

**SECTION 4**

**AVIATION FORECASTS**



## SECTION 4 AVIATION FORECASTS

### INTRODUCTION

This section presents the forecasts of aviation activity for Fullerton Municipal Airport. These projections represent the future traffic levels to be accommodated at the airport. The forecasts developed for this study cover the period between 2003 and 2023. Intermediate year forecasts are also provided for 2008 and 2013. The forecasts serve as the basis for determining the phased development of facility improvements for the short, intermediate and long-range planning periods.

The forecast analysis includes projections of:

- Total based general aviation aircraft by type (single engine piston, multi-engine piston, turbine powered, and helicopters)
- Total annual aircraft operations by type of operation (local versus itinerant, and instrument operations)
- Aircraft operations in the peak hour
- Annual aviation fuel flowage

There has been no scheduled passenger service at the airport since 1979, and none is anticipated during the planning period.

Due to uncertainties in the aviation industry, long-term forecasting of airport activity is approximate in nature. However, the forecasts described here were developed using the best available information and will serve the useful function of providing guidance on future airport facility needs.

### FULLERTON MUNICIPAL AIRPORT SERVICE AREA

#### Location of Airport Service Area

The listing of City of Fullerton based aircraft tiedown and hangar customers was examined to determine where the majority of based aircraft owners live. Eighty-nine percent live in north Orange County (cities ranging to the south as far as Newport Beach and Tustin) and the southeastern part of Los Angeles County (including such cities as Whittier, Downey, Santa Fe Springs, Norwalk, La



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Mirada, Cerritos and Long Beach). This area, shown in Figure 4-1, is identified as the primary Airport Service Area (ASA).

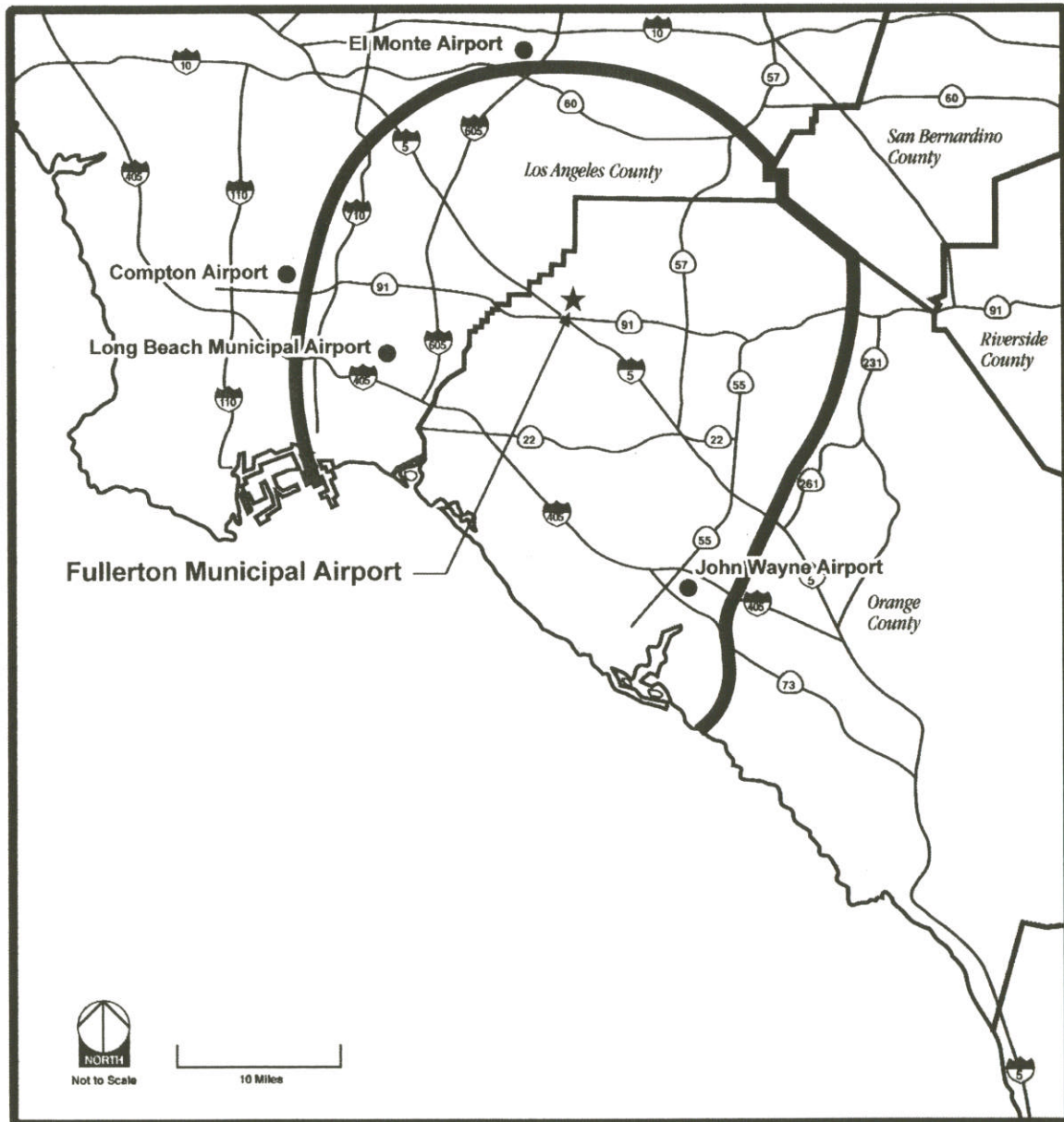


Figure 4-1  
Primary Airport Service Area



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## **Aircraft Based at Airports in or Near the Service Area**

There are four other public-use airports in or near the ASA: Long Beach Municipal Airport (nine miles southwest), Compton Airport (13 miles northwest), El Monte Airport (13 miles northwest), and John Wayne Airport (13 miles southeast). Fullerton Municipal Airport accounts for about 16 percent of the based aircraft at the five public-use airports in or near the service area.

