1.0 INVENTORY

The PB Team conducted an inventory of the William J. Fox Airfield's, henceforth Fox Airfield, existing airport facilities in December 2009. This site visit consisted of a complete review of the location, type, number, and general condition of each airport facility at Fox Airfield (WJF). These facilities included the airfield, terminal area, ground access, aircraft/vehicular parking, pavement conditions, utilities, and Navigational Aids (NAVAIDS). The information collected during the inventory of the Airport's existing facilities will be utilized throughout this master plan update to evaluate the Airport's capacity to accommodate future aircraft activity over the long-term planning period (20 years). Any deficiencies identified during this evaluation will be addressed during the development of the alternatives analysis. The following eight subsections identify the findings of the inventory of existing airport conditions:

- ★ Airport History
- ★ Existing Airport Conditions
- ★ Physical Facilities
- ★ Airspace and ATCT Conditions
- → Utilities
- ★ Airport Operations
- ★ Local Land Use Plans and Regulations
- ★ Environmental Resources
- **★** NAVAIDS

1.1 Airport History

Fox Airfield was first developed in 1959 by the County of Los Angeles under a prior agreement with the Federal Government to buy the Palmdale Airport. The sale in 1954 required relocating commercial and general aviation operations from the Palmdale Airport to Fox Airfield in order to separate military and civilian aircraft operations. Fox Airfield Airport was named for General William J. Fox who was the Director of Aviation for Los Angeles County during the same period. General Fox played a major role in the planning, design, and construction of the Airport.

1.2 Existing Airport Conditions

Fox Airfield is located approximately 45 miles north of downtown Los Angeles, California. As shown in **Figure 1.1**, Fox Airfield lies within the Antelope Valley and is in the City of Lancaster, California. Fox Airfield serves the general aviation needs of Palmdale, Rosamond Quartz Hill and Lancaster. The Airport is owned by the County of Los Angeles and is administered by the Department of Public Works Aviation Division. The County of Los Angeles owns five airports: Brackett Airfield, Compton/Woodley, El Monte, Fox Airfield, and Whiteman Airport.

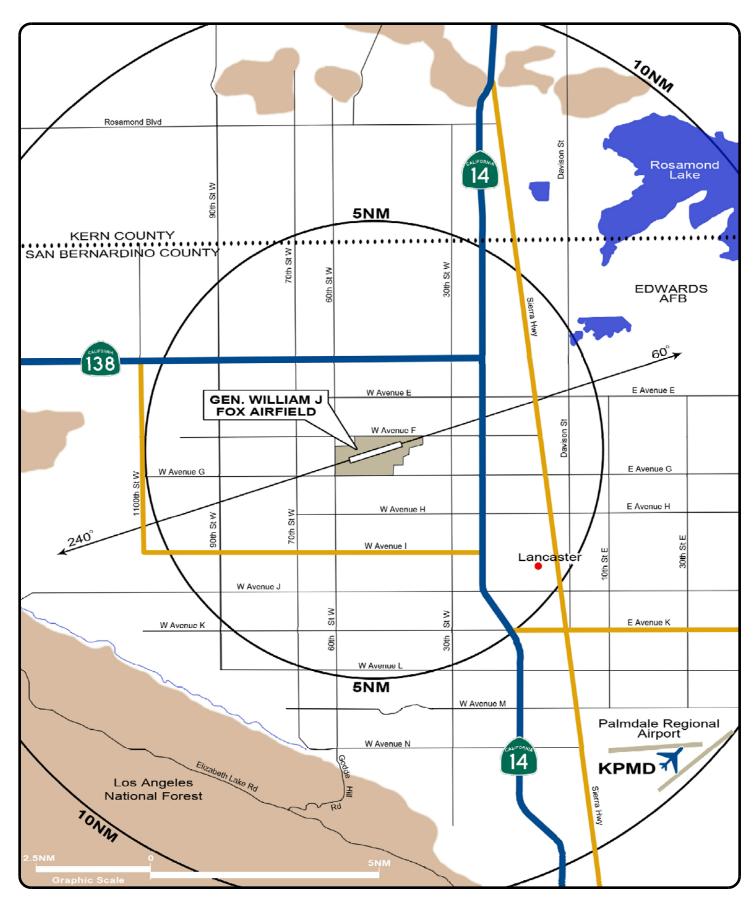
The County of Los Angeles Aviation Commission serves as an advisor to the County Board of Supervisors, Regional Planning Commission, and the Department of Public Works. The County of Los Angeles Aviation Commission consists of ten members, which are appointed by a Supervisor from each district for a period of four years. The operation of Fox Airfield is managed by a private general aviation management company which also manages the four other County of Los Angeles owned airports mentioned above.

Vehicular or ground access to the Airport is excellent. The Antelope Valley Freeway (Highway 14) is located approximately three miles east of the Airport and provides access to Avenue G, which connects to William J. Barnes Avenue. The main Airport entrance is located on William J. Barnes Avenue. The Airport can also be accessed using 50th Street West. The proximity of the Airport and the local ground access network are also depicted in Figure 1.1.

Fox Airfield is classified in the Federal Aviation Administration's National Plan of Integrated Airport Systems (NPIAS) as a General Aviation (GA) airport. A GA airport is defined as an airport that serves a community without scheduled commercial air service. By definition, GA airports enplane less than 2,500 annual passengers and are used primarily by private and business aircraft. There are more than 2,500 designated GA airports in the US.

Fox Airfield is classified a Regional General Aviation Airport in the California Aviation System Plan (CASP). This classification was developed by the State to categorize airports based on an airport's function, services provided, and role in the State aviation system. Fox Airfield is included in the Los Angeles Desert Region of the CASP. The desert region also includes the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. It should be noted that while the official classification of Fox Airfield is Regional General Aviation, Fox Airfield meets all minimum standards for a Primary Commercial Non-Hub airport.

As identified in FAA Advisory Circular 150/5300-13, Airport Design, planning standards associated with Airplane Design Group (ADG) IV were applied throughout this airport master plan. ADG IV includes large aircraft having wingspans from 118 feet up to but not including 171 feet in width. Currently, the US Forest Service (USFS) operates Group IV aircraft from Fox Airfield to support fire-fighting operations along the west coast. Other typical Group IV aircraft include the Lockheed L-1011, Lockheed C-130, Boeing 707, Boeing 757, Boeing 767, McDonnell DC-8, and McDonnell MD-11. The design aircraft for the Airport is indentified in Chapter 4.0 Facility Requirements. Design standards for Group IV will be applied for all aircraft except in locations utilized by small aircraft only.





GENERAL WILLIAM J. FOX AIRFIELD Lancaster, CA Master Plan Update

AIRPORT VICINITY MAP

FIGURE 1.1

1.3 Physical Facilities

The Airport's physical facilities are categorized into two types of facilities: airside and landside. Airside facilities consist of runways, taxiways, runway approach areas, airfield lighting and signage, air traffic control tower, visual aids and navigational aids. Landside facilities include terminal buildings, Fixed Base Operators (FBO), hangars, fuel facilities vehicular parking areas, and other ancillary support facilities. The current airside and landside facilities are shown in **Figure 1.2**. A description of both facility types are provided below.

1.3.1 Airside Facilities

Fox Airfield has one runway that is 7,201 feet long by 150 feet wide. The Runway designation is 6-24 and has a true bearing of South 72° 24'02.45" W. Runway 6-24 is

marked with precision non instrument runway markings that include delineation of the runway threshold, aiming point, runway centerline, pavement edge, and runway designation markings. As depicted in **Figure 1.3**, the current runway pavement strength as published in the US Government Flight Information Publication Airport/Facility Directory Fox Airfield is 50,000 pounds single-wheel (S), 68,000 pounds dual-wheel (D) 86,000 single-

