3. Affected Environment

3.1 Introduction

The affected environment for the Proposed Action encompasses those areas that could be directly or indirectly affected by the Proposed Action if it is implemented. This section details the existing conditions within the Generalized Study Area (GSA). The environmental resource categories are organized as identified in FAA *Order 1050.1E, Environmental Impacts: Policies and Procedures*. The potential environmental impacts of the Proposed Action are depicted in the fourth section of this EA, *Environmental Consequences*.

The environmental resources which would not be affected by the Proposed Action or its alternatives, due to their absence in the study areas (as defined below), are:

- Farmlands. There are no prime or unique farmlands within the GSA. The nearest designated agricultural land use is a landscaping nursery located approximately 1.5 miles to the southeast of the GSA.[1]
- Wild and Scenic Rivers. There are no Wild and Scenic Rivers within the GSA. The nearest listed Wild and Scenic River is Piru Creek, in Angeles National Forest, which is located over 20 miles northeast of the GSA.[2]
- Coastal Barriers. There are no coastal barrier islands within the vicinity of Santa Monica Bay. According to the U.S. Fish and Wildlife Service Coastal Barrier Resources Act website, no Coastal Barrier resources exist within the state of California.[3]

In accordance with the guidance provided in FAA *Order 1050.1E, Environmental Impacts: Policies and Procedures* and FAA *Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions,* no further examination of these environmental resources is provided in this EA.

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1 Southern California Association of Governments, *Land Use GIS Data*, 2008.

2 U.S. Fish and Wildlife Service, *National Wild and Scenic Rivers System*, accessed online, September 2013: http://www.rivers.gov/.

3 U.S. Fish and Wildlife Service, *Coastal Barrier Resources Act, Coastal Barrier Resources System Mapper*, accessed online, September 2013: http://www.fws.gov/cbra/Maps/Mapper.html.

3.1.1 STUDY AREAS

Three study areas were identified to describe existing conditions in the LAX vicinity that may be affected by the Proposed Action. These study areas include the GSA, which encompasses a Detailed Study Area (DSA) and the Area of Potential Affect (APE). The GSA is defined by the existing Airport property boundary, the DSA is a noncontiguous area within the GSA; and the APE is a noncontiguous area used for analysis of cultural resources in compliance with Section 106 of the National Historic Preservation Act. The DSA and APE are the delineated areas where either the Proposed Action or the No Action Alternative would have a direct effect on existing surface features (i.e., involve ground disturbance). The GSA, DSA, and APE are displayed in **Exhibit 3-1**. The specific evaluation areas for these topics are further defined in the applicable sections of this EA.

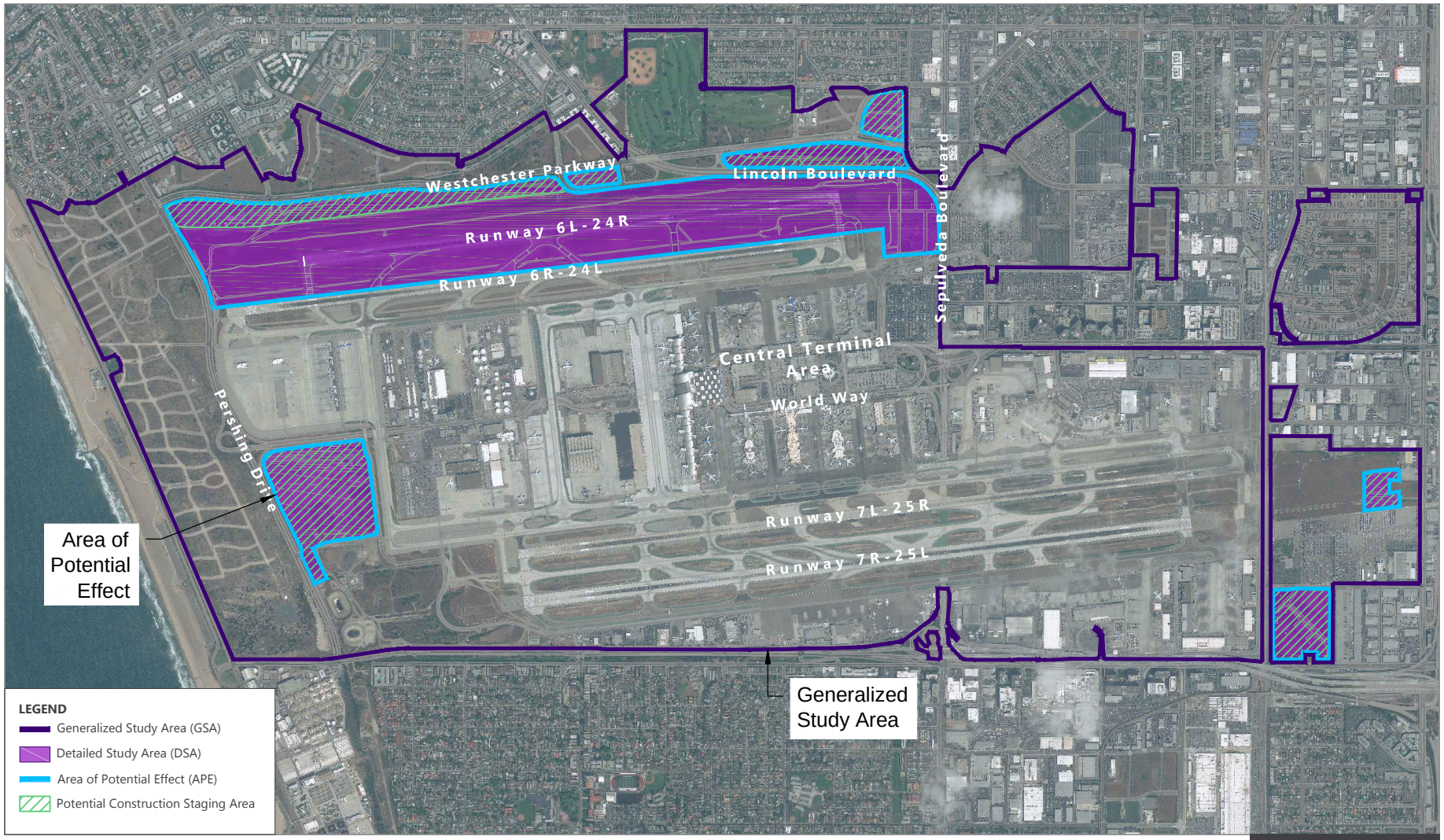
3.1.1.1 Generalized Study Area (GSA)

In light of the limited physical area of direct disturbance, and the fact that the Proposed Action would not substantially change aircraft operations at LAX, the GSA shown in Exhibit 3-1 contains a geographic area defined by the extents of the LAX property boundary. This area was established to quantify the potential impacts that may occur to various resource categories including air quality, surface transportation, and land use as a result of the Proposed Action.

3.1.1.2 Detailed Study Area (DSA)

A DSA was established for environmental considerations that deal with specific and direct construction-related issues such as wetlands, floodplains, protected species, and hazardous materials. Specifically, the DSA includes areas of potential physical disturbance for the proposed runway safety area improvements, pavement reconstruction, and related construction impact areas. The DSA is shown in Exhibit 3-1.

Because the Proposed Action and construction staging areas would occur at specific locations across the LAX property, a noncontiguous DSA was delineated by FAA. The DSA includes seven potential Construction Staging Areas. Only a portion of these construction staging areas would be used during construction of the Proposed Action. However, a specific construction staging area has not been determined at the present time, therefore all seven potential staging areas are being considered in this EA. Impacts within these staging areas are anticipated to be minimal as the construction staging areas would be used for storage of equipment and materials, construction employee parking, and temporary construction offices. Minimal to no ground disturbance would occur within the construction staging areas. Each of the potential staging areas has been previously disturbed and currently has minimal, if any, vegetation.



SOURCE: Landrum & Brown, *Los Angeles International Airport, Airport Layout Plan,* 2005; Los Angeles World Airports, April 2013 (aerial photography); Ricondo & Associates, 2013.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

EXHIBIT 3-1

NORTH 0 2,500 ft.

Study Areas and Area of Potential Effect

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3.1.1.3 Area of Potential Effect (APE)

The APE is defined as the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties (36 Code of Federal Regulations [CFR] Part 800, Protection of Historic Properties, Section [§]800.16(d)). These changes may include physical destruction, damage, or alteration of a property; change in the character of the property's use or of physical features within its setting that contributes to its historic significance; and introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features (36 CFR § 800.5(a)(2)). The locations of various known historic properties within the GSA vicinity were carefully considered. Specifically, the APE includes areas of potential physical disturbance for the proposed runway safety area improvements, pavement reconstruction, and related construction impact areas.

The APE for the Proposed Action includes boundaries of the entire area that would have physical disturbance, including proposed construction staging areas. Because the Proposed Action and construction staging areas would occur at specific locations across the LAX property, a noncontiguous APE was delineated by FAA, and has been concurred with by the State Historic Preservation Officer (SHPO). The concurrence letter from the SHPO is provided in **Appendix B**. The APE includes seven potential Construction Staging Areas described above.

As the Proposed Action or its alternatives would not increase the operational capacity of LAX or change the number or type of aircraft operations, delineation of an indirect APE was not required.

3.1.2 STUDY YEARS

The year used to establish existing conditions within the GSA and other study areas is 2012, the last full year of available data at the time the EA was initiated. Future year 2015 was selected for analysis of potential impacts of implementation of the Proposed Action or the No Action Alternative, as LAWA proposes to implement the Proposed Action in 2015. The year 2020 would be the 5-year future horizon normally used in FAA environmental documents as required by FAA Order 1050.1E.

3.2 Noise

The FAA has developed specific guidance and requirements for the assessment of aircraft noise in order to comply with NEPA requirements. The methodology to be used in conducting aircraft noise analyses is established in FAA Order 1050.1E and described in Section 3.2.3 below.

3.2.1 NOISE DESCRIPTORS

Unless otherwise stated, all sound levels (decibels [dB]) reported in this EA are in A-weighted decibels (dBA). The A-weighting de-emphasizes lower frequency sounds below 1,000 Hertz (1 kilo-Hertz [kHz]) and higher frequency sounds above 4 kHz. It emphasizes sounds between 1 kHz and 4 kHz. Most community noise standards utilize A-weighting, as it provides a high degree of correlation with human annoyance and health effects.

California law mandates use of the Community Noise Equivalent Level (CNEL) for assessing airport noise exposure.[4] For aviation noise analysis, the FAA has determined that the cumulative noise exposure of individuals resulting from aircraft noise must be established in terms of the yearly day-night average sound level (DNL) metric, but accepts the use of the CNEL for aircraft noise evaluations in California.[5]

CNEL is a 24-hour, time-weighted average noise metric, expressed in terms of dBA, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. CNEL is calculated based on noise levels and operational activity occurring during three time periods: daytime (7:00 a.m. to 6:59 p.m.), evening (7:00 p.m. to 9:59 p.m.), and nighttime (10:00 p.m. to 6:59 a.m.). To represent the added intrusiveness of sounds during evening and nighttime hours, CNEL adds weights of 4.77 dBA and 10 dBA to events occurring during the evening and nighttime periods, respectively.[6]

CNEL is used in this EA for the discussion of noise conditions related to operations at LAX. CNEL contours are graphical representation of the distribution of noise over the surrounding area from LAX's average annual daily aircraft operations.

3.2.2 NOISE REGULATORY ENVIRONMENT

The FAA has a long history of providing guidance regarding aviation noise and land-use criteria in the vicinity of airports. These laws and regulations provide a basis for local development of airport plans, analysis of potential impacts from airport development, and compatibility policies. In terms of land-use compatibility, the primary role of the FAA is regulation of noise at the source. This includes the development of noise standards for certificated aircraft and the approval of noise-abatement flight procedures. The FAA also plays a supporting role in the development of local airport noise abatement plans and policies to ensure that land uses in the immediate vicinity of airports are compatible with normal airport operations.

The FAA and the State of California define 65 dB CNEL as the threshold of exterior noise compatibility for residential and other noise-sensitive land uses, such as schools, libraries, and religious facilities. FAA requires an analysis of noise exposure when development actions may change the cumulative noise exposure of individuals to aircraft noise in areas surrounding the airport. Common development actions that may change the cumulative noise environment include: runway reconfiguration, aircraft operations and/or movements, aircraft types using the airport, or aircraft tracks and profiles.

Potential noise impacts associated with the Proposed Action or its alternatives are analyzed using the methodologies developed by the FAA and published in Appendix A of FAA Order 1050.1E, Change 1, *Environmental Impacts: Policies and Procedures*. This guidance states that a Proposed Action or its

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4 California Code of Regulations, Title 21, Division 2.5, Chapter 6.

5 The FAA definition of "significance" is specified using the day-night average sound level (DNL) metric. The FAA recognizes the use of the Community Noise Equivalent Level (CNEL) for aircraft noise evaluations in California. See FAA Order 1050.1E, Appendix A, Section 14 for FAA's acceptance of CNEL as a suitable substitute for DNL.

6 State of California, Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook,* 2002.

alternatives would be considered to have an impact with regard to aviation noise, when compared to the No Action Alternative for the same time frame, if it would:

- Cause noise-sensitive areas located at or above 65 dB CNEL to experience a noise increase of at least 1.5 dB CNEL; and/or
- Cause an increase of CNEL that introduces new noise-sensitive areas to exposure levels of 65 dB CNEL or more.

The California Code of Regulations, Title 21, provides noise standards governing the operation of aircraft and aircraft engines for all airports operating under a valid permit issued by the California Department of Transportation. The regulations "are designed to cause the airport proprietor, aircraft operator, local governments, pilots, and the department to work cooperatively to diminish noise problems." The regulations included under Title 21 work to control and reduce the noise impact area in communities in the vicinity of the airport.

In addition to Title 21, communities adjacent to the Airport have also developed their own noise ordinances. Several are based on the regulations contained within the Los Angeles County Code of Ordinance, Chapter 12.08 *Noise Control*. The City of Los Angeles regulates noise exposure within the City. These regulations are contained in Chapter XI of the Los Angeles Municipal Code (LAMC). LAMC Chapter XI, Section 41.40 regulates noise exposure from construction activities. Subsection (a) prohibits any construction activities between the hours of 9:00 p.m. and 7:00 a.m. (of the following day) that may make "…loud noises to the disturbance of persons occupying sleeping quarters in any dwelling hotel or apartment or other place of residence."

The City of El Segundo has enacted a noise ordinance that prohibits the creation of noise levels greater than 5 dB higher than ambient noise levels on residential land uses, or greater than 8 dBA higher than ambient noise levels on commercial and industrial property. However, the ordinance also states that activities that are preempted by State or Federal law (such as aircraft) are exempted from the ordinance.

The City of Inglewood Municipal Code has enacted several noise regulations to "establish criteria and standards for the regulation of noise levels within the community." These include regulations on typical residential noise (radios, televisions, stereos, ice cream trucks, and musical instruments), as well as machinery and construction noise. Article 2 Section 5-46 prohibits excessive aircraft noise (noise levels exceeding 90 dBA) except for those in conformity with, or pursuant to, federal law, federal air regulations, and air traffic control instruction.

3.2.3 METHODOLOGY

FAA Order 1050.1E requires that detailed noise analyses be performed through noise modeling using the FAA's Integrated Noise Model (INM). The INM has been the FAA's standard noise modeling tool for predicting noise levels in the vicinity of airports since 1978. INM version 7.0d, released May 30, 2013, was used in the preparation of the noise analysis of this EA.

The INM incorporates the number of annual average daily daytime, evening, and nighttime aircraft operations, flight paths, and flight profiles of aircraft, along with its extensive internal database of aircraft noise and performance information, to calculate the CNEL at many points on the ground around an airport. From a grid of points, the INM contouring program draws contours of equal CNEL that can be superimposed onto land use maps. For this EA, three standard ranges of CNEL noise contours are presented: 65 dB CNEL and above, 70 dB CNEL and above, and 75 dB CNEL and above.

LAWA currently uses INM version 7.0d to develop CNEL contours for LAX. Every quarter, LAWA evaluates noise exposure due to aircraft operations at LAX and generates airport noise contours based on annualized operational information gathered for the 12-month period ending in the given quarter. Sources of information for generating the aircraft noise contours include data from FAA's Automated Radar Terminal System (ARTS) and the FAA Airport Traffic Control Tower (ATCT).

3.2.4 EXISTING (2012) NOISE ENVIRONMENT

The existing noise environment at and around the GSA is dominated by noise from airport-related uses including aircraft departing, landing, and taxiing on runways and connecting taxiways. Noise levels from aircraft departure operations commonly exceed 110 dBA at locations near the runway.[7]

The dominant noise sources affecting noise-sensitive uses in the vicinity of LAX are aircraft arrival and departure noise, several major highways around LAX including I-405 and I-105, and major arterial roadways, including Imperial Highway, Sepulveda Boulevard, Century Boulevard, and Lincoln Boulevard (Exhibit 3-1).

The nearest noise-sensitive area to the GSA consists of residential uses in the Los Angeles communities of Playa Del Rey and Westchester, north of LAX; mixed-urban uses, including airport-related, commercial, industrial, residential and educational exist east of the GSA; airport use and residential uses in the City of El Segundo south of the GSA; and open space to the west of the GSA.

3.2.5 EXISTING NOISE MANAGEMENT PROGRAM

LAX maintains a state-of-the-art noise monitoring systems to manage existing noise in the surrounding communities using 39 noise monitors. LAWA uses this system to generate quarterly aircraft noise reports[8] and noise contours using the INM for noise levels in the vicinity of LAX that include 65, 70, and 75 dB CNEL contours, superimposed over a land use map.

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7 U.S. Department of Transportation, Federal Aviation Administration and Los Angeles World Airports, *LAX Master Plan Final EIS/EIR*, 2005.

8 LAWA Quarterly Noise Contour Maps and Reports for LAX can be accessed online: http://www.lawa.org/welcome_LAX.aspx?id=1090

For determination of existing, 2012 aircraft noise conditions, CNEL contours were developed using the latest version of the FAA's Integrated Noise Model available at the time the EA was prepared (INM, Version 7.0d, released on May 30, 2013). The INM is FAA's standard noise modeling tool for predicting noise levels in the vicinity of airports. Existing 2012 aircraft noise contours generated by INM were superimposed over an existing land use map (**Exhibit 3-2**).

Modeled aircraft noise data from LAWA's noise monitors indicate that the existing cumulative noise exposure at the nearest noise-sensitive areas in the communities of Playa del Rey and Westchester in the City of Los Angeles north of Westchester Parkway approaches 70 dBA CNEL.

The closest noise-sensitive land uses to the pavement reconstruction components of the Proposed Action include single-family and multi-family homes and schools along the northern GSA boundary. The homes along the northern boundary of the GSA are currently exposed to aircraft noise levels of approximately 65 dB CNEL. Airport noise exposure at the homes to the northeast of the GSA is in the range of 65 to 68 dBA CNEL.

3.2.6 LAND USE COMPATIBILITY

According to Title 14 CFR Part 150, Airport Noise Compatibility Planning, land use compatibility guidelines do not represent a federal determination that a specific land use is acceptable or unacceptable under federal, state, or local laws. The responsibility for determining acceptable land uses rests with local authorities through zoning laws and ordinances.

The Federal Government defines 65 dB DNL (CNEL in California) as the threshold of noise compatibility for residential land uses.[9] Land use noise exposure is quantified as numbers of noise-sensitive sites, and numbers of people and housing units exposed to various levels of aircraft noise. The number of sensitive sites, housing units, and population around LAX exposed to 65 dBA CNEL or above for existing conditions, are presented in **Table 3-1**.

Under existing conditions from modeled aircraft noise data (Exhibit 3-2), approximately 9,894 single- and multi-family housing units (representing 38,173 people), were located within the 65 dBA CNEL or higher contours. Of these, 2,207 housing units (representing 8,614 people) are located within the 70 dBA CNEL or higher contours.

[9] Federal Interagency Committee on Aviation Noise, Land Use Compatibility and Airports, accessed online, March 13, 2014: http://www.fican.org/pdf/Land_Use_Planning_and_Airports.pdf.

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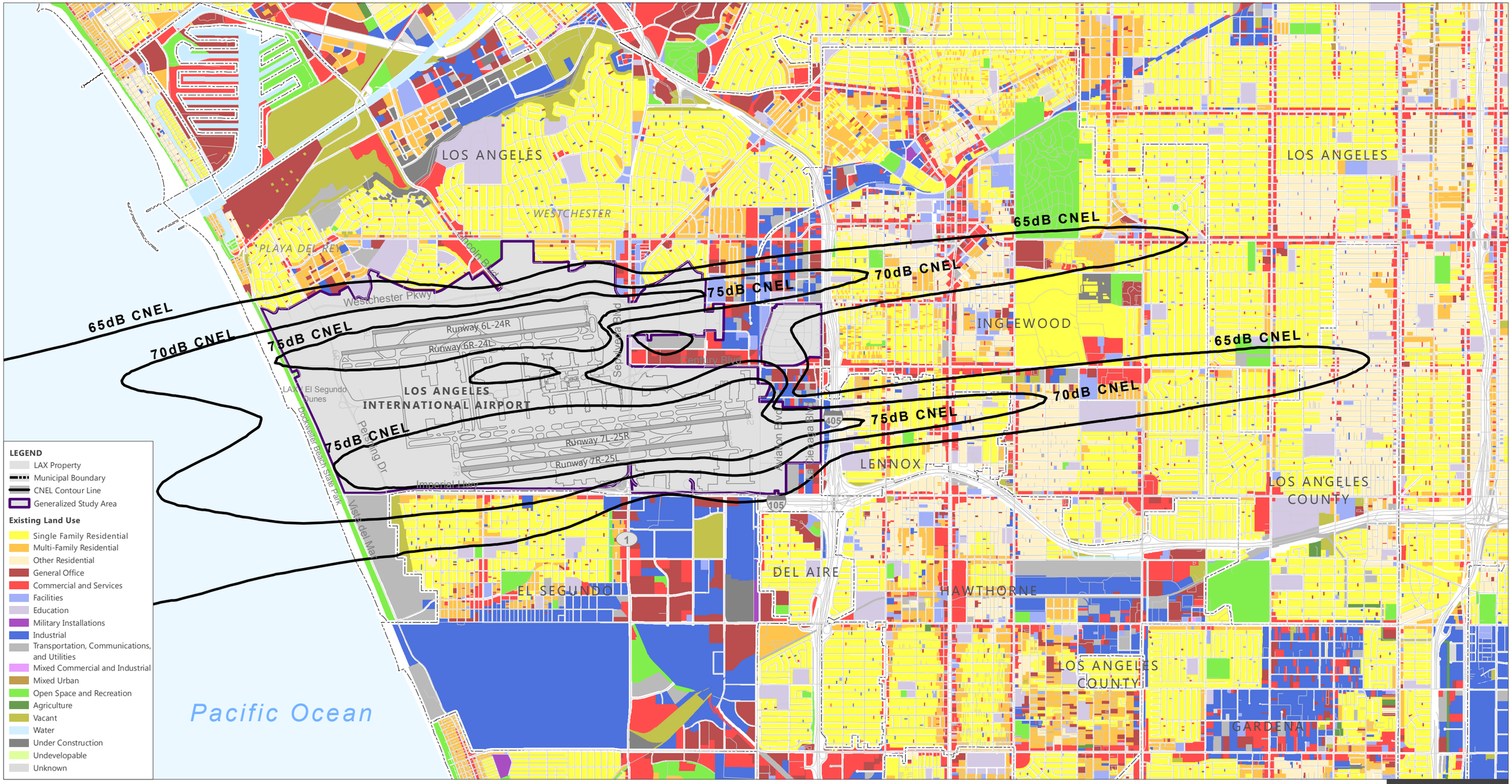

SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets); LAX Airport Layout Plan, Ricondo & Associates, Inc., 2010 (runways, taxiways, terminal area, ariport property boundary).
South California Association of Governments (land use), 2008.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

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EXHIBIT 3-2

Existing (2012) CNEL Contours and Existing Land Use in the Vicinity of LAX

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Table 3-1: Existing Conditions Aircraft Noise Exposure (2012) – All Jurisdictions

LAND USE		65+dB CNEL[1/]	70+ dB CNEL[2/]	75 dB CNEL AND ABOVE [3/]
Residential	**Population**	38,173	8,614	195
	Dwelling Units	9,894	2,207	39
Schools		27	5	0
Churches		13	0	0
Healthcare Facilities		29	6	0
Recreation		13	3	2

NOTES: This table is not intended to be viewed as cumulative. Each group with a higher starting dB CNEL is a subset of the group with the lower starting dB CNEL. For example the 9,894 single-family units exposed to 65 dB CNEL and above include the 2,207 exposed to 70 dB CNEL and above and the 39 exposed to 75 dB CNEL and above.

