

# **The State of Hanscom**

**Presented to the  
Hanscom Field Advisory Commission**

**March 2009**

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# **THE STATE OF HANSCOM**

## **MASSACHUSETTS PORT AUTHORITY**

The Massachusetts Port Authority (Massport), which was created by the legislature in 1956, is the owner and operator of Laurence G. Hanscom Field. Massport is a world-class, independent, public authority that develops, promotes and manages airports, the seaport, and transportation infrastructure. These facilities provide safe, secure, and efficient transportation resources for travelers and businesses and enable Massachusetts and New England to compete successfully in the global marketplace.

Massport's facilities are essential to the citizens of the Commonwealth and provide economic benefits throughout the region. At the same time, Massport recognizes that its facilities may have an impact on its host communities. Massport is diligent in abiding by all environmental regulations while voluntarily participating in other environmental initiatives. Massport implements and participates in outreach programs that encourage an open and timely exchange of information and ideas; it is Massport's goal to understand and integrate the concerns of the community into its projects and plans whenever and wherever possible.

## **HANSCOM FIELD BACKGROUND**

In 1941, the Commonwealth of Massachusetts purchased land northwest of Boston to build an airport, and the State Senate and House of Representatives passed resolutions "...relative to the designation of the proposed Boston Auxiliary Airport as Laurence G. Hanscom Field, Boston Auxiliary Airport at Bedford". Control of Hanscom passed to a number of different agencies, including the Massachusetts Aeronautics Commission, until 1956, when the legislature placed Hanscom Field under Massport's jurisdiction. Although the land was always controlled by the state, the airfield was leased and maintained by the military until 1974.

Hanscom Field is the region's premier full-service general aviation airport, and it plays a critical role as a corporate reliever for Logan International Airport. Aircraft operations at Hanscom have traditionally included commuter, business, charter, cargo, personal aircraft, air taxi and flight school activity. Hanscom Field serves the diverse flying needs of the region's high technology corporations and educational institutions and is an important resource for Hanscom Air Force Base (HAFB), a research and development facility abutting the airfield.

*The State of Hanscom* is presented annually to the Hanscom Field Advisory Commission (HFAC), a legislatively created body comprised of representatives from the surrounding residential communities, the aviation community, and area-wide organizations. State elected officials, and representatives from HAFB, the Federal Aviation Administration, Minute Man National Historic Park, and Massport serve as resources to the commission.

In presenting *The State of Hanscom*, Massport provides an opportunity for a wide range of interested parties to discuss the airport's role in the regional transportation system and to discuss Massport's objectives for the facility. *The State of Hanscom* presents the airport's operational activity, financial performance, and economic benefits. It discusses Massport's 2008 accomplishments at Hanscom, as well as its plans for the airport's future.

## SECTION I - AIRCRAFT ACTIVITY

Table 1 shows total aircraft activity levels at Hanscom Field for 7 a.m. to 11 p.m. operations in 2007 and 2008 based on Federal Aviation Administration (FAA) tower counts, fleet mix data, and estimates. The 2008 data are preliminary and will be thoroughly reviewed before publication of the 2008 noise report.

**TABLE 1**  
**Hanscom Field Aircraft Activity**  
2007

FROM FAA TOWER REPORTS & ESTIMATES (7 A.M.-11 P.M)

	CIVILIAN						MILITARY	TOTAL
	LOCAL	SINGLES	TWIN	TURBO	JET	HELI		
	PISTON							
January	3688	3146	281	723	2734	594	95	11,261
February	2682	2849	303	634	2753	536	71	9,828
March	3266	3788	360	767	2993	570	83	11,827
April	3800	3335	368	952	3074	564	99	12,192
May	5217	5396	398	1047	3177	588	162	15,985
June	5698	5144	417	1065	2865	568	186	15,943
July	6471	5358	390	978	2516	613	82	16,408
August	7143	6163	368	1078	2544	578	155	18,029
September	5339	5268	313	897	2783	559	189	15,348
October	5583	4883	392	946	3295	585	105	15,789
November	4270	4164	320	805	3151	553	129	13,392
December	3574	2282	286	463	2637	581	82	9,905
<b>TOTAL</b>	<b>56,731</b>	<b>51,776</b>	<b>4,196</b>	<b>10,355</b>	<b>34,522</b>	<b>6,889</b>	<b>1,438</b>	<b>165,907</b>

2008

FROM FAA TOWER REPORTS & ESTIMATES (7 A.M.-11 P.M)

	CIVILIAN						MILITARY	TOTAL
	LOCAL	SINGLES	TWIN	TURBO	JET	HELI		
	PISTON							
January	4986	3730	288	527	2699	577	75	12,882
February	3909	2489	258	552	2711	543	82	10,544
March	4444	3467	284	476	2789	568	223	12,251
April	5965	4308	343	529	2916	563	231	14,855
May	7419	5669	352	623	2923	584	152	17,722
June	5237	4197	431	698	2690	558	144	13,955
July	7137	5133	424	733	2301	571	143	16,442
August	7250	5666	356	677	2168	571	151	16,839
September	5579	5069	369	573	2450	558	155	14,753
October	6287	5083	321	562	2574	576	114	15,517
November	4416	3306	287	527	2377	561	55	11,529
December	3277	1946	275	404	2058	575	65	8,600
<b>TOTAL</b>	<b>65,906</b>	<b>50,063</b>	<b>3,988</b>	<b>6,881</b>	<b>30,656</b>	<b>6,805</b>	<b>1,590</b>	<b>165,889</b>

Note: The 2008 figures are preliminary. All 2008 data will be reviewed before publication of the 2008 annual noise report.