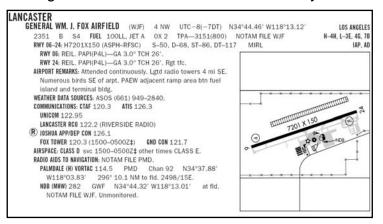


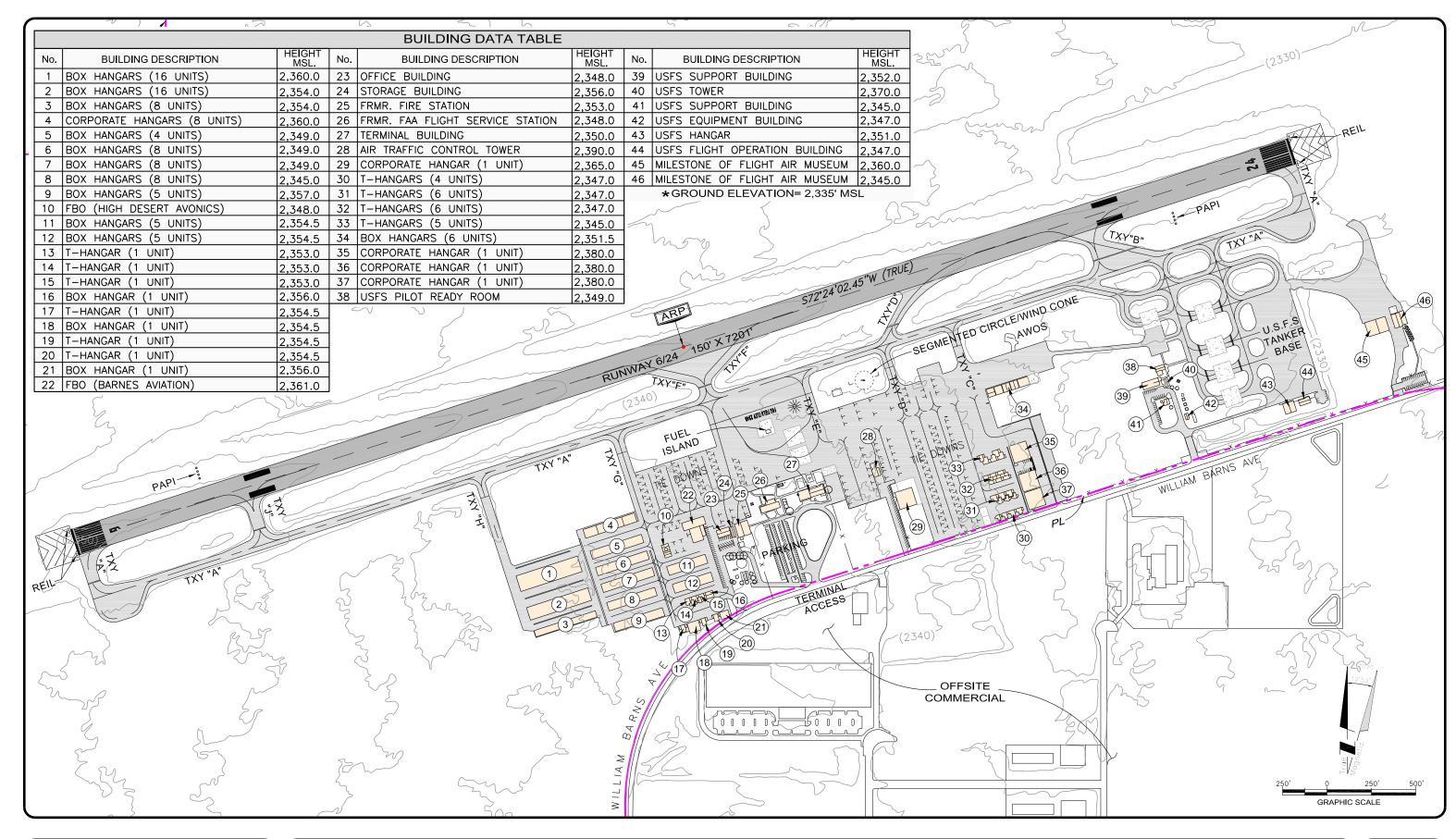
Figure 1.3: WJF Flight Information

tandem (ST), and 117,000 pounds dual-tandem (DT). Runway 24 is the preferred runway end and is used approximately 60 percent of the time. Runway 6 is used approximately 40 percent of the time. Both runways have published GPS approach procedures. **Table 1.1** depicts Runway 6-24 characteristics.

Table 1.1: Runway 6-24 Characteristics

Runway	Elevation	Longitude	Latitude
RW 6	2,350.5' MSL	118° 13'48.1415" W	34° 44'16.8072" N
RW 24	2,334.8' MSL	118° 12'26.0652 W	34° 44'38.7410 N
			Note: NAD83

Chapter One: Inventory





EXISTING AIRPORT

FIGURE 1.2 Runway 6-24 is equipped with Medium Intensity Runway Lighting (MIRL). Airport lighting on runway 6-24 also includes Runway End Identification Lighting (REIL) and Precision Approach Path Indicators Lighting (PAPI) P4L on both runway ends. Each PAPI P4L has a 3° glide slope and threshold crossing height of 26 feet Above Ground Level (AGL). The existing Fox Airfield Airport Reference Point (ARP) is located at 34° 44′ 27.8000" north latitude and 118° 13′07.1000" west longitude. The Airport's published airport elevation is 2,351 above Mean Seal Level (MSL). Fox Airfield is impacted by magnetic declination at a rate of approximately five minutes per year resulting in a 12° 53' East difference between true north and magnetic north for year 2010.

Fox Airfield has one segmented circle with an illuminated windsock located on the south side of the runway near the midpoint of the Airport. As depicted in Figure 1.2, the Airport operates under a left-handed traffic pattern during Visual Flight Rule (VFR) conditions. Weather information is provided to pilots via an Automated Weather Observation Station (AWOS) also located on the south side of the runway. The AWOS-3 provides current wind speed and direction, wind gusts, variable wind direction, altimeter readings, temperature, dew point, visibility, variable visibility, precipitation, day/night, cloud height, sky condition, and density altitude. Fox Airfield AWOS information can be accessed via the Internet and telephone (661-949-2840). The information is also broadcast over the Airport Traffic Control Tower radio frequency when the Airport Traffic Control Tower is closed.

Runway 6-24 is supported by eight taxiways, labeled alphabetically A through H. As shown in Figure 1.2, Taxiway A is a full parallel taxiway located on the south side of Runway 6-24. Taxiway A is 7,201 feet long by 50 feet in width. Taxiways B, D, F, and J are exit taxiways that connect Runway 6-24 with Taxiway A. Taxiway F is located near the midpoint of the Airport and is used most frequently by aircraft exiting the runway. Finally, taxiways C, D, E, and H provide access from Taxiway A to the landside facilities located along the south side of the runway. All taxiways are 50 feet in width.

There are no deviations to FAA Airport Standards.

Information regarding meteorological considerations for Fox Airfield was obtained from the National Climatic Data Center (NCDC) located in Asheville, NC. Data provided by the NCDC was collected from the AWOS located on the Airport. Observations for Fox Airfield were taken over a ten-year period (1999 through 2009). These observations were used to develop the visual and instrument metrological conditions wind roses for the Airport. The results of the wind rose analysis indicate that the existing runway configuration provides 98.24 percent coverage for a crosswind component of 13 knots. The 13-knot crosswind component applies to ARC C-IV. The percentage of wind coverage provided for Runway 6-24 meets the FAA's recommendation of 95 percent crosswind coverage. No additional runways are required. According to data provided by the NCDC, visual meteorological weather conditions occur 99 percent of the time; whereas, instrument meteorological weather conditions occur less than one percent. Instrument meteorological weather conditions are classified as any weather conditions

when cloud ceilings are less than 1,000 feet AGL and/or visibility is less than 3 miles. Instrument meteorological weather conditions typically occur in the months of October through January as well as the months of March through May. Combined, this period of instrument metrological weather conditions total approximately three days (.01 percent) of a typical year. Fox Airfield's airport reference temperature, which is defined as the mean maximum temperature of the hottest month of the year, is 97 degrees and occurs during the month of July. This temperature is based on historical data collected from the AWOS located on the Airport. The average total annual rainfall is eight inches per year. Data used to determine these weather observations occurred between the dates of January 1, 2000, through December 31, 2009.

1.3.2 Landside Facilities

Landside facilities at Fox Airfield include aircraft parking aprons, terminal building, hangars, air museum, US Forest Service facilities, fuel facilities, vehicular parking, and restaurant. All landside facilities are located on the south side of the runway. Figure 1.2 depicts the location of Fox Airfield's landside facilities and vehicular access ways.

Fox Airfield aircraft parking aprons are conveniently located near the midpoint of the Airport near Taxiways G and D. The aircraft parking aprons are very large and can accommodate approximately 332 aircraft in a tie-down position. Of the 332 tie-downs, approximately 293 are County operated and 39 are leased to and operated by the Fixed Base Operators (FBO) at the Airport. Transient aircraft park immediately north of and adjacent to the terminal building. The transient aircraft apron is approximately 5,000 square yards in size. As of December 2009, aircraft tie-downs were 35 percent occupied.

The terminal and administration building is located at the midpoint of the Airport, which houses the airport management offices, restaurant, gift shop, public restrooms, and public lobby space including free Wi-Fi, public phones, custodial closet and pilot briefing room/lounge. The terminal building is approximately 6,400 square feet in size. The Airport's electronic vault and lighting controls are located in the basement of the building. Additional GA terminal use space is provided at Barnes Aviation FBO and includes facilities such as a pilot lounge and flight planning area.

There are approximately 100 aircraft hangar spaces available at Fox Airfield. The County operates 89 hangars (which include six end rooms) in three rows of hangars and six portable hangars. Two former FBOs previously owned storage hangars at Fox Airfield –Ca-Jon Hangars and Visco Hangars. Ca-Jon owned 35 hangars (two sizes) in three buildings. One building contains seven spaces that measure approximately 53 feet in width by 46 feet in length. Two buildings contain 28-smaller hangar spaces, which measure 40 feet in width by 31 feet in length. These buildings are approximately 18 years old. The Visco hangar building was constructed about 15 years ago, includes five hangar spaces, and is approximately 3,000 square feet in size. The County recently assumed control of both the Visco and Ca-Jon hangars. Barnes

Aviation, a major FBO at the Airport, owns 8,400 square feet of hangar with an additional 2,430 square feet of office space, and 900 square feet of shop area.

Barnes Aviation, High Desert Avionics, MH Aviation, Inc. and Exodus Maintenance Service are the primary providers of avionics and/or aircraft repair (maintenance) services at the Airport. Barnes Aviation has an 8,400 square foot hangar, which can accommodate up to five single or light twin-engine aircraft. High Desert Avionics has approximately 3,000 square feet of hangar space located behind their office facility. MH Aviation, Inc. is located on the west east side of the Airport and has approximately 5,000 square feet of hangar space devoted to maintenance. Exodus recently relocated from their facility near the ATCT to a corporate hangar located on the west side of the Airport. Currently, Exodus has approximately 4,000 square feet of hangar space designated for maintenance.