1/ The numbers presented in this group include sensitive uses that are exposed to 65 dB CNEL and above including the numbers on the two other groups in this table.

2/ These numbers are subsets of the 65 dB CNEL and Above group.

3/ These numbers are subsets of the 65 dB CNEL group and of the 70 dB CNEL and Above group.

SOURCE: PCR Services Corporation, 2013; Ricondo & Associates, Inc., March 2014.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

3.3 Compatible Land Use

This section describes existing and planned land use in areas surrounding LAX. The land use information included in this section is derived from the LAX Master Plan Final EIS/EIR [10] and the LAX Specific Plan[11] as well as the general plans and zoning ordinances of the jurisdictions surrounding the GSA. Land use compatibility with airport noise levels is defined in 14 CFR Part 150 and is presented in **Table 3-2**.

3.3.1 EXISTING LAND USE

Exhibit 3-2 shows existing land use for the GSA as well as the areas surrounding LAX. LAX is located on the western end of the Los Angeles Basin and is bounded on the north by the City of Los Angeles communities of Westchester and Playa Del Rey (which form the Westchester-Playa Del Rey Community Plan Area), on the east by the City of Inglewood and the community of Lennox (unincorporated Los Angeles County), on the south by the City of El Segundo and the community of Del Aire (unincorporated Los Angeles County), and on the west by Dockweiler Beach State Park and the Pacific Ocean.

[10] U.S. Department of Transportation, Federal Aviation Administration and Los Angeles World Airports, *LAX Master Plan Final EIS/EIR,* 2005.

[11] City of Los Angeles, *LAX Specific Plan*, September 2004, as amended by Ordinance 182542 on September 2013.

Table 3-2: Land Use Compatibility with Yearly Day-Night Average Sound Levels

LAND USE	DNL 65 TO 70	DNL 70 TO 75	DNL 75+
Residential			
Residential other than mobile homes and transient lodgings	NLR required[1/]	NLR required[1/]	Incompatible
Mobile homes	Incompatible	Incompatible	Incompatible
Transient lodgings	NLR required[1/]	NLR required[1/]	Incompatible
Public use			
Schools, hospitals, and nursing homes	NLR required[1/]	NLR required[1/]	Incompatible
Churches, auditoriums, and concert halls	NLR required[1/]	NLR required[1/]	Incompatible
Governmental services	Compatible	NLR required	NLR required
Transportation	Compatible	Compatible[2/]	Compatible[2/]
Parking	Compatible	Compatible[2/]	Compatible[2/]
Commercial use			
Offices, business, and professional	NLR required	NLR required	NLR required[2/]
Wholesale and retail—building materials, hardware, and farm equipment	Compatible	Compatible[2/]	Compatible[2/]
Retail trade—general	NLR required	NLR required	NLR required
Utilities	Compatible	Compatible [2/]	Compatible [2/]
Communication	NLR required	NLR required	NLR required
Manufacturing and production			
Manufacturing—general	Compatible	Compatible[2/]	Compatible[2/]
Photographic and optical	Compatible	NLR required	NLR required
Agriculture (except livestock) and forestry	Compatible	Compatible	Compatible
Livestock farming and breeding	Compatible	Compatible	Incompatible
Mining and fishing resources production and extraction	Compatible	Compatible	Compatible
Recreational			
Outdoor sports arenas and spectator sports	Compatible[3/]	Compatible[3/]	Incompatible
Outdoor music shells, amphitheaters	Incompatible	Incompatible	Incompatible
Nature exhibits and zoos	Compatible	Incompatible	Incompatible
Amusements, parks, resorts, and camps	Compatible	Compatible	Incompatible
Golf courses, riding stables, and water recreation	Compatible	Compatible	Incompatible

NOTES:

DNL = Day-night average sound level, in A-weighted decibels.

Compatible = Generally, no special noise attenuating materials are required to achieve an interior noise level of DNL 45 in habitable spaces, or the activity (whether indoors or outdoors) would not be subject to a significant adverse effect by the outdoor noise level.

Incompatible = Generally, the land use, whether in a structure or an outdoor activity, is considered to be incompatible with the outdoor noise level even if special attenuating materials were to be used in the construction of the building.

NLR = Noise Level Reduction. NLR is used to denote the total amount of noise transmission loss in decibels required to reduce an exterior noise level in habitable interior spaces to DNL 45. In most places, typical building construction automatically provides an NLR of 20 decibels. Therefore, if a structure is located in an area exposed to aircraft noise of DNL 65, the interior noise level would be about DNL 45. If the structure is located in an area exposed to aircraft noise of DNL 70, the interior noise level would be about DNL 50, so an additional NLR of 5 decibels would be required if not afforded by the normal construction. This NLR can be achieved through the use of noise attenuating materials in the construction of the structure.

1/ The land use is generally incompatible with aircraft noise and should only be permitted in areas of infill in existing neighborhoods or where the community determines that the use must be allowed.

2/ NLR required in offices or other areas with noise-sensitive activities.

3/ Provided special sound reinforcement systems are installed.

SOURCE: Derived from the U.S. Department of Transportation, Federal Aviation Administration, Federal Aviation Regulations Part 150, Airport Noise Compatibility Planning, Code of Federal Regulations, Title 14, Chapter I, Subchapter I, Part 150, Table 1, January 18, 1985, as amended 14 CFR Part 150 § A150.101.

PREPARED BY: Ricondo & Associates, Inc., January 2014.

To the north and south of LAX, within the cities of Los Angeles and El Segundo, land use is dominated by single-family residential use with commercial uses concentrated along major corridors, including Lincoln Boulevard, West Manchester Avenue and Sepulveda Boulevard to the north, and Imperial Highway to the south. To the east, land uses are primarily commercial and industrial, with many airport-related uses (hotels, car rental businesses, parking lots) concentrated on Sepulveda Boulevard, Aviation Boulevard, and Arbor Vitae Avenue/98th Street in the cities of Los Angeles and Inglewood.

The GSA intersects the City of Los Angeles communities of Westchester, Playa Del Rey, the cities of El Segundo and Inglewood and the unincorporated Los Angeles County communities of Lennox and Del Aire. All of these jurisdictions have adopted zoning ordinances that provide for a variety of permissible uses within areas around LAX. The existing zoning in these areas are shown in **Exhibit 3-3**.

The GSA contains several noise-sensitive resources as indicated in Section 3.2 above. However, as the GSA primarily contains airport-related uses and given the urbanized nature of the areas around LAX, all sensitive resources (residences, parks, public services, including schools) within a quarter-mile of the GSA were inventoried for the environmental analysis in Section 4. These are shown in **Table 3-3**. These sensitive resources include 6 parks/areas of open space, 10 public and private schools, 4 fire stations, 7 health care facilities, and 7 religious facilities (**Exhibit 3-4**).

3.3.2 LOCAL PLANS AND LAND USE REGULATIONS

The community and general plans for each of the jurisdictions intersected by and/or adjacent to the GSA boundary provide land use guidance for future development in areas around LAX. The following sections describe planned land uses for the cities of El Segundo, Inglewood, and Los Angeles, and for the Los Angeles County unincorporated communities of Del Aire and Lennox. The LAX Master Plan and LAX Specific Plan, which set forth compatible land use policies for development around LAX, are also discussed below.

3.3.2.1 City of Los Angeles

City of Los Angeles General Plan – Land Use Element

The City of Los Angeles General Plan is a comprehensive, long-term declaration of purposes, policies, and programs for the development of the City of Los Angeles. It sets forth goals, objectives, and programs to provide a guideline for land use policies and to meet the existing and future needs and desires of the community. The City of Los Angeles General Plan integrates a range of State-mandated elements including Land Use, Transportation, Noise, Safety, Housing, and Conservation. The Land Use Element consists of 35 Community Plans and the LAX and Harbor Plans.

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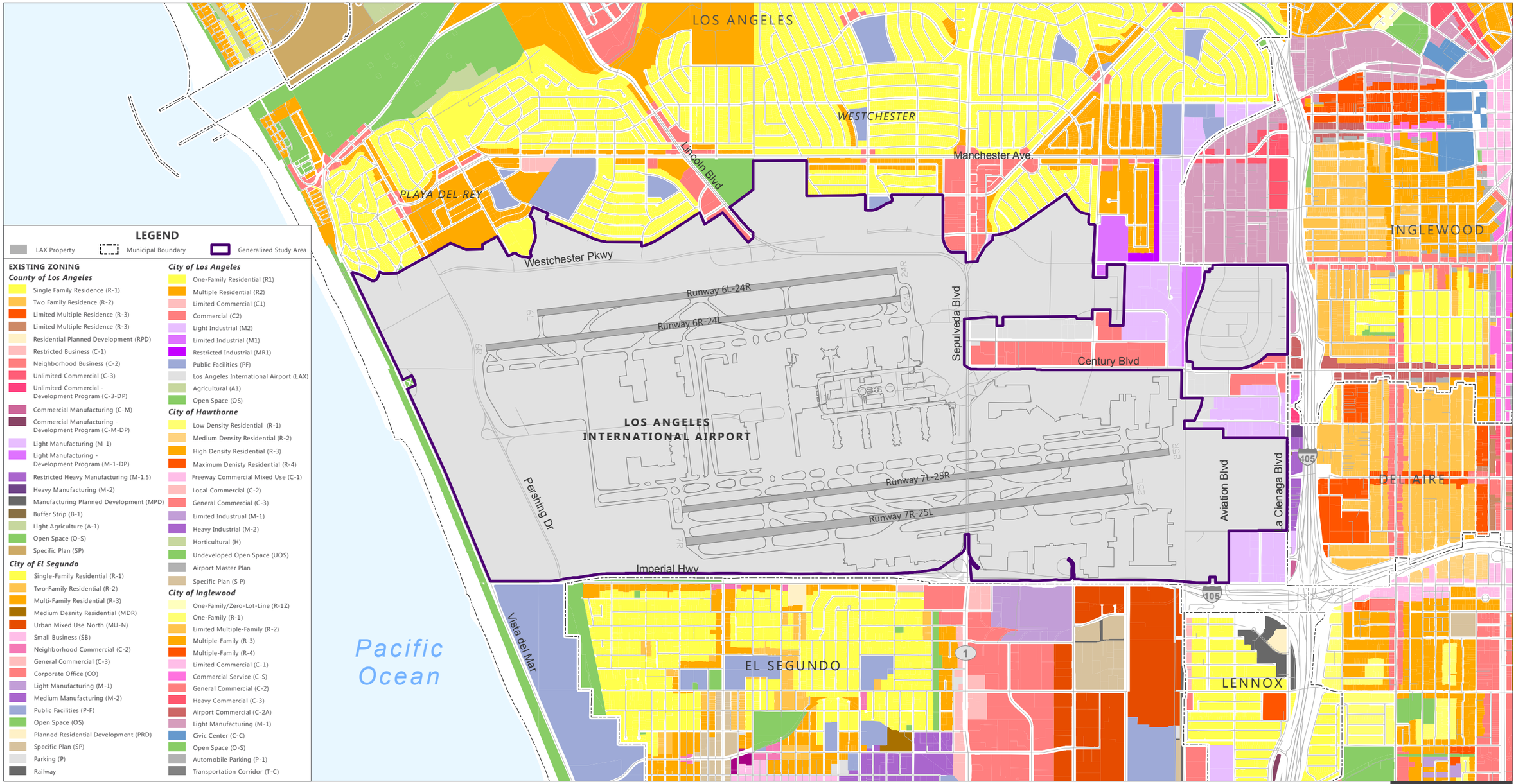

SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets); LAX Airport Layout Plan, Ricondo & Associates, Inc., 2010 (runways, taxiways, terminal area, ariport property boundary).
South California Association of Governments (land use), 2008.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

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EXHIBIT 3-3

Existing Zoning in the Vicinity of LAX

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Table 3-3: Sensitive Land Uses within ¼-Mile of GSA

FACILITY NAME	TYPE	JURISDICTION
Crimson Technical College	Colleges and Universities	Inglewood
Otis College Of Art And Design	Colleges and Universities	Los Angeles
The University Of West Los Angeles	Colleges and Universities	Inglewood
St. Bernard Catholic High	Private and Charter Schools	Playa Del Rey
B'Nai Tikvah Nursery And Kindergarten	Private and Charter Schools	Los Angeles
Visitation Elementary	Private and Charter Schools	Los Angeles
Paseo Del Rey Fundamental Elementary School	Public Elementary Schools	Westchester
Loyola Village Elementary School	Public Elementary Schools	Westchester
98th St Elementary School	Public Elementary Schools	Westchester
Felton Elementary School	Public Elementary Schools	Lennox
Vista Del Mar Wraparound	Mental Health Centers	Inglewood
Tenika Jackson, PSYD	Mental Health Centers	Los Angeles
Pacific Asian Counseling Services	Mental Health Centers	Los Angeles
Spirit Home Health Care	Health Clinics	Westchester
Homes for Life Foundation	Mental Health Centers	Los Angeles
Empowertech	Health Screening and Testing	Los Angeles
Hillcrest Medical Clinic	Health Clinics	Inglewood
Los Angeles Fire Department - Station 51	Fire Stations	Los Angeles
Los Angeles Fire Department - Station No. 80	Fire Stations	Los Angeles
Los Angeles Fire Department - Station No. 5	Fire Stations	Los Angeles
Los Angeles Fire Department - Station 95	Fire Stations	Los Angeles
Pacific Baptist Church	Place of Worship	El Segundo
Saint Johns Lutheran Church	Place of Worship	El Segundo
Church of Christ	Place of Worship	Inglewood
First Baptist Church	Place of Worship	Los Angeles
Grace Assembly Church	Place of Worship	Los Angeles
Visitation Catholic Church	Place of Worship	Los Angeles
Westchester Christian Church	Place of Worship	Los Angeles
Carl E. Nielson Youth Park	Regional Parks & Gardens	Los Angeles
Vista Del Mar Park	Regional Parks & Gardens	Los Angeles
Westchester Recreation Center	Recreation Centers	Los Angeles
Westchester Golf Course	Golf Courses	Los Angeles
Dockweiler State Beach	Beaches & Marinas	Los Angeles
El Segundo Dunes ESHA	Natural Areas & Wildlife Sanctuaries	Los Angeles

SOURCE: Los Angeles County, *Los Angeles County GIS Data Portal, GIS Shapefiles*, June 2013, accessed online: http://egis3.lacounty.gov/dataportal/, November 2013.; Ricondo & Associates, Inc., November, 2013.

PREPARED BY: Ricondo & Associates, Inc., June 2014.

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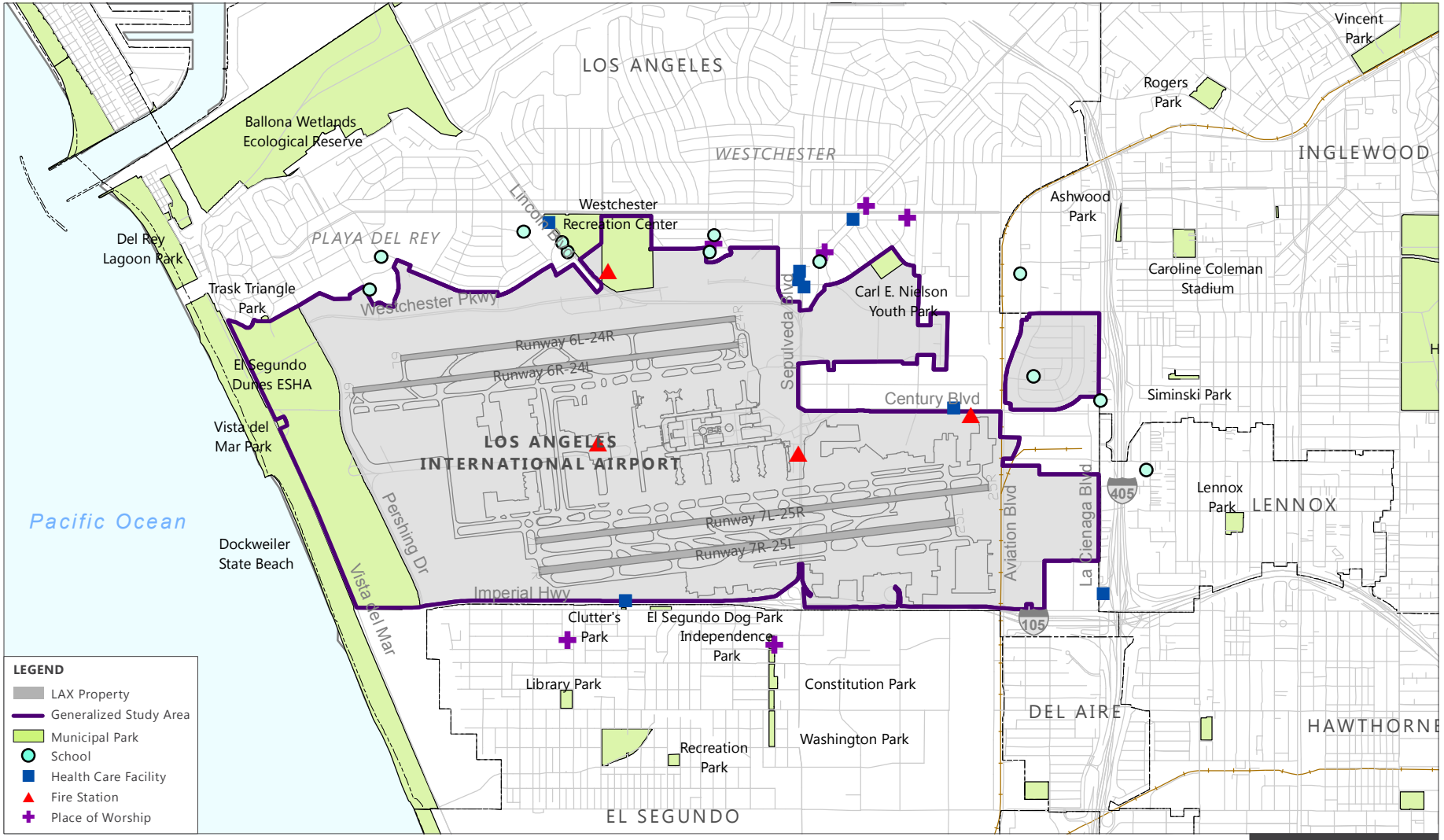

SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets); Los Angeles County, L.A. County GIS Data Portal, County Data, Accessed Online, January 2014;
LAX Airport Layout Plan, Ricondo & Associates, Inc., 2010 (runways, taxiways, terminal area, ariport property boundary).
National Geographic World Map, ESRI Database, 2011.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

EXHIBIT 3-4

Sensitive Land Uses within and in the Vicinity of the GSA

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LAX Plan. The LAX Plan is one of 35 Community Plans that are part of the Land Use Element of the City of Los Angeles General Plan. The LAX Plan is intended to promote an arrangement of airport uses that encourages and contributes to the modernization of LAX in an orderly and flexible manner within the context of the City and region. It provides goals, objectives, policies, and programs that establish a framework for the development of facilities that promote the movement and processing of passengers and cargo within a safe and secure environment. The LAX Plan is intended to allow LAX to respond to emerging new technologies, economic trends and functional needs. This plan also includes the area known as Manchester Square and LAX Northside Area, which are all part of the GSA.[12] Land uses in the LAX property are divided into Airport Airside, Airport Landside, and LAX Northside sub-areas. The LAX Plan area consists of 3,900 acres and is bounded by the communities of Westchester, El Segundo, Lennox, and Inglewood.

The currently adopted LAX Plan land use designations for the GSA are Airport Airside and Airport Landside. Airside land use designation provides for passenger and cargo movement that are associated with aircraft operating under power and related airfield support services. Allowable uses within LAX Airside designated areas include four runways, taxiways, aircraft gates, maintenance areas, airfield operation areas, air cargo areas, passenger handling facilities, fire protection facilities, and other ancillary airport facilities. The Airport Landside area functions as the interface between Airport Airside and the regional ground transportation network, establishing access portals for the efficient processing of people and goods. This area includes a Central Terminal Area (CTA) and other facilities to the east. Aircraft are not permitted under power in this area. Allowable uses include passenger handling services, passenger pickup/dropoff areas, airport administrative offices, parking areas, cargo facilities, and other ancillary airport facilities.[13]

Westchester-Playa del Rey Community Plan. The Westchester-Playa del Rey Community Plan is one of 35 Community Plans that make up the Land Use Element of the City of Los Angeles General Plan. It sets forth goals, objectives, and programs to provide a guideline for land use policies and to meet the existing and future needs of the communities of Westchester and Playa del Rey, and includes the Playa Vista development, as well as the Ballona Wetlands. The Westchester-Playa del Rey Community Plan Area (CPA) is situated in the western portion of the Los Angeles Basin, north and east of LAX. The Westchester-Playa del Rey CPA is generally bounded by Centinela Avenue, La Cienega, unincorporated communities of Los Angeles County, the City of Inglewood, the City of El Segundo, Dockweiler State Beach, Ballona Creek, and Jefferson Boulevard.[14]

The Westchester-Playa del Rey CPA contains approximately 5,766 acres. The existing land use consists primarily of low to low-medium density residential uses, with commercial uses concentrated near the transit corridors of Lincoln Boulevard, Sepulveda Boulevard, and Century Boulevard. Most of the housing stock is more than 40 years of age. Concentrations of multi-family residential uses can be found near La Tijera Boulevard and Manchester Avenue. Land uses adjacent to LAX include single- and multi-family housing north of Westchester Parkway and commercial uses east of Sepulveda Boulevard (Exhibit 3-2).

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12 City of Los Angeles, *LAX Plan*, effective July 3, 2013.

13 City of Los Angeles, *LAX Plan*, effective July 3, 2013.

14 City of Los Angeles, *Westchester-Playa Del Rey Community Plan*, April 2004.

Applicable City of Los Angeles Specific Plans

LAX Specific Plan. The LAX Specific Plan achieves the goals and objectives of the LAX Plan through zoning and development standards, and contains specific provisions for the GSA. The LAX Specific Plan also establishes the procedures for processing future specific projects and activities anticipated under the LAX Master Plan. The LAX Specific Plan area is bounded generally by 88th Street, Manchester Avenue, and 91st Street on the north; Imperial Highway on the south; Pershing Drive on the west; and La Cienega Boulevard on the east.

The currently adopted LAX Specific Plan zoning for the GSA are LAX-A Zone Airport Airside and LAX-L Zone Airport Landside, as described above. The purpose of the LAX-A Zone is to allow for the safe and efficient operation of airport airfield activities. The LAX-L Zone is in place to allow for the safe and efficient operation of airport facilities, with the primary function of providing access to the airport and processing passengers. For both LAX-A and LAX-L Zones, permitted uses include those allowed in the C2 and M2 Zones (Sections 12.14 and 12.19 of the Los Angeles Municipal Code), as well as additional uses listed in the LAX Specific Plan.[15]

Los Angeles Airport/El Segundo Dunes Specific Plan. This Specific Plan applies to the portion of the LAX Plan area that is bounded by Napoleon and Waterview Streets on the north, by Imperial Highway on the south, by Pershing Drive on the east, and by Vista del Mar on the west. This area includes the former residential development known as Surfridge. This Specific Plan was created to restore and preserve the natural ecology of the El Segundo Dunes and native dune-dependent species, such as the endangered El Segundo Blue Butterfly. Passive recreation is allowed under this Specific Plan in the form of paths, a visitor center, and viewing areas that would give visitors an opportunity to learn about sand dune ecology and to observe both airfield activities and the scenic resources of the ocean and the Dunes.[16] As of this EA, a recreational interpretive nature trail has been developed along the northern periphery of the Specific Plan area. Recreational programs include Adopt-A-Dune, a volunteer dunes stewardship and restoration program initiated in 2014 by LAWA Environmental Services Division.

Coastal Bluffs Specific Plan. This Specific Plan applies to the portion of the Westchester-Playa del Rey Community Plan area that is bounded by Lincoln Boulevard on the east, the Ballona Wetlands and Culver Boulevard on the north, Vista Del Mar on the west, and Rees, 83rd, 79th, and 80th Streets to the south. The purpose of this Specific Plan is to implement the policies and objectives of the Scenic Highways Plan, the Seismic Safety Plan, the Open Space Plan, the Conservation Element and the Westchester-Playa del Rey Community Plan, which are components of the City of Los Angeles General Plan.[17]

Coastal Transportation Corridors Specific Plan (Adopted 1993). This Specific Plan applies to an area, which includes all or parts of the Westchester-Playa Del Rey CPA, the Palms-Mar Vista-Del Rey CPA, the

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15 City of Los Angeles, *LAX Specific Plan,* April 2013.

