

Chapter 3

Airport Activity Levels

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This chapter summarizes information that was included in the *Draft ESPR* for airport activity levels and provides responses to scoping elements identified in the MEPA Certificate related to consideration of alternative descriptors for the forecast scenarios, the procedures that new-entrant airlines must follow before initiating service at Hanscom Field, coordination with forecast efforts for Logan and the New England Regional Airport System Plan, the landing fee structure at Hanscom Field, and the number of nighttime (11:00 p.m. to 7:00 a.m.) operations at Hanscom Field.

Summary of the *Draft ESPR*

Chapter 3 of the *Draft ESPR* reported on aviation activity trends at Hanscom Field, compared actual 2000 activity levels to forecast activity from the 1995 *GEIR*, and presented new forecasts for 2005 and 2015. Historic aviation activity measures for Hanscom Field were updated through the year 2000 and supplemented with available data for 2001. Activity measures presented included: aircraft operations, operations by aircraft class, and scheduled airline passengers. The *ESPR* forecasts include projections of aircraft operations, regional airline passengers, and based aircraft for two planning scenarios - the Moderate Growth and High Growth scenarios - and two forecast years - 2005 and 2015. The forecasts assume that Hanscom Field primarily accommodates GA operations, with limited military, commercial passenger and cargo aircraft operations. The *ESPR* forecasts are intended to provide a range of what could happen at Hanscom Field using certain assumptions, not necessarily what will happen. The activity level projections were used to evaluate potential future environmental impacts and facility needs. The key findings of the *Draft ESPR* are summarized below:

- Hanscom Field accommodated 212,400 aircraft operations in 2000. From 1995 to 2000 total aircraft operations grew at an average annual rate of 2.2 percent. Jet aircraft operations increased by an average of 16.1 percent per year. (See Table 3-1)
- In 2000, general aviation (GA) accounted for 96.3 percent of aircraft operations at Hanscom Field. Scheduled airline operations were only 3.1 percent of aircraft activity and the military were less than one percent. (See Figure 3-1)
- Shuttle America commenced scheduled passenger services at Hanscom Field in September 1999. In 2000, Shuttle America carried 162,000 passengers and performed 6,600 operations with 50-seat turboprop aircraft.

Table 3-1 History of Hanscom Field Aircraft Operations (7 a.m. to 11 p.m.) - 1990 to 2001

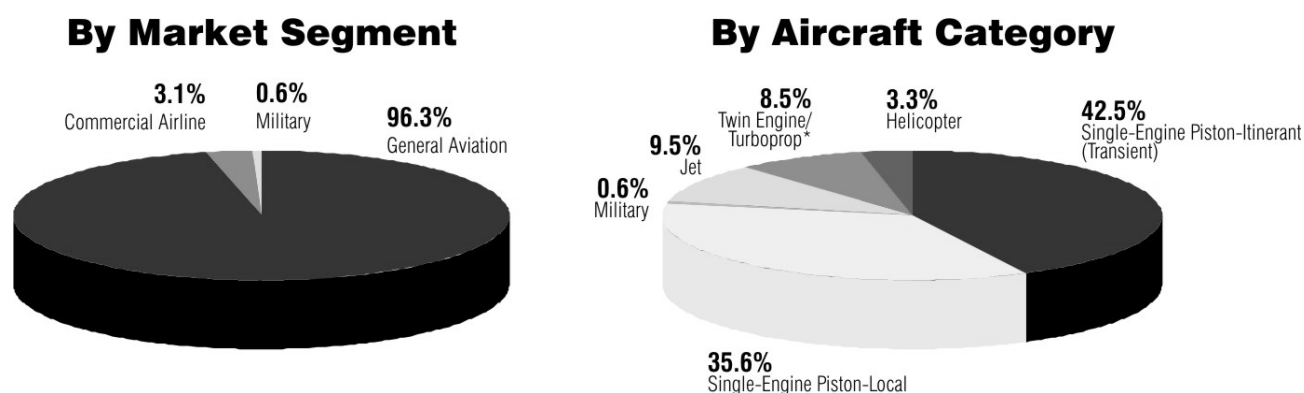
Year	SE Piston Local	SE Piston Itinerant	Twin Engine/ Turbo	Jet	Total Business	Helicopter	Military	Total GA and Military	Regional Airline Turboprop	Total Airport
Operations										
1990	76,732	124,756	13,240	8,630	21,870	7,262	2,058	232,678	-	232,678
1991	80,805	102,478	12,142	8,368	20,510	6,942	2,902	213,637	-	213,637
1992	83,427	92,328	10,519	8,105	18,624	6,834	2,542	203,755	-	203,755
1993	85,872	82,756	9,060	8,838	17,898	6,811	2,801	196,138	-	196,138
1994	86,287	74,294	8,804	9,345	18,149	6,819	2,001	187,550	-	187,550
1995	86,048	76,685	8,586	9,592	18,178	6,804	2,567	190,282	-	190,282
1996	76,735	74,872	8,786	10,390	19,176	6,915	1,799	179,497	-	179,497
1997	76,217	83,515	7,890	11,248	19,138	6,912	2,305	188,087	-	188,087
1998	68,506	81,976	10,321	13,583	23,904	6,878	1,921	183,185	-	183,185
1999	73,483	88,137	9,959	16,108	26,067	6,885	1,566	196,138	*1,164	197,302
2000	75,676	90,323	11,373	20,226	31,599	6,914	1,287	205,799	6,572	212,371
2001	72,605	84,785	12,041	22,839	34,880	5,500	1,252	199,022	6,414	205,436
Average Annual Growth										
1990-95	2.3%	-9.3%	-8.3%	2.1%	-3.6%	-1.3%	4.5%	-3.9%	-	-3.9%
1995-00	-2.5%	3.3%	5.8%	16.1%	11.7%	0.3%	-12.9%	1.6%	-	2.2%
1990-00	-0.1%	-3.2%	-1.5%	8.9%	3.7%	-0.5%	-4.6%	-1.2%	-	-0.9%