The FAA tower counts are traditionally used to report the official number of operations for an airport; at Hanscom they do not include nighttime operations between 11 p.m. and 7 a.m. when the FAA Tower is closed. In addition to the 7 a.m. to 11 p.m. aircraft activity, there were 1,914 nighttime operations in 2008, a decrease from 2,284 in 2007.

The airport's activity levels have historically been closely aligned to the economic health of the high technology industry in Boston's Routes 128/95 and 495 areas and have generally mirrored national trends. For ten years starting in 1987, when Massport began estimating the fleet mix, the fleet mix remained relatively constant, with some increases in the percentage of jet operations and some decreases in the percentage of single engine piston operations.

More noticeable fleet mix changes began in 1999 when commuter service was reintroduced using turboprops, causing an increase in the percentage of turboprop operations. In addition, the percentage of single engine piston activity began to decline more steeply, while the percentage of jets increased more sharply. Business jet usage at Hanscom was particularly influenced by the September 11, 2001 events, which triggered a 50 percent increase in jet activity in the subsequent 12 months.

The data in Table 1 show 165,889 operations for 2008, 18 fewer operations than in 2007. Although total operations have been below 200,000 in thirteen out of the past fifteen years, they were well above 200,000 for the 30 years prior to 1993, and they exceeded 300,000 in 1970.

Consistent with experience for more than 25 years, the civilian portion of the 2008 aircraft operations comprised approximately 99 percent of the total aviation activity. The largest component of the total activity, 69.9 percent, consisted of single engine piston (SEP) operations ("Local" plus "Singles" in Table 1). The 115,969 estimated SEP flights indicate that their activity increased 6.9 percent as compared to 2007.

Touch-and-go activity ("Local" in Table 1) comprised 57.8 percent of the SEP operations. Each touch-and-go consists of a practice landing and take-off and is counted as two operations. Touch-and-goes are not allowed in aircraft over 12,500 pounds at Hanscom; they are most commonly conducted by flight schools using SEP aircraft. The 6.9 percent SEP increase was generated by a 43.3 percent average increase in touch-and-go activity between January and May of 2008.

The 4,195 estimated twin engine piston operations indicate a decrease of 3.6 percent as compared to 2007. They represented 2.4 percent of the 2008 operations. The 6,805 estimated helicopter operations indicate a decrease of 1.2 percent as compared to 2007, and they represented 4.1 percent of the total.

Estimated turboprop aircraft activity, representing 4.2 percent of the 2008 total activity, decreased 33.6 percent to 6,881 operations. This was due to the termination of Hanscom's commuter airline service on February 29, 2008. Boston-Maine, Hanscom's only commuter airline used turboprop aircraft. In January and February, Boston-Maine conducted 104 operations and handled 157 passengers. Non-commuter airline turboprop operations decreased 1.5 percent in 2008 as compared to 2007.

The 30,656 civilian jet operations that were conducted in 2008 represented 18.5 percent of the total activity and indicated an 11.2 percent decrease in jet activity, as compared to 2007. The most significant decreases were in October, November and December, which experienced declines in jet operations of 21.9 percent, 24.6 percent and 22.0 percent respectively. Hanscom's business jet activity has exceeded 30,000 operations annually since the events of September 11, 2001; it peaked at 34,522 operations in 2007.

All of the 2008 data used to create Table 1 will be reviewed for the 2008 annual noise report, which will be prepared later in the year and presented to HFAC. The noise report will include a more detailed analysis of operations and trends as well as a full analysis of noise exposure using EXP, a metric developed to track changes in Hanscom's noise environment.

## **SECTION II - FINANCIAL RESULTS FOR FISCAL YEAR 2008**

Massport continues its commitment to operating a first class facility while striving to improve Hanscom's financial performance. Massport's fiscal year (FY) begins on July 1 and ends on June 30.

Operating Hanscom Field with a balanced budget has been a challenge since 1974 when Massport assumed responsibility for maintaining the airfield. From FY93 through FY97, the airport's deficit exceeded \$2 million annually. This resulted from the continued need to address aging facilities and equipment while aircraft activity decreased because of the slowed economy. Increased efforts to control Hanscom's expenses, combined with an improved economy, produced decreases in the deficit from FY97 through FY02, and there was a small surplus in the operating budget from FY00 through FY02. In FY02, the total deficit, including amortization, was below \$1.0 million, the lowest in recent history.

