

A. GENERAL

The forecast of aviation demand establishes the nature and magnitude of aeronautical activity and the need for airport development for the ensuing planning period. The resulting forecasts will be used in the next chapter to determine facility requirements. The general aviation forecast provides projections of general aviation activity for based aircraft; based aircraft by type; local vs. itinerant total operations; and operations by aircraft type. The following phases of development are presented in this study:

- Phase I Short Term (0-5 years) 2002-2007
- Phase II Intermediate Term (6-10 years) 2008-2012
- Phase III Long Term (11-20 years) 2013-2022

The Virginia Air Transportation System Plan and FAA's Terminal Area Forecast were reviewed in preparation for developing the based aircraft forecast for Virginia Highlands Airport. The latest Airport Master Plan Update of 1996 (1996 AMP) was also reviewed. The most recent VATSP Draft and the TAF both list 55 based aircraft currently and for the foreseeable future. As acknowledged in Chapter One Inventory, we have documented 71 based aircraft at the airport in August 2002 (after the forecast was completed another based aircraft was added by the Airport and was not included in the study). Therefore, our forecast will use this documented figure as a starting point.

The 1996 AMP utilized a growth rate of 2.1% for based aircraft. In contrast, the VATSP Draft and the TAF have utilized a 0% growth rate for based aircraft. Using the actual based aircraft of 57 documented in 1996, and the actual based aircraft of 71 documented in this study yields an annual growth rate of 2.8%. Clearly, the issues of September 11, 2001 will impact general aviation for several years; however, the strong growth rate at VJI cannot be ignored. Therefore, for this study, a conservative growth rate of about 1% will be used. **Table 2-1** presents data on the historical based aircraft for VJI, and **Table 2-2** displays the forecast summary for the VATSP, TAF, and this ALP Update study.



**TABLE 2-1
VIRGINIA HIGHLANDS AIRPORT
HISTORICAL BASED AIRCRAFT**

YEAR	1996 MASTER PLAN UPDATE	VATSP	TAF
1975	26		
1980	44		
1985	51		
1990	64	60	
1994	57		
1995		57	
1996			55
2000		55	55

Source: Delta Airport Consultants, Inc. Analysis
 1996 Master Plan Update
 APO Terminal Area Forecast (www.apo.data.faa.gov) accessed July 2002
 Draft VATSP Update 2000

**TABLE 2-2
VIRGINIA HIGHLANDS AIRPORT
FORECAST OF BASED AIRCRAFT**

YEAR	1996 MASTER PLAN UPDATE	VATSP	TAF	STUDY
2002		55	55	71
2005	75	55	55	
2007			55	74
2010	83			
2012			55	76
2015	93	55	55	
2020		55		
2022				83

Source: Delta Airport Consultants, Inc. Analysis
 1996 Master Plan Update
 APO Terminal Area Forecast (www.apo.data.faa.gov) accessed July 2002
 Draft VATSP Update 2000



B. BASED AIRCRAFT BY TYPE

The mix of based aircraft was generated to reflect historical trends at the airport. **Table 2-3** presents data on the average annual growth rate of based aircraft by type since the latest AMP update of 1996. A breakdown of future based aircraft by type is presented in **Table 2-4** and **Table 2-5**. The forecast for Virginia Highlands Airport differs from the VATSP draft and the FAA's TAF because both of the reports present a zero percent growth rate. As presented in Table 1-4 of Chapter One, there are 71 based aircraft at VJI. The documented number of 71 is much larger than the VATSP and TAF number of 55. Therefore, the number 71 was used as the based aircraft starting figure for this study. Since the 1996 AMP, the airport has attracted four Cessna Citation Business jets and a King Air 200. Other corporations have contacted the Airport Manager about available space; however, no hangar space is currently available for larger aircraft.

**TABLE 2-3
VIRGINIA HIGHLANDS AIRPORT
HISTORICAL BASED AIRCRAFT BY TYPE**

	SE & ME PISTON	ME TURBO- PROP & JET	ROTORCRAFT	OTHER*	TOTAL
1996 AMP Update	48	1	3	5	57
2002 Study	57	5	4	5	71
Average Annual Growth Rate	2.20%	22.30%	3.70%	0.00%	2.80%

* Denotes ultra-lights, gliders, and unmanned aircraft.