16 City of Los Angeles, *Los Angeles Airport/El Segundo Dunes Specific Plan,* 1992.

17 City of Los Angeles, *Coastal Bluffs Specific Plan,* 1994.

Venice CPA, and the LAX Plan Area, generally bounded by the City of Santa Monica on the north, Imperial Highway on the south, the San Diego Freeway on the east, and the Pacific Ocean on the west. The purpose of this Specific Plan includes: providing a mechanism to fund specific transportation improvements due to transportation impacts generated by the projected new commercial and industrial development within the Specific Plan area; establishing the Coastal Transportation Corridor Impact Assessment Fee process for new development in the Commercial, Manufacturing, and Public Use Zones, and for development on property owned by LAWA; and regulating the phased development of land uses, insofar as the transportation infrastructure can accommodate such uses.[18]

LAX Master Plan

The LAX Master Plan is the comprehensive development program for LAX properties that seeks to improve Airport safety, add new security measures, improve ground transportation, and provide job opportunities. The LAX Master Plan outlines improvement programs to modernize LAX, including runway and taxiway system modernization, redevelopment of terminal areas, airport access improvements, and passenger safety, security, and convenience enhancements. The LAX Master Plan does not include the proposed RSA improvements because P.L. 109-115 mandating compliance with FAA RSA design standards was enacted after completion of the LAX Master Plan.

City of Los Angeles Municipal Code

The City of Los Angeles Municipal Code (LAMC) implements the City of Los Angeles General Plan's land use policy by establishing zones and specifying uses permitted by right or with permits, development standards, and procedures. The areas adjacent to the north side of LAX are zoned Single-Family (R1), Multi-Family (R3), Neighborhood Commercial (C-2), Public Facilities (PF) and Open Space (OS). On the eastern side of LAX, City of Los Angeles land uses are zoned primarily General Commercial (C-2) and Manufacturing (M1 and M2) (Exhibit 3-3).[19]

3.3.2.2 City of El Segundo

City of El Segundo General Plan

The City of El Segundo is located to the south of LAX. The City of El Segundo last updated its General Plan in 1992.[20] In general, areas within the City of El Segundo are fully developed and planned land use is consistent with existing land use. Land use patterns are primarily focused on low-density residential use, which is a mixture of single and multi-family residences. Commercial uses are located along major corridors such as Main Street, El Segundo Boulevard, Imperial Highway, and Sepulveda Boulevard. The southern portion of the GSA intersects the northern edge of the City of El Segundo. In the area adjacent to the southeast portion of

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18 City of Los Angeles, *Coastal Transportation Plan Specific Plan,* 1993.

19 City of Los Angeles, Zone Information & Map Access System (ZIMAS), website: http://zimas.lacity.org/, accessed September 2013.

20 City of El Segundo General Plan website, *http://www.elsegundo.org/depts/planningsafety/planning/general_plan/gptoc.asp,* accessed June 2013.

LAX, land uses are a mix of commercial and light manufacturing from Aviation Boulevard west to Sepulveda Boulevard that contains buildings with high profiles. West of the western terminus of I-105, the existing land uses are a mix of open space, multi-family residences, and commercial uses, typified by low building heights (Exhibit 3-2).[21]

City of El Segundo Municipal Code

The City of El Segundo Zoning Code contains information regarding the types of allowable uses within land use designations. The areas adjacent to the south portion of LAX are zoned O-S (Open Space), R-3 (Multi-Family Residential), and C-2 (General Commercial) west of the western terminus of I-105. From Aviation Boulevard west to Sepulveda Boulevard, the areas are zoned MU-N (Urban Mixed Use-North), CO (Corporate Office), and M-1 (Light Manufacturing) (Exhibit 3-3).

3.3.2.3 City of Inglewood

City of Inglewood General Plan

The City of Inglewood is located east of LAX. The City of Inglewood is in the process of updating its General Plan, which was last adopted in 1991.[22] However, the Technical Background Report was updated in August 2006, which included the Land Use section of the Community Development chapter.[23] In general, areas within the City of Inglewood are fully developed and planned land use is consistent with existing land use. The predominant land use in the City of Inglewood is low-density residential use, with multi-family residences located primarily west of Crenshaw Boulevard and single-family residences located primarily east of Crenshaw Boulevard. Commercial uses are located along the city's major corridors, such as the north-south arterials of La Cienega Boulevard, La Brea Avenue, Prairie Avenue, and Crenshaw Boulevard; along with the east-west arterials of Centinela Avenue, Manchester Boulevard, Arbor-Vitae Street, Century Boulevard, and Imperial Highway. Industrial uses are located primarily along Century Boulevard and Florence Avenue, as well as in the area west of the San Diego (I-405) Freeway. The eastern portion of the GSA intersects the City of Inglewood; in the area nearest to LAX, allowable land uses include a mix of industrial and commercial uses (Exhibit 3-2).

City of Inglewood Municipal Code

The City of Inglewood Zoning Code contains information regarding the types of allowable uses within land uses designations. The areas near the eastern portion of LAX are zoned M-1 (Light Manufacturing) and C-3 (Heavy Commercial) east of Aviation Boulevard and west of I-405 (Exhibit 3-3).

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21 City of El Segundo General Plan website, *http://www.elsegundo.org/depts/planningsafety/planning/general_plan/gptoc.asp,* accessed June 2013.

22 City of Inglewood website, *http://www.cityofinglewood.org/depts/planning_and_building/planning/default,asp,* accessed June 2013.

23 City of Inglewood website, *http://www.cityofinglewood.org/generalplan/reports_and_docs.html,* accessed June 2013.

3.3.2.4 Los Angeles County

Los Angeles County General Plan

Del Aire and Lennox are unincorporated communities in Los Angeles County located south and east, respectively, of LAX. Neither Del Aire nor Lennox has an adopted community plan[24] and, therefore, the existing Land Use Element of the Los Angeles County General Plan applies to these communities. Los Angeles County is in the process of updating its General Plan, which was last adopted in 1980.[25] In general, areas within the communities of Del Aire and Lennox are fully developed and land use patterns are primarily focused on low-density residential use. Commercial uses are concentrated along the major corridors of each community (North Aviation Boulevard, West El Segundo Boulevard, and Inglewood Avenue for Del Aire, and South Hawthorne Boulevard, South Inglewood Avenue, and Lennox Boulevard for Lennox). The GSA intersects the Lennox community along the eastern side of LAX but does not intersect Del Aire. In the area of Del Aire nearest LAX (south of Imperial Highway and east of Aviation Boulevard), land uses include a mix of residential, commercial, and industrial uses. In the area of Lennox adjacent to LAX (east of La Cienega Boulevard), allowable land uses are industrial and commercial (Exhibit 3-2).

Los Angeles County Municipal Code

The Los Angeles County Municipal Code contains information regarding the types of allowable uses within land uses designations (Title 22). The areas of Del Aire near the southeastern portion of LAX are zoned R-1 (Single-Family Residence), RPD (Residential Planned Development), C-1 (Restricted Business), and MPD (Manufacturing Industrial Planned Development) east of Aviation Boulevard and south of I-105. The areas of Lennox adjacent to the eastern portion of LAX property are zoned C-2 (Neighborhood Commercial), C-3-DP (Unlimited Commercial-Development Program), C-M (commercial manufacturing), M-1 (Light Manufacturing), M-1-DP (Light Manufacturing-Development Program), M-1.5 (Restricted Heavy Manufacturing), and M-2 (Heavy Manufacturing), east of La Cienega Boulevard and west of I-405 (Exhibit 3-3).

3.4 Department of Transportation Act, Section 4(f) and Land and Water Conservation Fund Act, Section 6(f) Resources

The Federal statute that governs impacts in this category is commonly known as the Department of Transportation (DOT) Act, section 4(f) provisions. Section 4(f) of the DOT Act, which is codified and renumbered as section 303(c) of 49 U.S.C., provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance or land from an historic site of national, State, or local significance as determined by the officials having jurisdiction thereof, unless there is no feasible

[24] Los Angeles County Department of Regional Planning website, *http://planning.lacounty.gov/plans/adopted*, accessed June 2013.

[25] Los Angeles County Department of Regional Planning website, *http://planning.lacounty.gov/generalplan/existing*, accessed June 2013.

and prudent alternative to the use of such land and such program, and the project includes all possible planning to minimize harm resulting from the use.[26]

For Section 4(f) purposes, the term "use" not only includes actual physical takings of Section 4(f) lands but also adverse indirect impacts, or constructive use. Constructive use only occurs if Section 4(f) lands are substantially impaired by a Proposed Action or its alternatives, which includes substantially diminishing the activities, features, or attributes of the Section 4(f) resource that contribute to its significance or enjoyment.

Section 6(f) of the *National Park Service (NPS) Land and Water Conservation Fund (LWCF) Act* contains provisions for the protection of federal investments in land and water resources. The LWCF Act discourages the conversion of parks or recreational facilities to other uses.

3.4.1 SECTION 4(F) RESOURCES LOCATED WITHIN THE GSA

The GSA includes two City of Los Angeles public parks (Carl E. Nielsen Youth Park and Westchester Golf Course) that were determined to not qualify as Section 4(f) resources because they are owned by a transportation agency and the properties are used as parks on an interim basis.[27] Seven additional municipal parks and parklands that do qualify as Section 4(f) properties are located adjacent to or in the vicinity of the GSA: Dockweiler Beach State Park, Vista Del Mar Park, Trask Triangle Park, Lennox Park, Clutter's Park, El Segundo Dog Park and Ashwood Park (**Exhibit 3-5**).

The DSA does not contain any land that is considered a park or is used for recreational purposes. In addition, portions of the DSA have restricted public access due to safety and security reasons, since the DSA includes areas of active airfield in constant use by aircraft and other vehicles.

There are no current or proposed Habitat Conservation Plans or Natural Community Conservation Plan areas covering the DSA. However, the proposed project is located east of the County of Los Angeles General Plan's El Segundo Dunes Significant Ecological Area and northeast of the LAX/El Segundo Dunes El Segundo Blue Butterfly Habitat Restoration Area Boundary (neither of which are designated wildlife or waterfowl refuge). The Dockweiler State Beach Habitat Restoration Area occurs approximately 0.6 mile south of the westernmost study area and is focused on restoring coastal dune habitat for the El Segundo Blue Butterfly.

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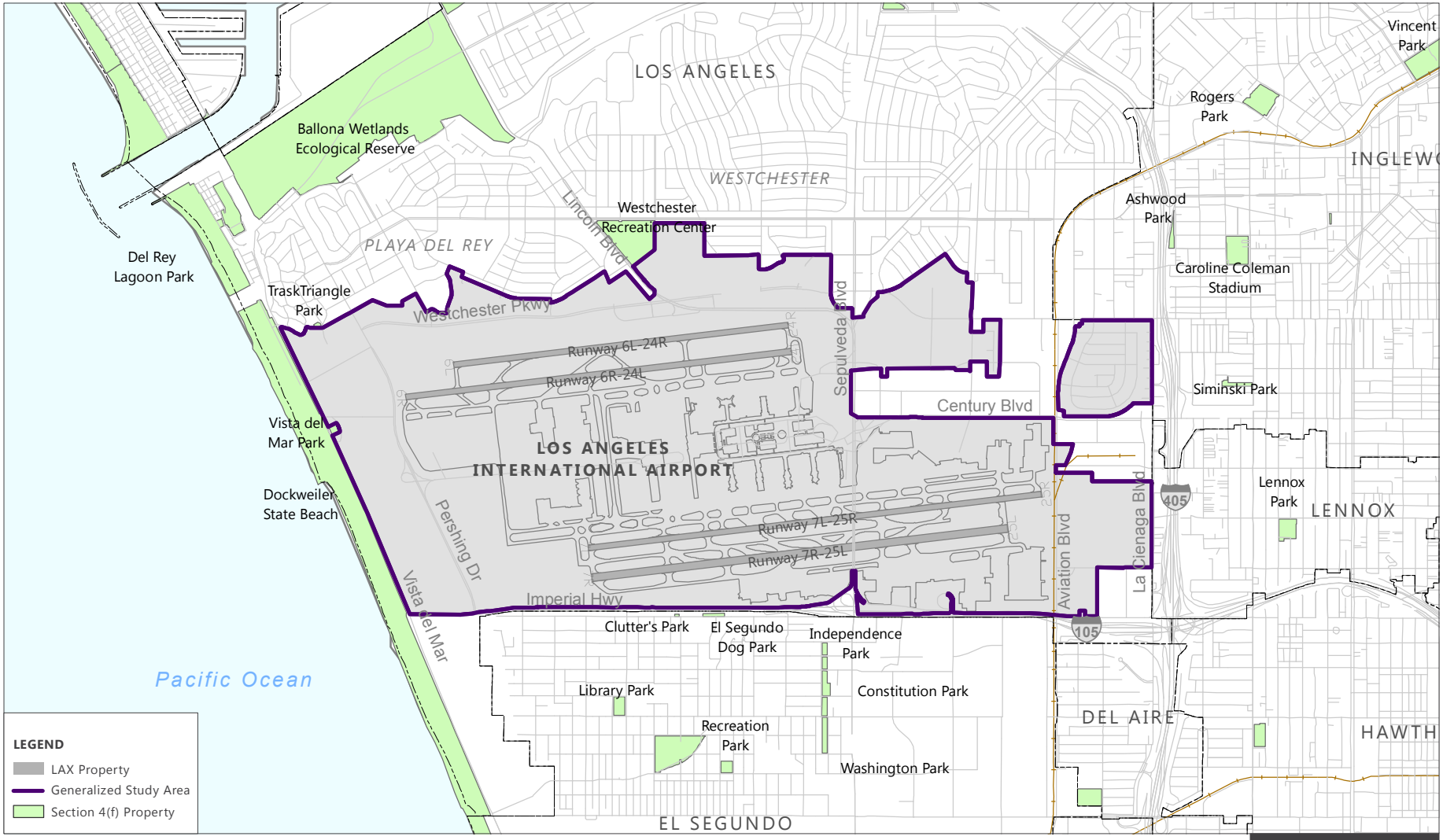
[26] U.S. Department of Transportation, Federal Aviation Administration, June 8, 2004. *Order 1050.1E, Environmental Impacts: Policies and Procedures*, Change 1, effective March 20, 2006.

[27] U.S. Department of Transportation, Federal Aviation Administration, *Record of Decision on the LAX Master Plan EIS,* 2005.



SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets); LAX Airport Layout Plan, Ricondo & Associates, Inc., 2010 (runways, taxiways, terminal area, ariport property boundary).
National Geographic World Map, ESRI Database, 2011.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

EXHIBIT 3-5

Section 4(f) Properties Within and Adjacent to the Generalized Study Area

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According to the South Central Coastal Information Center (SCCIC)[28] report obtained for the GSA and APE, no known historical properties are present within the APE, although several are located within the GSA, including the Theme Building located in the LAX Central Terminal Area (CTA) and Hangar One. Section 3.12 provides further detail and additional documentation of historical sites in proximity to the APE.

3.4.2 SECTION 6(F) RESOURCES LOCATED WITHIN THE GSA

Three parks and facilities have received funding from the LWCF Act in the vicinity of the GSA: Dockweiler Beach State Park and the South Bay Bicycle Trail (both located adjacent and to the west of the GSA), and Jesse Owens County Park (located 3.25 miles east of the GSA).[29] However, none of these parks and facilities would be converted for Airport use under the Proposed Action or its alternatives and, therefore, Section 6(f) would not apply. Exhibit 3-5 illustrates Section 4(f) properties within and adjacent to the GSA.

3.5 Demographic, Socioeconomic, and Transportation Characteristics

Socioeconomics are the activities and resources associated with the everyday human environment, particularly with population centers, their demographics, and economic activities generated. Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was enacted in 1994 to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, tribal, and local programs and policies. Consideration of environmental justice concerns must be given to populations in the vicinity of a proposed project. A series of census tracts in the immediate vicinity of LAX have been identified for socioeconomic analysis.

3.5.1 POPULATION

The DSA is contained completely within the LAX property and would not extend into the surrounding communities. However, the GSA is adjacent to Census tracts in several communities surrounding LAX and contains parts of Census tracts that include housing units. A number of these housing units are owned by LAWA but are still occupied by a small number of tenants. The 2010 Census tracts analyzed in this EA are shown in **Exhibit 3-6**.

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[28] The South Central Coastal Information Center (SCCIC), housed at California State University, Fullerton, serves as a regional clearinghouse of the State Historic Preservation Office.

[29] U.S. Department of Transportation, Federal Aviation Administration and Los Angeles World Airports, *LAX Master Plan Final EIS/EIR,* 2005.

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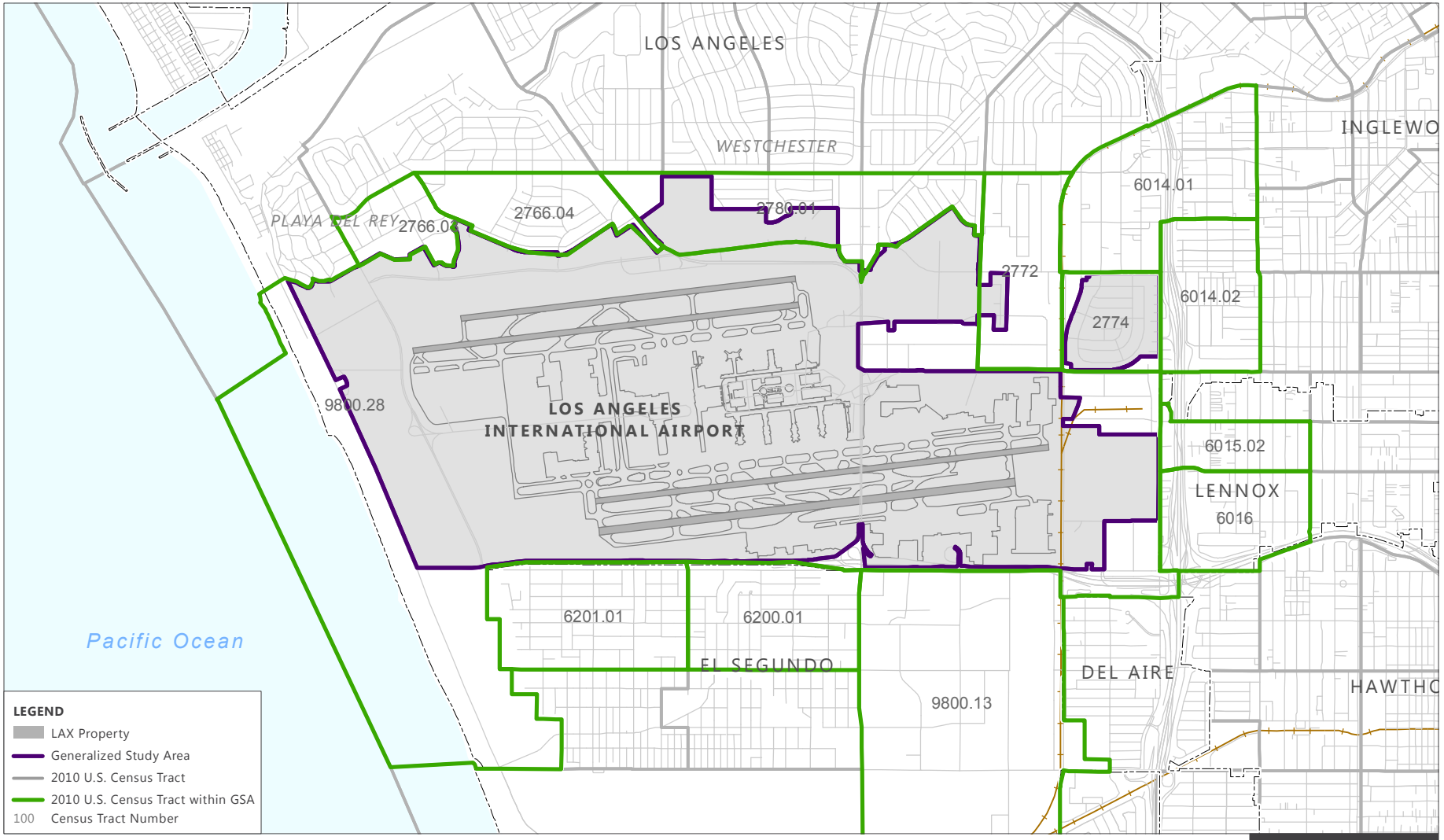

SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets); LAX Airport Layout Plan, Ricondo & Associates, Inc., 2010 (runways, taxiways, terminal area, ariport property boundary).
U.S. Census Bureau, Geography Division, TIGER/Line Shapefile 2010.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

EXHIBIT 3-6

NORTH 0 4,000 ft.

Generalized Study Area Census Tracts

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Los Angeles County's population is anticipated to grow from approximately 9.8 million persons to 11.3 million persons between 2010 and 2020, which represents an increase in population of 15 percent. Additionally, population data was collected for the communities around LAX at a higher geographical scale (cities and communities versus Census tracts). **Table 3-4** lists population trends and projections for the communities surrounding the GSA. U.S. Decennial Census data was used for population counts from 1990 through 2010. Southern California Association of Governments (SCAG) *2008 Regional Transportation Plan* projections were used for 2015 and 2020.

Table 3-4: Municipal Population Trends

	POPULATION (PERSONS)					CHANGE 1990-2010	
AREA	1990 [1/]	2000 [2/]	2010 [3/]	2015 [4/]	2020 [4/]	POPULATION	%
City of Los Angeles	3,485,398	3,612,223	3,792,621	4,128,125	4,204,329	307,223	9.00%
Westchester- Playa del Rey CPA [5/]	48,003	51,255	57,658	58,5117	59,9887	9,655	20.00%
City of El Segundo	15,223	16,033	16,654	17,495	17,500	1,431	9.00%
City of Inglewood	109,602	112,580	109,673	120,185	120,678	71	0.10%
Los Angeles County	8,863,164	9,519,338	9,818,605	10,971,602	11,329,829	955,441	11.00%
Lennox Community	22,757	22,950	22,753	26,307	26,842	-4	-0.02%
Del Aire Community	8,040	9,012	10,001	10,379	10,457	1,961	24.00%

NOTES:

GSA=General Study Area; CPA=Community Plan Area

1/ 1990 U.S. Decennial Census.

2/ 2000 U.S. Decennial Census.

3/ 2010 U.S. Decennial Census.

4/ 2008 SCAG RTP Growth Forecast.

5/ These numbers are based on the sum of the population of the different Census tracts that make up the Westchester-Playa Del Rey Community Plan Area. These Census tracts include 2760, 2761, 2764, 2765, 2766.01, 2766.02, 2770, 2771, 2772, 2774, 2780 (now 9800.28 and 2780.01), and 2781.

SOURCES: United States Census Bureau, 1990, 2000, and 2010 Decennial Census data website, http://www.census.gov/, accessed November 2013; Southern California Association of Governments, 2008 Integrated Growth Forecast website, http://www.scag.ca.gov/forecast/index.htm, accessed November 2013; and City of Los Angeles Department of City Planning website, http://cityplanning.lacity.org/, accessed November 2013.

PREPARED BY: Ricondo & Associates, Inc., June 2014.

Table 3-5 shows the population trends for the Census tracts that intersect the GSA (2010 U.S. Census tracts 2772, 2774, 2780.01, 9800.28, 2766.03, 2766.04, 2781.02, 6014.01, 6014.02, 6015.02, 6016, 6200.01, 9800.13 and 6201.01), (see Exhibit 3-6).

The population change seen in the GSA Census tracts has varied, ranging from a 23 percent growth rate to a 57 percent decline (tract 9800.28 omitted due to tract reconfigurations). Overall, the population in Census tracts which intersect the GSA experienced a 23 percent decline in population (population change from 1990 to 2010 is not a direct comparison due to Census tract sub-division). However, in the cities and communities surrounding LAX, between 1990 and 2010, population generally grew, with the exception of Lennox.