The total bulk fuel storage capacity at Fox Airfield is 80,000 gallons of which 40,000 gallons is 100 Low Lead (100LL) Avgas and 40,000 gallons is Jet A. The 40,000 gallons of Avgas is stored in two 20,000-gallon tanks. The 40,000 gallons of Jet A is stored in two 20,000-gallon tanks. The storage tanks are approximately 21 years old and are in good condition. All tanks have leakage detection equipment. The current fuel storage capacity is adequate for exiting demand. This includes the anticipated need for the US Forest Service's fire-fighting aircraft during peak seasons.

Vehicular parking at Fox Airfield consists of approximately 235 spaces at various locations surrounding the Airport. The following list provides an approximate count of these spaces:

•	Terminal/Administration Building	35 spaces
•	Main Parking Lot (near former FAA FSS)	115 spaces
•	Barnes Aviation	24 spaces
•	ATCT	10 spaces
•	ATCT Frontage Road	34 spaces
•	Corporate Hangar (near east tie down apron)	17 spaces

Aircraft owners also park their vehicles in their T-Hangars or tie-down area for convenience.

There are four primary Fixed Base Operators located at Fox Airfield. These include the following:

 Barnes Aviation: is a full-service FBO located on the west side of the Airport and is adjacent to the west tie-down apron. Barnes Aviation has been in continuous operation since 1940. Barnes Aviation provides flight training, aircraft rental, maintenance, ground power, weather/flight planning, rental cars, hangar space, catering, and aircraft washing.

- **High Desert Avionics:** specialize in avionics sales and repair. They have operated at Fox Airfield for more than 20 years. High Dessert Avionics is located on the west side of the Airport.
- MH Aviation, Inc.: specialize in aircraft inspection, parts modifications, and major repairs. MH Aviation, Inc. is located on the east side of the Airport.
- **Exodus Air Service:** has operated at Fox Airfield for approximately 18 years and conducts air annuals, engine repair, teardowns, collision repair, magneto diagnostics, and NDT testing. Exodus Air Service is located on the west side of the Airport.

There are other major tenants on the Airport that do not fit the category of FBO; however, they play an important part of the Airport's current role in the airport system. These include:

- US Forest Service: maintains an air tanker base that includes offices, control tower, rest/living quarters, storage, fire retardant storage tanks, apron, and loading pads. Present aircraft operations total approximately 750 per year with most conducted by P-3, P-4, and C-130 aircraft. Operations are anticipated to increase as land use restrictions at other US Forest Service bases become incompatible with USFS operations.
- Milestone of Flight Air Museum: is located on the east side of the Airport near Apollo Park. According to the current museum curator and a review of the visitor sign-in logs, approximately 850 people visit the museum annually. The museum has more than 100 exhibits and contains indoor and outdoor static displays of vintage aircraft.

1.4 Airspace and ATCT Conditions

The airspace surrounding Fox Airfield is comprised of volumes of air above airports within a 25 nautical mile radius, navigational aids, and enroute airways. **Figure 1.5** displays the airports and enroute airways with the 25-nautical mile radius. Including Fox Airfield, there are four airports within 25-nautical miles of the Airport. Of these four airports, three are publicly owned and include Palmdale, Aqua Dulce, and Mohave. **Table 1.2** provides a general description of these three public-use airports. Edwards AFB is located approximately 20-miles northeast of Fox Airfield and is owned and operated by the US Air Force.

	Ownership Type	Distance from WJF	Table 3.2 Airports Near William J. Fox Airfeild					
Airport Name			Runway Info	Runway Surface	Fuel	No. Based Aircraft	No. Hangars	ATCT
Agua Dulce	Private	15 nm S	RW 4-22 (4,600')	Asphalt	100LL	34	47	No
Palmdale	Public	11 nm SE	RW 7-25 (12,002')	Concrete	Unknown	0	Unknown	Yes
			RW 4-22 (12,001')	Concrete				
			RW 7L-25R (6,000')	Asphalt				
Mohave	Public	22 nm N	RW 12-30 (12,503')	Ashpalt	100LL/Jet A	149	Unknown	Yes
			RW 8-26 (7,049')	Ashpalt				
			RW 4-22 (3,946')	Ashpalt				
Edwards AFB	Air Force	22 NM NE	RW 4L-22R (12,000')	Asphalt	100B+	Unknown	Unknown	Yes
			RW 4R-22L (15,024')	Concrete				
			RW 6-24 (8,000')	Concrete				
Source: FAA Form 5010-	1, California Aviation System	Plan						+-

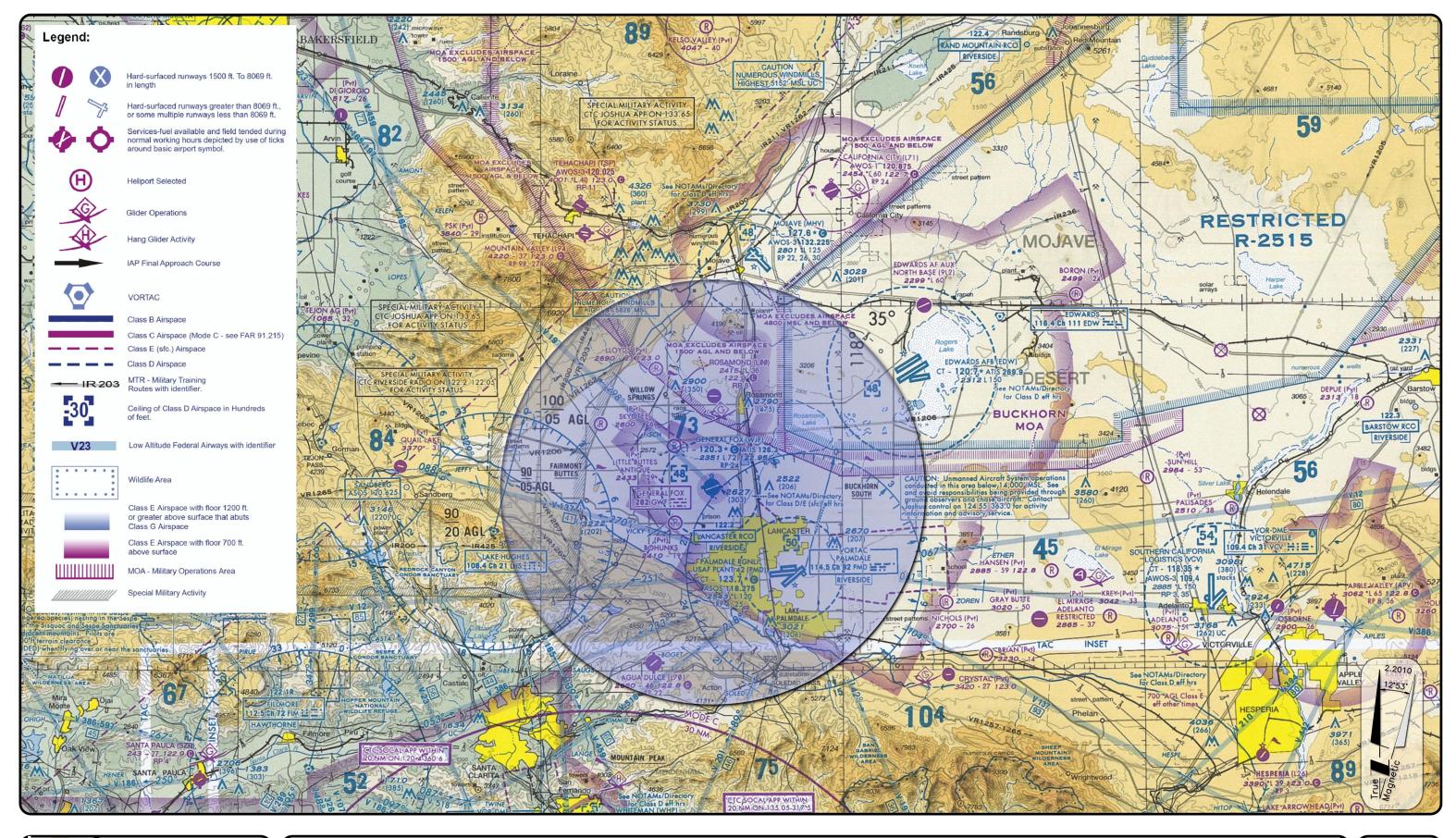
There are two categories of airspace: regulatory and non regulatory. Regulatory airspace consists of Class A, B, C, D, and E airspace areas, restricted and prohibited areas. Non regulatory airspace includes military operating areas (MOAs), warning areas, alert areas, and controlled firing areas. Within these two categories of airspace, there are four types: controlled, uncontrolled, special use, and other airspace. The categories of airspace are dictated by the complexity or density of aircraft movements, the nature of the operations conducted with the airspace, the level of safety required, and the national and public interest.