## **Socioeconomic Base of the Service Area**

The owners of 70 percent of the City's based aircraft reside in the Orange County portion of the ASA. The demographic growth in this area therefore is used to represent the entire ASA (see Table 4-1 for data on the Orange County portion of the ASA). Continued modest growth in population and employment is projected for this area. Population growth is expected to average only 0.6 percent a year to 2025. Employment growth over this 25-year period is projected to average 0.9 percent a year.

**Table 4-1  
Socioeconomic Projections for the Orange County Portion  
Of the Fullerton Municipal Airport Service Area [a]**

Item	Actual	Forecast		
	2000	2005	2015	2025
Population	2,146,990	2,253,011	2,384,449	2,475,602
Employment	1,195,578	1,281,133	1,412,092	1,499,964

*[a] Source: Center for Demographic Research, California State University, Fullerton, Orange County Projections, 2000. Includes data for Orange County Community Analysis Areas 1 through 49.*

## **FORECAST OF BASED AIRCRAFT**

The growth in the number of aircraft based at Fullerton Municipal is projected to follow national trends in general aviation aircraft growth.



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## Nationwide Trends in General Aviation Growth

The number of general aviation fixed-wing piston and turbine powered aircraft and helicopters (exclusive of experimental and other aircraft) based in the nation is forecast by the FAA to grow from 189.1 million in 2001 to 197.0 million by 2013, an average annual increase of 0.3 percent (Table 4-2). The FAA reports that “the turnaround in the general aviation industry that began with the passage of the General Aviation Revitalization Act in 1994 appears to have slowed considerably in 2001. While the slowdown in U.S. economic activity can be partially blamed for the slowing of demand for general aviation products and services, the events of September 11, 2001 and their aftermath are expected to have the greatest and longest impact on the general aviation industry. The slowing demand for general aviation products was confirmed when the General Aviation Manufacturers Association (GAMA) released its report on the industry’s third quarter billings and shipments. The report showed that aircraft shipments were down 13.4 percent for the third quarter and 6.2 percent year-to-date.”<sup>1</sup>

**Table 4-2**  
**FAA Forecast of Active General Aviation**  
**Aircraft in the U.S. [a]**

	Aircraft (Thousands)			
	Fixed Wing		Helicopter	Total
	Piston	Turbine		
<b>Historical</b>				
1994	142.2	8.0	4.7	154.9
1995	152.8	9.6	5.8	168.2
1996	153.6	10.1	6.6	170.3
1997	156.1	10.8	6.8	173.7
1998	163.0	12.2	7.4	182.6
1999	164.0	12.7	7.6	184.3
2000	170.5	12.8	7.2	190.5
2001	169.0	12.9	7.2	189.1
<b>Forecast</b>				
2002	167.3	13.0	7.0	187.3
2003	166.7	13.2	7.0	186.7
2013	172.7	16.8	7.5	197.0

[a] Source: Federal Aviation Administration, *FAA Aerospace Forecasts, Fiscal Years 2002-2013*, March 2002.

<sup>1</sup> Federal Aviation Administration, *FAA Aerospace Forecasts, Fiscal Years 2002-2013*, March 2002.



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## AVIATION FUEL FORECAST

### Aviation Gas (Avgas) Forecast

Avgas flowage is projected using historic ratios of fuel flowage to annual operations. From January 2001 to December 2001, an average of approximately 3.0 gallons of 100LL gasoline was pumped at the airport per annual aircraft operation. This average is assumed to continue into the future and is applied to the total number of forecast aircraft operations to arrive at the projected avgas flowage. Avgas pumped at the airport is estimated to increase from an average of 273,000 gallons between 2000 and 2001 to 275,000 gallons in 2008, 281,000 gallons in 2013, and 298,000 gallons in 2023 (Table 4-5).

### Jet-A Fuel Forecast

Jet-A fuel consumption is estimated by the same approach. In 2001 and 2002, an average of about 1.8 gallons of Jet-A fuel was pumped per annual aircraft operation. This average is also assumed to continue into the future. Jet-A fuel pumped at the airport is estimated to increase from an average of 165,000 gallons between 2000 and 2001 to 168,000 gallons in 2013, and 179,000 gallons in 2023 (Table 4-5).

**Table 4-5**  
**Aviation Fuel Flowage Forecast**  
**Fullerton Municipal Airport**

Item	Average	Forecast [b]		
	2000 - 2001 [a]	2008	2013	2023
Annual Operations	92,688	91,500	93,600	99,300
Aviation Gas				
Gallons per Operation	3.0	3.0	3.0	3.0
Total Gallons Pumped	274,000	275,000	281,000	298,000
Jet-A Fuel				
Gallons per Operation	1.8	1.8	1.8	1.8
Fuel Pumped (Gallons)	165,000	165,000	168,000	179,000

[a] Source: City of Fullerton.

[b] Source: P&D Aviation analysis.