Source: Massport and FAA Tower Counts

Note: Includes IFR and VFR operations.

* Includes three months of activity from September to December, 1999.

Figure 3-1 Hanscom Field Aircraft Operations by Market Segment and Aircraft Category - 2000



Source: Massport and FAA Tower Counts

Includes commercial operations

- In 2001, Shuttle America's passenger traffic declined by 17 percent to 134,000 and aircraft operations fell slightly to 6,400. The decline in activity resulted from air service reductions following Shuttle America's Chapter 11 bankruptcy filing in April 2001, the temporary suspension of services after 9/11, and reduced passenger demand in a weak economy. In 2002, there were further declines in commercial airline activity at Hanscom; commercial airline passengers (Shuttle America and Boston-Maine Airways) fell to 68,000 and operations increased slightly to 6,600. The reduced passenger activity reflects an overall decline in the US commercial airline industry resulting from a slow economy and geo-political uncertainties that have dampened the demand for air travel.
- Total Hanscom Field aircraft operations for 2000 were within the *1995 GEIR* forecast range. General aviation operations were also within the *1995 GEIR* forecast range for 2000, but GA jet operations were higher than predicted. The *1995 GEIR* predicted that jet operations would be the fastest growing segment of Hanscom Field operations, but actual operations increased at an average annual rate of 16 percent, compared to the *1995 GEIR* growth assumptions of four to seven percent per year. GA product liability reforms and the introduction of fractional GA ownership programs resulted in higher than anticipated growth.
- The actual level of scheduled airline operations at Hanscom Field in 2000 was within the *1995 GEIR* forecast range. However, 162,000 commercial airline passengers utilized Hanscom Field in 2000 compared to the *1995 GEIR* forecast range of 43,000 to 88,000. Passenger levels exceeded forecasted passengers because of differences between actual and predicted fleet mix and passenger load factors. (See Table 3-2). Since 2000, commercial airline passengers at Hanscom have declined. At 68,000 annual passengers, actual passenger activity in 2002 was within the range predicted for 2002 in the *1995 GEIR* (54,000 to 118,000 annual passengers).
- Total aircraft operations are forecast to vary from 231,000 in the 2005 Moderate Growth Scenario to 296,000 in the 2015 High Growth Scenario (see Table 3-3).
 - General aviation is forecast to remain the single largest category of aviation activity at Hanscom Field, accounting for 91-93 percent of operations in the 2005 Moderate Growth Scenario and 90 to 91 percent in the 2015 High Growth Scenario.
 - Scheduled passenger operations, which represented three percent of operations in 2000, are forecast to be seven to eight percent of operations in the 2005 Moderate Growth Scenario and eight to nine percent in the 2015 High Growth Scenario.
 - Military activity, which accounted for 0.6 percent of operations in 2000, is forecast to increase slightly to between 0.6 and 0.7 percent in the 2005 Moderate Growth Scenario and 0.8-1.0 percent in the 2015 High Growth Scenario.
 - Scheduled cargo airline operations are forecast to account for 0.2-0.4 percent of operations in the 2005 Moderate Growth Scenario and 0.4-0.5 percent in the 2015 High Growth Scenario.
 - Scheduled airline passengers are forecast to increase from 162,000 in 2000 to 330,000 in the 2005 Moderate Growth Scenario and 660,000 in the 2015 High Growth Scenario.