Follwoing are the classes of airspace surrounding Fox Airfield:

- Class C Airspace surrounds airports with an ATCT and is serviced by radar approach control. Class C airspace is developed according to airport specific conditions and typically has two layers of control. Pilots entering Class C airspace must have two-way radio contact with the ATCT and maintain contract throughout Class C airspace. Within Class C airspace, air traffic controllers are required to separate VRF aircraft from one another but not IFR traffic. The nearest Class C airspace to Fox Airfield is associated with Bob Hope Airport (BUR) in Burbank.
- Class D Airspace is circular in form and normally extends from the surface to 2,500 feet AGL and to a variable radius (generally five-statute miles) around airports with an operational ATCT and not otherwise in Class C or B airspace. Class D airspace reverts to Class E when the ATCT is closed or during special conditions. Two-way communication with ATC must be established before entering Class D airspace; however, no transponder is required. Class D airspace surrounds Palmdale Airport, which is located south of Fox Airfield.
- Class E Airspace is the less restrictive than Class A, B, and C controlled airspace classifications. Throughout much of the US, Class E airspace extends from 1,200 feet AGL up to 18,000 feet MSL which is the lower limit of Class A airspace. There are areas where Class E airspace begins at either the surface or 700 AGL. These areas are used to transition to and from terminal or enroute

environments. Class E airspace VFR visibility requirements are as they are for Class C and D airspace. There is one type of Class E airspace near Fox Airfield. This Class E airspace begins at 700 AGL and extends up to 18,000 MSL. This Class E airspace encompasses several airports including Fox Airfield, Mohave, and Edwards AFB.

• Class G Airspace Class G is airspace not otherwise classified below flight level 600 (FL 600). There are no entry or clearance requirements for Glass G airspace, even for IFR operations. Class G airspace typically starts very near the ground (1,200 feet or less) and lies under Class E airspace.





AIRSPACE SECTIONAL MAP

FIGURE 1.5 There are several controlled and special use airspace areas located within 25 nautical miles of Fox Airfield. There are two airspace areas classified as Restricted (R) and are designated as R-2515 and R-2508, respectively. The R-2515 airspace is located around Edwards AFB and extends northeastward. The R-2508 airspace is located directly north of Fox Airfield and extends northward. Pilots must have prior authorization to enter restricted airspace. As shown in Figure 1.5, there is one special use airspace area within the 25 nautical mile radius of Fox Airfield. These areas are known as special use airspace areas and are located around Fox Airfield, Palmdale, and Edwards AFB. A control zone extends upward from the ground up to but not including 14,500 feet MSL. A control zone is regulatory in nature and may include one or more airports. Control Zones are typically circular in shape and have a radius of five statute miles.

Two Military Operations Areas (MOA) are located near Fox Airfield. The first MOA is known as Buckhorn and is associated with operations at Edwards AFB. The second MOA exists to the west of Fox Airfield and is known as the Isabella MOA. The Isabella MOA is used for military testing. MOA's have defined vertical and lateral dimensions, which separate certain military activities from IFR traffic, and indicate to VFR traffic where these activities are conducted. **Figure 1.5** shows the location of the MOA's near Fox Airfield.

Fox Airfield has four published instrument approach procedures. All of these procedures are classified as non precision instrument approaches. Instrument approach procedures are a series of predetermined maneuvers for an aircraft to transition from IFR conditions from the beginning of the initial approach to a point where a landing may be made visually. These procedures provide protection from obstacles that could jeopardize the safety of aircraft operations by providing a specific clearance over obstacles. For purposes of comparison, a precision instrument approach is one in which an electronic glide slope is provided that gives the pilot a glide path, or specific descent profile guidance. A non precision approach is a procedure in which no electronic glide slope is provided. **Table 1.3** provides the instrument approach procedures and navigational aids for Fox Airfield.

Table 1.3: Fox Airfield Approach Procedures

NAVAID	Location	Procedure	Lowest Minima
RNAV (GPS) RW 6	On-Airport	Straight In	300'/1 mile
RNAV (GPS) RW 24	On-Airport	Straight In	500'/1 mile
Palmdale VOR	10 nm SE	Circling	1,000'/ 1.25 miles
Fox NDB	On-Airport	Circling	800'/1 mile

Source: US Government Flight Information Publications, US FAA Terminal Procedures Publication, 3/2010

Figures 1.6 thru 1.9 depict the approach procedures available for Fox Airfield.

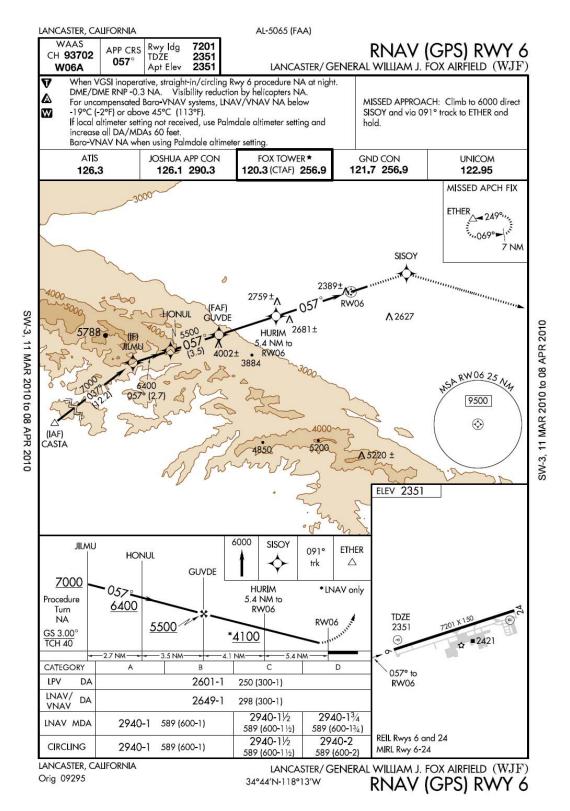


Figure 1.6: RNAV (GPS) RW 6

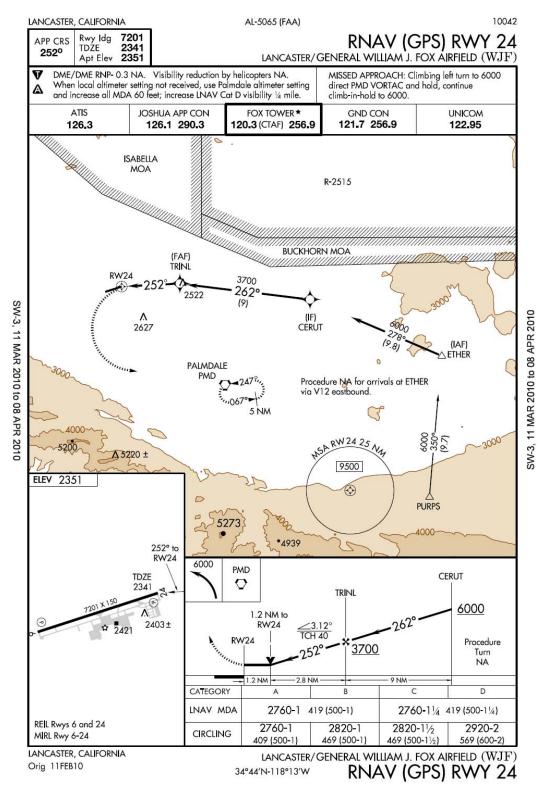


Figure 1.7: RNAV (GPS) RW 24

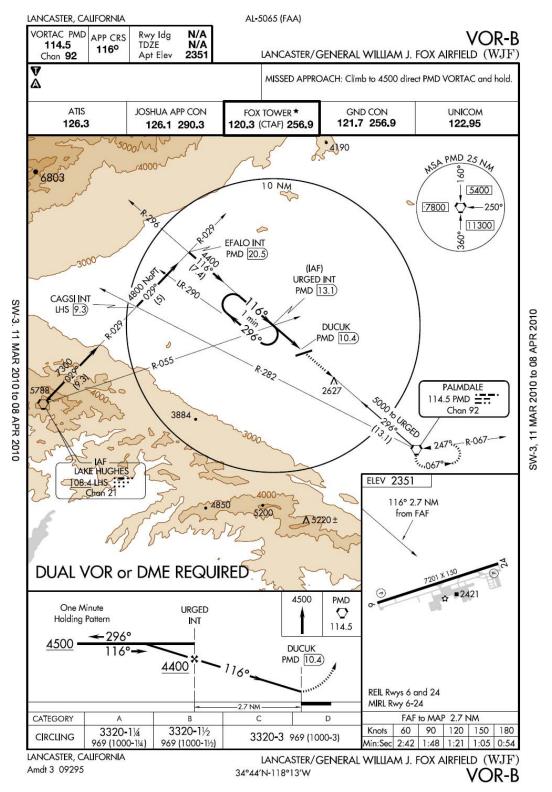


Figure 1.8: VOR-B

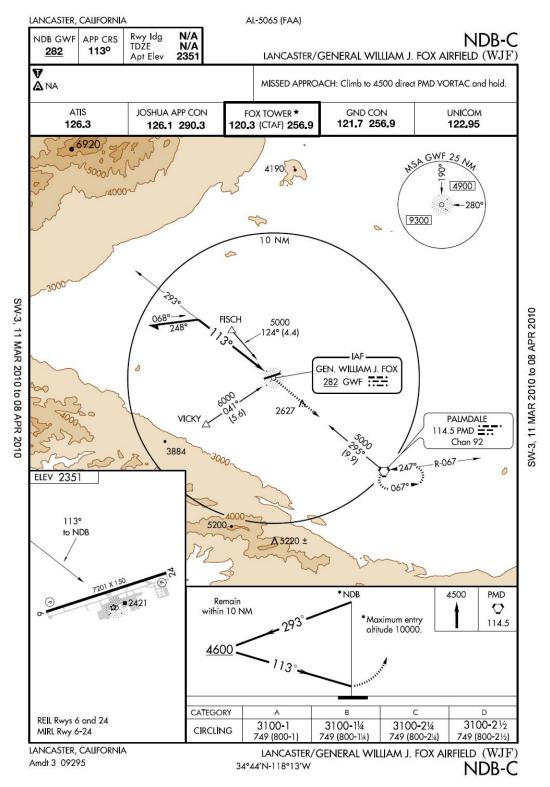


Figure 1.9: NDB-C

1.5 Utilities

The County of Los Angeles, Department of Public Works Waterworks Division (District No. 4) provides water to Fox Airfield. A nearby sewer treatment plant located east of the Airport provides the primary source of water needed for fire fighting. The airport sewer system is serviced by a 15-inch sanitary line, which is located along William Barnes Drive. The sewer is owned and maintained by the County of Los Angeles.