Source: Delta Airport Consultants, Inc. Analysis
1996 Master Plan Update (1994 Inventory Data)



**TABLE 2-4
VIRGINIA HIGHLANDS AIRPORT
FORECAST OF BASED AIRCRAFT BY TYPE**

YEAR	SE PISTON	ME PISTON	ME TURBO- PROP	ME JET	ROTOR CRAFT	OTHER *	TOTAL
2002	49	8	1	4	4	5	71
2007	50	8	1	5	5	5	74
2012	51	9	1	5	5	5	76
2022	52	10	2	6	7	6	83

* Denotes ultra-lights, gliders, and unmanned aircraft.

Source: Delta Airport Consultants, Inc. Analysis

**TABLE 2-5
VIRGINIA HIGHLANDS AIRPORT
BASED AIRCRAFT BY TYPE (Average Annual Growth Rate Percent)**

PERIOD	SE PISTON	ME PISTON	ME TURBO- PROP	ME JET	ROTOR CRAFT	OTHER*	TOTAL
2002-2007	0.30%	1.00%	5.00%	4.60%	4.60%	0.00%	0.83%
2008-2012	0.30%	1.50%	5.00%	0.00%	0.00%	0.00%	0.68%
2013-2022	0.20%	1.50%	5.00%	1.80%	3.40%	0.90%	0.78%

* Denotes ultra-lights, gliders, and unmanned aircraft.

Source: Delta Airport Consultants, Inc. Analysis

C. AIRCRAFT OPERATIONS BY TYPE

An aircraft operation is defined as either a take-off or landing. A touch and go (landing and take-off without a full stop) is counted as two operations. This section will initially quantify total general aviation operations. The next section identifies the share of total operations attributed to local and itinerant operations.

The forecast of general aviation operations was derived using the 2000 Virginia Air Transportation System Plan Update (VATSP). The VATSP operation forecast for VJI in the year 2000 and 2005 was 22,527 and 24,292 respectively. The annual growth rate during the five year forecast period was 1.5 percent. Using the VATSP growth rate of 1.5 percent, the number for 2002 airport operations was interpolated to be 23,200. This figure and the VATSP growth rate of 1.5 percent were both used to help develop the operations forecast for this study. **Table**



2-6 presents the historical general aviation operations at Virginia Highlands Airport and Table 2-7 presents the forecast of general aviation operations for the planning period.

TABLE 2-6
VIRGINIA HIGHLANDS AIRPORT
HISTORICAL GENERAL AVIATION OPERATIONS

YEAR	1996 MASTER PLAN UPDATE	TAF
1980	19,339	
1985	17,567	
1990	14,600	
1993	12,600	
1996		15,000
2000		15,000

Source: Delta Airport Consultants, Inc. Analysis
 1996 Master Plan Update (1994 Inventory Data)

TABLE 2-7
VIRGINIA HIGHLANDS AIRPORT
FORECAST OF GENERAL AVIATION OPERATIONS

YEAR	VATSP	TAF	STUDY
2000	22,527	15,000	
2002			23,200
2005	24,292	15,000	
2007		15,000	25,050
2012		15,000	27,000
2022			31,500

Source: Delta Airport Consultants, Inc. Analysis
 APO Terminal Area Forecast (www.apo.data.faa.gov) accessed July 2002
 Draft VATSP Update 2000

The 2000 Virginia Air Transportation System Plan Update indicates a projected trend in operations toward a heavier, more sophisticated aircraft fleet. It is anticipated that during the planning period this trend will continue. It is expected that future operations by aircraft type will generally follow the based aircraft forecast, but reflect an increasing number of jet operations. **Table 2-8** presents data on the average annual growth rate of operations by aircraft type from the 2000 VATSP Update. A breakdown of future operations by aircraft type is presented in **Table 2-9** and **2-10**.