Unfortunately, security and insurance related costs escalated after the events of September 11, 2001, and a soft economy weakened revenues. As a result, the total deficit increased, peaking at \$2.5 million in FY06. Subsequent efforts to reduce the deficit brought it down 44.5 percent in FY07 as compared to FY06. Although the total deficit then increased 20.4 percent in FY08 as compared to FY07, it was below \$2.0 million in both fiscal years.

Table 2 demonstrates the recent fluctuations in Hanscom's budget. Comparing FY08 to FY07, revenues increased 13.7 percent and operating expenses increased 20.7 percent, leaving Hanscom with an operating surplus of \$761 thousand. This, combined with a 4.3 percent decrease in amortization, resulted in a FY08 total deficit of \$1.6 million. The FY09 total deficit was projected to be \$1.7 million when it was prepared in the spring of 2008.

Massport recognizes that controlling Hanscom's deficit requires an aggressive multi-faceted approach. On the cost side, every expenditure and project is carefully scrutinized for its financial implications, and cost-saving measures continue to be explored. On the revenue side, a regular review of rates and charges, followed by appropriate adjustments, has been adopted. Expanding sources of revenue through development, as discussed later in this report, is another avenue for controlling the deficit. Massport also recognizes that commercial and/or air taxi services help increase revenue, and Massport will support companies that express interest in operating such services out of Hanscom, as long as they comply with Massport's regulations.

**TABLE 2**

**Hanscom Field Five Year Financial Summary**  
**Fiscal Years (FY) 05-09**

<b>REVENUES</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<i>Budgeted</i> <b>FY09</b>
<b>RENTALS</b>					
Terminal	262,628	268,192	259,368	334,331	325,024
Non-Terminal	1,600,589	1,393,438	1,701,337	2,149,330	2,142,444
Ground	854,952	1,227,720	1,485,984	1,913,572	1,815,372
Tie Downs	165,935	150,161	158,375	152,972	160,692
Utilities	107,686	153,692	157,030	167,275	163,220
<b>SUBTOTAL</b>	<b>2,991,790</b>	<b>3,193,203</b>	<b>3,762,094</b>	<b>4,717,480</b>	<b>4,606,752</b>
<b>FEES</b>					
Landing Fees	522,678	825,070	1,075,753	955,553	899,240
Customs Fees	290,080	556,647	877,562	869,215	748,077
Night Field Use Fees	532,497	436,049	584,352	600,132	591,460
Parking Fees	80,249	119,636	144,640	156,211	156,000
Other	247,816	578,752	650,257	788,713	790,348
<b>SUBTOTAL</b>	<b>1,673,320</b>	<b>2,516,154</b>	<b>3,332,564</b>	<b>3,369,824</b>	<b>3,185,125</b>
<b>COMMISSIONS</b>					
Rental Cars	133,627	139,383	146,250	156,394	141,989
Flight Schools	74,031	27,195	22,175	34,210	29,260
Ground Servicing	232,783	177,649	153,051	210,775	163,168
Fuel Flowage	799,537	792,895	1,090,997	1,232,910	1,344,954
Other	202,263	319,528	405,805	411,455	375,863
<b>SUBTOTAL</b>	<b>1,442,241</b>	<b>1,456,650</b>	<b>1,818,278</b>	<b>2,045,744</b>	<b>2,055,234</b>
<b>TOTAL REVENUES</b>	<b>6,107,351</b>	<b>7,166,007</b>	<b>8,912,936</b>	<b>10,133,048</b>	<b>9,847,111</b>
<b>OPERATING EXPENSES</b>					
Admin, Maintenance, Security Staff	3,069,966	3,162,628	3,709,615	4,983,777	3,577,318
Supplies & Materials	212,840	239,216	262,961	377,574	333,255
Reparis	313,961	300,925	475,288	391,608	353,541
Services	1,018,807	1,663,803	1,835,801	1,476,397	2,517,066
Utilities	271,747	414,686	354,281	419,681	532,591
Insurance	926,360	635,881	378,562	334,627	385,139
Miscellaneous	(42,406)	38,817	78,143	674,441	559,413
General & Administration	584,528	609,886	671,399	713,782	844,896
<b>TOTAL OPERATING EXPENSES</b>	<b>6,355,803</b>	<b>7,065,842</b>	<b>7,766,049</b>	<b>9,371,887</b>	<b>9,103,219</b>
<b>OPERATING SURPLUS/DEFICIT</b>	<b>(248,452)</b>	<b>100,165</b>	<b>1,146,887</b>	<b>761,161</b>	<b>743,892</b>
<b>AMORTIZATION</b>	<b>1,952,484</b>	<b>2,526,530</b>	<b>2,506,616</b>	<b>2,398,836</b>	<b>2,398,836</b>
<b>TOTAL COSTS (oper.+amortiz.)</b>	<b>8,308,287</b>	<b>9,592,372</b>	<b>10,272,665</b>	<b>11,770,723</b>	<b>11,502,055</b>
<b>SURPLUS/DEFICIT</b>	<b>(2,200,936)</b>	<b>(2,426,365)</b>	<b>(1,359,729)</b>	<b>(1,637,675)</b>	<b>(1,654,944)</b>

### **SECTION III - ECONOMIC BENEFITS OF HANSCOM ACTIVITY**

Massport's facilities enable the region's residents and leading industries to make connections with new markets, products, customers, family, and friends. In just about every aspect of life in Massachusetts, Massport is helping the local economy grow.