Natural gas is delivered to the Airport by the Southern California Gas Company through a 4-inch high-pressure gas main located along Avenue G. In addition, a 2.5-inch high-pressure gas line along William Barnes Drive at 50th Street West provides natural gas onto Airport property.

Southern California Edison Company supplies electricity through an electric line underneath William Barnes Drive. General Telephone Company provides telephone service to Fox Airfield using telephone lines located underneath William Barnes Drive.

1.6 Airport Operations

Since the previous Fox Airfield Master Plan Update was conducted in 1996, general aviation operations have significantly declined along with related activities including aircraft sales, certification of new pilots, and the increased cost of aircraft operation/maintenance. Nationally, the culmination of the tragic events of September 11, 2001 and an economy in recession have resulted in stagnate general aviation growth for nearly a 10-year period. Corporate and business aviation have experienced slight increases in growth over the same period. Fractional ownership and corporate flying continue to increase as the on-demand charter industry serves as a feasible alternative to companies owning their own aircraft. A summary of historical activity at Fox Airfield is discussed in detail in Chapter 2.0, Aviation Forecasts. These activities include the number of annual aircraft operations and the number of based aircraft.

A based aircraft is defined as one that is permanently stationed at an airport. For the purposes of this airport master plan update, a based aircraft is considered one that is under an agreement between the aircraft owner and airport management. To determine the number of based aircraft at Fox Airfield, the following FAA documents were reviewed: the Terminal Area Forecast, the FAA 5010-1 form; and additionally, there were conversations with airport management. The number of based aircraft at Fox Airfield has decreased from 258 in 1996 to approximately 163 in 2010. Chapter 2.0 provides a detailed discussion and table depicting the annual number of historical based aircraft.

The number of aircraft operations has also declined since the 1996 master plan. In 1996, Fox Airfield accommodated approximately 110,500 aircraft operations. By 2009,

Fox Airfield operations had declined to approximately 60,000 annually. An aircraft operation is defined at either a takeoff or landing. Aircraft operations are classified as either itinerant or local. A local operation is conducted by an aircraft operating in the local traffic pattern, known to be departing or arriving from flights in local practices areas located within a 20-mile radius of the airport, and/or executing a simulated instrument approach or low pass at the Airport. An itinerant operation is one that does not include any of the characteristics of a local operation. Chapter 2.0 discusses the historical and the anticipated future aircraft operations for Fox Airfield in detail.

1.7 Local Land Use Plans and Regulations

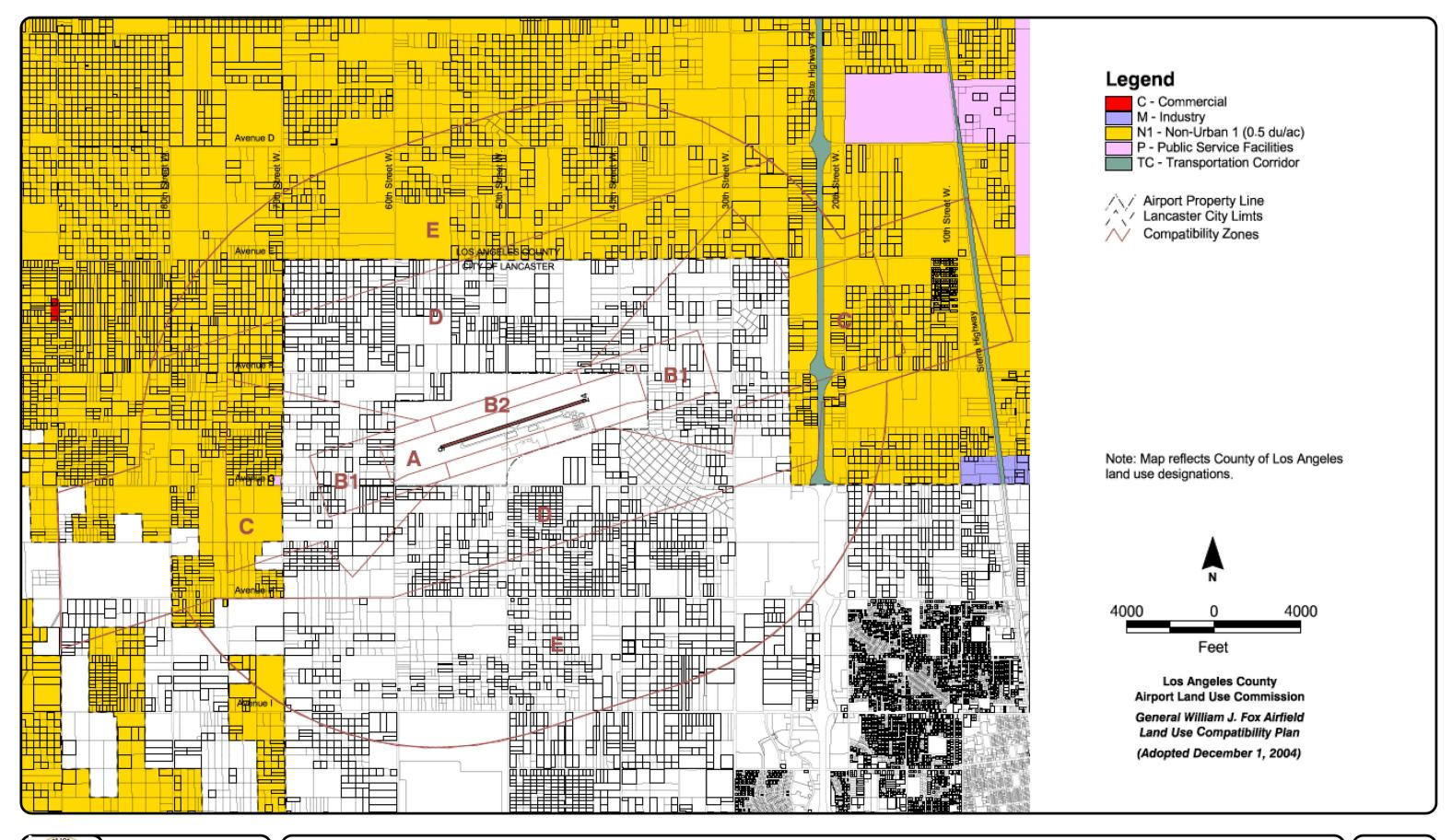
The County of Los Angeles Airport Land Use Commission implements state law (Public Utilities Code) regarding public airports and surrounding land use compatibility. The County of Los Angeles Airport Land Use Plan applies to all airports in Los Angeles County, except for Fox Airfield, which is covered by the Fox Airfield Land Use Compatibility Plan (adopted December 1, 2004). State aeronautics law requires all airport-vicinity land use designations specified in local plans to be consistent with the airport land use compatibility criteria to the extent that the affected areas are not already developed. Fox Airfield and vicinity land uses are designated by the Antelope Valley Area Wide General Plan (County of Los Angeles, adopted December 1986), the City of Lancaster General Plan (adopted October 1997; revised December 2001), and the Fox Airfield Industrial Corridor Specific Plan (City of Lancaster, adopted March 1996). Land surrounding Fox Airfield is currently characterized by undeveloped desert land divided into many small parcels with scattered rural residential and industrial uses. Figure 1.10 depicts the Antelope Valley Area Wide General Plan Land Use Designations.²

Fox Airfield is generally located south of Avenue F, north of Avenue G, east of 60th Street, and west of 30th Street. The Airport is located within an area that is currently open space including a 56-acre park and recreation facility named Apollo Park located adjacent to the eastern limit of the Airport. A small church is located to the northeast of the Airport. The City of Lancaster General Plan characterizes land area directly adjacent to Fox Airfield as light industrial with small areas of land to the northeast and southwest designated as heavy industrial land use. Land to the north and the northwest of Fox Airfield is designated as urban residential land use. Land to the south and the southeast of Fox Airfield is designated as urban residential. Small portions of the land to the southwest of Fox Airfield are also characterized as multifamily residential and commercial use. **Figure 1.11** refers to the City of Lancaster General Plan Land Use Designations.

