rhaphiomidas terminatus terminatus*		Dunes	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 9.8 miles southwest of the study area.

TABLE B-1
Other Sensitive Wildlife Species Potentially Occurring in the Study Area, *Continued*

Name	Status	Habitat	Survey Results
Gertsch's socalchemmis spider *Socalchemmis gertschi*		Coastal scrub	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 7.6 miles northwest of the study area.
*El Segundo Jerusalem cricket *Stenopelmatus* sp.		Southern foredune, southern dune scrub	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys. Previously detected in Los Angeles/El Segundo Dunes (1996–1998).
Dorothy's El Segundo Dune weevil *Trigonoscuta dorothea dorothea*		Coastal dunes	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 0.3 mile west of the study area.
Mimic tryonia (=California brackishwater snail) *Tryonia imitator*		Aquatic, brackish marsh, estuary, lagoon, marsh and swamp, salt marsh, wetland	Determined to be absent. Habitat, individuals and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 1.6 miles north of the study area.
Amphibians			
Western spadefoot *Spea hammondii*	SSC	Cismontane woodland, coastal scrub, valley & foothill grassland, vernal pool, wetland	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys. Previously detected on LAX (1996). Suitable habitat was removed from LAX and there has been a lack of current observations. Nearest CNDDB record is located approximately 22.9 miles east of the study area.
Reptiles			
Silvery legless lizard *Anniella pulchra pulchra*	SSC	Coastal sage scrub, chaparral, coastal dunes, valley/foothill grasslands, oak woodlands, pine forests	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys. Previously determined present in Los Angeles/El Segundo Dunes. Nearest CNDDB record is located approximately 10.9 miles southeast of the study area.
Coastal whiptail *Aspidoscelis tigris stejnegeri*		Deserts, semiarid areas, woodland, riparian areas	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 10.6 miles of northwest of the study area.
San Bernardino ringneck snake *Diadophis punctatus modestus*		Open, relatively rocky areas often moist places near intermittent streams	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 14.1 miles northwest of the study area.
Western pond turtle *Emys marmorata*	SSC	Aquatic, artificial flowing waters, Klamath/north coast flowing waters, Klamath/north coast standing waters, marsh and swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, south coast flowing waters, south coast standing waters, wetland	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 1.2 miles northwest of the study area.
Coast horned lizard *Phrynosoma blainvillii*	SSC	Chaparral, cismontane woodland, coastal bluff scrub, coastal scrub, desert wash, pinon and juniper woodlands, riparian scrub, riparian woodland, valley & foothill grassland	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys. Previously determined present in Los Angeles/El Segundo Dunes. Nearest CNDDB record is located approximately 6.4 miles south of the study area.
Two-striped garter snake *Thamnophis hammondii*	SSC	Marsh and swamp, riparian scrub, riparian woodland, wetland	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 12.7 miles northwest of the study area.
Birds			
Tricolored blackbird *Agelaius tricolor*	BCC, SSC	Freshwater marsh, marsh and swamp, swamp, wetland	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 9.1 miles southeast of the study area.
Burrowing owl *Athene cunicularia*	BCC, SSC	Coastal prairie, coastal scrub, great basin grassland, great basin scrub, Mojavean desert scrub, Sonoran desert scrub, valley & foothill grassland	Determined to be present. Habitat, individuals, and sign were observed during the surveys. Previously determined present as a winter resident in Los Angeles / El Segundo Dunes. Observed in 2012 on western and northern areas of the north airfield. Nearest CNDDB record is located approximately 1.4 miles north of the study area.

TABLE B-1
Other Sensitive Wildlife Species Potentially Occurring in the Study Area, *Continued*