Located off Route 128/95, Hanscom Field has been a vital link to domestic and international destinations for individual pilots, commuter airlines and local employers, including high technology corporations, research and development firms, and educational institutions. Businesses look for accessible air travel when deciding where to locate, and Hanscom provides local businesses with easy access to corporate travel opportunities.

In FY08, Massport invested \$2.1 million in airfield, terminal, other facility improvements, and the equipment that is required to maintain the airport. Past and future investments ensure that Hanscom will continue to be prepared to support future economic growth by serving the diverse needs of users who operate a wide variety of aircraft.

Periodically, Massport completes an examination of the economic impacts of its facilities. This was last done for 2004 activity levels. It was determined that there were 462 jobs directly related to Hanscom, and it was estimated that Hanscom generated economic benefits of \$180.6 million when all the direct, indirect and induced economic benefits of the airport were considered. It was also found that Hanscom generated \$9.6 million in state and local taxes and that \$65.4 million was spent on local purchases.

### **SECTION IV - 2008 ACCOMPLISHMENTS AND 2009 OBJECTIVES**

Massport's primary responsibility at Hanscom Field is to maintain a safe, secure, and efficient regional airport while minimizing the environmental impact of its operations. Improvements are made in accordance with these guiding principles. While Massport is committed to maintaining Hanscom as a first class, full service airport, maintenance and improvements at the airport are consistently coupled with a variety of environmental initiatives, programs, and policies.

#### **Maintain and Improve Airfield—Annual Airfield Improvement Program**

Many projects at Hanscom are part of maintaining a safe and efficient airfield, and these may be eligible for full or partial federal funding under the FAA's Airfield Improvement Program (AIP). Each year, Massport submits projects for FAA funding approval. Projects that are currently being partially funded through the AIP are as follows:

- 1. Runway Safety Area (RSA) Project:** In the late 1990s, Massport began its reconstruction project for Runway 5/23, and the FAA informed Massport that the Runway Safety Area (RSA) for the runway needed to be upgraded. This upgrade is not a runway expansion project; it does not require any additional pavement; and it is not designed to change how the runway is used. It requires re-grading pervious areas at the two runway ends.

After a full analysis of alternatives, Massport selected, and the FAA approved, an option that

would bring the RSA more closely in alignment with current RSA standards. The permitting process for the RSA wetland work was a multi-year endeavor.

- Affected wetland areas at the Runway 23 end were identified in 2005, and it was determined that wetland replication would be required. Massport submitted an Environmental Notification Form to the Massachusetts Environmental Policy Act (MEPA) staff, and MEPA issued a scope for an Environmental Impact Report (EIR).
- Massport submitted a Draft EIR to MEPA in 2006, and MEPA issued a certificate showing that the Draft EIR adequately and properly complied with the scope of work. The certificate outlined the steps for preparing a Final EIR for the project.
- Massport submitted a Final EIR to MEPA in 2007, and the Secretary of Environmental Affairs issued a certificate showing that the Final EIR adequately and properly complied with the scope of work. Massport submitted a Notice of Intent to the Town of Bedford Conservation Commission (BCC) for the Runway 23 end project. Because of the size of the project, the BCC was required to deny the permit per the Wetlands Protection Act. In response to the BCC denial, Massport submitted a request for a Superseding Order to the Department of Environmental Protection (DEP). Because of criteria requirements in the Wetlands Protection Act, DEP denied the Superseding Order request. In response, Massport submitted a variance request to DEP. Additionally, Massport submitted an Application for Water Quality Certification to DEP and a water quality permit request to the Army Corp of Engineers.

**In 2008:** Massport received all the required permits for the RSA project by April, and construction began in August. Wetlands replication and most of the re-grading of the Runway 23 end were completed before the end of the year.

**In 2009:** The RSA project will be completed in the spring. This includes reconstruction of the FAA access road that was being used by trucks hauling soil during the RSA project; relocating airfield fencing near the new wetland area to improve visibility and security; re-grading the Runway 05 end; and completing the re-grading at the Runway 23 end.

- 2. Airfield Pavement Maintenance:** There is an on-going program for reconstructing pavement on the airfield.

**In 2008:** Design work began for pavement reconstruction of the western end of Taxiway Echo.

**In 2009:** The western end of Taxiway Echo will be reconstructed.

### **Safety and Security on and off the Airfield**

Safety and security are the two most critical components of operating an airport, and there is a continual multi-level emphasis on both at Hanscom. Massport's commitment to operating a safe and secure airport helps safeguard its host communities as well as those who use the airport.