Table 3-5: GSA Population Trends

CENSUS TRACT [1/]			POPULATION (PERSONS)			PROJECTED POPULATION (PERSONS)		CHANGE 1990-2010	
1990 [2/]	2000 [3/]	2010 [4/]	1990 [2/]	2000 [3/]	2010 [4/]	2015 [5/]	2020 [5/]	Population	Percent
2772	2772	2772	3,400	3,743	2,490	4,167	4,247	-910	-26.76%
2774	2774	2774	3,591	4,798	1,533	5,305	5,457	-2,058	-57.31%
2780.01	2780.01	2780.01	2,428	2,417	2,458	NA	NA	30	1.24%
9800.28	9800.28	9800.28	0	0	0	NA	NA	0	0.00%
2766.02	2766.02	2766.03	7,527	8,091	5,252	NA	NA	1,708	22.69%
		2766.04			3,983	NA	NA		
2780[6/]	2780[6/]	9800.28[6/]	2,428	2,430	0	NA	NA	-2,428	-100.00%
2781	2781	2781.02	2,968	2,859	3,158	NA	NA	190	6.40%
6014.01	6014.01	6014.01	5,865	5,010	4,683	5,274	5,291	-1,182	-20.15%
6014.02	6014.02	6014.02	5,121	5,361	5,059	5,721	5,743	-62	-1.21%
6015	6015.02	6015.02	8,112	3,899	3,963	4,503	4,599	-4,149	-51.15%[6/]
6016	6016	6016	4,733	4,641	4,375	5,374	5,491	-358	-7.56%
6200	6200.01	6200.01	6,799	3,834	3,943	3,986	3,987	-2,797	-41.14%
	6200.03	9800.13		1	59	N/A	N/A		
		GSA Tracts Total	52,972	47,084	40,956	34,330[7/]	34,815[7/]	-12,016[7/]	-22.68%[7/]

NOTES:

GSA=General Study Area; CT= Census tract; NA=Data Not Available

1/ U.S. Census tracts have been split, modified or redistributed between 1990 and 2010. The table has been organized to most accurately show 1990 tracts and the 2010 equivalent tracts.

2/ 1990 U.S. Decennial Census.

3/ 2000 U.S. Decennial Census.

4/ 2010 U.S. Decennial Census.

5/ 2008 RTP Growth Forecast.

6/ Prior to the 2010 Census, Census tract 2780 included populated areas north of LAX property and the LAX airport itself. In the 2010 Census, the LAX Airport was separated to Census tract 9800.28 and the remaining area was re-designated as Census tract 2780.01.

7/ Population changes may not reflect a direct comparison due to Census tract sub-division.

SOURCES: United States Census Bureau, 1990, 2000, and 2010 Decennial Census data website, http://www.census.gov/, accessed November 2013; Southern California Association of Governments, 2008 Integrated Growth Forecast website, http://www.scag.ca.gov/forecast/index.htm, accessed November 2013; and City of Los Angeles Department of City Planning website, http://cityplanning.lacity.org/, accessed November 2013.

PREPARED BY: Ricondo & Associates, Inc., June 2014.

3.5.2 ETHNICITY OF POPULATION AND POVERTY STATUS

The race and poverty data in 2010 for the GSA are shown in **Table 3-6**. Census tracts within the GSA as well as the overall City of Los Angeles, City of Inglewood, County of Los Angeles, Lennox community, and Del Aire community had minority populations greater than 50 percent. The City of El Segundo and the City of Los Angeles Westchester – Playa del Rey had the lowest percentages of minority populations of the cities and communities in the vicinity of the GSA (31 and 46 percent, respectively).

Table 3-6: Race and Poverty

AREA	POPULATION (2010)	MINORITY POPULATION (PERSONS)	PERCENT MINORITY	POPULATION LIVING BELOW POVERTY LEVEL	PERCENTAGE LIVING BELOW POVERTY LEVEL
GSA CTs Total	46,382	20,885	45%	7,219	16%
CT 2772	2,490	1,979	79%	349	14%
CT 2774	1,533	1,408	92%	199	13%
CT 2780.01	2,458	1,246	51%	295	12%
CT 9800.28	0	0	N/A	0	N/A
CT 2766.03	5252	1446	28%	410	8%
CT 2766.04	3983	1346	34%	693	17%
CT 2781.02	3158	496	16%	234	7%
CT 6014.01	4683	3109	66%	1410	30%
CT 6014.02	5059	2749	54%	794	16%
CT 6015.02	3963	2453	62%	904	23%
CT 6016	4375	2627	60%	1658	38%
CT 6200.01	3943	867	22%	95	2%
CT 6201.01	5426	1154	21%	179	3%
CT 9800.13	59	5	8%	-	-
City of Los Angeles	3,792,621	2,705,713	71%	721,169	19%
Westchester- Playa del Rey CPA [1/]	57,658	26,298	46%	5,249	10%
City of El Segundo	16,654	5,139	31%	541	3%
City of Inglewood	109,673	106,588	97%	21,602	20%
Los Angeles County	9,818,605	7,090,284	72%	1,508,618	16%
Lennox	22,753	22,318	98%	6,485	30%
Del Aire	10,001	6,543	65%	445	5%

NOTES:

GSA= General Study Area; CPA=Community Plan Area; CT= Census tract

1/ The GSA includes the Westchester-Playa Del Rey Community Plan Area and, consequently, the Census tracts in this GSA area. The numbers are based on the sum of the population of the different Census tracts that make up the Westchester-Playa Del Rey Community Plan Area. These Census tracts include 2756.02, 2760, 2761, 2764, 2765, 2766.01, 2766.03, 2766.04, 2770, 2771, 2772, 2774, 2780 (now 9800.28 and 2780.01), and 2781.02.

SOURCE: United States Census Bureau, 2010 Census data website, http://www.census.gov/, accessed November 2013.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

The percentages of the GSA Census tract populations living below the poverty level in 2010 ranged from 7 to 38 percent. Approximately 30 percent of the population in Lennox lived below the poverty level in 2010, which was the highest in any of LAX's surrounding communities. By contrast, approximately 3 percent of the City of El Segundo's population was living below the poverty level in 2010.[30]

3.5.3 EMPLOYMENT

Employment characteristics by category are shown in **Table 3-7**. As shown, the Educational/Health/Social Services category is the industry category with the highest percentage of workers in California, Los Angeles County community of Del Aire, City of Los Angeles, City of El Segundo, and the City of Inglewood (16.4 to 21.9 percent). For the Lennox community, the Arts/Entertainment/Recreation/Hospitality/Food Services industry category employs the largest percentage of residents (21.5 percent).

Table 3-7: 2010 Employment Characteristics

	PERCENTAGE EMPLOYED IN EACH AREA BY INDUSTRY						
		LOS ANGELES COUNTY					
INDUSTRY	STATE	OVERALL	DEL AIRE	LENNOX	CITY OF LOS ANGELES	CITY OF EL SEGUNDO	CITY OF INGLEWOOD
Total Employed Population (16 years and over)	16,632,466	4,522,917	4,947	9,110	1,798,135	9,518	49,000
Agriculture/ Forestry/ Fishing & Hunting/Mining	2.1%	0.5%	0.0%	0.9%	0.4%	0.6%	0.5%
Construction	7.0%	6.3%	5.9%	10.2%	6.7%	2.3%	4.9%
Manufacturing	10.3%	11.4%	12.1%	9.5%	9.8%	15.0%	8.5%
Wholesale trade	3.4%	3.9%	3.2%	1.8%	3.2%	2.1%	2.8%
Retail trade	11.0%	10.6%	11%	14.1%	10.3%	8.1%	9.9%
Transportation/ Warehousing/ Utilities	4.7%	5.2%	12.1%	5.9%	4.1%	8.8%	8.9%
Information	3.0%	4.4%	3.6%	0.8%	5.8%	6.4%	2.5%
Finance/ Insurance/ Real Estate	7.0%	7.0%	5.6%	3.4%	7.0%	6.9%	5.9%
Professional/ Scientific/ Management/ Administrative/Waste Management Services	12.2%	12.0%	11.7%	12.1%	13.3%	17.1%	11.8%
Educational/ Health/ Social Services	20.1%	19.9%	18.3%	13.6%	19.0%	16.4%	21.9%
Arts/ Entertainment/ Recreation/Hospitality/ Food Services	9.2%	9.7%	5.1%	21.5%	11.2%	8.2%	11.2%
Other Services	5.2%	5.9%	4.4%	5.4%	7.0%	3.7%	6.3%
Public Administration	4.6%	3.3%	7.0%	0.8%	2.4%	4.4%	4.8%

SOURCE: United States Census Bureau, 2010 Census data website, http://www.census.gov/, accessed November 2013.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

[30] United States Census Bureau website, *http://www.census.gov,* accessed November 2013.

Unemployment trends for the state of California, Los Angeles County, and jurisdictions adjacent to LAX are shown in **Table 3-8**. As shown, unemployment in the communities surrounding LAX was generally higher than the state unemployment rate in 2000, except for the community of Del Aire and the City of El Segundo. In 2008, the U.S. economy went into recession, and unemployment rates increased by 2 to 3 percentage points. In 2010, unemployment rates had increased by 5 to 7 percentage points from 2000 unemployment rates. Of the jurisdictions surrounding LAX, Lennox currently has the highest percentage of unemployed people (16.7 percent) and the City of El Segundo has the lowest (6.3 percent) compared to the county or state (12.6 percent and 12.4 percent, respectively).[31]

Table 3-8: Unemployment Trends

YEAR	STATE	LOS ANGELES COUNTY			CITY OF LOS ANGELES	CITY OF EL SEGUNDO	CITY OF INGLEWOOD
		OVERALL	DEL AIRE	LENNOX			
2000	4.9%	5.4%	2.8%	7.0%	6.0%	2.4%	6.9%
2005	5.4%	5.4%	2.9%	7.3%	5.9%	2.6%	6.8%
2008	7.2%	7.5%	4.0%	10.1%	8.3%	3.6%	9.5%
2010	12.4%	12.6%	7.0%	16.7%	13.9%	6.3%	15.7%

SOURCE: U.S. Bureau of Labor Statistics, 2012 and California Employment Development Department, 2012.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

3.5.4 2010 INCOME AND HOUSING DISTRIBUTION

Table 3-9 shows the median household incomes in the GSA, and in surrounding jurisdictions for comparison purposes. According to the 2011 U.S. Census American Community Survey (ACS) 5-year estimates, GSA Census tract 6016 had the lowest median household income ($33,371), and GSA Census tract 2781.02 had the highest median household income ($116,603).[32] Of the communities surrounding the GSA, the Westchester-Playa del Rey Community Plan Area, which contains several Census tracts, had the highest overall median household income ($115,103).

In 2010, GSA Census tract 2766.03 had the most housing units (3,280) and Census tract 9800.13 had the least housing units (8), the latter of which is largely due to this area being mostly commercial and industrial land use (Census tract 9800.28 excluded since this tract covers mostly LAX). Census tract 2774 has the greatest vacancy rate (20 percent), while Census tract 6200.01 had the smallest vacancy rate (3 percent; tracts 9800.13 and 9800.28 omitted since these tracts are largely unpopulated).[33]

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31 United States Bureau of Labor Statistics, *2012 and California Employment Development Department*, 2012.

32 United States Census Bureau, American Community Survey 5-year estimates, *http://www.census.gov/*, accessed November 2013.

33 United States Census Bureau website, *http://www.census.gov,* accessed November 2013.

Table 3-9: 2010 Income and Housing Information

AREA	MEDIAN AVERAGE HOUSEHOLD INCOME [1/, 2/]	TOTAL HOUSING UNITS	VACANCY RATE (%)
CT 2766.03	$ 91,544	3,280	5%
CT 2766.04	$ 75,510	2,287	9%
CT 2772	$ 58,207	1,134	7%
CT 2774	$ 45,123	728	20%
CT 2780.01	$ 66,324	1,012	5%
CT 2781.02	$ 116,603	1,752	9%
CT 6014.01	$ 38,892	1,589	5%
CT 6014.02	$ 50,219	1,405	5%
CT 6015.02	$ 38,271	903	4%
CT 6016	$ 33,371	1,084	4%
CT 6200.01	$ 98,177	1,632	3%
CT 6201.01	$ 93,333	2,344	4%
CT 9800.13	N/A	8	0%
CT 9800.28	N/A	1	0%
City of Los Angeles	$ 76,097	1,413,995	7%
Westchester-Playa del Rey CPA [3/]	$ 115,103	26,580	6%
City of El Segundo	$ 105,583	7,410	4%
City of Inglewood	$ 55,479	38,429	5%
Los Angeles County	$ 79,658	3,445,076	6%
Lennox	$ 43,136	5,487	4%
Del Aire	$ 90,062	3,428	4%

NOTES:

1/ In 2009 dollars.

2/ Estimates obtained from U.S. Census Bureau American Community Survey 5-year estimates.

3/ The GSA includes the Westchester-Playa Del Rey Community Plan Area and, consequently, the Census tracts in this GSA area. The numbers are based on the sum of the population of the different Census tracts that make up the Westchester-Playa Del Rey Community Plan Area. These Census tracts include 2756.02, 2760, 2761, 2764, 2765, 2766.01, 2766.03, 2766.04, 2770, 2771, 2772, 2774, 2780 (now 9800.28 and 2780.01), and 2781.02.

SOURCE: United States Census Bureau, 2010 Census data website, *http://www.census.gov/*, accessed November 2013. United States Census Bureau, American Community Survey 5-year estimates, *http://www.census.gov/*, accessed November 2013.

PREPARED BY: Ricondo & Associates, Inc., June 2014.

3.5.5 LIMITED ENGLISH PROFICIENCY COMMUNITIES

Executive Order 13166, *Improving Access to Services for Persons with Limited English Proficiency* (August 11, 2000), requires federal agencies to provide the opportunity for Limited English Proficiency (LEP) communities to be involved in the planning process by having access to translated materials and/or translation services during meetings. For this evaluation, the LEP population was calculated for the GSA. The LEP population was calculated from U.S. Census American Community Survey 5-year estimates for the population 5-years old or greater which speak English less than "very well" (**Table 3-10**).

Table 3-10: 2012 English Proficiency

	POPULATION		POPULATION SPEAKING ENGLISH LESS THAN "VERY WELL"	
AREA	TOTAL, 5+ YEARS OLD	NON-ENGLISH SPEAKING	NUMBER	PERCENT
GSA CTs Total	44,584	19,928	7,627	17.0%
CT 2766.03	5,445	1,252	345	6.3%
CT 2766.04	4,002	772	105	2.6%
CT 2772	2,811	1,208	461	16.4%
CT 2774	1,556	646	245	15.7%
CT 2780.01	2,207	595	202	9.2%
CT 2781.02	2,811	699	80	2.8%
CT 6014.01	4,631	2,318	658	14.2%
CT 6014.02	4,477	3,649	1,635	36.5%
CT 6015.02	3,712	3,397	1,569	42.3%
CT 6016	4,148	3,714	1,917	46.2%
CT 6200.01	3,613	574	237	6.6%
CT 6201.01	5,171	1,104	173	3.3%
CT 9800.13	NA	NA	NA	0.0%
CT 9800.28	NA	NA	NA	0.0%
City of Los Angeles	3,549,007	2,135,516	1,051,630	29.6%
Westchester-Playa del Rey CPA	NA	NA	NA	NA
City of El Segundo	15,779	3,042	773	4.9%
City of Inglewood	101,866	50,440	23,352	22.9%
Los Angeles County	9,188,362	5,216,284	2,438,809	26.5%
Lennox	20,401	18,062	9,250	45.3%
Del Aire	9,623	5,244	2,037	21.2%

NOTES: NA= Data not available. Census tracts 9800.13 and 9800.28 are largely unpopulated and English proficiency data was not available.

SOURCE: United States Census Bureau, American Community Survey 5-year estimates, *http://www.census.gov/*, accessed January 2014.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

As shown, a lower percent of the population in the GSA Census tracts speaks English less than "very well" than in the surrounding jurisdictions of the City of Los Angeles and Los Angeles County. According to the 2012 ACS 5-year estimates approximately 17 percent of the 5-year and older population in the Census tracts which intersect the GSA speak English less than "very well". This compares to 29.6 percent of the City of Los Angeles population and 26.5 percent of the County of Los Angeles population.

3.5.6 CHILDREN'S ENVIRONMENT HEALTH AND SAFETY

Three school districts are adjacent to LAX: the Los Angeles Unified School District (USD), the El Segundo USD, the Lennox USD, and the Inglewood USD.

Within a quarter-mile radius of the GSA, there are 7 pre-schools, 1 high school, 8 elementary schools, 1 college or university and 3 private and charter schools. Four schools are located within or immediately adjacent to the GSA: St. Bernard Catholic High School, 98th Street Elementary School, The University of West Los Angeles, and Otis College of Art and Design (see Exhibit 3-4).

3.5.7 SURFACE TRANSPORTATION AND TRAFFIC

The principal freeways and roadways serving as access routes within and around the GSA are described below. These roads are identified in most of the figures in this report and are illustrated in **Exhibit 3-7**.

I-405 (San Diego Freeway) - This north-south freeway extending from Sylmar in the San Fernando Valley to Orange County generally forms the eastern boundary of the GSA and provides regional access to LAX and the surrounding areas. Access to the GSA is provided via ramps at Howard Hughes Parkway, Century Boulevard, I-105, Imperial Highway, and three locations along La Cienega Boulevard.

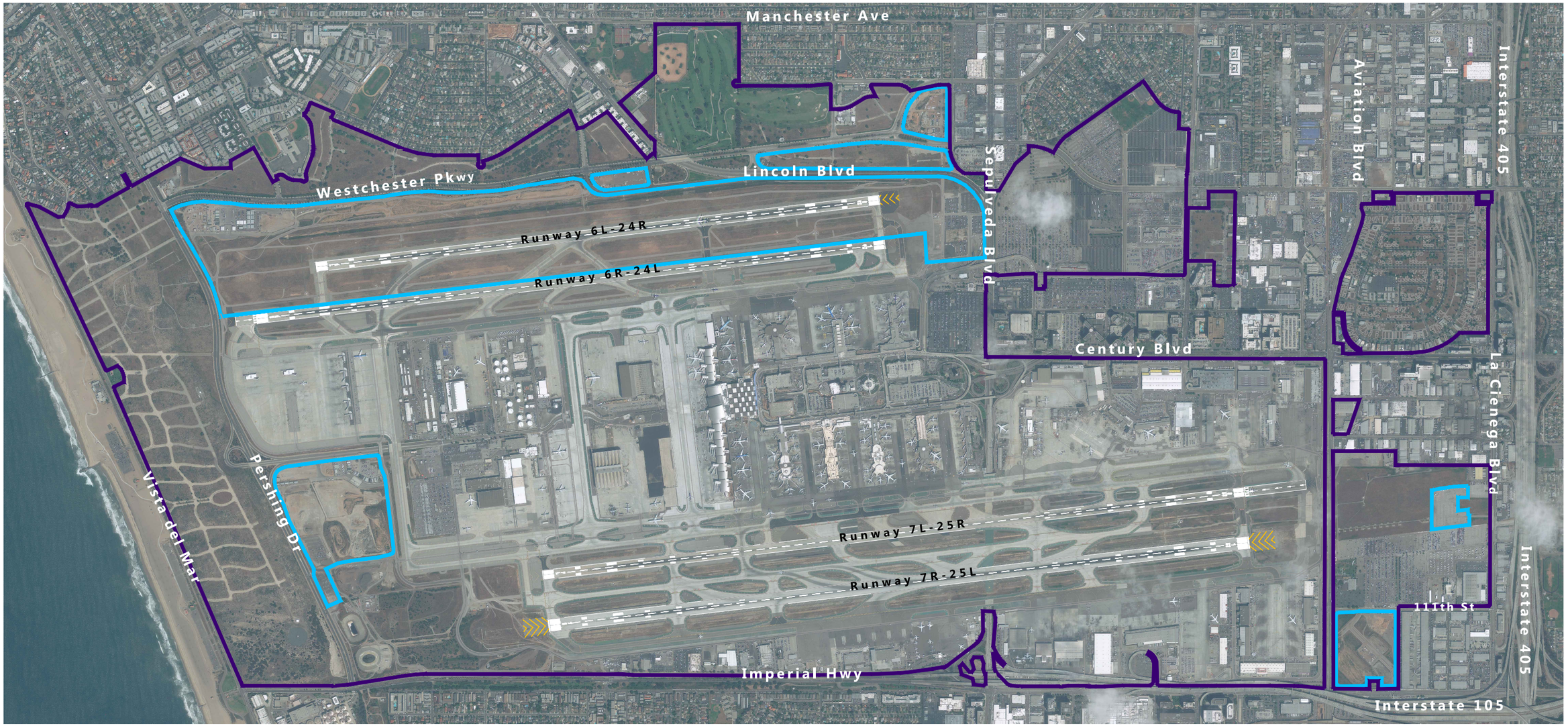
I-105 (Glenn M. Anderson/Century Freeway) - Along with Imperial Highway (described below), this east-west freeway forms the southern boundary of the GSA, and extends approximately from the San Gabriel Freeway (I-605) on the east to just west of Sepulveda Boulevard. Access to the GSA from the I-105 is provided via ramps at Sepulveda Boulevard and along Imperial Highway. The westbound off-ramp from the I-105 Freeway to northbound Sepulveda Boulevard was widened to three lanes in March 2010.

Aviation Boulevard - This north-south, four-lane roadway bisects the GSA.

Century Boulevard - This eight-lane divided east-west roadway serves as the primary entry to the LAX CTA. This roadway also provides access to off-airport businesses and hotels and on-airport aviation-related facilities (e.g., air cargo facilities) located between the LAX CTA and I-405.

Imperial Highway - This east-west roadway is located at-grade and beneath much of the elevated I-105 freeway. The number of lanes on this roadway varies from six lanes east of the merge with I-105 to four-lanes west of the merge with I-105.

La Cienega Boulevard - This north-south roadway parallels I-405 at the east boundary of the GSA. The roadway is four to six lanes.



LEGEND
- Generalized Study Area
- Detailed Study Area

SOURCE: Landrum & Brown, *Los Angeles International Airport, Airport Layout Plan,* 2005; Los Angeles World Airports, April 2013 (aerial photography); Ricondo & Associates, Inc., July 2013.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

EXHIBIT 3-7

NORTH 0 1,600 ft.

Principal Access Routes

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Manchester Avenue - Four-lane, east-west roadway is located along the northernmost portion of the LAX property boundary.

Pershing Drive - This north-south, four-lane divided roadway forms the western boundary of the operational portion of LAX.

Westchester Parkway - This east-west four-lane divided arterial roadway forms a portion of the northern boundary of the operational portion of LAX.

Sepulveda Boulevard (State Route 1 south of Lincoln Boulevard) - This major north-south six-lane arterial roadway provides direct access to LAX via I-405 and Westchester Parkway on the north and via I-105 on the south. Sepulveda Boulevard between I-105 and Century Boulevard is located in a tunnel section beneath the South Airfield runways.

111th Street - This east-west roadway has one lane in each direction separated by a continuous two-way left turn lane. This roadway provides access to LAX's Public Parking Lot B, Airport Employee Parking Lot E, and other businesses in the GSA.

3.6 Air Quality

Air quality in the Los Angeles region is regulated by federal, state, and local laws. In addition to rules and standards contained in the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA), air quality is also subject to the rules and regulations established by state and local entities. The CAA requires the U.S. Environmental Protection Agency (EPA) to establish and periodically review the National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. National standards have been established for the following "criteria" pollutants:

- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Ozone (O_3)
- Sulfur dioxide (SO_2)
- Lead (Pb)
- Respirable Particulate matter (PM_{10})
- Fine particulates ($PM_{2.5}$)

On the federal level, the USEPA is responsible for implementation of the CAA. The CAA was first enacted in 1970 and has been amended numerous times in subsequent years (1977, 1990, and 1997). Under the authority granted by the CAA, the USEPA has established NAAQS for the following criteria pollutants: CO, NO_2, O_3, SO_2, Pb, PM_{10}, and $PM_{2.5}$. **Table 3-11** presents the NAAQS that are currently in effect for criteria air

pollutants. O_3 is a secondary pollutant, meaning that it is formed from reactions of "precursor" compounds under certain conditions. The primary precursor compounds that can lead to the formation of O_3 are VOCs and NO_X.

Table 3-11: National Ambient Air Quality Standards (NAAQS)

POLLUTANT	AVERAGING TIME	PRIMARY NAAQS	SECONDARY NAAQS
Carbon Monoxide (CO)	1 Hour 8 Hour	35 ppm 9 ppm	N/A N/A
Nitrogen Dioxide (NO_2)	1 Hour AAM	0.100 ppm 0.053 ppm	N/A [1/] Same as Primary
Ozone (O_3)	1 Hour 8 Hour	– 0.075 ppm	N/A Same as Primary
Sulfur Dioxide (SO_2) [2/]	1 Hour 3 Hour 24 Hour AAM	0.75 ppm 0.50 ppm 0.14 ppm 0.03 ppm	N/A 0.5 ppm N/A N/A
Lead (Pb)	30 Day Average Quarter	– 1.5 µg/m^3	N/A Same as Primary
Respirable Particulate Matter (PM_{10})	24 Hour AAM	150 µg/m^3 –	Same as Primary N/A
Fine Particulate Matter ($PM_{2.5}$)	24 Hour AAM	35 µg/m^3 12 µg/m^3	Same as Primary 15 µg/m^3

NOTES:

1/ On March 20, 2012, the USEPA took final action to retain the current secondary NAAQS for NO_2 (0.053 ppm averaged over a year) and SO_2 (0.5 ppm averaged over three hours, not to be exceeded more than once per year) (77 Federal Register [FR] 20264).