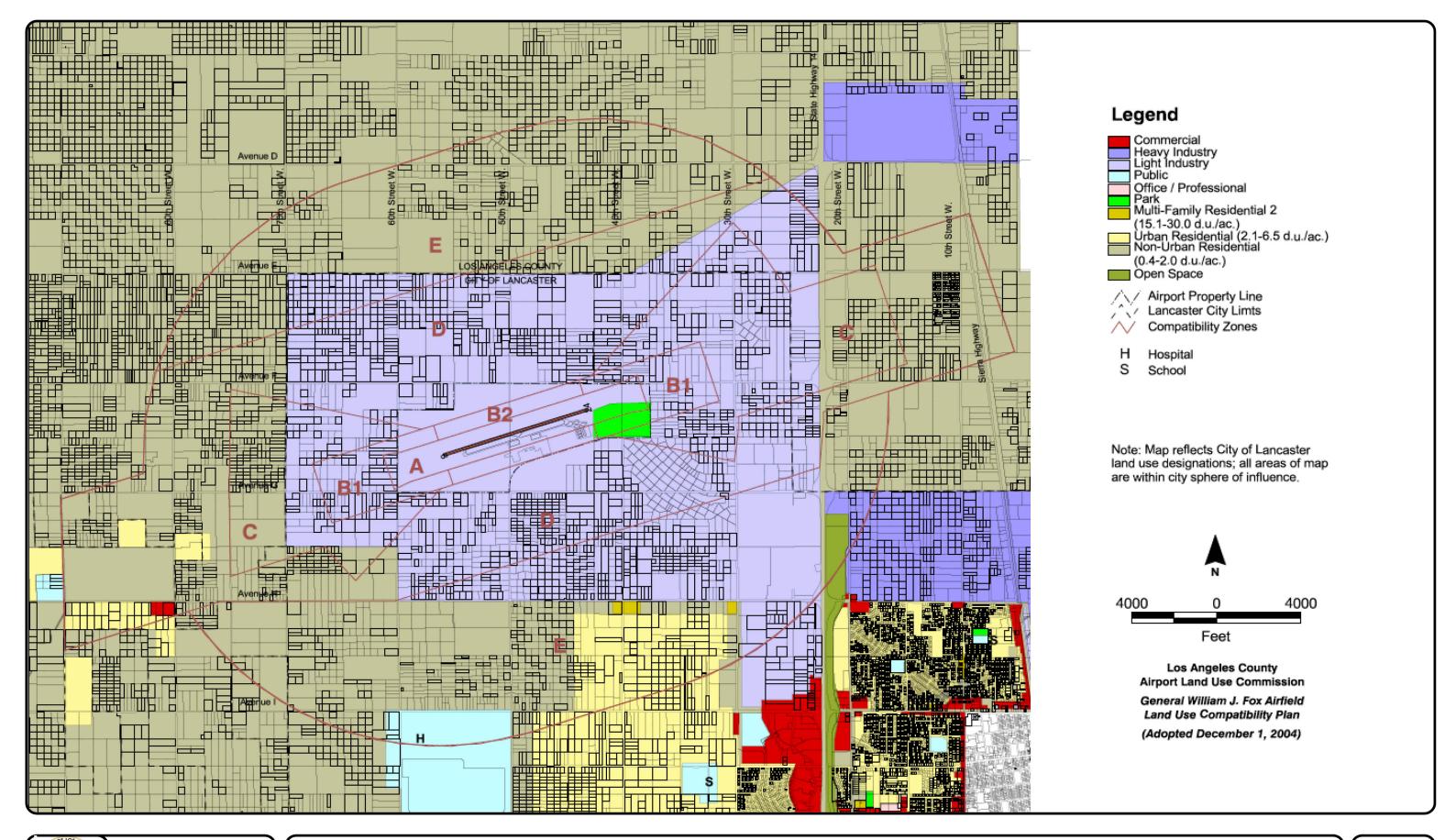
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Los Angeles County Department of Regional Planning, 2010. Los Angeles County Airport Land Use Commission webpage. Accessed at http://planning.lacounty.gov/aluc on March 15, 2010.

Los Angeles County Airport Land Use Commission, 2004. General William J. Fox Airfield Land Use Compatibility Plan. Adopted December 1, 2004.









1.8 Environmental Resources

The topics for the environmental resources overview are based on Federal guidelines contained in FAA Orders 1050.1E (June 8, 2004) and 5050.4B (April 28, 2006) and include 20 specific impact categories (similar to categories based on CEQA guidelines). The FAA Environmental Desk Reference for Airport Actions (October 2007) and FAA Advisory Circular 150/5070-6B, Change 1 to Airport Master Plans (May 1, 2007) were also consulted. Some of the following discussions are based on the County of Los Angeles' General Plan Draft Update (released in 2008). The impact categories discussed in the following environmental overview include:

- Air Quality
- Coastal Barriers
- Coastal Zone Management
- Compatible Land Use
- Construction Impacts
- Department of Transportation Act, Section 4(f)
- Farmlands
- Fish, Wildlife, and Plants
- Floodplains
- Greenhouse Gas Emissions
- Hazardous Materials
- Historical, Architectural, Archaeological, and Cultural
- Light Emissions and Visual Effects
- Natural Resources and Energy Supply
- Noise
- Socioeconomic, Environmental Justice, and Children's Health and Safety Risks
- Solid Waste
- Water Quality
- Wetlands, Jurisdictional or Non-Jurisdictional
- Wild and Scenic Rivers

1.8.1 Air Quality

The United States Environmental Protection Agency (USEPA) establishes National Ambient Air Quality Standards (NAAQS) for six principle pollutants, commonly referred to as the criteria pollutants. These six criteria pollutants include carbon monoxide, lead, nitrogen dioxide, particulate matter, sulfur dioxide and ozone. The USEPA also determines whether an area is in attainment with NAAQS. Based on current information, no impacts to air quality are anticipated; however, an air quality review will be conducted during the development of the alternatives analysis stage of this master plan update.

1.8.2 Coastal Barriers

Impacts expected on coastal barriers are either non substantial or nonexistent because Fox Airfield is greater than 50 miles from the Pacific Ocean and is not located near a coastal barrier.

1.8.3 Coastal Zone Management

Impacts expected on coastal zone management are either non substantial or nonexistent because Fox Airfield is greater than 50 miles from the Pacific Ocean and is not located within a coastal zone.

1.8.4 Compatible Land Use

As noted in Section 1.7, land use surrounding the Airport is generally compatible with aviation activities at Fox Airfield. Both the Antelope Valley Area Wide General Land Use Plan and City of Lancaster General Plan have identified the need to protect land surrounding the Airport by zoning much of this area as light industrial or public (park) open space. See Figures 1.10 and 1.11. A review of compatible land use will also be conducted during the alternatives analysis to identify any potential impacts resulting from proposed improvements to Fox Airfield.

1.8.5 Construction Impacts

Construction impacts are yet to be determined. Once alternatives for future development at Fox Airfield have been developed, construction impacts can be assessed. It should be noted that Best Management Practices (BMPs) will be incorporated whenever practical to limit impacts resulting from construction.

1.8.6 Department of Transportation Act, Section 4(f)

Section 4(f), as part of the Department of Transportation Act (1966), requires that special efforts be taken "to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites". Therefore, a review of the impacts that the proposed airport improvements may have on the following resources is required.

Apollo Community Regional Park is located immediately east, adjacent to Fox Airfield. Apollo Park is a publicly owned park and is considered a Section 4(f) property.³ Apollo Park is located north of West Avenue F-8 and approximately 0.75 miles west of 30th

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U.S. Federal Highway Administration, 2010. Section 4(f) at a Glance webpage. Accessed at http://www.environment.fhwa.dot.gov/4f/4fAtGlance.asp on March 9, 2010.

Street West at 4555 West Avenue G in the City of Lancaster, California. This 56-acre park is managed by the County of Los Angeles Parks and Recreation and is part of the Antelope Valley Waste Water Reclamation Project. Three recreation lakes (Aldrin, Armstrong and Collins) occupy 26 acres of the park while the other 30 acres are landscaped. The lakes are stocked with trout from November to April and with catfish in the warm months. A Fishing License is required for persons 16 years and older. Apollo Park has no structured program activities, but hosts a number of fishing derbies throughout the year. The park is open daily from 9 a.m. to Sunset. Potential Section 4(f) impacts will be reviewed during the development of the alternatives analysis. Careful effort will be taken to avoid development that would affect the Apollo Community Regional Park.

1.8.7 Farmlands

Impacts expected on farmland are either non substantial or nonexistent, because no farmland is located in the immediate vicinity of Fox Airfield. **Figure 1.12, Los Angeles Important Farmland 2008**, shows that Airport property consists of land categorized as *Urban and Built-up Land* and *Other Land* by the California Farmland Mapping and Monitoring Program. Impacts associated with proposed development at the Airport are not anticipated but will be reexamined during development of the alternatives analysis.

1.8.8 Fish, Wildlife, and Plants

According to the California Natural Diversity Database (CNDDB), the following sensitive species are documented to occur in the quadrangle surrounding the Airport:

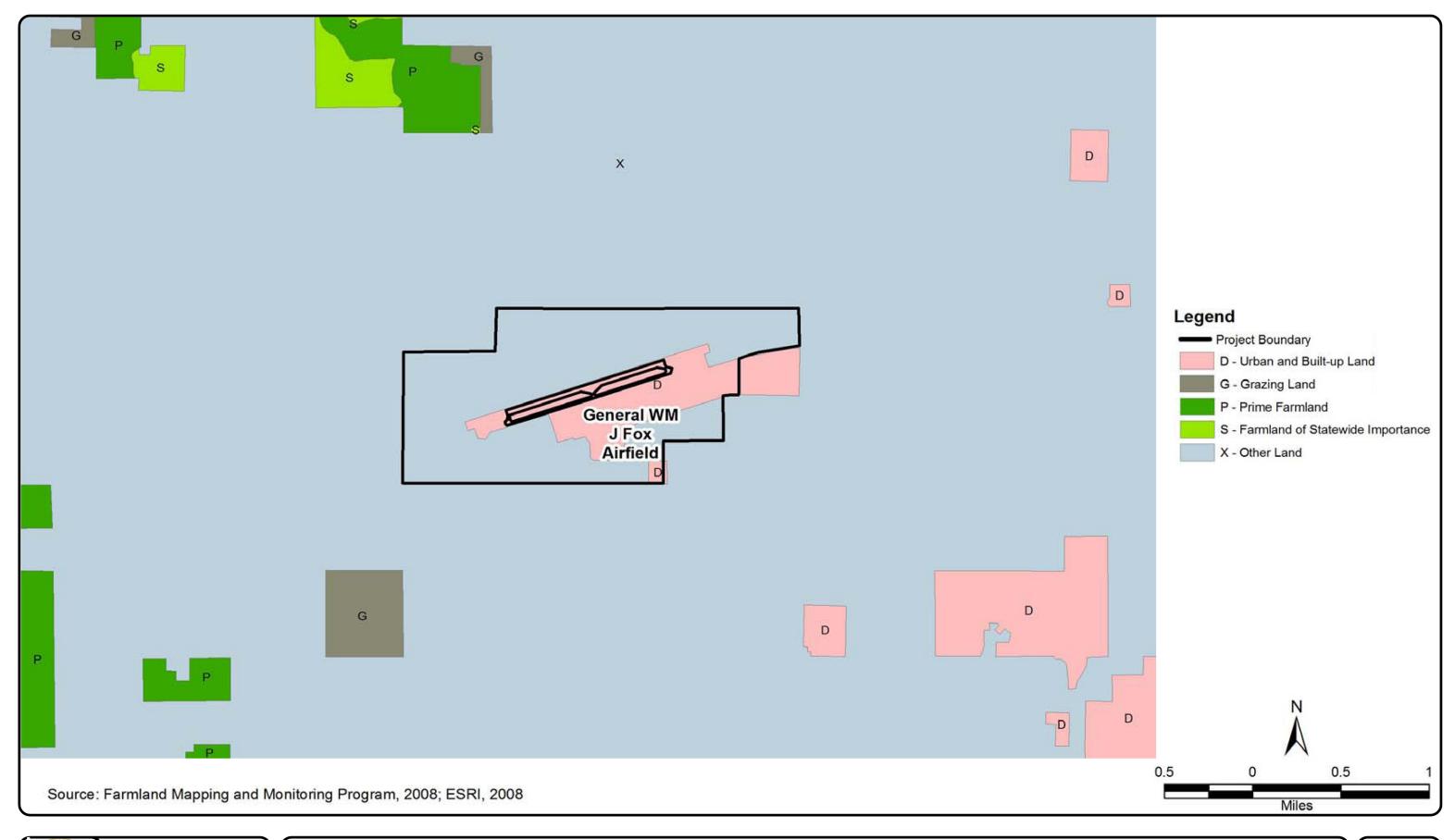
- Burrowing Owl (Athene cunicularia)
- Swainson's Hawk (Buteo swainsoni)
- Desert Tortoise (Gopherus agassizii)
- Mohave Ground Squirrel (Xerospermophilus mohavensis)
- Tricolored Blackbird (Agelaius tricolor)
- Silvery Legless Lizard (*Anniella pulchra pulchra*)
- Short-eared Owl (Asio flammeus)
- Mountain Plover (Charadrius montanus)
- Coast Horned Lizard (*Phrynosoma blainvillii*)
- American Badger (*Taxidea taxus*)
- Le Conte's Thrasher (*Toxostoma leconteri*)
- Short-joint Beavertail (Opuntia basilaris var. brachyclada)
- Horn's Milk-vetch (Astragalus hornii var. hornii)
- Lancaster Milk-vetch (Astragalus preussii var. laxiflorus)
- Alkali Mariposa-lily (*Calochortus striatus*)

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Los Angeles County Parks and Recreation, 2010. *Apollo Community Regional Park* webpage. Accessed at http://parks.lacounty.gov/Parkinfo.asp?URL=cms1 033245.asp&Title=Apollo on March 9, 2010.

- Parry's Spineflower (Chorizanthe parryi var. parryi)
- Barstow Woolly Sunflower (Eriophyllum mohavense)
- Red Rock Poppy (Eschscholzia minutiflora ssp. twisselma)
- Pale-yellow Layia (Layia heterotricha)

Based on the results of the CNDDB search, we recommend that the site be surveyed and evaluated for potential biological resources that may occur within areas planned for future development and to determine if future development could potentially affect any biological resources occurring within the defined limits of disturbance.





Los Angeles Important Farmland 2008

FIGURE 1.12

1.8.9 Floodplains

Impacts on floodplains are expected to be non substantial. **Figure 1.13, Flood Insurance Rate Map 06037C0405F** shows the southwestern portion of Fox Airfield to be located in Zone X (shaded), described as a moderate flood hazard area between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood due to potential flooding from an unnamed creek located at the southwest portion. The majority of the Airport is located in Zone X (unshaded), described as an area of minimal flood hazard which are outside the Special Flood Hazard Area and higher than the elevation of the 0.2-percent-annual-chance flood.⁵

Potential flood hazards are not expected to cause extensive damage that would interrupt airport service or use of the runway or other proposed airport facilities for long periods. At most, interruption of services or use of facilities is expected to last for only a few hours. Airport improvements are not expected to result in a notable, adverse effect on the floodplain's natural and beneficial values.

1.8.10 Greenhouse Gas Emissions

Potential impacts resulting from an increase in greenhouse gas emissions are not anticipated because of proposed airport improvement projects at Fox Airfield. While these improvements, if any, have not yet been determined, any recommendation to develop or promote carbon generation facilities will be scrutinized to balance the needs of the Airport with the natural environment.

1.8.11 Hazardous Materials

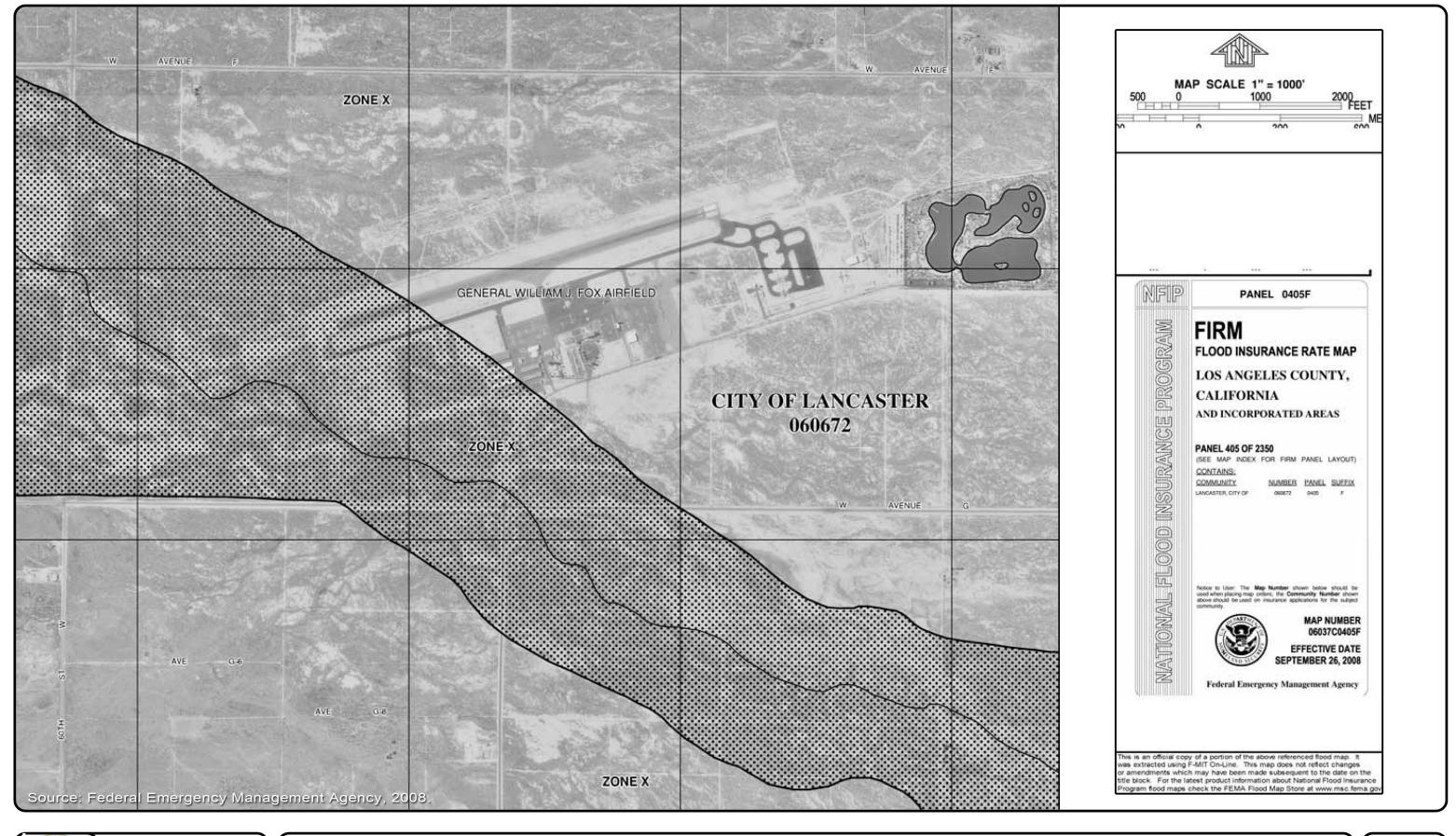
Fox Airfield is not listed on the Environmental Protection Agency's *National Priorities List* (NPL). The NPL is the "list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation." Additionally, the California Department of Toxic Substances Control's EnviroStor database does not show Fox Airfield to be a State Response or Voluntary Cleanup site.⁷

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Federal Emergency Management Agency, 2010. Flood Zones, Definition/Description. Accessed at http://www.fema.gov/plan/prevent/floodplain/nfipkeywords/flood_zones.shtm on March 10, 2010.