**1. Obstruction Removal:** A high priority for Massport is maintaining compliance with FAA certification and safety requirements regarding obstructions within runway approach and departure surfaces. Massport uses aerial photogrammetric mapping of the runway areas to identify vegetation that is penetrating, or close to penetrating, these surfaces. The state identified vegetation removal guidelines in the *Generic Environmental Impact Report (GEIR) for Vegetation Removal at Public Use Airports* and the *1999 GEIR/Generic Environmental Notification Form Update*. Historically, a vegetation removal project has been required every five years at Hanscom.

- ***Hanscom's First Five Year Vegetation Management Plan (VMP) Using the State's GEIR Guidelines:*** In 1999, Massport conducted an obstruction analysis that identified vegetation that was penetrating or near penetrating Hanscom's runway approach and departure surfaces. Over a period of several years, Massport identified and delineated wetlands where there were obstructions, finalized a five year VMP, and pursued all of the necessary permits for removing those obstructions. By 2003, Massport had received Orders of Conditions from all four towns, and vegetation removal took place in early 2004. A maintenance program was implemented to minimize the need for future large-scale cutting in those areas. The only area that was not addressed during the implementation of this VMP was off-airport in Bedford.

The 1999 obstruction analysis used a 34:1 approach surface for the Runway 23 end, as required by the FAA. This analysis identified penetrations in Bedford's Hartwell Town Forest and Jordan Conservation area. Massport initiated preliminary discussions with the Town of Bedford regarding the need for a mutually agreeable management plan for the necessary vegetation removal on town property. In response to Massport and community concerns regarding the extent of vegetation removal required in conservation areas, Massport prepared a 20:1 approach surface analysis and petitioned the FAA to allow the use of a 20:1 approach surface rather than 34:1 for this runway. The 20:1 approach surface analysis showed considerably fewer obstructions in the Jordan Conservation area, and it eliminated the need for vegetation removal in the Bedford Hartwell Town Forest. In 2006, the FAA agreed that Massport could use 20:1 for the Runway 23 end approach surfaces off the airport, and this information was shared with the Town of Bedford.

- ***Hanscom's Second Five Year VMP Using the State's GEIR Guidelines:*** In 2007, Massport performed a new obstruction analysis for the airport as part of its five year VMP update. The 2007 aerial photogrammetric mapping of the approach and departure surfaces for all four runway ends documented that the first Five Year VMP had minimized the need for additional vegetation removal in the areas that were cut in 2004. As anticipated, the analysis also demonstrated the need for vegetation removal in areas that were not part of the first five year VMP. Using the FAA approved 20:1 approach surfaces for Runway 23, the analysis identified obstructions in the Jordan Conservation area; there were no obstructions in the Bedford Town Forest. These findings were used to begin developing the second Five Year VMP for Hanscom.

**In 2008:** Following the presentation of an updated draft VMP at a public hearing, the document was completed. The finalized updated five year VMP was submitted to the four towns' Conservation Commissions along with Notices of Intent for the required vegetation

removal in wetland areas that are on Massport property. Massport also re-opened discussions with the Town of Bedford regarding obstructions in the Jordan Conservation area, stressing the importance of this safety-related project.

**In 2009:** By early 2009, Massport had received Orders of Conditions for vegetation removal on Massport property from all four towns' Conservation Commissions. Massport began vegetation removal on Massport property during the winter months with the expectation that removal in the wetland areas would be completed while the ground was frozen. Removal in upland areas will be completed in the spring.

Massport will continue to seek an arrangement that permits the removal of obstructions in the Jordan Conservation area. There are also some trees that need to be removed from off-airport property in Concord, Bedford, and Lexington.

- 2. Annual Emergency Exercise:** One of Hanscom's FAA Part 139 certification requirements is to conduct an annual exercise to ensure an effective response in the event of an aircraft emergency. A tabletop exercise is conducted two out of every three years. On the third year, a simulated emergency is conducted on the airport.

**In 2008:** A simulated aircraft emergency exercise was conducted on the airport in the summer of 2008. Although the primary purpose of this response and transport exercise was to test the effectiveness and efficiency of the airport's incident command and communication team, Massport encouraged participation by mutual aid responders and area medical teams, which allowed them to test their response times and to evaluate the capabilities of their medical facilities.

**In 2009:** Massport will host a table-top emergency exercise in 2009 as part of its program to facilitate an effective response in the event of an aircraft emergency.

- 3. Aircraft Rescue and Fire Fighting (ARFF) Services:** Massport is required to maintain Aircraft Rescue and Fire Fighting (ARFF) services that comply with FAA standards. For many years, Massport contracted with Hanscom Air Force Base (HAFB) for ARFF services, as well as for structural fire and first responder emergency medical services. Due to federal accounting procedures, HAFB had to terminate its contract for ARFF services, effective July 1, 2007. On an interim basis, Massport's Fire Rescue department assigned Logan personnel to provide ARFF services at Hanscom; at the same time, staff pursued federal legislation that would allow Massport to revert to contracting with HAFB.