2/ On June 22, 2010, the 1-hour SO_2 NAAQS was updated and the previous 24-hour and annual primary NAAQS were revoked. The previous 1971 SO_2 NAAQS (24-hour: 0.14 ppm; annual: 0.030 ppm) remain in effect until one year after an area is designated for the 2010 NAAQS (75 FR 35520).

NAAQS = National Ambient Air Quality Standards

ppm = parts per million

AAM = Annual Arithmetic Mean

N/A = Not applicable

µg/m^3 = micrograms per cubic meter

PM_{10} = particulate matter equal to less than 10 microns in diameter

$PM_{2.5}$ = particulate matter equal to less than 2.5 microns in diameter

SOURCE: California Air Resources Board, Ambient Air Quality Standards Chart, Available: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, accessed January 13, 2014.

PREPARED BY: Ricondo & Associates, Inc., June 2014.

The CAA also specifies future dates for achieving compliance with the NAAQS and mandates that states submit and implement a State Implementation Plan (SIP) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones.

LAX is located in the South Coast Air Basin (Basin), which is designated as a federal nonattainment area for O_3, $PM_{2.5}$, and Pb. Nonattainment designations under the CAA for O_3 are classified into levels of severity based on the level of concentration above the standard, which is also used to set the required attainment date. The Los Angeles Basin is classified as an extreme nonattainment area for O_3. The Basin was reclassified on September 22, 1998 to attainment/maintenance for NO_2 and on June 11, 2007 for CO since concentrations of these pollutants dropped below the NO_2 and CO NAAQS for several years. More recently, the Los Angeles Basin was reclassified to attainment/maintenance for PM_{10} on July 26, 2013. Attainment/maintenance means that the pollutant is currently in attainment and that measures are included in the SIP to ensure that the NAAQS for that pollutant are not exceeded again (maintained). The attainment status with regard to the NAAQS is presented in **Table 3-12** for each criteria pollutant.

Table 3-12: South Coast Air Basin Attainment Status

POLLUTANT	NAAQS ATTAINMENT STATUS 1/
Carbon Monoxide (CO)	Attainment - Maintenance
Nitrogen Dioxide (NO_2)	Attainment - Maintenance
Ozone (O_3)	Nonattainment - Extreme
Sulfur Dioxide (SO_2)	Attainment
Lead (Pb)	Nonattainment
Respirable Particulate Matter (PM_{10})	Attainment - Maintenance
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment

NOTES:

NAAQS = National Ambient Air Quality Standards

1/ Status as of July 31, 2013.

SOURCE: U.S. Environmental Protection Agency. Green Book. Available at http://www.epa.gov/air/oaqps/greenbook/index.html. As of July 31, 2013.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

On the state level, the California Air Resources Board (CARB) manages air quality, regulates mobile emissions sources, and oversees the activities of county and regional air districts within California. CARB also regulates local air quality indirectly by establishing California Ambient Air Quality Standards (CAAQS) and vehicle emissions standards, and by conducting research, planning, and coordination activities. California has adopted ambient standards that are generally more stringent than the federal standards for the criteria air pollutants.

On the local level, the South Coast Air Quality Management District (SCAQMD) is responsible for ensuring that federal and state air quality standards are met by monitoring air pollutant levels throughout the region and implementing strategies to attain the standards. Together with CARB and the Southern California Association of Governments (SCAG), SCAQMD is responsible for managing air quality in the region. SCAQMD is also involved in the assessment of health and environmental hazards associated with toxic (or hazardous) air pollutants.

3.6.1 EXISTING AMBIENT AIR QUALITY

In an effort to monitor the various concentrations of air pollutants throughout the Basin, the SCAQMD has divided the region into 38 Source Receptor Areas in which monitoring stations operate. The monitoring station that is most representative of existing air quality conditions at LAX is the Southwest Coastal Los Angeles Monitoring Station located at 7201 W. Westchester Parkway (referred to as the LAX Hastings site), less than 0.5-mile from Runway 6L-24R (northernmost LAX runway). Criteria pollutants monitored at this station include O_3, CO, SO_2, NO_2, and PM_{10}. The nearest representative monitoring station that monitors $PM_{2.5}$ is the South Coastal Los Angeles County 1 Station, which is located at 1305 E. Pacific Coast Highway (Long Beach). A summary of the monitored pollutants from 2010 through 2012 is provided in **Table 3-13**.

Table 3-13: Southwest Coastal Los Angeles and South Coastal Los Angeles County Monitoring Station Ambient Air Quality Data

POLLUTANT	AVERAGING TIME	2010	2011	2012
Ozone (O_3)	1 Hour, ppm 8 Hour, ppm	- 0.070	- 0.067	- 0.075
Carbon Monoxide (CO)	1 Hour, ppm 8 Hour, ppm	2.6 2.19	2.3 1.79	2.8 1.51
Nitrogen Dioxide (NO_2)	1 Hour, ppm AAM, ppm	0.061 0.012	0.065 0.013	N/A 0.010
Sulfur Dioxide (SO_2) [2/]	1 Hour, ppm 24 Hour, ppm AAM, ppm	0.016 0.004 0.000	0.008 0.002 0.000	N/A 0.001 0.000
Respirable Particulate Matter (PM_{10})	24 Hour, µg/m^3 AAM, µg/m^3	37 20.6	41 21.7	31 19.8
Fine Particulate Matter ($PM_{2.5}$)	24 Hour, µg/m^3 AAM, µg/m^3	35.0 10.3	39.7 11.3	49.8 10.4

NOTES:

AAM = Annual arithmetic mean

ppm = parts per million (by volume)

µg/m^3 = micrograms per cubic meter

N/A = not applicable

SOURCES: California Air Resource Board, iADAM: Air Quality Data Statistics, Available: http://www.arb.ca.gov/adam/, accessed April 4, 2013; California Air Resource Board, AQMIS2, Available: http://www.arb.ca.gov/aqmis2/aqmis2.php, accessed May 14, 2013.

PREPARED BY: Ricondo & Associates, Inc., June 2014.

3.6.2 SOURCES OF AIRPORT AIR EMISSIONS

The sources of air emissions associated with LAX are typical of sources associated with most large commercial service airports. Typical sources include aircraft during the landing/takeoff cycles, ground support equipment (GSE), auxiliary power units, airport-related motor vehicles (from passengers, employees, shuttle vans, fleet vehicles, buses, etc.) within the airport roadway network, stationary sources (e.g., boilers and generators), and

construction-related emissions. **Table 3-14** presents a summary listing of these sources of air emissions, the associated criteria pollutants, and their characteristics.

Table 3-14: Airport-Related Sources of Air Emissions

SOURCE	POLLUTANT(S)	CHARACTERISTICS
Aircraft and Auxiliary Power Units (APUs)	CO, NO_X, PM, SO_X, VOC	Exhaust products of fuel combustion that vary depending on aircraft engine type, number of engines, power setting, and time in modes during the landing-takeoff (LTO) cycle. Emissions from APUs are during taxi/idle periods.
Ground Support Equipment (GSE)	CO, NO_X, PM, SO_X, VOC	Exhaust products of fuel combustion from bag tractors, catering trucks, cargo loaders, service trucks, sweepers, etc.
Motor Vehicles	CO, NO_X, PM, VOC	Exhaust products of fuel combustion from motor vehicles traveling to/from the Airport. Emissions vary depending on vehicle type, operating fuel, distance traveled, and operating speed.
Stationary Sources	CO, NO_X, PM, SO_X, VOC	Exhaust products of fossil fuel combustion. Sources mainly include boilers, emergency generators, etc. Off-site emissions as a result of purchased electricity, solid waste disposal, water usage, and wastewater treatment may also be quantified.
Construction	CO, NO_X, PM, SO_X, VOC	Dust generated from excavation and land clearing, exhaust emissions from construction equipment and construction-related motor vehicles (including worker commute and vehicle delivery trips), and evaporative emissions from asphalt paving and painting.

SOURCE: Ricondo & Associates, Inc., January 2014.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

3.6.3 GREENHOUSE GASES AND HAZARDOUS AIR POLLUTANTS

Because greenhouse gases (GHG) and hazardous air pollutants (HAPs) are evaluated independently from the USEPA criteria pollutants in FAA NEPA documents, these emissions for existing conditions at LAX are presented and discussed later in Section 4.5, *Environmental Consequences, Air Quality*.

3.7 Water Resources

3.7.1 SURFACE AND STORMWATER

Major surface water features in the vicinity of LAX include the Pacific Ocean, Santa Monica Bay to the west and Marina Del Rey to the north-northwest. The El Segundo Dunes provide a natural barrier between LAX and Dockweiler Beach State Park and the Pacific Ocean (Exhibit 3-2). The Santa Monica Bay watershed extends from Malibu to the north to El Segundo to the south. Land uses include open spaces, residential, commercial, industrial, and transportation land uses. Portions of LAX drain to the southern portion of the Santa Monica Bay watershed.

Stormwater drainage, sanitary wastewater, and industrial wastewater collection are separate systems in the City of Los Angeles. Stormwater discharges associated with LAX are regulated by individual National Pollution Discharge Elimination System (NPDES) wastewater permits. Wastewater permits currently issued to LAX are intended to implement storm water pollution control measures to reduce the discharge of pollutants in storm water from the industrial and construction activities at LAX. LAX is within the region covered by NPDES Permit No. CA S004001 issued by the Los Angeles Regional Water Quality Control Board (LARWQCB).[34] This permit prohibits non-stormwater discharges in order to reduce pollutants in urban stormwater discharges. LAX has implemented a Stormwater Pollution Prevention Plan (SWPPP) for stormwater discharges associated with industrial activities.[35] The major surface drainage features within the boundaries of LAX consists of five stormwater Sub-Basins: The Argo, Culver, Dominguez, Imperial, and Vista del Mar Sub-Basins (**Exhibit 3-8**). Portions of the DSA drain into four of the Sub-Basins:

- Argo and Imperial Sub-Basins: The Argo and Imperial Sub-Basins drain west of Sepulveda Boulevard and both Sub-Basins discharge directly into Santa Monica Bay. These Sub-Basins are generally bounded by Sepulveda Boulevard to the east, the El Segundo Blue Butterfly Habitat Area to the west, Manchester Avenue to the north, and Imperial Highway to the south (Exhibit 3-8). Approximately 1,100 and 1,300 acres of LAX drain into the Argo and Imperial Sub-Basins, respectively.
- Dominguez Channel Sub-Basin: The Dominguez Channel Sub-Basin drains into the Dominguez Channel and ultimately into the San Pedro Harbor. This water Sub-Basin is bounded by Sepulveda Boulevard to the west, I-405 to the east, Manchester Boulevard to the north, and I-105/Imperial Highway to the south (Exhibit 3-8). Approximately 1,100 acres of LAX drain into the Dominguez Channel Sub-Basin.
- Culver Drain Sub-Basin: The Culver Drain Sub-Basin drains in the northwestern portion of LAX and ultimately drains into Santa Monica Bay. The Culver Sub-Basin is bounded by the LAX property boundary and Westchester Parkway to the north, the Argo Sub-Basin to the east, the Imperial Sub-Basin to the south and the Vista Del Mar Sub-Basin to the west. Approximately 50 acres of LAX drain into the Culver Drain Sub-Basin.

Within the DSA, the Argo Ditch acts as a flood control structure and receives water from runoff, concrete culverts and other drainage features. Surface water runoff enters a gated outlet structure where a concrete box section transitions to an open ditch and a series of side drainages/culverts along the length of the ditch The Argo Ditch is identified in the National Wetlands Inventory (NWI) as a riverine, intermittent, streambed with a temporary flooded water regime and is excavated. Additional information on the Argo Ditch is provided in Section 3.9.1.

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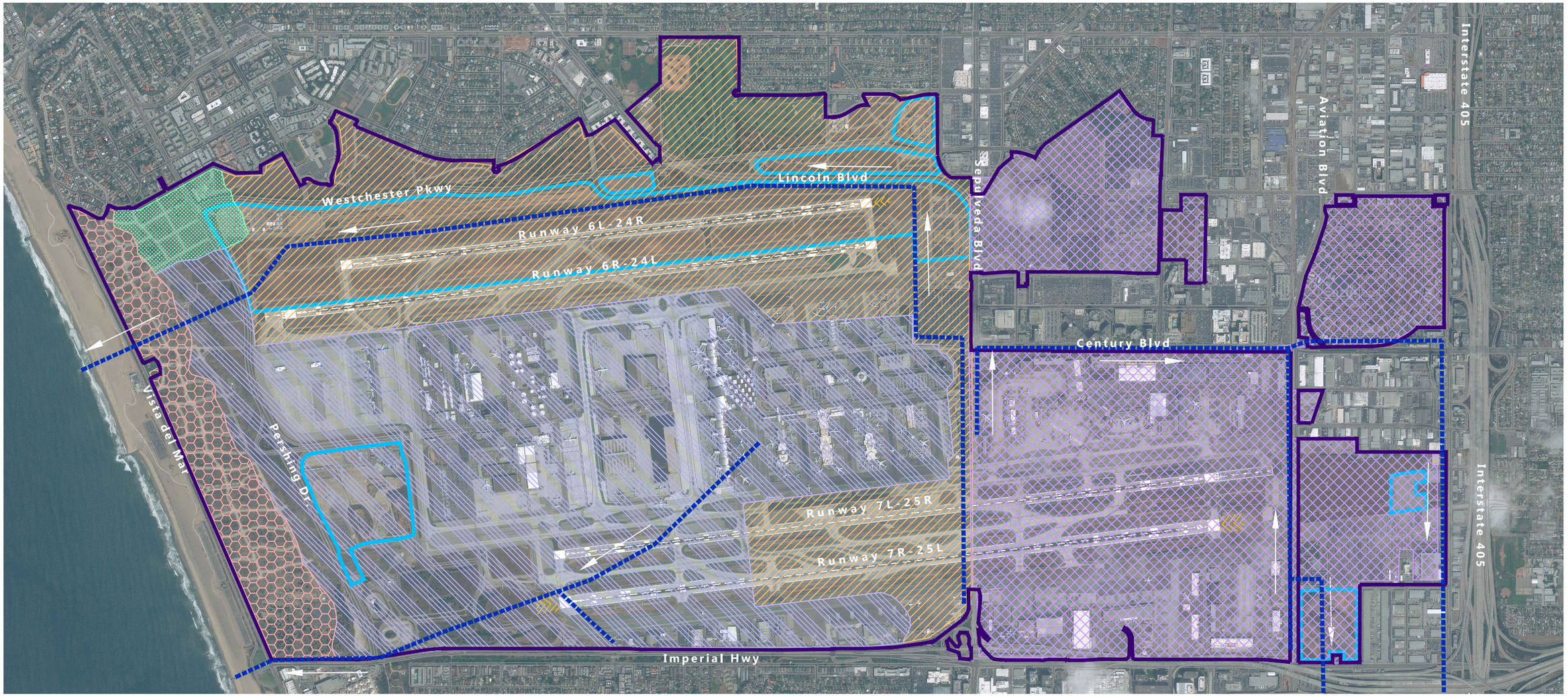
[34] City of Los Angeles, and Los Angeles World Airports, *LAX Specific Plan Amendment Study*, Final EIR, January 2013.

[35] U.S. Department of Transportation, Federal Aviation Administration and Los Angeles World Airports, *LAX Master Plan Final EIS/EIR*, 2005.



LEGEND

- Generalized Study Area
- Detailed Study Area
- Stormwater Flow Direction
- Storm Drain
- Vista Del Mar Sub-Basin
- Dominguez Channel Sub-Basin
- Imperial Drain Sub-Basin
- Argo Drain Sub-Basin
- Culver Drain Sub-Basin

SOURCE: Landrum & Brown, *Los Angeles International Airport, Airport Layout Plan,* 2005; Los Angeles World Airports, April 2013 (aerial photography); Ricondo & Associates, Inc., July 2013.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

EXHIBIT 3-8

NORTH 0 1,500 ft.

Drainage Sub-Basins

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Santa Monica Bay is the primary receiving water body for runoff from LAX. Santa Monica Bay includes 19 pollutants of concern.[36] Ten of these pollutants were identified as potential stormwater runoff from LAX. These pollutants include total suspended solids, phosphorous, copper, lead, zinc, biochemical oxygen demand, chemical oxygen demand, oil and grease, Kjeldahl[37] nitrogen, and pathogenic bacteria (fecal coliform, fecal enterococcus, and coliform bacteria).

3.7.2 GROUNDWATER

LAX is located within the West Coast Groundwater Basin, which is generally bordered by I-10 to the north, Harbor Boulevard to the east, the Pacific Ocean to the west, and San Pedro Harbor to the south. The average depth to groundwater under LAX is over 90 feet; however, perched groundwater conditions have been noted in the upper 60 feet at various locations at LAX.[38] The Santa Monica Groundwater Basin is located to the north of LAX, along the northern boundaries of the Playa del Rey and Westchester neighborhoods.

Groundwater in the DSA is not located within the perched groundwater locations. The closest perched groundwater location was identified at the LAX Fuel Facilities, north of the existing Tom Bradley International Terminal in the CTA.[39]

3.7.3 WATER SUPPLY

Drinking water at LAX is provided by the City of Los Angeles Department of Water and Power (LADWP) and is distributed through the LAX transmission system. The LAX transmission system consists of a combination of several 10-, 12-, and 16-inch transmission lines that lead to a major 36- inch trunk line beneath Sepulveda Boulevard. This system connects to the overall City of Los Angeles water supply infrastructure from three connectors beneath West Westchester Parkway, South Pershing Drive, and Sepulveda Boulevard just south of Century Boulevard. The DSA is served by a 10-inch connection from a 12-inch transmission line in Pershing Drive near World Way West.

3.7.4 SANITARY WASTEWATER AND TREATMENT

Wastewater treatment for most of the City of Los Angeles is performed at the Hyperion Treatment Plant (HTP) which is located near the southwest portion of the LAX property, south of Imperial Highway. Wastewater generated at LAX is collected in the airport sanitary sewer system through a 21-inch main pipeline.[40]

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36 City of Los Angeles, Los Angeles World Airports, *LAX Specific Plan Amendment Study*, Final EIR, January 2013.

37 The measure of both the ammonia and the organic forms of nitrogen.

38 U.S. Department of Transportation, Federal Aviation Administration and Los Angeles World Airports, *LAX Master Plan Final EIS/EIR*, 2005.

39 *Ibid.*

40 *Ibid.*

The DSA is served by the North Outfall Relief Sewer (NORS) and Central Outfall Sewer (COS) sewer lines that run underneath LAX at depths of between 5 to 25 feet.[41] Wastewater generated at LAX is conveyed via these sewer lines to the HTP. Current daily intake at the HTP is approximately 299 million gallons per day (gpd).[42]

LAX-related uses generate approximately 797,672 gpd.[43] However, the Proposed Action or its alternatives would include only the construction or rehabilitation of existing taxiways, runways, or service roads, which do not generate wastewater.

3.8 Fish, Wildlife, and Plants

A Biological Assessment was prepared for the DSA in conjunction with this EA and includes three site visits that were conducted May 8, June 14, and December 18, 2013 in addition to database and literature searches. Additional details of the site visits, as well as database lists of species and habitats, are provided in the Biological Assessment (**Appendix C**). Vegetation communities within the surveyed DSA include California bulrush marsh, cattail marsh, perennial ryegrass field, sandbar willow thicket, smartweed-cocklebur patch, yellow starthistle field, disturbed/annual brome grassland, disturbed vegetation, ornamental, and existing construction area in addition to developed land. Each of these communities and cover types is briefly discussed below.

The Biological Assessment concluded there is no designated critical habitat or areas proposed for designation for critical habitat for federally listed wildlife within the proposed project area (Appendix C). Critical habitat was identified for seven wildlife species within 35 miles of the proposed project 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.

3.8.1 PLANT COMMUNITIES

LAX and associated facilities are largely developed, and the majority of the undeveloped areas support ruderal and ornamental vegetation. All plant communities within the DSA have global and state rarity rankings of 4 or higher. According to California Department of Fish and Wildlife (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. Eleven distinct plant communities were identified within the proposed project area; plant community locations and site photographs are provided in Appendix C.

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41 U.S. Department of Transportation, Federal Aviation Administration and Los Angeles World Airports*, LAX Master Plan Final EIS/EIR*, 2005.

42 City of Los Angeles, Los Angeles World Airports, *LAX Specific Plan Amendment Study, Final EIR*, January 2013.

43 U.S. Department of Transportation, Federal Aviation Administration and Los Angeles World Airports, *LAX Master Plan Final EIS/EIR,* 2005.

California Bulrush Marsh. Approximately 0.55-acre of the proposed project was classified as California Bulrush Marsh. This area was confined to the Argo Ditch and was dominated by California bulrush (*Schoenoplectus californicus*). This community corresponds to the *Schoenoplectus californicus* Alliance (52.114.00), which has a global rarity ranking of 5 and state rarity ranking of 4.[44] This plant community may also be classified as Coastal and valley freshwater marsh (52410).

Cattail Marsh. Approximately 0.01-acre of the proposed project was classified as Cattail Marsh. This area was confined to the Argo Ditch and was dominated by broad-leaf cattail (*Typha latifolia*). This community corresponds to the *Typha (angustifolia, domingensis, latifolia)* Alliance (52.050.00), which has a global and state rarity ranking of 5.[45] This plant community may also be classified as Coast and Valley freshwater marsh (52410).

Perennial Ryegrass Field. Approximately 0.67-acre of the proposed project was classified as Perennial Ryegrass Field. This area was confined to the Argo Ditch and was dominated by perennial rye-grass (*Festuca perrenis*). This community corresponds to the *Festuca perennis* Semi-natural Stands (41.321.00), which does not have a global or state rarity ranking.[46] This plant community may also be classified as Non-Native Grassland (42200).

Sandbar Willow Thicket. Approximately 0.14-acre of the proposed project was classified as Sandbar Willow Thicket. This area was confined to the Argo Ditch and was dominated by narrow-leaf willow (*Salix exigua* cf. var. *hindsiana*). This community corresponds to the *Salix exigua* Alliance (61.209.00), which has a global rarity ranking of 5 and a state rarity ranking of 4.[47] This plant community may also be classified as Southern Willow Scrub (63300).

Smartweed-Cocklebur Patch. Approximately 0.25-acre of the proposed project was classified as Smartweed-Cocklebur Patch. This area was confined to the Argo Ditch and was dominated by common knotweed (*Persicaria lapathifolia*). This community corresponds to the *Persicaria lapthifolia – Xanthium strumarium* Provisional Alliance (42.207.00), which has a global and state rarity ranking of 4.[48] This plant community may also be classified as Coastal and Valley Freshwater Marsh (52410).

Yellow Starthistle Field. Approximately 1.73 acres of the proposed project were classified as Yellow Starthistle Field. This area was confined to the Argo Ditch and was dominated by yellow starthistle (*Centaurea solstitialis*) and brome species (*Bromus* sp.). This community corresponds to the *Centaurea (solstitialis,*

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44 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. Accessed online, October 2013: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

45 *Ibid.*

46 *Ibid.*

47 *Ibid.*

48 *Ibid.*

meletensis) Semi-natural Stands (42.042.00), which does not have a global or state rarity ranking.[49] This plant community may also be classified as Non-native Grassland (42200).

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 214.76 acres of disturbed/Annual Brome Grassland plant community in this area. Plant species associated with the 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*). Vegetation in disturbed/Annual Brome Grassland areas has been and will continue to be routinely maintained or removed as part of LAWA's ongoing program to prevent wildlife hazardous to aircraft operations from entering the airfield.

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. There are approximately 33.5 acres of disturbed vegetation plant community in this area. Plant species associated with the 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*). 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 3.16 acres of the proposed project was classified as ornamental. 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*).

Existing Construction Area. Existing construction areas within the proposed project site occupy approximately 61.99 acres and consist of existing staging areas or other areas where construction activities are currently taking place. The grading, excavating, or movement of construction equipment within this community makes it difficult for vegetation to establish.

Developed. Developed areas within the proposed project site occupy approximately 202.57 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. The hardscape associated with this community make it unsuitable to support vegetation.

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[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. Accessed online, October 2013: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

3.8.2 PLANTS

Seventy-four plant species from 31 families were identified during the surveys. Thirty-two of the identified plant species are native to California, with the remaining 42 plant species being non-native. Non-native plants dominated most of the surveyed area in and around the runways and staging areas, with native patches occurring sporadically along the Argo Ditch. This may be due to the continual disturbance regime that occurs throughout the proposed project area and the presence of water in the Argo Ditch. Human presence is limited to authorized personnel and is frequent in the proposed project area.