United States Environmental Protection Agency, 2010. National Priorities List (NPL) webpage. Accessed at http://www.epa.gov/superfund/sites/npl/index.htm on March 10, 2010.

California Department of Toxic Substance Control, 2010. EnviroStor Database. Accessed at <a href="http://www.envirostor.dtsc.ca.gov/public/map.asp?global_id=&x=119.1357421875&y=37.82280243352756&zl=5&ms=640,480&mt=m&f-indaddress=True&city=LANCASTER&zip=&county=&federal_superfund=true&state_response=true&voluntary_cleanup=true&school_cleanup=true&corrective_action=true&permit_site=true&permit_and_ca_site=true on March 10, 2010.





Flood Insurance Rate Map 06037C0405F

FIGURE 1.13

1.8.12 Historical, Architectural, Archaeological, and Cultural

Section 106 coordination with the appropriate Federal, State and local agencies is a requirement to determine potential impacts to historical, architectural, archaeological and/or cultural impacts resulting from the implementation of proposed airport improvements. Once alternatives for Fox Airfield have been developed, a review of these potential impacts will begin. Please note that an initial review of the local land use plans including Fox Airfield did not identify the presence of any known historical, architectural, archaeological, and/or cultural resource within the current airport property line.

1.8.13 Light Emissions and Visual Effects

Airport improvements at the Airport are not expected to create unusual lighting conditions that would be considered sufficient to warrant a special study. Normally, impacts of light improvements are not substantial. Lighting improvements related to runways or taxiways are identified as categorical exclusions under FAA Order 5050.4B, and do not require any formal environmental assessment.

Construction and implementation of the master plan improvements will not substantially impede or block views of the east adjacent Apollo Community Regional Park or the Angeles National Forest, located more than seven miles south southwest of Fox Airfield. The Airport and vacant lands to the north, south, and west are relatively flat and do not contain substantial scenic resources.

1.8.14 Natural Resources and Energy Supply

No significant impacts to natural resources or energy supply are anticipated with future improvements to Fox Airfield. If any major changes to facilities and equipment increase utility usage, power companies or other suppliers shall be contacted to determine if projected demands can be met by existing and planned source facilities.

1.8.15 Noise

The effect of aircraft noise on people who live and work near airports is an issue of national concern. Expansion of U.S. airports to meet growing transportation demands combined with increased residential development in many communities has created the need to coordinate airport planning with community development. Potential impacts resulting from noise have yet to be determined; however, it is anticipated that any proposed improvements to the Airport would not create a substantial increase in noise to surrounding land use given the surrounding land use and sparse population. Noise contours will be developed for the recommended development alternative in preparation for the development of the on-Airport land use plan. Three noise contours will be

prepared for the 55 CNEL, 60 CNEL, and 65 CNEL noise levels over the 5-, 10-, and 20-year time periods.

1.8.16 Socioeconomic, Environmental Justice, and Children's Health and Safety Risks

Impacts on socioeconomic issues are expected to be non substantial or nonexistent because no residential areas are located near Fox Airfield. According to the Fox Airfield Industrial Corridor Specific Plan (May 31, 1996), the existing roadway system within the Specific Plan study area operates at a high Level of Service (LOS A) due to sparse development. A LOS A is described as conditions where traffic flows at or above the posted speed limit and all motorists have complete mobility between lanes. A traffic impact analyses may be required prior to the implementation of future improvements on the Airport site.

Airport improvements will not require relocation of any housing or community businesses. Airport improvements are not expected to reduce the LOS of roads serving the Airport or to result in a loss in community tax base. Improvements to the Airport may include new facilities such as new hangars and aircraft parking, which serve private businesses are anticipated to increase the local tax base.

Impacts on environmental justice issues are expected to be non substantial or nonexistent because no residential areas that would have minority or low-income populations are located near the Airport.

Although Apollo Community Regional Park is adjacent to the Airport, health and safety impacts to children are expected to be non substantial because there have been no known aircraft accidents affecting Apollo Park in the past. Health and safety risks from aircraft are not expected to increase due to the proposed improvements to Fox Airfield.

1.8.17 Solid Waste

Solid waste generated at the Airport is taken to the nearby Chiquita Landfill located in the City of Lancaster. No landfills are located adjacent to the Airport; therefore, no impacts to birds or fowl are anticipated. Waste from construction activities may result in some additional solid waste; however, any such impact would be temporary.

1.8.18 Water Quality

Impacts to water quality are not yet known. Potential water quality impacts will be identified once the alternatives analysis has begun. It should be noted that potential impacts to existing waterways located on the Airport would be avoided if possible.

1.8.19 Wetlands, Jurisdictional or Non-Jurisdictional

Impacts expected on wetlands are either non substantial or nonexistent because no wetlands are located on or near Fox Airfield.

1.8.20 Wild and Scenic Rivers

An unnamed creek is located on the southwest portion of the Airport property, as shown in Figure 1.13, Flood Insurance Rate Map 06037C0405F. However, impacts expected on wild and scenic rivers are either non substantial or nonexistent because Fox Airfield is not located near any wild and scenic rivers.

1.9 NAVAIDS

Navigational aids (NAVAIDS) are any sort of marker that aids a pilot during navigation. An inventory of NAVAIDS and air traffic facilities located on or near the Airport are included below:

- Airport Traffic Control Tower (ATCT): Fox Airfield is equipped with an ATCT, which operates daily from 7:00 a.m. until 9:00 a.m. local time, 7 days per week. The ATCT is the central facility in the Fox Airfield air control system. Communication systems for air and ground, visual signaling, and other devices are used to provide safe and expeditious movement of all air traffic. Ground movement of aircraft and vehicles on the runway/taxiway system are also under the control of the ATCT. The Fox Airfield ATCT is classified as a contract tower as it is not staffed by FAA air traffic controllers, but rather a private company, which is certified by the FAA.
- Non-Directional Beacon (NDB): a low/medium frequency or ultrahigh frequency (UHF) radio beacon transmitting non directional signals, which the pilot of an aircraft equipped with directional finding equipment can determine the bearing to or from the radio beacon. The Fox Airfield NDB is located on the Airport and is used for the NDB approach for the Airport. The NDB approach is usable within a 25 nautical mile radius of the Airport.
- Very-High Frequency Omni-Directional Range/Tactical Air Navigation (VORTAC): A type of radio navigation system, which broadcasts a very-high frequency radio signals in which the pilot of an aircraft equipped with directional finding equipment can receive a magnetic bearing from a station. This navigational aid provides azimuth (direction) and distance information to the pilot. The Palmdale (PMD) VORTAC is located approximately 10 nautical miles southeast of Fox Airfield and is NAVAID used for the circling, VOR published approach. The VORTAC is also used for enroute navigation. The Palmdale VORTAC is designated as a High Altitude facility and is usable from 1,000 feet

AGL to 14,500 feet AGL. One other VORTAC facility near Fox Airfield is the Lake Hughes (LHS) located 19 nautical miles west.

- Automated Surface Observation Station (ASOS): is a system of weather reading instruments, which collects weather conditions at the Airport. This system provides information on altimeter setting, winds, temperature, dew point, density altitude, visibility, and cloud/ceiling. The ASOS at Fox Airfield provides Airport Traffic Control Tower personnel with weather information which is relayed to pilots either verbally or via the Automated Terminal Information System (ATIS) radio broadcast.
- Automated Weather Observation Station (AWOS): is a system of weather reading instruments, which collects weather conditions at the Airport and broadcasts such information to pilots. This system provides information on altimeter setting, winds, temperature, dew point, density altitude, visibility, and cloud/ceiling. The AWOS at Fox Airfield provides pilots with weather information, which is accessible via the telephone and Internet, or, when the Airport Traffic Control Tower is closed, the information is broadcast over the ATCT radio frequency.

The closest FAA Flight Service Station (FSS) is located at the Riverside Municipal Airport. The following services are provided by the Riverside FSS:

- VFR advisory service
- Pilot briefings
- Flight plan assistance
- Issuance of Notices to Airmen (NOTAMs)
- Dissemination of Pilot Reports (PIREPs)
- Issuance of weather data and National Airspace System (NAS) information

In addition to the aforementioned NAVAIDS, Fox Airfield is also equipped with the following visual aids. These visual aids assist pilots in locating the runway at night or during periods of low visibility:

- Precision Approach Path Indicator (PAPI): provides vertical visual glide path
 information to pilots approaching the runway. PAPIs consist of two, three or four
 boxes of lights that are typically located on the left side of the runway. Runway 6
 and 24 are equipped with a four-box PAPI. The PAPI system can be seen for up
 to five miles during daylight hours and up to 20 miles during nighttime hours.
 Approach angles for both runway ends are set at 3.0 degrees.
- Runway End Identifier Lights (REIL): are two synchronized flashing lights, one
 on each side of the displaced runway threshold. REILs provide identification of
 the runway end to approaching pilots. Runways 6 and 24 are equipped with
 REILs.

- **Medium Intensity Runway Lights (MIRL):** are used to outline the edges of runways during periods of darkness or poor visibility. Runway 6-24 is equipped with MIRLs.
- Rotating Beacon: is a visual aid that indicates the location of an airport.
 Rotating beacons are electronic devices that emit alternating white and green
 beams of light in a 360-degree pattern. The rotating beacon for Fox Airfield is
 located just north of the former Flight Service Station and meets FAA
 specifications.