**In 2008:** Federal legislation that allowed Massport to contract with HAFB for ARFF services was approved in January 2008. An agreement was negotiated, and HAFB returned to providing ARFF services in the spring under a multi-year contract.

- 4. Wildlife Control:** Wildlife on an airfield can be a serious safety hazard for aircraft. The U.S. Department of Agriculture (USDA) regularly conducts field visits at Hanscom to monitor and evaluate wildlife on the airfield, with a particular focus on assisting Massport in minimizing bird strike hazards.

**In 2008:** In response to an FAA recommendation, Massport, through the USDA, completed a wildlife assessment in 2008. It included twelve months of observation and data collection to identify types and patterns of wildlife observed on the airfield, plus recommendations for the future control of wildlife. Massport initiated an evaluation of the results to determine whether additional steps could be taken to reduce the hazards of wildlife on the airfield.

**In 2009:** Massport will be implementing recommendations included in the USDA wildlife study.

- 5. Safety Inspections and Meetings:** There are regular safety inspections conducted by Massport's Safety Office staff, and safety meetings are held with tenants and the FAA to facilitate the identification of safety concerns. Every year, Massport reviews its snow removal plan with the FAA Tower staff to ensure effective communication and coordination during snow removal operations.
- 6. Security:** There was an increased emphasis placed on security after the events of September 11, 2001. Before the end of 2002, installation of new security fencing was initiated and an ID badging program was developed. Today, anyone requiring unescorted access to the airfield must undergo a background security check in order to obtain a badge, and badges must be displayed at all times on the airfield. A variety of other measures have been adopted since 2002 as the result of an on-going process of evaluating and implementing new security programs, as appropriate.

### **Maintain and Improve Facilities**

Hanscom's critical role in the regional transportation system demands appropriate maintenance programs and responsible development of airport facilities. Anticipating future needs and meeting the needs of existing users of Hanscom Field create challenges that require careful analysis and flexibility. Massport makes adjustments to its projects based on local demand and changes in the aviation industry.

- 1. Massport Controlled Facilities:** Massport owns and manages the Civil Air Terminal, a number of corporate hangars that are leased, t-hangars and tie-down spots for owners of small aircraft, the central parking lot, and the entrance areas to the airfield. There is a continual process of maintaining and upgrading these facilities and areas. The Civil Air Terminal is home to a number of aviation businesses, including Hanscom's flight schools, and it has always been the base for any commuter airline service.

**In 2008:** Although Hanscom's only commuter airline left Hanscom in early 2008, Massport anticipates future interest by an airline. In support of such interest, Massport drafted plans for upgrading the civil terminal so that it can efficiently accommodate a commuter airline operation while supporting other tenants in the building.

**In 2009:** Massport plans to re-roof, paint the outside, and upgrade the first floor of the Civil Air Terminal. In keeping with a commitment to sustainability, Massport is designing a "green roof" for the Terminal.

**2. Third Party Development:** Massport solicits third party development and management for new aviation-related facilities that support Hanscom's role in the regional transportation system as a full service general aviation airport. Most of Hanscom's hangars, with associated office space, are owned or leased by tenants who are responsible for maintaining the facilities.

Potential development sites are identified and analyzed in Hanscom's Environmental Status and Planning Reports (ESPRs), which serve as planning tools as Massport pursues future development at Hanscom. Massport is pursuing development at the following sites:

- **Hangar 24 Site:** Hangar 24, on the southwest side of the airfield, was vacated in 2001. In subsequent years, Massport solicited and received proposals for third party development of the Hangar 24 site. Developers were interested in demolishing the old hangar and constructing a new facility. In 2006, Massport was informed by the Massachusetts Historical Commission (MHC) that, because of important events that took place in Hangar 24, the facility meets some of MHC's criteria for historical significance. Massport prepared a Project Notification Form regarding its plans for Hangar 24 and submitted this to MHC in late 2006.

During 2007, Massport joined MHC in a public consultation process related to the potential demolition of Hangar 24. An engineering analysis of the structure found the hangar to be in poor condition and suggested it would be financially infeasible to renovate the hangar to meet today's building codes and safety standards. Massport prepared a draft Memorandum of Agreement (MOA) that detailed how Massport would commemorate photos and information related to the historical events that took place in Hangar 24 during World War II and the cold war.

Members of the residential communities have proposed converting Hangar 24 into a public museum. Massport supports the concept of having an aviation museum at Hanscom, but maintains that the Hangar 24 site is on Hanscom's flight line and is an inappropriate location for a museum. Furthermore, converting Hangar 24 into a museum would be inconsistent with Massport's legal obligation to operate the airport as close to financially self-sustaining as possible.

**In 2008:** The MHC contacted the FAA regarding the potential demolition of Hangar 24 and suggested that the FAA undertake a Section 106 review of this project under the National Historic Preservation Act of 1966. The FAA decided to incorporate a Department of Transportation (DOT) 4(f) review into the FAA Section 106 process because the two reviews are essentially the same. The FAA held two meetings during the summer of 2008; reviewed comments made at the meetings and/or submitted in writing; and drafted a finding of no significant impact by the end of the year.