3.8.3 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 at the proposed project site (Appendix C). 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 handful of reptile and mammal species observations. No fish or amphibian species were observed during the surveys. Degraded small mammal burrows were observed near Runway 6L-24R but none showed signs of recent activity. 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. Blackbirds were observed within the Argo Ditch and displayed breeding behavior during late spring but were not observed during subsequent visits in the mid- to late summer; these species were assumed to have attempted to nest, but no nests were detected during surveys. Small migratory birds, such as the common yellowthroat (*Geothlypis trichas*), were observed during mid- to late summer surveys within the vegetated portions of the Argo Ditch; therefore, some nesting of small, wetland bird species may be occurring annually. A single burrowing owl along with its burrow was observed just south of Westchester Parkway near the intersection of Westchester Parkway and Northside Parkway.

3.8.4 PROTECTED SPECIES

This section considers species protected under the federal Endangered Species Act (ESA), and the California ESA, as evaluated in the LAX Master Plan. A comprehensive understanding of the potential for occurrence of protected species was obtained through consultation with resource specialists and available information from resource management plans, and other technical documents containing information on locations and types of biological resources that have the potential to exist within the study area. Some of these resources included the United States Fish and Wildlife Service (USFWS) Critical Habitat Mapper and File[50] data and the Carlsbad Field Office Species List for Los Angeles County. The CDFW Natural Diversity Database[51] and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants[52] file data were also queried for records of

[50] U.S. Fish and Wildlife Service. *Critical Habitat Portal website*, http://criticalhabitat.fws.gov/crithab/, accessed March 2012.

[51] California Department of Fish and Game, *California Natural Diversity Database*, 2012.

[52] California Native Plant Society, *CNPS Electronic Inventory of Rare and Endangered Plants*, 2012.

occurrence of special-status species and habitats within the Venice and Inglewood U.S. Geological Survey (USGS) 7.5-minute Topographic Quadrangle Map.[53]

3.8.4.1 Federally Listed Plant Species

Table 3-15 provides listed plants species with potential for occurrence within the DSA. All 12 of the federally-listed sensitive plant species that were identified as potentially occurring in the vicinity of the proposed project area were determined to be absent as a result of directed surveys. An account of each of these species is provided below. These plant species are listed as endangered, threatened or candidate under the federal Endangered Species Act. Distributions of extant populations of sensitive species and critical habitat near the proposed project are mapped in Appendix C.

One sensitive plant species, Lewis' evening primrose (*Camissoniopsis lewisii*), was observed at the western end of the study area. The species is listed as having a CNPS ranking of 3 and has been observed during previous surveys conducted on LAX. 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.

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 occurrence for the species is located approximately 6.3 miles northeast of the proposed project site.[54] 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 occurrence for this species is approximately 6.3 miles northeast of the proposed project site.[55] 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 occurrence of this species is approximately 2.8 miles northwest of the proposed project site.[56] The nearest critical habitat is located approximately 49 miles to the northwest.

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53 U.S. Geological Service, 7.*5 Minute Venice and Inglewood Quadrangle Maps*, 1981.

54 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.

55 *Ibid.*

56 *Ibid.*

Table 3-15 (1 of 2): Listed Plant Species Potential for Occurrence within the DSA

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 proposed project 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 proposed project. 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 proposed project 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 proposed project. 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 project 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 proposed project. 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 no suitable habitat within the proposed project 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 proposed project. 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 project 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 proposed project. 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 project 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 proposed project. 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 proposed project 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 proposed project. Currently, there is no established or proposed critical habitat for this species.

Table 3-15 (2 of 2): Listed Plant Species Potential for Occurrence within the DSA

NAME	STATUS	HABITAT	SURVEY RESULTS
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 proposed project 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 proposed project. 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 project 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 proposed project. 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 proposed project area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 6 miles southeast of the proposed project. 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 proposed project 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 proposed project. 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 no suitable habitat within the project 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 proposed project. Currently, there is no established or proposed critical habitat for this species.

NOTES:
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
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.*
PREPARED BY: Ricondo & Associates, Inc., June 2014.

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 (Hickman 1993). It is state-listed endangered and a potential candidate for federal listing as endangered. Historic records indicate it occurred in the study area (Pierce and Pool 1938). The nearest occurrence of this species is approximately 2.2 miles northeast of the proposed project site.[57] 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 occurrence of this species is approximately 1.8 miles northwest of the proposed project site.[58] 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 occurrence of this species is approximately 5.7 miles northwest of the proposed project site.[59] 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 occurrence of this species is approximately 12.5 miles northwest of the proposed project site.[60] Santa Monica dudleya was not observed during 2013 surveys or previous surveys. 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 federal-listed endangered and state-listed threatened species. The nearest occurrence of this species is approximately 6.3 miles northeast of the proposed project site.[61] 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.

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57 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.

58 *Ibid.*

59 *Ibid*

60 *Ibid.*

61 *Ibid.*

The nearest occurrence of this species is approximately 2.8 miles east of the proposed project site.[62] 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 occurrence of this species is approximately 6 miles southeast of the proposed project site.[63] 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 federal and state-listed endangered species. The nearest occurrence of this species is approximately 14.1 miles southeast of the proposed project site.[64] 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 occurrence of this species is approximately 0.2 miles west of the proposed project site.[65] Currently, there is no established or proposed critical habitat for this species.

3.8.4.2 Federally Listed Wildlife Species

All ten of the federally-listed sensitive wildlife species (listed as endangered, threatened or candidate under the federal Endangered Species Act) that were identified as potentially occurring in the vicinity of the proposed project area were determined to be absent as a result of directed surveys. **Table 3-16** lists the wildlife species initially identified as having the potential to occur within the DSA. Occupied habitat for two species, El Segundo blue butterfly and coastal California gnatcatcher, is present in close proximity to the proposed project Area. An account of each of these species is provided below. Distributions of extant populations of sensitive species and critical habitat near the proposed project are mapped in Appendix C.

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62 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.

63 *Ibid.*

64 *Ibid.*

65 *Ibid.*

Table 3-16 (1 of 2): Listed Wildlife Species Potential for Occurrence within the DSA

NAME	STATUS	HABITAT	SURVEY RESULTS
Invertebrates			
El Segundo blue butterfly *Euphilotes battoides allyni*	FE	Coastal sand dunes with coastal buckwheat.	Determined to be absent. Known to be present in the vicinity. Determined to be absent in the project area. There is no suitable habitat within the project area. The species was not observed in the project area during 2013 biological surveys or previous surveys in the project area. Occupied habitat is limited to the nearby Los Angeles/El Segundo Dunes, approximately 0.6 mile south of the project, as documented in the CNDDB.
Palos Verdes blue butterfly *Glaucopsyche lygdamus palosverdesensis*	FE	Coastal scrub	Determined to be absent. There is no suitable habitat within the project 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 project. 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 project area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 12 miles northwest of the project. 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 project area. The species was not observed during 2013 biological surveys or previous surveys. Nearest CNDDB record is located approximately 12 miles southeast of the project. 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 project 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 project. 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 project 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 project. The nearest critical habitat is located approximately 22 miles to the north.

Table 3-16 (2 of 2): Listed Wildlife Species Potential for Occurrence within the DSA

NAME	STATUS	HABITAT	SURVEY RESULTS
Coastal California gnatcatcher *Polioptila californica californica*	FT, SSC	Coastal bluff scrub, coastal scrub	Determined to be absent. Known to be present in the vicinity. Determined to be absent in the project area. There is no suitable habitat within the project area. The species was not observed in the project area during 2013 biological surveys or previous surveys in the project area. Occupied habitat is limited to the nearby Los Angeles/El Segundo Dunes, approximately 2.8 miles northeast of the project, as documented in the CNDDB. 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 proposed project 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 proposed project. 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 proposed project 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 proposed project. 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 proposed project area. The species was not observed during 2013 biological surveys or previous surveys. Potentially suitable habitat is limited to the Los Angeles/El Segundo Dunes. Nearest CNDDB record is located approximately 1.1 miles south of the proposed project. Currently, there is no designated or proposed critical habitat for this species.

NOTES: 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

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*.

PREPARED BY: Ricondo & Associates, Inc., June, 2014.

El Segundo Blue Butterfly (*Euphilotes battoides allyni*) is a federally-listed endangered species. This species typically occurs in coastal sand dunes with coastal buckwheat. Occupied habitat for the species has been documented on approximately 200 acres within the LAX/El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys or previous surveys within the DSA. 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 a half-acre site at Malaga Cove. There is also an anecdotal report of a population of either El Segundo Blue or Palos Verdes Blue butterflies at Redondo and Torrance Beach. The Dunes population represents approximately 90 percent of the known population of this species. The nearest occurrence of this species is approximately 0.6-mile south of the proposed project site.[66] 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.[67] However, it was unclear whether or not 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 at the proposed project site, but is known to be present in the LAX/El Segundo Dunes, west of the DSA. Individuals and sign were not observed during 2013 biological surveys or previous surveys in the proposed project area. The nearest occurrence of this species is approximately 9.8 miles south of the proposed project site.[68] The Palos Verdes blue butterfly is known to inhabit the Palos Verdes Peninsula located approximately 10 miles south of the proposed project 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. Habitat, individuals and sign were not observed during 2013 biological surveys or previous surveys within the DSA. The nearest occurrence of this species is approximately 12 miles northwest of the proposed project site.[69] The nearest critical habitat is located approximately 10 miles to the northwest.

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. Habitat, individuals, and sign were not observed during 2013 biological surveys or previous surveys within the DSA. The nearest

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66 U.S. Fish & Wildlife Service, *El Segundo Blue Butterfly* (*Euphilotes battoides allynii*) *5-Year Review: Summary and Evaluation*. Carlsbad, California, 2008.

67 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.

68 *Ibid*

69 *Ibid.*

occurrence of this species is approximately 12 miles southeast of the proposed project site.[70] 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 within the DSA. The nearest occurrence of this species is approximately 0.8-mile northwest of the proposed project site.[71] 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 within the DSA. The nearest occurrence of this species is approximately 10.6 miles southeast of the proposed project site.[72] 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. Habitat for the species was not observed in the proposed project area, though suitable habitat is known to be present in the nearby El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys. At least one pair was observed nesting in the LAX/El Segundo Dunes in 2013. The nearest occurrence of this species is approximately 2.8 miles northeast of the proposed project site.[73] 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 proposed project area. Habitat, individuals and sign were not observed during 2013 biological surveys or previous surveys within the DSA. The nearest occurrence of this species is approximately 1.2 miles northwest of the proposed project site.[74]

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 and sign were not observed during 2013 biological surveys or previous surveys within the DSA. The nearest occurrence for the species is located

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70 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.

71 *Ibid.*

72 *Ibid.*

73 *Ibid*

74 *Ibid.*

approximately 14.7 miles northeast of the proposed project site.[75] The 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 LAX/El Segundo Dunes have been unsuccessful. The dunes contain the largest remaining area of historically occupied habitat. Habitat was not observed within the proposed project area, however it is known to be present in the LAX/El Segundo Dunes. Individuals and sign were not observed during 2013 biological surveys or previous surveys within the DSA. Additionally, LAWA previously undertook a directed survey to identify occurrences of the Pacific pocket mouse. LAWA's efforts included a significant investment to conduct targeted night surveys to detect the presence of the Pacific pocket mouse. No occurrences of the mouse were observed.[76] The nearest occurrence of this species is approximately 1.1 miles south of the proposed project site.[77] Currently, there is no established or proposed critical habitat for this species.

3.9 Wetlands

The U.S. Army Corps of Engineers' (USACE) Wetland Delineation Manual defines wetland areas that have positive indicators for hydrophytic vegetation, wetland hydrology, and hydric soils as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

Jurisdictional waters under the Clean Water Act (federal waters) fall into two categories: wetlands and other waters of the U.S. Wetlands include marshes, meadows, seep areas, floodplains, basins, and other areas experiencing inundation or saturation for a duration long enough to support vegetation adapted to saturated soil conditions. The USACE typically takes jurisdiction over wetlands only when they lie within or adjacent to navigable waters, or tributaries of such waters where those tributaries bear an ordinary high water mark. An ordinary high water mark is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, presence of litter or debris, or other appropriate means that consider the characteristics of the surrounding areas."

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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 City of Los Angeles and Los Angeles World Airports, *LAX Master Plan Draft EIS/EIR, Appendix J1. Biological Assessment Technical Report,* January 2001.

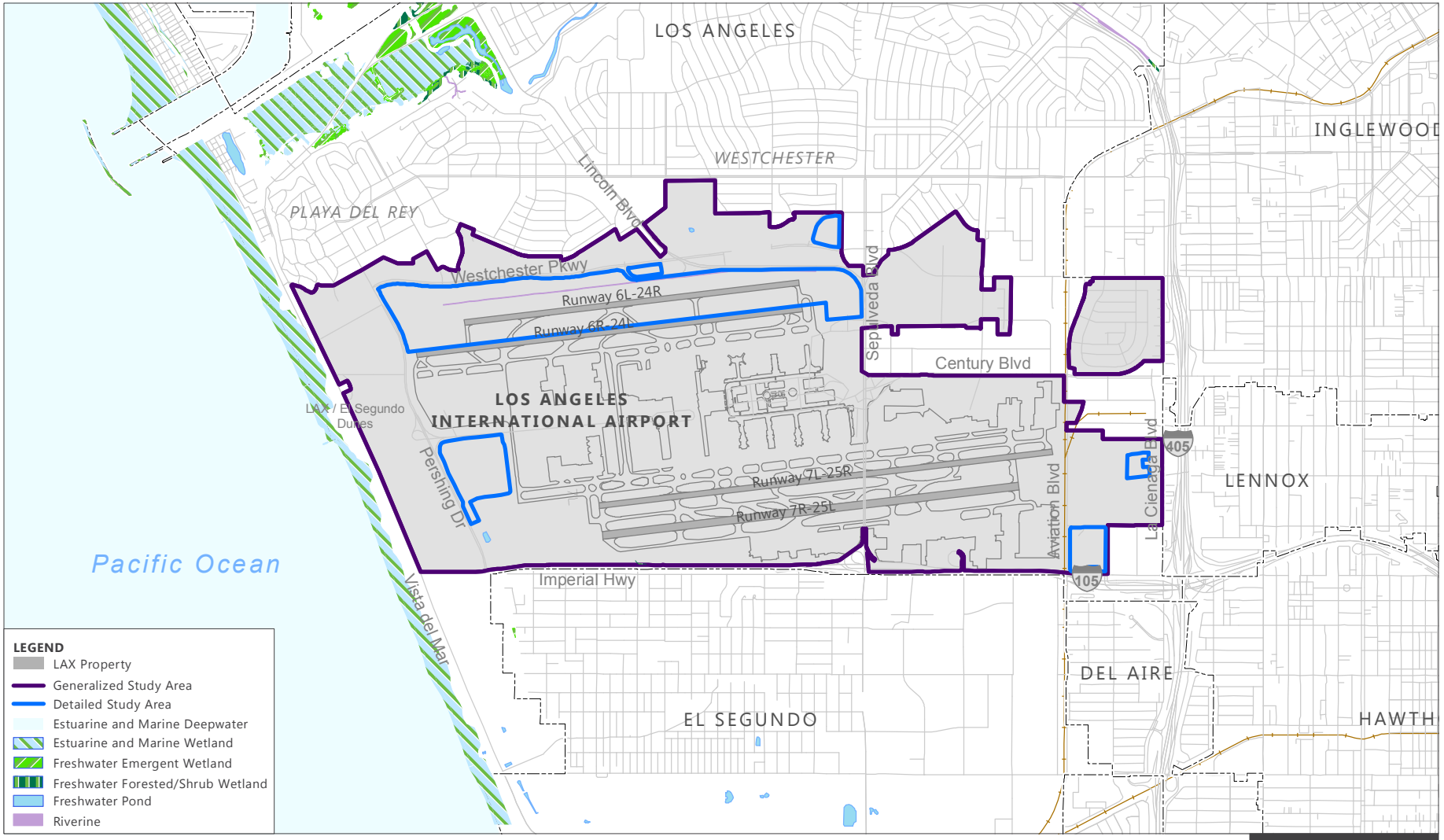
77 *Ibid*.

Seasonally or intermittently inundated features, such as seasonal pools, are considered wetlands if they demonstrate hydric soils and support wetland vegetation. According to 40 CFR Part 230, Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material, § 230.3(s), waters of the U.S. include:

1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2) All interstate waters including interstate wetlands;
3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds of which their use, degradation, or destruction could affect interstate or foreign commerce including any such waters:
    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    c. Which are used or could be used for industrial purposes by industries in interstate commerce;
4) All impoundments of waters otherwise defined as waters of the U.S. under this definition;
5) Tributaries of waters identified in paragraphs (1) through (4) of this section;
6) The territorial sea; and,
7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6) of this section.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act (other than cooling ponds as defined in 40 CFR Part 423, Steam Electric Power Generating Point Source Category, § 423.11(m) which also meet the criteria of this definition) are not waters of the U.S. In addition, waters of the U.S. do not include prior converted cropland.

LAX is highly developed (e.g., buildings, paved surfaces, ornamental landscaping) and contains few areas with the potential to support wetlands. Virtually all areas that would be developed under the Proposed Action consist of bare earth, paved surfaces, structures or ornamental (low habitat value) landscaping with the exception of the Argo Ditch. Review was undertaken for jurisdictional habitats that may fall under Corps jurisdiction pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344), wetland and streambed habitats under CDFW jurisdiction pursuant to Section 1600 of the Fish and Game Code, and wetland habitat under California Coastal Commission (CCC) jurisdiction pursuant to Section 30121 of the California Coastal Act. Additionally, a delineation report was conducted for the Argo Ditch area to determine if this area qualifies as a wetland or other Waters of the U.S. The jurisdictional delineation report for the Argo ditch is provided in **Appendix D**. Wetlands in the vicinity of LAX are displayed on **Exhibit 3-9**.



SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets); LAX Airport Layout Plan, Ricondo & Associates, Inc., 2010 (runways, taxiways, terminal area, ariport property boundary).
National Geographic World Map, ESRI Database, 2011; U.S. Department of Interior, U.S. Fish and Wildlife Service, Wetland Mapper, accessed online: http://www.fws.gov/wetlands/Data/Mapper.html, January 2014.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

EXHIBIT 3-9

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Wetlands

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3.9.1 ARGO DITCH

The Argo Ditch is identified in the NWI as a riverine, intermittent, streambed with a temporary flooded water regime and is excavated. It is a man-made flood control structure constructed circa 1949 and falls under the jurisdiction of USACE and CDFW. As of 1998, USACE has exerted jurisdiction over the Argo Ditch because although it does not connect to any river, stream, or lake, it ultimately discharges to the Pacific Ocean, which is a navigable water body pursuant to Section 404 of the Federal Clean Water Act. The jurisdictional delineation report was conducted in August 2013 for the Argo Ditch and included a review of two previous delineations of the Argo Ditch.

3.9.1.1 1997 Delineation

The 1997 jurisdictional delineation of the Argo Ditch was completed in support of emergency channel maintenance activities in October 1997. Sampling for wetland vegetation, hydrology, and soil occurred every 100 feet for a total of 99 locations. During the 1997 delineation of the Argo Ditch, Sapphos Environmental, Inc., on behalf of LAWA found "riparian and wetland habitat created in association with the Argo Ditch"[78]. Wetlands were found within the man-made ditch in limited areas (~1 acre in total), mostly within the eastern portions of the Argo Ditch. Sapphos Environmental, Inc. also documented riparian vegetation dominated by willows but lacking wetlands in the mid-portions of the Argo Ditch.

USACE exerted jurisdiction over isolated wetlands in the Argo Ditch that resulted from a lack of routine operations and maintenance activities over an approximate 20-year period. LAWA and the FAA consulted with USACE and CDFW in order to perform annual clearing of vegetation and mitigation for the loss of wetlands. USACE authorized emergency operations and maintenance activities pursuant to Nationwide Permit No. 31.[79]

The CDFW issued an agreement on February 9, 1998 which stated that LAWA intended to remove vegetation on a regular basis and continually maintain the Argo Ditch to be "clear of vegetation until a permanent solution can be established"[80]. This agreement also required mitigation for the loss of wetland vegetation. To mitigate for the loss of 0.99-acre of wetlands delineated in 1997, a restoration site was created at Ken Malloy Harbor Regional Park (KMHRP). USACE determined that mitigation was complete and successful on December 9, 2004.[81]

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78 Sapphos Environmental, Inc. *Preliminary Results of Delineation of Areas Subject to the Jurisdiction of the U.S. Army Corps of Engineers and the California Department of Fish and Game at Argo Ditch*, Los Angeles International Airport, City of Los Angeles, California.

79 U.S. Army Corp of Engineers. 7 Jan. 1998. Letter to Mr. Driscoll regarding the Department of the Army Nationwide Permit Authorization.

80 California Department of Fish and Game. 9 Feb. 1998. Notification No. 5-480-97 (revision 2). Agreement Regarding Proposed Alteration to Argo Ditch. Executed by Mr. John Driscoll, Executive Director, Los Angeles World Airports, and Ms. Leslie McNair, Environmental Specialist II, California Department of Fish and Game.

81 U.S. Army Corp of Engineers. 9 Dec. 2004. Letter to Mr. Brown regarding the status of wetland mitigation. December 9, 2004.

3.9.1.2 2011 Delineation

On July 7, 2011, a second delineation was conducted on behalf of LAWA at 15 locations along the Argo Ditch in support of the LAX Specific Plan Amendment Study. Wetlands determined during this delineation occurred primarily within the eastern portions of the Argo Ditch Wetlands were delineated to be 3.78 acres, of which approximately 2.45 acres consisted of non-wetland waters of the United States, and approximately 1.33 acres consisted of jurisdictional wetlands. Water within the ditch originated from "storm discharge and nuisance flow" and "the wettest areas are concentrated at the discharge points".[82]

As a result of the second delineation, the report concluded that potential areas subject to USACE jurisdiction were 3.78 acres of waters of the United States, of which 1.33 was wetlands and 2.45 acres was non-wetland waters. Further, potential areas subject to the CDFW jurisdiction was 3.97 acres, of which 1.52 acres consisted of riparian vegetation.

3.9.1.3 2013 Delineation

Six plant communities were detected during the field surveys. Eighteen of the 53 sampled points were classified as wetlands. Of these 18 points, only 2 had hydric soil indicators and the remainder had indicators for Problematic Hydric Soils, such as standing water in August. Sixteen of the wetland points were classified as wetlands based on the Problematic Hydric Soils section of the Regional Supplement Wetland Delineation Manual (WDM).

Sapphos Environmental, Inc. delineated seven wetlands within the man-made Argo Ditch for a total of 1.02 acres of wetlands. Most of these wetlands were associated with culverts or concrete areas within the Argo Ditch. All of these wetlands were within the man-made ditch and are subjected to periodic clearing of vegetation under current permits. Of the 1.02 acres of wetlands delineated during the 2013 study, approximately 0.09 acres of these wetlands were determined to be within the project site. Wetland delineation locations and site photographs are provided in Appendix D.

3.10 Floodplains

Executive Order No. 11988 was enacted in order to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practical alternative. The order was issued in furtherance of NEPA, the National Flood Insurance Act of 1968, and the Flood Disaster Act of 1973. Floodplains are defined as lowland and flat areas adjoining waters that are subject to a one percent or greater chance of flooding in any given year, i.e. a 100-year flood event.

[82] Glenn Lukos Associates, *Jurisdictional Delineation,* July 2012.

A majority of the LAX property is located in the Federal Emergency Management Agency (FEMA)-designated Flood Zone X, which is defined as an area of "minimal flooding." This area is outside of a Special Flood Hazard Area, or the 100-year flood zone.[83] One section of the southwest portion of the LAX property is designated as Zone A, 1 percent annual chance flood (100-year flood). This area is located approximately 5,000 feet south of the DSA. Consequently, the DSA is not considered to be located in an area with potential for flooding. FEMA flood zone designations in the vicinity of LAX are illustrated on **Exhibit 3-10**.

3.11 Coastal Resources

The Coastal Zone Management Act (CZMA) of 1972 ensures effective management, beneficial use, protection and development of the coastal zone. Coastal Zone Management Programs (CZMPs), prepared by states according to guidelines issued by the National Oceanic and Atmospheric Administration (NOAA), are designed to address issues affecting coastal areas. Coastal resources are identified in accordance with the California Coastal Act of 1976 ("Coastal Act"; California Public Resources Code Sections 30,000 et seq.). This act, which is consistent with the Federal Coastal Zone Management Act, contains the State's adopted policies with regard to the protection of coastal resources. In accordance with the California Coastal Commission, the only Federal actions for the FAA that would trigger a certification of consistency with the State's California Coastal Management Program (CCMP) are certificates for the operation of new airports.[84]

The Coastal Act grants authority to the California Coastal Commission to regulate development and related resource depleting activities within the defined coastal zone boundary. The California Coastal Commission retains jurisdiction over the coastal zone near LAX. Although Local Coastal Plans (LCPs) have been proposed in 1985 and 1992, neither were approved and there are no LCPs currently in place for the coastal zone near LAX.