Name	Status	Habitat	Survey Results
American peregrine falcon *Falco peregrinus anatum*	FD, SD, FP, BCC	Breeds in woodland, forest, coastal habitats. Non-breeding habitat includes riparian, coastal and inland wetlands	Determined to be absent. Foraging habitat observed. Breeding habitat not observed. Individuals and sign were not observed during 2013 biological surveys. Previously detected flying over the area and roosting in adjacent buildings. Nearest CNDDB record is located approximately 20.2 miles northeast of the study area.
Loggerhead shrike *Lanius ludovicianus*	SSC	Broadleaved upland forest, desert wash, Joshua tree woodland, Mojavean desert scrub, pinon & juniper woodlands, riparian woodland, Sonoran desert scrub	Determined to be absent. Foraging habitat observed. Nesting habitat not observed. Individuals and sign were not observed during 2013 biological surveys. Previously detected breeding in Los Angeles/El Segundo Dunes (1998, 2008, 2009). Nearest CNDDB record is located approximately 35.9 miles north of the study area.
California black rail *Laterallus jamaicensis coturniculus*	ST, FP, BCC	Brackish marsh, freshwater marsh, marsh and swamp, salt marsh, wetland	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 0.8 mile northwest of the study area.
Belding's savannah sparrow *Passerculus sandwichensis beldingi*	SE	Marsh and swamp, wetland	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 1.2 miles northwest of the study area.
California brown pelican *Pelecanus occidentalis californicus*	FD, SD, FP	Colonial nester on coastal islands just outside the surf line	Determined to be absent. Habitat, individuals, and sign were not observed during the 2013 biological surveys. The species may flyover the study area as it is in close proximity to the open ocean. The species is a year-round resident of southern California. Nearest CNDDB record is located approximately 1.8 miles northwest of the study area.
Bank swallow *Riparia riparia*	ST	Riparian scrub, riparian woodland	Determined to be absent. Breeding habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. May forage on the study area. Nearest CNDDB record is located approximately 7.4 miles northwest of the study area.
Mammals			
Pallid bat *Antrozous pallidus*	SSC	Chaparral, coastal scrub, desert wash, great basin grassland, great basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley and foothill grassland	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 4.8 miles north of the study area.
Western mastiff bat *Eumops perotis californicus*	SSC	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 4.8 miles north of the study area.
Hoary bat *Lasiurus cinereus*		Broadleaved upland forest, cismontane woodland, lower montane coniferous forest, north coast coniferous forest	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 4.9 miles north of the study area.
Silver-haired bat *Lasionycteris noctivagans*		Lower montane coniferous forest, oldgrowth, riparian forest	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 6.6 miles north of the study area.
San Diego black-tailed jackrabbit *Lepus californicus bennettii*	SSC	Coastal scrub	Determined to be absent. Habitat, individuals, and sign were not observed during the 2013 biological surveys. Previously detected in the LAX airfield open space. Have not been observed since 1997. Presumed extirpated due to LAX operations and maintenance. Nearest CNDDB record is located approximately 22 miles northeast of the study area.
South coast marsh vole *Microtus californicus stephensi*	SSC	Tidal marshes	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 1.4 miles north of the study area.
Pocketed free-tailed bat *Nyctinomops femorosaccus*	SSC	Joshua tree woodland, pinon and juniper woodlands, riparian scrub, Sonoran desert scrub	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 2.8 miles east of the study area.
Big free-tailed bat *Nyctinomops macrotis*	SSC	Low-lying arid areas in southern California. Need high cliffs or rocky outcrops for roosting sites.	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 11.3 miles northeast of the study area.

TABLE B-1
Other Sensitive Wildlife Species Potentially Occurring in the Study Area, *Continued*

Name	Status	Habitat	Survey Results
Southern California saltmarsh shrew *Sorex ornatus salicornicus*	SSC	Salt marsh	Determined to be absent. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 1.4 miles northwest of the study area.
American badger *Taxidea taxus*	SSC	Alkali marsh, alkali playa, alpine, alpine dwarf scrub, bog and fen, brackish marsh, broadleaved upland forest, chaparral, chenopod scrub, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub, desert dunes, desert wash, freshwater marsh, great basin grassland, great basin scrub, interior dunes, ione formation, Joshua tree woodland, limestone, lower montane coniferous forest, marsh and swamp, meadow and seep, Mojavean desert scrub, montane dwarf scrub, north coast coniferous forest, oldgrowth, pavement plain, redwood, riparian forest, riparian scrub, riparian woodland, salt marsh, sonoran desert scrub, sonoran thorn woodland, ultramafic, upper montane coniferous forest, upper Sonoran scrub, valley and foothill grassland	Determined to be absent. Habitat observed in Los Angeles / El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 11.3 miles northeast of the study area.

KEY:
CNDDB = California Natural Diversity Database
CNPS = California Native Plant Society
FE = federally endangered
FT = federally threatened
FC = federal candidate
FD = federally delisted
BCC = birds of conservation concern
SE = state endangered
ST = state threatened
SSC = state species of special concern
FP = state fully protected
SD = state delisted

NOTE:
*Critical habitat is only afforded to those species that are listed under the Federal Endangered Species Act as endangered or threatened. Reports describing previously observed species include the Sapphos Environmental Inc. Memoranda and Glenn Lukos Associates Specific Plan Amendment Study.