Table 3-2 Comparison of Actual 2000 to Forecast 2000 Aviation Activity at Hanscom Field

	General Aviation									
Year	Single Engine	Twin-Engine Turbo	Jet	Heli	Sub-Total	Military	Regional Airline	Total	2000 Regional Airline Passengers	2000 Based Aircraft
2000 Aircraft Operations (7 a.m. to 11 p.m.)										
Actual 2000	165,99	11,373	20,226	6,914	204,512	1,287	6,572	212,371	162,147	397
1995 GEIR Forecast										
No Growth	156,678	10,190	13,793	8,036	188,698	1,584	-	190,282	-	480
1% Growth	160,048	10,420	14,097	8,212	192,777	1,598	5,625	200,000	42,750	429
3% Growth	173,408	11,273	15,262	8,893	208,837	1,763	10,000	220,600	88,800	473
Actual versus Forecast - Year 2000										
No Growth Difference	9,321	1,183	6,433	(1,122)	15,814	(297)	6,572	22,089	162,147	(11)
Pct Difference	5.9%	11.6%	46.6%	-14.0%	8.4%	-18.8%	-	11.6%	-	-2.7%
1% Growth Difference	5,951	953	6,129	(1,298)	11,735	(311)	947	12,371	119,397	(32)
Pct Difference	3.7%	9.1%	43.5%	-15.8%	6.1%	-19.5%	16.8%	6.2%	279.3%	-7.5%
3% Growth Difference	(7,409)	100	4,964	(1,979)	(4,325)	(476)	(3,428)	(8,229)	73,347	(76)
Pct Difference	-4.3%	0.9%	32.5%	-22.3%	-2.1%	-27.0%	-34.3%	-3.7%	82.6%	-16.1%

Source: Massport, FAA, Tower Counts and the 1995 GEIR.

Characterization of Future Forecast Scenarios

Massport has characterized future forecast scenarios using the forecast years (2005 and 2015) and a description of the underlying growth assumptions (Moderate or High), i.e., 2005 Moderate, 2005 High, etc. In response to the MEPA Certificate, consideration was given to using other descriptors such as annual air passengers or aircraft operations as a means to characterize future forecast scenarios.

Using forecast commercial airline passengers as a descriptor, which Massport does for Logan, would ignore Hanscom's primary function and 90-96 percent of the Airport's aircraft activity. The principal role of Hanscom Field in the regional airport system is to serve the general aviation needs of the surrounding area and to function as a GA reliever to Logan Airport. Although Hanscom Field received some scheduled passenger airline service in 2000, the amount of commercial airline activity was small. Furthermore, to date no airline has been able to sustain successful commercial passenger services at Hanscom Field over the long-term. In 2000, general aviation accounted for 96 percent of aircraft operations at Hanscom Field and scheduled airline operations were only three percent of aircraft activity. Even in the future forecast scenarios, which consider an expanded commercial airline presence, general aviation accounts for 91 to 93 percent of total aircraft operations in the Moderate Growth Scenario and 90-91 percent in the High Growth Scenario.

Table 3-3 Summary of ESPR Forecast Aviation Activity at Hanscom Field

	Actual		2005		2015	
	2000	2001	Moderate	High	Moderate	High
Aircraft Operations (7 a.m. - 11 p.m.)						
General Aviation	204,512	197,770	213,793	223,402	248,074	265,306
Military	1,287	1,252	1,521	1,573	2,179	2,902
Scheduled Passenger Airline	6,572	6,414	15,170	20,063	21,168	26,060
Scheduled Cargo Airline	-	-	520	1,040	1,040	1,560
Total	212,371	205,436	231,004	246,078	272,461	295,828
Commercial Passengers	162,147	134,337	330,168	503,707	488,646	659,872
Based Aircraft	397	403	425	444	494	529
Percent of Total Operations						
General Aviation	96.3%	96.3%	92.5%	90.8%	91.0%	89.7%
Military	0.6%	0.6%	0.7%	0.6%	0.8%	1.0%
Scheduled Passenger Airline	3.1%	3.1%	6.6%	8.2%	7.8%	8.8%
Scheduled Cargo Airline	0.0%	0.0%	0.2%	0.4%	0.4%	0.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Massport and FAA Tower Counts

Using total operations as a descriptor would not provide any additional useful information. For example, the 2015 Moderate would be characterized as the "272,000 Operations" forecast and would not be properly distinguished from the 2005 High, which would be described as the "246,000 Operations" forecast. For these reasons, Massport considers the characterization of Hanscom activity forecasts that was presented in the *Draft ESPR* to be appropriate, given the nature of activity at the airport and its role within the regional airport network.

Procedures for New Airline Entrants

An airline proposing to commence scheduled service at Hanscom Field must comply with established FAA and Massport requirements for new entrant airlines. At the federal level, a new entrant to Hanscom must have its operations specifications ("opspecs") amended by the FAA to permit services to Hanscom Field with a specified type of aircraft. Opspecs must be amended each time an airline adds a new destination from any airport or the use of a different aircraft type. Once an amendment is granted for a specific market and aircraft type, additional amendments or approvals are not needed to increase the frequency of service to/from that market.