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83 U.S. Department of Homeland Security, Federal Emergency Management Agency, *FEMA Flood Rate Insurance Map (FIRM) 06037C1760F*, accessed online, September 23 2013: https://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1.

84 State of California, California Coastal Commission, *California Coastal Management Program, List of Federal Licenses and Permits Subject to Certification for Consistency*.

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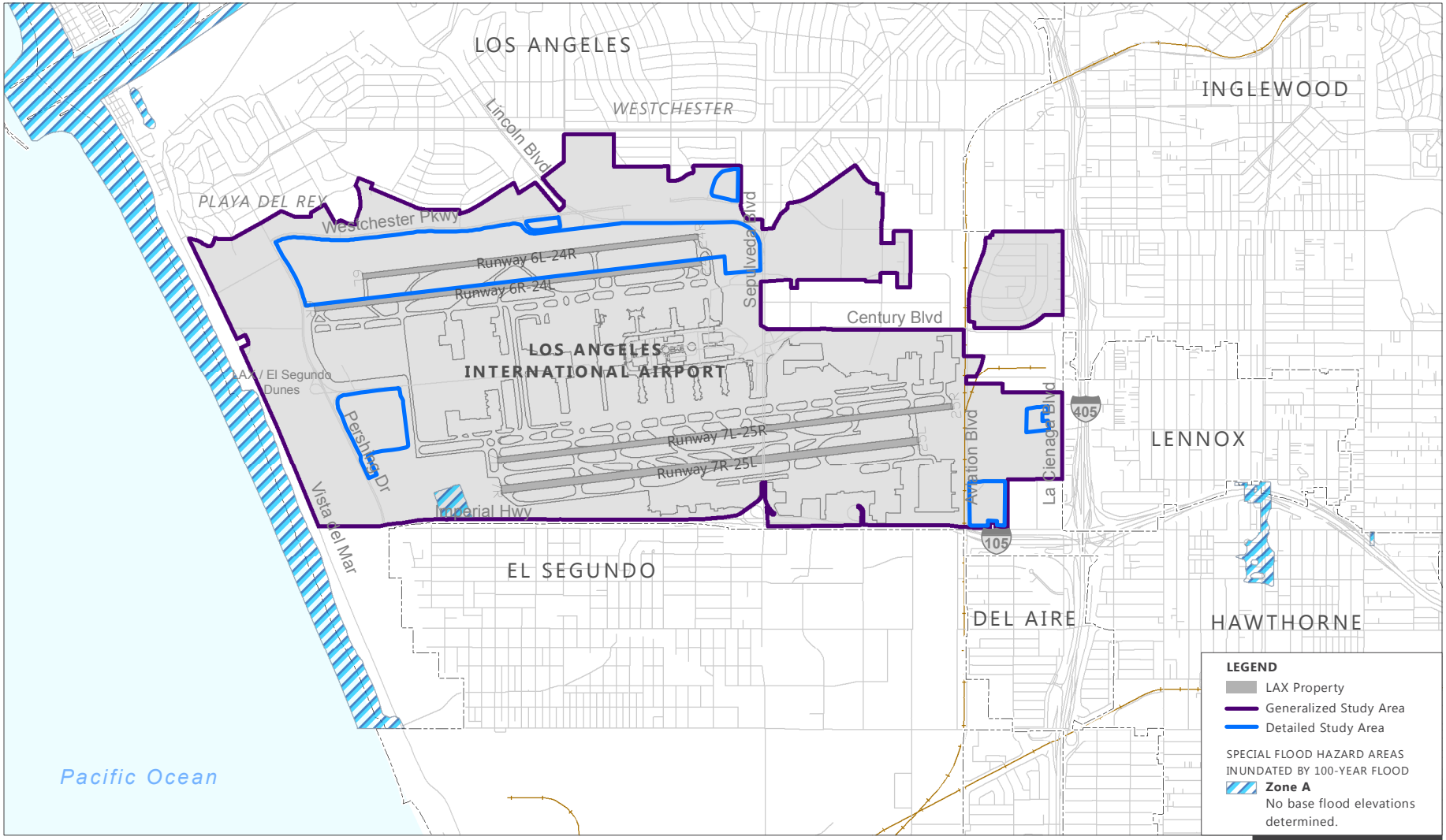

SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets); LAX Airport Layout Plan, Ricondo & Associates, Inc., 2010 (runways, taxiways, terminal area, ariport property boundary).
National Geographic World Map, ESRI Database, 2011; State of California, State of California Geoportal, Federal Emergency Management Agency (FEMA) Shapefile,
Accessed Online: http://portal.gis.ca.gov/geoportal/catalog/main/home.page, June 2014.
PREPARED BY: Ricondo & Associates, Inc., May 2014.

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EXHIBIT 3-10

Floodplains

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California's coastal zone generally extends 0.6-mile inland from the mean high tide line. In developed urban areas, the boundary is generally less than 0.6 miles.[85] The California Coastal Zone in the vicinity of LAX extends inland 1,000 feet from the mean high tide line. In this area, the eastern border of the California Coastal Zone is the eastern right-of-way for South Pershing Drive and includes Dockweiler Beach State Park, and the LAX/El Segundo Dunes. The California Coastal Zone in the vicinity of LAX extends north to the City of Los Angeles community of Playa del Rey and south to the City of Manhattan Beach (refer to Exhibit 1-1 General Location and Vicinity Map).[86] The DSA is located east of the coastal zone and is not located in the California Coastal Zone.

3.12 Historic, Architectural, Archaeological, and Cultural Resources

Historic, archaeological, architectural, and cultural resources are prehistoric and historic sites, districts, structures, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Numerous laws and regulations require that possible effects on these resources be considered during the planning and execution of federal undertakings. These laws and regulations stipulate a process of compliance, define the responsibilities of the federal agency proposing the actions, and prescribe the relationships among involved agencies. In addition to NEPA, the primary laws that pertain to the treatment of historic, archaeological, architectural, and cultural resources during environmental analyses are the National Historic Preservation Act (NHPA, particularly Sections 106 and 110), the Archaeological Resources Protection Act, the American Indian Religious Freedom Act, and the Native American Graves Protection and Repatriation Act.[87]

3.12.1 COMPLIANCE WITH SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the NHPA requires that federal agencies consider whether their activities could affect historic properties that are already listed, determined eligible, or not yet evaluated under the National Register of Historic Places (NRHP) criteria. Properties that are either listed in or eligible for listing in the NRHP are provided the same measure of protection under Section 106. If an undertaking has the potential to affect historic properties, then the federal agency, in consultation with the State Historic Preservation Officer (SHPO), defines an APE. The FAA process for consultation is established by regulations outlined in 36 CFR Part 800, as identified in 36 CFR Part 60, National Register of Historic Places, § 60.4.

There are four evaluation criteria to determine a resource's eligibility to the National Register of Historic Places (NRHP). These evaluation criteria are used to assist in determining what properties, if any, should be

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85 State of California, California Coastal Commission website, *State Coastal Zone Boundaries*, July 2011 website, http://coastalmanagement.noaa.gov/mystate/docs/StateCZBoundaries.pdf, accessed January 2012.

86 State of California, California Coastal Commission website, *Local Coastal Program (LCP) Status Maps*, July 2009 website, http://www.coastal.ca.gov/lcp/lcpstatus-map-sc.pdf, accessed January 2012.

87 U.S. Department of the Interior, *National Park Service, National Register Bulletin 15: How to Apply the Criteria for Evaluation*, Washington, D.C.: Government Printing Office, 1999.

considered for protection from destruction or impairment resulting from action-related activities (36 CFR § 60.2).

3.12.2 AREA OF POTENTIAL EFFECT (APE)

The APE is defined in 36 CFR §800.16(d) as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." The APE for the Proposed Action was delineated by the FAA in consultation with LAWA on the extent of the areas to be disturbed by proposed construction to fulfill its obligations under 36 CFR Part 800, the implementing regulations of the *National Historic Preservation Act of 1966*, as amended. Exhibit 3-1 depicts the APE utilized by the FAA to identify whether any historic properties exist within the area anticipated to be affected by the Proposed Action.

As detailed in Section 3.1, the APE for the Proposed Action and No Action alternative includes boundaries of the entire area that will have physical disturbance, including construction staging areas (Exhibit 3-1). A broader APE for historic properties was not required because the Proposed Action improvements would occur solely within the LAX property boundaries. As the Proposed Action or its alternatives would not increase the operational capacity of LAX, delineation of an indirect APE was not required. The State Historic Preservation Officer (SHPO) concurred with the delineation of the direct effects APE by letter dated December 26, 2013 (see Appendix B).

3.12.3 ARCHAEOLOGICAL AND HISTORIC ARCHITECTURAL RESOURCES

3.12.3.1 Record Search and Literature Review

A cultural resources technical report (CRTR) was prepared in conjunction with this EA and is included as **Appendix E**. The CRTR includes a cultural resources records search and literature review that was conducted at the South Central Coastal Information Center (SCCIC), housed at California State University, Fullerton, on November 20, 2012 and a supplemental records search conducted on December 16, 2013. The SCCIC serves as a regional clearinghouse of the SHPO. The purpose of the record search was to ascertain whether any cultural resources had been previously identified within or adjacent to LAX property, and to identify any previous cultural resource investigations that may have included the current APE.

These searches included reviews of all known relevant cultural resources survey reports to ascertain the presence of previously recorded prehistoric and historic archaeological resources within a 0.5-mile radius of the North Airfield, which includes the location of the Proposed Action (Exhibit 3-1). The purpose of the record search was to ascertain whether any cultural resources had been previously identified within or adjacent to LAX property, and to identify any previous cultural resource investigations that may have included the current APE. In addition, the most recent edition of the Historical Resources Inventory (HRI), which includes the NRHP, California Register of Historical Resources (CRHR), California Historic Landmarks (CHL), and California Points of Historical Interest as well as the Los Angeles Historic-Cultural Monument (LAHCM) list, was searched to determine whether known historical resources are located within the study area.

The results of the literature review specify that 14 cultural resources studies have been conducted within 0.5-mile of the APE of the proposed undertaking. The supplemental literature review indicates that 19 cultural

resources studies have been conducted within 0.5-mile of the APE. Results from the literature review are listed in Tables 5.1.2.1-1 and 5.1.2.2-1 of Appendix E. These results indicate that much of the APE associated with the proposed undertaking was previously evaluated in 1995 as part of a larger archaeological resources reconnaissance survey of the LAX property.[88]

The results of the records search determined that three archaeological sites, two archaeological isolates, and five built environment resources had previously been recorded within 0.5-mile of the North Airfield. The supplemental records search determined that one archaeological site, two archaeological isolates, and four built environment resources had previously been recorded within 0.5-mile of the APE of the proposed undertaking. **Table 3-17** provides a brief summary of Previously Recorded Cultural Resources within the Study Area that were found as a result of the cultural resources records review and supplemental records review. None of these previously documented cultural resources are located within the APE of the proposed project.

3.12.3.2 Native American Consultation

The record search of the Native American Heritage Commission (NAHC) Sacred Lands File indicates that Native American traditional cultural places are also present in the immediate vicinity of the proposed undertaking. These findings suggest a potential for the unanticipated discovery of buried cultural deposits if construction activities extend into native or undisturbed soil.

Consultation with the NAHC to identify Native American tribes that may have input or concerns that uniquely or significantly affect those Tribes related to planned and proposed airport improvements, or may have information about, or be interested in, the proposed undertaking, was coordinated by the FAA. The California NAHC provided a list of Native American contacts for the RSA project on the south airfield of LAX on January 5, 2012; FAA utilized the same listing for Native American contacts for the RSA projects on the north airfield. On February 6, 2014, FAA provided detailed information about the APE and the proposed undertaking to the tribal contacts provided by the California NAHC. FAA received only one response from one of the tribal contacts, acknowledging receipt of the information and requesting hard copies. However, no additional response has been received.

[88] Roschke, Rod. *Paleontological and Archaeological Resources Reconnaissance of LAX Property, Los Angeles County, California.* RMW Paleo Associates, Inc., Mission Viejo, CA, 1995.

Table 3-17 (1 of 2): Previously Recorded Cultural Resources within the Study Area

HISTORIC/ARCHAEOLOGICAL RESOURCE	RESOURCE TYPE	NRHP ELIGIBILITY	DESCRIPTION
CA-LAN-202	Site	Ineligible	Prehistoric, but no descriptive information provided in the site record. Residential development of the area in the 1960s appears to have extensively disturbed the site. Although later revisits to the area identified isolated fragments of *Mytilus* shell, no other cultural materials were identified in the vicinity
CA-LAN-1118	Site	Ineligible	Prehistoric shell midden with lithic debitage. Grading and road construction in this area has destroyed large portions of the site since its original recording.
CA-LAN-2358H/ CA-LAN-*1H	Site	Ineligible	Historic debris scatter containing concrete, asphalt, glass, brick, plaster, linoleum fragments, countertop files, and metal fragments. Historic documents indicate that these deposits likely represent the remains of a Nike Missile testing site, which was constructed in 1954. The facility was demolished in 1993 in preparation of the construction of Westchester Parkway.
P-19-100115	Isolate	Ineligible	One flake of reddish quartzite.
P-19-100116	Isolate	Ineligible	One prehistoric lithic flake.
P-19-150442 (Milliron's Department Store)	Building	Ineligible due to age (in 1998)	International-style building constructed in 1948.
P-19-150445 (Syad Realty Building)	Building	Ineligible	Utilitarian, single-story commercial structure built in 1950.
P-19-189869 (Clearwire CA-LOS2026B/LA03XC087)	Building	Ineligible	Modern-style, commercial building constructed in 1964.
Loyola Theater (LAHCM No. 259)	Building	Not evaluated	Historic theater building constructed in 1948.
Theme Building (LAHCM No. 570)	Structure	Eligible	Midcentury modern, flying saucer– like structure built at LAX in 1961– 1962. The building was designed by architects William Pereira, Charles Luckman, Welton Becket, and Paul Williams, and is composed of sets of parabolic arches from which a flying saucer–shaped restaurant is suspended. The Theme Building was found eligible for the NRHP under Criterion C. The Theme Building was also designated City of Los Angeles Historic-Cultural Monument #570 in 1992.
CA-LAN-2386H	Observation bunker	Not evaluated	This is an intact World War II–era observation bunker. The bunker is constructed of concrete with a fronting concrete apron.
CA-LAN-2345	Site	Not evaluated	Prehistoric site that contained hundreds of stone tools, bones, shell fragments and thermally affected stones. The site's Locus 4 appears to be roughly circular and constructed of stones, which suggests a possible fire hearth. The site is disturbed and is located adjacent to a large pit from which sedimentary materials were removed to build up a hill on which airport instruments are located. Due to its lack of integrity, the site was determined to be ineligible for the NRHP.

Table 3-17 (2 of 2): Previously Recorded Cultural Resources within the Study Area

HISTORIC/ARCHAEOLOGICAL RESOURCE	RESOURCE TYPE	NRHP ELIGIBILITY	DESCRIPTION
P-19-004353	Isolate	Ineligible	This is a historic isolate. The isolate consisted of a single 7-Up bottle base with embossments, which exhibits a manufacturing date circa 1955.
P-19-004354	Isolate	Ineligible	This is a historic isolate, consisting of a historic trash dump that contained approximately seven intact glass bottles of various sizes and colors and included several glass bottle fragments. The bottles were dated from 1946 to 1950 and were discovered partially submerged.
P-19-174101 Hangar One (NRHP No. 073727)	Building	NRPH Listed: 1992	Built in 1942, Hangar One was the first hangar built as part of the Los Angeles Municipal Airport, which later became the Los Angeles International Airport (LAX). Hangar One is the only structure remaining from the original airport site.
P-19-188005	Multi-Family Residence	Ineligible	Built between 1921 and 1925, with improvements dating to 1956. The original structure was a small wood frame rectangular shape house. The 1956 improvements consisted of a second residence in the center of the property.
P-19-188006	Single Family Residence	Ineligible	Built in 1927, with improvements/alternations made between 1945 and 1965. This cultural resource is a single story, wood frame house, with an irregularly shaped on a slightly raised foundation.

NOTE: NRHP = National Register of Historic Places

SOURCE: Sapphos Environmental, Inc., *Runway 6L-24R Safety Area and Associated Improvements Project Cultural Resources Technical Report,* October 2013.

PREPARED BY: Ricondo & Associates, Inc., June, 2014.

3.12.3.3 Field Reconnaissance

Cultural resources surveys of the APE were conducted on May 8, June 14, July 27, and December 18, 2013 by Sapphos Environmental, Inc. staff archaeologists. The goal of the pedestrian survey was to identify all prehistoric and historic period sites and isolates within the proposed APE. An Ashtech handheld global positioning system (GPS) unit was used to locate the APE boundary and to record the location of identified cultural resources. Sites, isolates, and built-environment resources were documented on State of California Department of Parks and Recreation (DPR) 523 series forms with preliminary sketch maps and photographs providing supplemental documentation. No artifacts were collected during the survey. Survey site locations and photographs are provided in Appendix E.

To inspect the APE, the archaeologists walked a total of four parallel transects spaced approximately 15 meters apart, including two on either side of each road segment. The construction staging areas were systematically inspected by an archaeologist and an architectural historian, who walked between two and four parallel transects spaced approximately 10 meters apart, depending on the physical size and shape of the staging area. The AOA fence located in the northeastern corner of the APE was thoroughly inspected by an archaeologist who walked a total of three transects that paralleled the fence realignment.

The surveys showed that large portions of the APE are graded dirt roads and managed (mowed) vegetation consisting of non-native grasses and small scrubs; these areas exhibited good to excellent ground visibility.

Exceptions to this were the APE for El Manor Avenue, portions of the AOA fence that are located east of Runway 24R, the construction staging area located north of Westchester Parkway, and the construction staging area located west of La Cienega Boulevard. El Manor Avenue is in an area that is largely paved, although archaeologists were able to inspect the unpaved shoulders immediately adjacent to the roadbed. Ground visibility in the area of the proposed AOA fence realignment can be characterized as fair to good; the area is unpaved and disturbed, and a moderately dense vegetation growth that covered the area to a height of approximately 1 to 2 feet. Denser stands of vegetation were observed near the Argo Ditch, where ground visibility also ranged from fair to good. Finally, construction staging areas located north of Westchester Parkway and west of La Cienega Boulevard are largely paved; however, the archaeologist and architectural historian were able to inspect small unpaved sections in these areas and found ground visibility to be good.

Because the APE includes an active Aircraft Movement Area with frequent arrivals of turbojet aircraft on Runway 6L-24R and taxiing on the taxiways, several portions of the APE could not be thoroughly inspected during the Phase I surveys. The areas that were not fully surveyed on the eastern end of the runway total 2.3 acres, and include portions of the service road segments. Each of these areas was examined from a distance by an archaeologist walking along the edge of the RSA perimeter. Given the high level of ground visibility in these areas, it is unlikely that significant cultural resources were missed during this inspection. Similarly, the western portion of the APE was not thoroughly inspected during the Phase I surveys; proposed work in this area is limited to pavement rehabilitation of a taxiway, the realignment of three holdbar lights, and the removal of two service road segments.

The field reconnaissance surveys identified no archaeological resources within the APE. However, five historic-period cultural resources were recorded within the APE of the proposed undertaking during the cultural resources assessment. These are the Argo Ditch, El Manor Avenue Residential Neighborhood, Will Rogers Street Residential Neighborhood, El Manor Avenue, and Runway 6L-24R. None of these historic-period resources meets the eligibility requirements for national, state, or local designation. Based on the information contained within the CRTR (Appendix E), the FAA has determined there are no historic properties listed or eligible for listing on the NRHP within the APE for the proposed undertaking. In a letter dated April 29, 2014 (see Appendix B), the SHPO concurred with FAA's determination of eligibility.

3.13 Light Emissions and Visual Character

Lighting is used throughout the GSA and on LAX to support existing operations during nighttime periods, and other periods of low visibility. Lighting consists of in-pavement lights along taxiways and runways, and lights mounted on towers used for the approach lighting system (ALS). Light shielding in LAX is currently implemented per the LAX Master Plan Final EIS/EIR mitigation commitments.[89]

[89] U.S. Department of Transportation, Federal Aviation Administration and Los Angeles World Airports, *LAX Master Plan Final EIS/EIR*, 2005.

The visual character in the vicinity of LAX is highly urbanized and primarily characterized by residential and commercial development on the north; hotel, airport-support, and commercial development on the east; residential development on the south; and open space on the west (see Exhibit 3-2).

High-rise development (more than three stories) is limited to the eastern portion of the GSA (hotels and commercial buildings between the approach paths of the North and South Airfields) and south of the GSA, east of the I-105 terminus (aerospace industries). Otherwise, the surrounding area is primarily low-rise, with structures of 1 to 2 stories. There are hills located north, west, and south of LAX, along Westchester Parkway, Pershing Drive, and Imperial Avenue, respectively. Residences located on hilltops have views of LAX.

LAX and most of the DSA is generally flat, although it follows the general southeastern sloping of the Los Angeles Basin in this area. The proposed staging areas contain portions where the land has been excavated. The DSA has been extensively disturbed by development activities and its visual character is dominated by Airport facilities; level, graded surfaces; and paved runways.

3.14 Natural Resources and Energy Supply

3.14.1 NATURAL RESOURCES

Within the GSA, mining activities for oil, coal, natural gas, sand, gravel, and crushed stone do not occur. The DSA is located within the MRA-3 zone, which represents areas with mineral deposits whose significance cannot be evaluated from available data.[90] However, oil extraction operations have historically occurred in the GSA and continue to occur in nearby areas, such as the Baldwin Hills.

The City of Los Angeles Department of Water and Power (LADWP) provides potable water to LAX from the following three sources: the Owens Valley and Mono Basin via the Los Angeles Aqueduct; northern California and Colorado River water purchased from the Metropolitan Water District of Southern California (MWD); and from local groundwater basins. Some wastewater within the LADWP service area is reclaimed for reuse as irrigation or industrial water, or for use in seawater intrusion barriers used to protect groundwater supplies.[91] Reclaimed water in the LAX area is provided by the West Basin Municipal Water District (WBMWD) West Basin Water Reclamation Plant (WBWRP). LADWP is responsible for supplying, treating, and distributing water within the city, serving residential, commercial, and industrial uses. The DSA as well as the entire LAX area utilizes reclaimed water for landscape irrigation.

3.14.2 ENERGY SUPPLY

Electrical power within the City of Los Angeles, including LAX, is supplied by LADWP, which serves approximately 4.1 million people. Electricity provided by LADWP is generated by LADWP and other utilities

[90] U.S. Department of Transportation, Federal Aviation Administration and Los Angeles World Airports, *LAX Master Plan Final EIS/EIR*, 2005.

[91] *Ibid*.

with power generating facilities located both within the Los Angeles region and in other areas, including the co-generation systems at LAX's Central Utility Plant (CUP), located in the Central Terminal Area. The Southern California Gas Company (SoCal Gas) supplies natural gas to nearly all of Southern and Central California, including the City of Los Angeles and LAX. Natural gas is transported from suppliers to The Gas Company's transmission facilities for distribution to their Southern California service areas by a network of high pressure transmission lines.[92]

3.15 Hazardous Materials, Pollution Prevention, and Solid Waste

Four primary laws have been passed governing the handling and disposal of hazardous materials, chemicals, substances, and wastes. The two statutes most applicable to airport projects are the Resource Conservation and Recovery Act (RCRA, as amended by the Federal Facilities Compliance Act of 1992) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended (also known as Superfund). RCRA governs the generation, treatment, storage, and disposal of hazardous wastes. CERCLA provides for cleanup of any release of a hazardous substance (excluding petroleum) in the environment.

An assessment was conducted in order to identify sites and facilities that are known, suspected, or likely to contain or store hazardous substances and to identify areas of known subsurface soil and/or groundwater contamination. For the purposes of this assessment, the term hazardous materials also includes the regulatory-defined terms of hazardous wastes, hazardous substances, and dangerous goods; contamination to soil, surface waters and groundwater; as well as the assortment of similarly regulated substances such as fuel and other petroleum-based products. Because the description and assessment of hazardous materials, pollution prevention, and solid wastes at LAX is largely based on the compilation and evaluation of information previously developed or disclosed by others, the approach to completing this assessment consisted of the following:

- Collection and review of reports, maps, and other relevant documents relating to subsurface environmental conditions at LAX. These include maps, figures, and exhibits depicting sites and facilities of potential relevance; and
- An independent electronic database survey of federal, state, and local agency files pertaining to hazardous waste sites and environmental contamination in the vicinity of LAX.