SOURCES: Sapphos Environmental Inc. January 2001. *Technical Report LAX Master Plan EIS/EIR, 7. Biological Resources, Memoranda for the Record on Floral and Faunal Surveys*.
Glenn Lukos Associates. July 2012. *Appendix D-1 LAX Specific Plan Amendment Study, Floral and Faunal Compendium and Sensitive Plants and Wildlife*.
Frank Hovore & Associates. September 28, 1998. *Report of sensitive arthropod surveys, Los Angeles International Airport 2015 Master Plan Study Area, 1996-1998*.
United States Fish and Wildlife Service. 2013. *California Brown Pelican (Pelecanus occidentalis)*. Arcata, CA. Available at http://www.fws.gov/arcata/es/birds/brnpelican/b_pelican.html
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United States Fish and Wildlife Service. 2013. *Species Profile - Western Burrowing Owl (Athene cunicularia hypogea)*. Washington, DC. Available at http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0AR#status

ATTACHMENT B-1
FAUNAL COMPENDIUM

Technical Note: The names and taxonomy for all faunal species is based upon the most current and accepted checklists approved by the appropriate scientific societies. Reptile names and taxonomy follow the recent report from the committee sanctioned by the Society for the Study of Amphibians and Reptiles, the American Society of Ichthyologists and Herpetologists, and The Herpetologists' League to continue the development of standard English names of the North American herpetofauna.[*] Bird names and taxonomy follow the *Check-List of North American Birds*, 7th edition, and its supplements approved by the American Ornithologist Union.[†]

Terrestrial Invertebrates

Insects

LEPIDOPTERA

Nymphalidae – Brush-Footed Butterflies

Junonia coenia
common buckeye

COLEOPTERA

Entiminae

Curculionidae – Weevils

weevil species

[*] Crother, B. I., J. Boundy, J. A. Cambell, K. de Queiroz, D. R. Frost, R. Highton, J. B. Iverson, P. A. Meylan, T. W. Reeder, M. E. Seidel, S. G. Tilley, and D. B. Wake. 2001. *Scientific and standard English names of amphibians and reptiles of North America north of Mexico, with comments regarding confidence in our understanding*. Edited by J. J. Moriarty. Society for the Study of Amphibians and Reptiles Herpetological Circulars No. 29.

[†] American Ornithologists' Union. 1998. *Check-List of North American Birds*, 7th ed. American Ornithologists' Union, Washington, DC.

Terrestrial Vertebrates

Reptiles

SQUAMATA

Phrynosomatidae – Zebra-Tailed, Spiny, Tree, and Horned Lizards

Sceloporus occidentalis
western fence lizard

Uta stansburiana
common side-blotched lizard

Colubridae – Colubrid Snakes

Pituophis catenifer
gopher snake

Birds

PODICIPEDIFORMES

Podicipedidae – Grebes

Aechmophorus occidentalis
western grebe

SULIFORMES

Phalacrocoracidae – Cormorants

Phalacrocorax auritus
double-crested cormorant

PELECANIFORMES

Ardeidae – Heron and Egrets

Egretta thula
snowy egret

ACCIPITRIFORMES

Accipitridae – Hawks, Eagles, and Kites

Buteo jamaicensis
red-tailed hawk

STRIGIFORMES

Strigidae – Typical Owls

Athene cunicularia
burrowing owl

CHARADIFORMES

Laridae – Gulls

Larus occidentalis
western gull

COLUMBIFORMES

Columbidae – Pigeons and Doves

Columba livia
rock pigeon
Zenaida macroura
mourning dove

FALCONIFORMES

Falconidae – Falcons

Falco sparverius
American kestrel

PASSERIFORMES

Corvidae – Jays and Crows

Corvus brachyrhynchos
American crow
Corvus corax
common raven

Hirundinidae – Swallows and Martins

Petrochelidon pyrrhonota
cliff swallow
Hirundo rustica
barn swallow

Mimidae – Thrashers

Mimus polyglottos
northern mockingbird

Sturnidae – Starlings

Sturnus vulgaris
European starling

Icteridae – Blackbirds and Orioles

Agelaius phoeniceus
red-winged blackbird

Fringillidae – Finches

Carpodacus mexicanus
house finch
Spinus psaltria
lesser goldfinch

MAMMALS

Vulpes vulpes
red fox