New commercial service at Hanscom Field proposed by new airline entrants must be consistent with the Master Plan and Massport Regulations. The Master Plan provides that the economic, noise and ground access impacts of new service proposals will be reviewed with the Hanscom Field Advisory Commission. Massport Regulations prohibit commercial passenger service at Hanscom with aircraft having a seat capacity greater than 60 seats.

Regarding cargo service, the Master Plan also calls for airlines to review the economic and noise emission implications of their proposals for new and/or expanded cargo service with the Hanscom Field Advisory Commission, prior to implementation.

As a prerequisite to entering into an operating agreement with Massport, an airline must submit to Massport valid and current certifications, authorizations, and approvals from all state, federal and other governmental bodies applicable to the proposed aircraft type and operations. Specifically, an airline must submit its FAA-approved opsspecs that authorize the proposed service at Hanscom, in accordance with applicable provisions of federal law. Thus, no new carrier may begin service until all necessary approvals have been secured.

Forecast Coordination with the Logan ESPR and the New England Regional Aviation System Plan Study

Coordination with Logan Airport Forecasts

Hanscom Field is located approximately 20 miles northwest of Boston. The airport's catchment area for commercial passenger services, which is defined by a 30-minute uncongested drive-time radius, lies entirely within the primary catchment area for Logan Airport. Thus, commercial airline services at Hanscom Field would primarily divert passengers from Logan Airport. The approach for the commercial passenger forecasts presented in the *Draft ESPR* relied on the 1999 Logan Air Passenger Survey and the 1999 *Logan ESPR* passenger forecast to quantify the baseline and forecast number of passengers generated by the Hanscom Field catchment area. Analysis of the Logan Air Passenger Survey indicated that the cities and towns in the Hanscom catchment area generated nearly five million Logan domestic air passengers in 2000. Based on the 1999 *Logan ESPR* growth projection for Logan Airport passengers, the Hanscom Field catchment area is forecast to generate 5.8 million domestic passengers in 2005 and 6.8 million domestic passengers in 2015. These Hanscom catchment area demand estimates, which were derived from the Logan Airport passenger projections, formed the basis for the Hanscom Field forecast analysis.

Coordination with New England Regional Aviation System Plan Forecasts

Phase 1 of the New England Regional Aviation System Plan (NERASP) study is underway and will be completed by the end of 2003. The focus of Phase 1 is to assess the future level of air transportation demand for the entire New England Region. A baseline regional demand forecast is being prepared for the years 2010 and 2020. As part of the study, an airport allocation model will also be developed to evaluate how the region's demand may be distributed among the area's principal commercial service airports. Phase 2 of the study will consider alternative future scenarios regarding the level of regional demand and how that demand may distribute across the region's airports. In developing airport level forecasts, the New England Regional Aviation System Plan will review all current forecasts for the region's airports. Massport will report on the status of the NERASP in the Logan ESPR/EDR process and in Hanscom Field's 2005 *ESPR*.

Hanscom Field Landing Fees

Hanscom Field's landing fee for commercial operations currently is 50 cents per thousand pounds on commercial aircraft, most of which is collected through Hanscom's fixed base operators (FBOs). There is no GA landing fee. Fees need to be reviewed periodically to ensure that they are appropriate. Shortly after the *Final ESPR* filing, Massport will be increasing the current landing fee for commercial and charter flights and extending it to include transient GA activity. Massport will also be increasing T-hangar, aircraft parking, and tie-down rates. Massport has reported the adjusted rates to the Hanscom Field Advisory Commission.

Nighttime Operations

In 2000, there were 1,918 nighttime (defined as 11:00 p.m. to 7:00 a.m.) operations at Hanscom Field. Jet aircraft accounted for 49 percent of nighttime operations in 2000. Total nighttime operations represent less than one percent of Hanscom's total aircraft activity. From 1995 to 2000, nighttime operations increased by less than three operations per day. In 2001, nighttime operations at Hanscom Field, declined by 12.7 percent to 1,674 operations (see Table 3-4).

Table 3-4 Nighttime Operations (11:00 p.m. to 7:00 a.m.) at Hanscom Field: 1995-2001

Year	Jet	Single Engine	Twin Engine	Turbo-Prop	Helicopter	Total Airport
1995	417	181	119	114	88	919
1996	392	135	119	162	351	1,159
1997	527	188	125	104	551	1,495
1998	618	156	108	159	349	1,390
1999	733	199	110	153	427	1,622
2000	944	194	85	268	427	1,918
2001	808	161	83	190	432	1,674

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