**In 2009:** The FAA will complete its Section 106 and the DOT 4(f) reviews. Massport anticipates documenting the role Hangar 24 events played in history according to requirements in a Memorandum of Agreement that is developed and signed by the required consulting parties during the FAA process. Massport is interested in soliciting

third party development of this site as soon as all FAA Section 106 and DOT 4(f) processes are complete.

- ***Pine Hill Site:*** The Pine Hill site is located on the southwest side of the airfield and currently is undeveloped. It can support two small hangars. Massport has had discussions with the two Hanscom flight schools regarding their potential use of this site.

**In 2008:** Massport continued discussions with the flight schools regarding their use of this area.

**In 2009:** Massport will continue to take steps that result in finding the best use of this currently undeveloped land.

- ***East Ramp:*** The East Ramp, located on the southeast side of the airfield, was identified in the ESPR as a potential site for a cluster of corporate hangars. The ramp area is already impervious surface that is used for storage and movement of aircraft.

**In 2008:** Massport completed a utility study of the East Ramp to identify utility needs if hangars are built in that area. Noise and air quality analyses, based on hangar development in this area, were conducted. These analyses were included with a letter to the FAA requesting a categorical exclusion under the National Environmental Policy Act (NEPA) for building hangars on the East Ramp. The FAA determined that hangar development on the East Ramp is a categorically excluded project. This means that there are no further environmental approvals required by the FAA before hangars can be built in this area.

**In 2009:** The FAA's letter determining that development of the East Ramp is a categorical exclusion project under NEPA also noted that Hangar 24 development and East Ramp development are happening at approximately the same time. The letter stated that the East Ramp finding should therefore be coordinated with the Hangar 24 findings, and the FAA considered the cumulative impacts of the two projects in its analysis. Massport will be determining its next steps for seeking third party development on the East Ramp.

**3. Property North of the Airfield:** Massport is evaluating the future use of property north of Runway 05/23, as follows:

- The U.S. Air Force has indicated it will vacate land in 2009 that it has leased from Massport for a trailer park. All structures will be removed by the Air Force before the land is turned back over to Massport.
- U.S. Navy facilities that are in Bedford were vacated by Raytheon in 2000. A hangar, supporting structures, and a ramp area abut the airfield, and an office building is on a hill overlooking the airport. Massport is particularly interested in the future disposition of the hangar area.

## **Monitor and Respond to Environmental Issues**

Massport has consistently maintained high environmental standards while complying with state and federal environmental regulations. In addition to complying with mandated requirements, Massport has elected to participate in programs that use environmentally friendly technologies and innovations to minimize operational impacts. There is a continual effort to extend and improve Hanscom's environmental performance.

**1. Environmental Programs and Audits:** In 2001, Massport brought its environmental commitment to a new level when Hanscom Field became the first U.S. airport to attain ISO 14001 certification. To become certified, Massport developed and implemented an Environmental Management System (EMS) that meets international performance standards. The EMS provides a framework that fosters the use of environmentally sustainable practices for operating the field and creates an auditable system for tracking, managing, and improving environmental performance. The EMS facilitates environmental compliance, encourages strategic environmental thinking during business and planning processes, and promotes environmental awareness.

Massport meets its environmental commitments using a series of programs that include monitoring and auditing activities at Hanscom to ensure compliance with environmental regulations and the use of pollution prevention practices. Ongoing practices include:

- Using the EMS to track, manage and improve environmental compliance and performance; updating targets as target dates are reached or when opportunities arise for improving the EMS framework;
- Participating in the Massachusetts State Sustainability Program (Executive Order No. 438) to promote environmentally sustainable practices and in the Massachusetts' Leading By Example Program – Clean Energy and Efficient Buildings (Executive Order No. 484);
- Inspecting Massport and tenant facilities to ensure environmental compliance;
- Reviewing and updating the Spill Prevention Control and Countermeasure (SPCC) Plan, which outlines steps to be taken by Massport employees in the event of a spill of fuel or other hazardous materials;
- Conducting monthly inspections of materials in the Field Maintenance garage that are used to control spills of fuel or other hazardous materials;
- Implementing and encouraging tenants to utilize Best Management Practices (BMPs) as discussed in the National Pollutant Discharge Elimination System (NPDES) multi-sector permit for stormwater discharges at Hanscom Field;
- Conducting periodic water quality inspections at Massport's stormwater outfall locations;
- Participating in an aggressive mixed paper and cardboard recycling program for tenant and Massport offices;
- Identifying opportunities during Massport capital program project design development to reduce stormwater runoff and peak flows;
- Identifying opportunities for development projects to control stormwater runoff. For example, if a project results in an increase in impervious surface, Massport requires compensatory storage for stormwater in order to avoid increasing peak stormwater runoff rates. This policy is incorporated into all Hanscom Field development.