3.15.1 HAZARDOUS MATERIALS REGULATIONS

Hazardous materials are regulated by a number of federal laws and regulations – most of which are promulgated by the USEPA. These include the RCRA and CERCLA, as mentioned above, in addition to the CAA and Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), Hazardous Materials Transportation Act (HMTA), and the Emergency Planning & Community Right to Know Act (EPCRA). Together, these

[92] City of Los Angeles, Los Angeles World Airports, *LAX Specific Plan Amendment Study*, Final EIR, January 2013.

regulations serve as guiding principles governing the storage, use, and transportation of hazardous and other regulated materials from their time of origin to their ultimate disposal. The recovery and clean-up of environmental contamination resulting from the accidental or unlawful release of these materials and substances are also governed by these regulations.

On the state level, the agency with similar authority to the USEPA over hazardous materials is the Cal-EPA. Specifically, the Cal-EPA Department of Toxic Substances Control (DTSC) is responsible statewide for matters concerning the use, storage, transport and disposal of hazardous materials. Similarly, the California Integrated Waste Management Board (CIWMB) is responsible for the management of solid wastes and the Cal-EPA Office of Environmental Health Hazard Assessment (OEHHA) is involved in the evaluation of risks to public health and the environment posed by hazardous materials and environmental contamination. Importantly, Cal-EPA delegates much of the enforcement responsibility for hazardous materials to local governments under the Certified Unified Program Agency (CUPA) program.

Locally, the City of Los Angeles Fire Department (LAFD) serves as the CUPA and is responsible for regulating hazardous materials, hazardous wastes, and underground storage tanks (USTs). The Los Angeles County Environmental Health Services Department (LACEHSD) is designated as the Local Enforcement Agency (LEA) by the CIWMB and is responsible for enforcing regulations pertaining to solid waste disposal units (i.e., landfills, old burn dumps, etc.). The Los Angeles Regional Water Quality Control Board also has jurisdiction over the management of potential sources of surface and groundwater contamination such as the cleanup of UST and aboveground storage tank (AST) spill sites. Finally, the SCAQMD is involved in the assessment of health and environmental hazards associated with toxic (or hazardous) air pollutants.

Regulatory agencies involved in the management of hazardous materials, pollution prevention, and solid wastes for LAX are listed in **Table 3-18**.

Table 3-18: Regulatory Agencies Involved in Hazardous Materials, Pollution, and Solid Waste in Los Angeles County

AGENCY	ROLES AND RESPONSIBILITIES
U.S. Environmental Protection Agency (USEPA) Region 9	*Federal Agency* – Sets national policies for solid and hazardous wastes, hazardous materials and environmental contamination under the federal RCRA, CERCLA and other federal regulations.
California Environmental Protection Agency (CalEPA)	*State Agency* – Establishes statewide policies and rules governing solid wastes, hazardous materials and environmental contamination through the DTSC, RWQCB, and OEHHA.
Los Angeles County Environmental Health Services Department (LACEHSD)	*Local Agency* – Serves as the CUPA and the LEA and enforces federal and state regulations countywide pertaining to hazardous materials, solid wastes and USTs/ASTs.
Los Angeles Regional Water Quality Control Board	*Local Agency* –Enforces federal and state regulations countywide pertaining to surface and groundwater.
South Coast Air Quality Management District	*Local Agency* – Enforces federal and state regulations regionally pertaining to air quality.

NOTES:

AST: Aboveground Storage Tank

CERCLA: Comprehensive Environmental Response Compensation and Liability Act

CUPA: Certified Unified Program Agency

DTSC: Department of Toxic Substances Control

LEA: Local Enforcement Agency

OEHHA: Office of Environmental Health Hazard

RCRA: Resource Conservation and Recovery Act

RWQCB: Regional Water Quality Control Board

UST: Underground Storage Tank

SOURCE: Los Angeles County website, http://lacounty.gov, accessed January 2012.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

3.15.2 KNOWN/POTENTIAL SITES

The types, characteristics, and occurrences of hazardous materials and other regulated substances at LAX are typical of large metropolitan airports that offer commercial and cargo services. These services include the fueling, servicing, and repair of aircraft, GSE, and motor vehicles; the operation and maintenance of the airfield, main terminal complex and parking facilities; and a range of other special-purpose facilities and operations connected with aviation (i.e., air cargo facilities, navigation and air traffic control functions). Off-airport activities within the GSA include a mixture of industrial, commercial, and warehousing activities.

The substances that are used in large quantities at LAX that are classifiable as hazardous include aircraft and motor vehicle fuels. Other, smaller amounts of petroleum-products (e.g., lubricants and solvents), waste materials (e.g., used oils, filters, cleaning residues, and spent batteries) and manufactured chemicals (e.g., herbicides, fertilizers, paints, fire-fighting foam, de-icing fluids) are stored in various locations throughout LAX. These materials and substances are characteristically used on a routine basis in support of aircraft, GSE, and

motor vehicle maintenance activities and for a range of other similar functions to operate LAX and to meet aviation safety requirements.

Several sites and facilities at LAX and off-airport are known, or have the potential to contain hazardous materials and/or other regulated substances (**Exhibit 3-11**). Other sites and facilities have been identified as confirmed hazardous waste release sites, and have been included in several federal and state databases. These databases form the basis for the identification of hazardous waste sites in the GSA.[93] The databases include known hazardous materials release sites, generators of hazardous waste(s), and UST sites. These databases identified a total of 182 sites listed within the GSA. Of these, one site is located within the DSA, the Continental Airlines Cleanup Program Site. This site is located within the potential construction staging area located in the southwestern portion of the LAX property, along Pershing Drive. Six additional sites are located in areas adjacent to the DSA (**Table 3-19**). However, there are no hazardous waste sites located within the DSA.

Table 3-19: Relevant Potential Hazardous Waste Release Sites Within and Adjacent to DSA

SITE NAME	HAZARD CATEGORY	CLEANUP STATUS	ADDRESS	JURISDICTION
Continental Airlines	Other Cleanup Site	Open/Site Assessment	7300 W World Way	City of Los Angeles
Continental Airlines Maintenance Facility	Other Cleanup Site	Open/Site Assessment	7300 W World Way	City of Los Angeles
Federal Express	UST	Not Applicable	7401 W World Way	City of Los Angeles
LAFD Training Center Facility	UST (2 locations)	Not Applicable	7411 W World Way	City of Los Angeles
LAWA	UST	Not Applicable	7350 W World Way	City of Los Angeles
LAWA	UST	Not Applicable	7450 W World Way	City of Los Angeles
LAX Jet Manifold	UST	Not Applicable	7300 W World Way	City of Los Angeles

NOTES:

UST = Underground Storage Tank

LAWA: Los Angeles World Airports

LAFD = Los Angeles Fire Department

SOURCE: GeoTracker website, http://geotracker.waterboards.ca.gov/default.asp, accessed December 2013.
PREPARED BY: Ricondo & Associates, Inc., June, 2014.

[93] GeoTracker website, *http://geotracker.waterboards.ca.gov/default.asp*, accessed December 2013.

3.15.3 SOLID WASTE COLLECTION AND DISPOSAL

In September 1989, the California Integrated Solid Waste Management Act (also known as Assembly Bill [AB] 939) was enacted into law. The Integrated Waste Management Authority (IWMA) establishes an integrated system of waste management in California and requires each local jurisdiction to implement a Source Reduction and Recycling Element (SRRE), Household Hazardous Waste Element (HHWE), and Non-Disposal Facility Element (NDFE). The IWMA requires that the Siting Element[94] be prepared by the county and approved by the County Board of Supervisors and a majority of the cities within the county. The IWMA requires each city in the state to divert at least 50 percent of its solid waste from landfill disposal through source reduction, recycling, and composting.

In accordance with the IWMA, LAX is required to comply with the City of Los Angeles' landfill diversion rates set forth by the Bureau of Sanitation under AB939. AB939 mandated a 50 percent landfill diversion rate by 2000, which the City achieved and surpassed. The current solid waste diversion rate goal of the City of Los Angeles is 70 percent by 2020.[95] LAWA has implemented several waste recycling efforts at LAX, including recycling common items, such as cardboard, metals, and wood pallets. The City of Los Angeles also has a construction and demolition waste recycling program, that requires all mixed construction and demolition waste generated within City limits to be taken to City certified construction and demolition waste processors. In addition, there is a concrete and asphalt recycling program at LAX that aims to divert construction waste from landfills.

Solid waste management is conducted by both LAWA and private companies. Solid waste in the City of Los Angeles is collected by municipal agencies and private refuse haulers. Private companies operating in the Los Angeles region provide collection services, and waste is transported to several regional landfills. There are eight major landfills currently accepting municipal solid waste in Los Angeles County.

Solid waste generation associated with LAX airport activities is estimated to be 25,472 tons per year or 139,573 pounds per day.[96] However, the runway components do not generate solid waste and therefore the Proposed Action or its alternatives would not generate additional solid waste.

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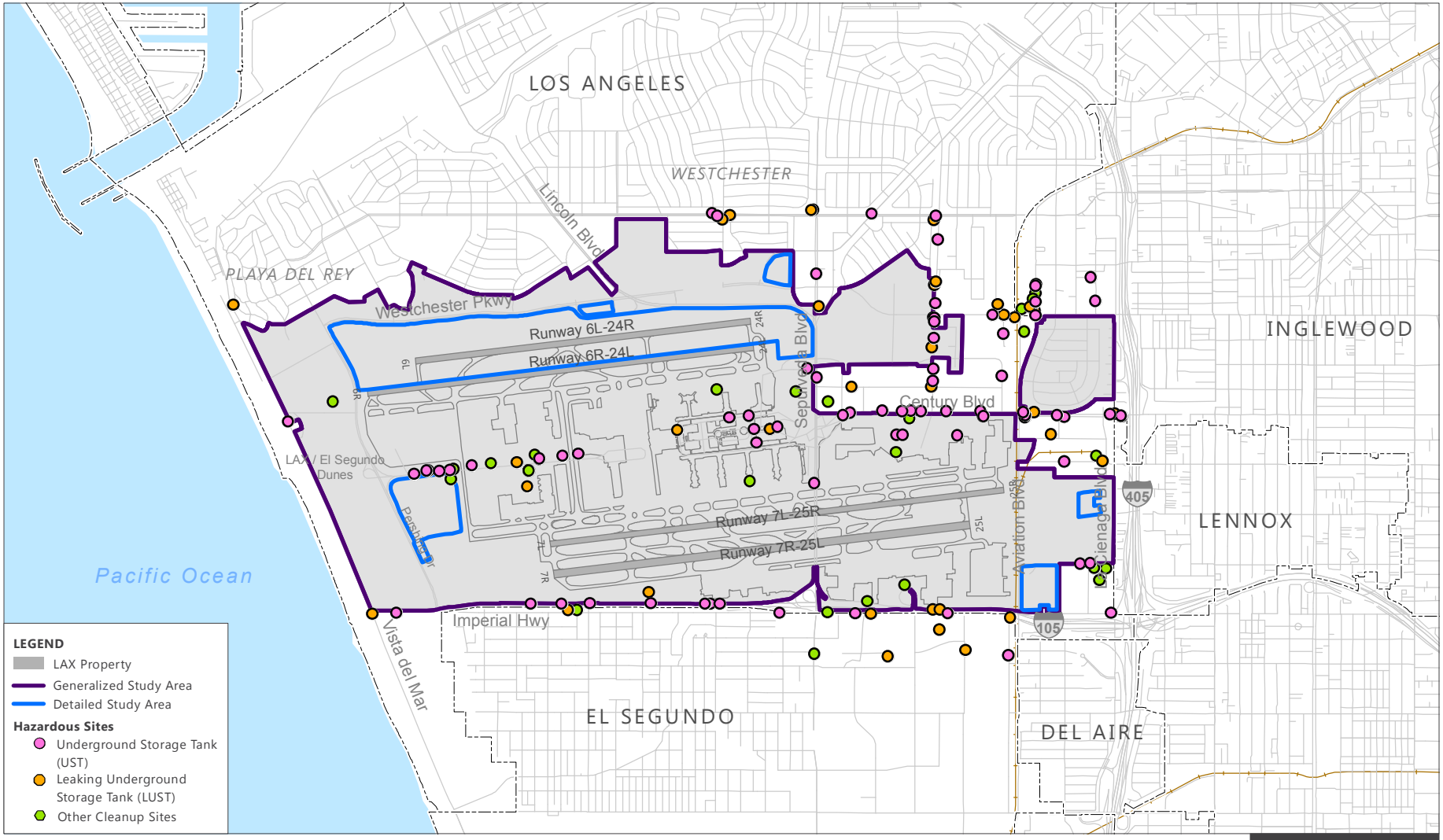
94 A Siting Element provides a means for proper planning and management of solid waste formation and land disposal facilities on a County-wide basis. It offers policies and establishes siting criteria to evaluate sites proposed for development of needed solid waste transformation and land disposal facilities to effectively serve the public need.

95 City of Los Angeles Department of Public Works, Bureau of Sanitation website, *http://www.lacitysan.org/solid_resources/strategic_programs/diversion_strategy/index.htm*, accessed April 2012.

96 Based on 50,944,000 pounds per year, divided by 365 days per year. Los Angeles World Airports, *LAX Specific Plan Amendment Study Final EIR*, January 2013.



SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets); LAX Airport Layout Plan, Ricondo & Associates, Inc., 2010 (runways, taxiways, terminal area, ariport property boundary).
South California Association of Governments (land use), 2008.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

EXHIBIT 3-11

Hazardous Material/Clean-up Sites within the Generalized Study Area

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3.16 Past, Present, and Reasonably Foreseeable Future Actions

This section describes cumulative actions within the GSA for the purpose of considering potential cumulative impacts in Section 4.14, Cumulative Impacts, of this EA. In accordance with NEPA, a discussion of cumulative impacts resulting from projects that are proposed, under construction, recently completed, or planned for implementation in the near future is required. **Table 3-20** lists and describes past, present, and reasonably foreseeable future projects that have been considered for potential cumulative impacts in the resource categories evaluated. Projects considered in this evaluation meet three criteria:

- The project has the potential for impacts to all or some of the resource categories evaluated in this EA;
- The project is an LAX development project that is not related to the proposed Project and is of similar or greater size and magnitude to the proposed Project; and,
- The temporal scope includes projects that have occurred or will occur in a time frame similar to that of the Proposed Action or its alternatives, such that there is the potential for additive impacts on any resource category.

For this EA, 12 actions meet the criteria described above. As shown in Table 3-20, the timeframe for these actions ranges from 2010 through 2022. General types of on-airport projects include, but are not limited to, runway reconstruction, terminal redevelopment, and roadway development. **Exhibit 3-12** shows where these projects are located relative to the GSA.

There are two major LAX projects which are omitted from the list in Table 3-20: LAX Northside Plan Update and LAX Specific Plan Amendment Study (SPAS). The rationale for not including these projects is that land use development on the area of the LAX Northside Plan or any SPAS projects would not begin during the development time of the Proposed Action alternative. Both the LAX Northside Plan Update and the SPAS projects will require additional federal and local approvals, including environmental analysis under CEQA and NEPA. LAWA has not requested the initiation of NEPA analysis or project-level CEQA analysis for any of the SPAS projects.

Table 3-20: LAX Development Project Not Related to the Proposed Project Elements (1 of 2)

EXHIBIT ID	PROJECT	DATES	DESCRIPTION
		Past Actions	
1	Crossfield Taxiway Project	Spring 2009 – Summer 2010	The Crossfield Taxiway Project (CFTP) includes development of a new taxiway, Taxiway R, extending north-south between the north airfield complex and the south airfield complex, and the extension of existing Taxiway D. Also included as part of the CFTP are the construction of a new fire station/Aircraft Rescue and Firefighting Facility (ARFF), relocation of an existing aircraft Remain Overnight (RON) area, and development of a new vehicle parking lot.
		Present Actions	
2	South Terminal Improvements	Nov-11 – Feb-18	Major interior improvements and building system upgrades within the South Terminal complex, particularly Terminal 5 (Delta Airlines) and Terminals 6-8 (United).
3	North Terminal Improvements	Aug-13 – Aug-17	Major interior improvements and building system upgrades within the North Terminal complex, particularly Terminal 1 (Southwest).
4	Central Utility Plant Replacement Project (CUP - RP)	Sep-11 – Dec-14	Construction of Replacement CUP and related underground piping network within CTA.
5	LAX Bradley West Project	Nov-11 – Dec-17	Replacement of existing concourses and aprons at the TBIT with new concourses and gates at Bradley West. Work includes demolition of existing TBIT concourses and installation of east gates/aprons along Bradley West concourses. Also includes Taxiway T project and construction of secure/sterile passenger and baggage connection between the TBIT core and Terminal 4 (T-4). Although construction of similar connection between TBIT core and T-3 is also part of the overall Bradley West Project, it is broken out separately below, as its construction would not begin until well after the other Bradley West improvements are completed.
6	West Aircraft Maintenance Area Project	Jan-14 – Dec-18	The proposed West Aircraft Maintenance Area project would allow for more efficient and effective maintenance of existing aircraft at the airport, including Aircraft Design Group (ADG) VI aircraft (Airbus A380s and Boeing 747-8s). The proposed Project would include aircraft parking and maintenance facilities, employee parking areas, and related storage, equipment and facilities. The proposed Project would be able to accommodate up to 8 ADG VI aircraft simultaneously or 18 ADG III aircraft (aircraft similar in size to and including Boeing 737's).
7	Runway 7L-25R Safety Area Improvements-South Airfield	Feb-14 – Feb-15	Improvements at west end of Runway 7L/25R including runway and connecting taxiway extensions to meet FAA Runway Safety Area (RSA) requirements. Rehabilitation of deteriorating concrete at east end of runway and Taxiway B.

Table 3-20: LAX Development Project Not Related to the Proposed Project Elements (2 of 2)

EXHIBIT ID	PROJECT	DATES	DESCRIPTION
		Present Actions (continued)	
--- [1/]	Miscellaneous Projects and Improvements	Jan-14 – Jul-20	This includes a wide variety of smaller miscellaneous projects and improvements mostly related to repair/replacement of, and upgrades to, existing facilities at LAX, including, but not limited to, runway repair/rehabilitation, elevators/escalators replacement, CTA second level roadway repairs, terminal taxilanes and aprons rehabilitation, passenger boarding bridge replacements, terminals electrical, plumbing, and facilities upgrades, miscellaneous demolition, and more.
8	LAX Midfield Satellite Concourse (MSC) North Project	Jul-14 – Jun-19	The MSC North Project consists of a satellite concourse west of TBIT that would include up to 11 aircraft gates that could accommodate ADG V and ADG VI aircraft. The MSC North Project includes associated apron areas, a new crossfield taxiway, taxilane, and provisions for an underground automated people mover (APM) tunnel.
		Future Actions	
--- [1/]	LAX Master Plan Alt. D	Jun-15 – Jun-25	Assumes continued implementation of the approved LAX Master Plan, which includes ground transportation improvements, airfield improvements, and terminal improvements.
9	Metro Crenshaw / LAX Transit Corridor and Station	Dec-15 – Apr-19	The Los Angeles County Metropolitan Transportation Authority (Metro) recently approved the proposed Crenshaw/LAX Transit Corridor Project, which includes an 8.5-mile light-rail transit line that would connect the existing Metro Green Line and the Metro Expo Line at Crenshaw and Exposition Boulevards. A station is proposed in proximity to LAX, near the intersection of Century Boulevard and Aviation Boulevard.
10	Terminal 3 (T-3) Connector	Jul-19 – Jan-22	See LAX Bradley West Project Remaining Work above.

NOTES:

The list of past, present, and reasonably foreseeable projects contained in the EA was reviewed in light of other cumulative impacts analysis being conducted by LAWA. Relatively minor projects that would not involve construction activities similar to the scale and magnitude of the Proposed Action were eliminated from the cumulative impacts analysis.

1/ The locations of these projects are not depicted on Exhibit 3-12 as they either occur at multiple airport locations, have not yet been sited, or the location is not general public information.

SOURCE: Los Angeles World Airports, July 2013; Los Angeles World Airports, Airports Development Executive Management Program Status Report, May 2013; Los Angeles World Airports, LAX Sign District Project Draft Environmental Impact Report, October 2012; Ricondo & Associates, Inc., June 2014.

PREPARED BY: Ricondo & Associates, Inc., June 2014.

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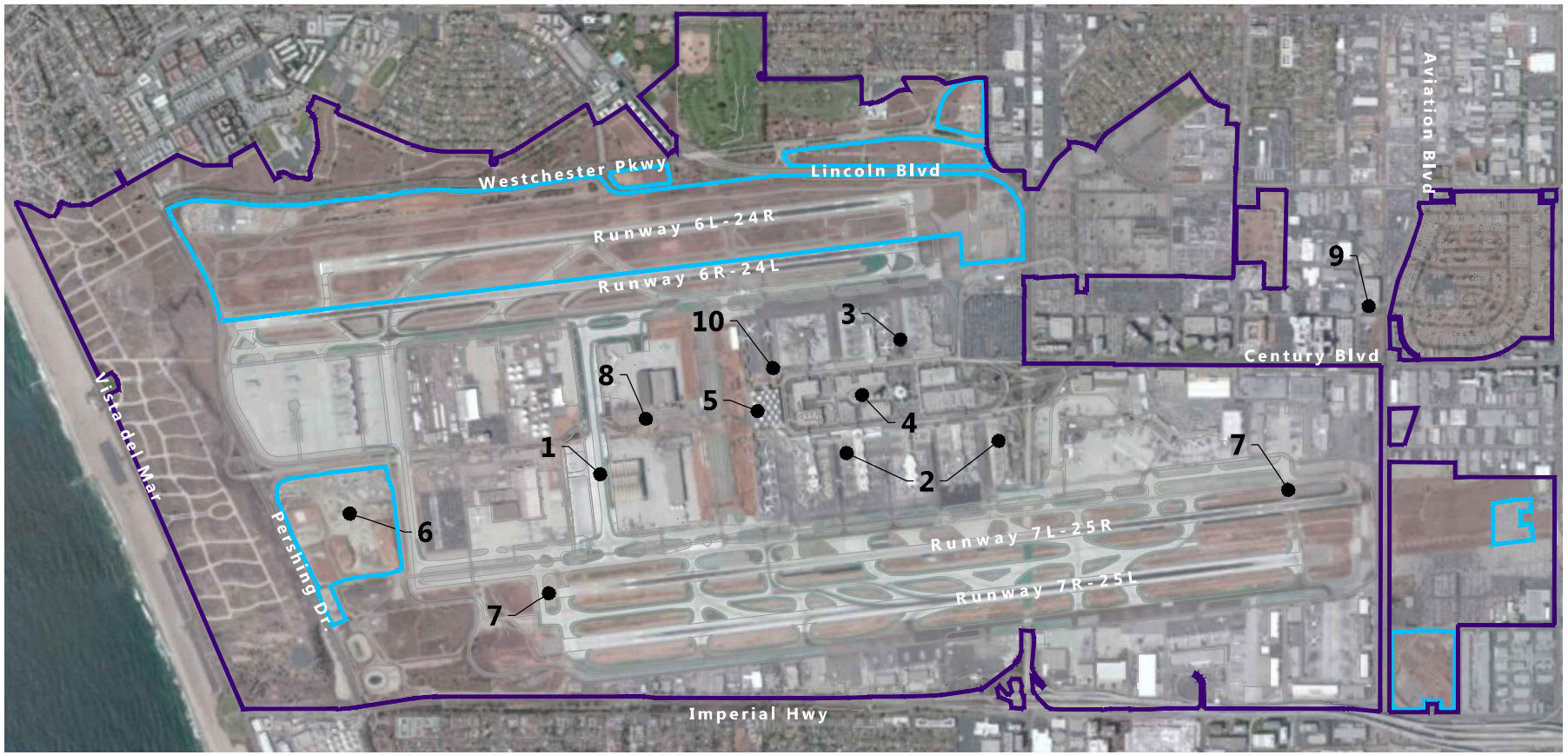

SOURCE: Landrum & Brown, *Los Angeles International Airport, Airport Layout Plan,* 2005; Los Angeles World Airports, April 2013 (aerial photography); Ricondo & Associates, Inc., July 2013.
PREPARED BY: Ricondo & Associates, Inc., June 2014.

EXHIBIT 3-12

Location of Related Projects

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