**In 2008:** There was one incident involving a reportable spill of hazardous waste materials at Hanscom Field. A tenant reported to Massport and the Department of Environmental Protection (DEP) that an aircraft had vented fuel, resulting in about one gallon entering the storm drain. The storm drain was cleaned, and booms were installed downstream from the storm drain as a safety measure. All DEP regulations were followed for clean up and closure of the incident.

**In 2009:** Massport plans to expand to a single stream recycling program at Hanscom. This means that all recyclable items can be combined in one container for pick up. Massport will also develop a Stormwater Pollution Prevention Plan in compliance with the National Pollutant Discharge Elimination system Stormwater Multi-Sector General Permit.

- 2. DEP Shawsheen Watershed Initiative:** Massport has been working cooperatively with the Massachusetts DEP, the U.S. Environmental Protection Agency, and the United States Air Force to improve the flow characteristics and profile of stormwater discharges into the Shawsheen River. Massport has removed pavement to decrease impermeable areas on the airfield and has incorporated water quality and water quantity improvements into ongoing projects using Low Impact Development technologies.

Massport has also taken measures to directly affect stormwater discharges into the river. For example, overflow weirs for temporarily storing water were installed in three large drainage pipes leading to the Shawsheen River in 2006. The weirs were designed to reduce the peak discharge of stormwater and increase base flow by releasing the stored water over time. In 2007, Massport prepared a computer model to evaluate potential stormwater improvement projects at Hanscom Field or on Hanscom Air Force Base. An important goal of the work was to develop a system for determining which stormwater improvements would be of the greatest benefit to the Shawsheen River.

**In 2008:** Massport had silt and sand removed from portions of three storm drain pipes just upstream from the Shawsheen River. An additional weir was installed in a large collection chamber to reduce peak flow during a storm event. A new structure was also constructed in an infield area to reduce the amount of flow entering a culvert.

**In 2009:** Massport will continue to work cooperatively with the Air Force and DEP to gain the maximum benefit from a combination of controls implemented by the Air Force and Massport.

- 3. Protection of Rare and Endangered Species:** Two grassland bird species protected under the Massachusetts Endangered Species Act (MESA) have been observed at Hanscom Field: the Upland Sandpiper and the Grasshopper Sparrow. In cooperation with the Massachusetts Audubon Society, Massport has traditionally managed airfield vegetation in a manner that maintains aviation safety while protecting the grassland nesting areas of these species.

As part of its commitment to help protect the Upland Sandpiper and other listed grassland species, Massport completed a Grassland Management Program in 2004 that manages selected grassland areas while minimizing risks associated with hazardous wildlife species on the airfield. As part of this effort, Massport suspends mowing activities in some areas (excluding runway safety areas) during the critical nesting season of these birds. At the same

time, Massport must ensure that birds at Hanscom do not pose a bird strike hazard. As mentioned earlier in this document, the USDA assists Massport in this endeavor.

- 4. Environmental Status and Planning Reports (ESPRs):** Starting in 1985, Massport has prepared a series of environmental assessments for Hanscom Field. These studies identify the environmental effects of current conditions and activity at the airport, and they present and evaluate the potential cumulative environmental effects of several future scenarios.

Massport's first Generic Environmental Impact Report (GEIR) for Hanscom Field evaluated the environmental impacts for 1985 conditions and looked at the potential impacts for 1990. In 1997, a GEIR Update was completed, using 1995 as the base data year and evaluating potential impacts for 2000 and 2010. Subsequently, the name of the study was changed from a GEIR to an Environmental Status and Planning Report (ESPR) because it was determined that this title better characterized the study.

The first ESPR analyzed the environmental effects for 2000 and compared the results to the data in the 1995 GEIR Update. In addition, potential environmental effects for 2005 and 2015 were analyzed based on a range of aviation growth scenarios, and on the development needed to support that activity. The second ESPR analyzed the environmental effects for 2005 and compared the results to the data in the 2000 ESPR. In addition, potential environmental effects for 2010 and 2020 were analyzed based on a range of aviation growth scenarios, and on the development needed to support that activity.

Each year that the GEIR/ESPR documents were completed, they were submitted to the Massachusetts Environmental Policy Act (MEPA) offices, and the certificates issued by MEPA found them to be adequate. The 2005 ESPR is the most current document and is used as a comprehensive resource for background information on the airport and for evaluations of Hanscom's current and potential future environmental effects.

### **Community Outreach**

Massport strives to build positive community relations and public confidence by maintaining open communications and by supporting programs that assist in addressing the concerns of Hanscom's stakeholders and host communities.

- 1. Community Meetings:** Massport is committed to the public's "right to know". Massport sponsors project-specific informational meetings, tours, and public hearings for representatives and residents of the towns that abut the airfield, those who use the airport, the Minute Man National Historic Park, the FAA, Hanscom Air Force Base and other interested parties, as needed or requested. Additionally, Massport staff members regularly attend two monthly community meetings, as follows:

- *The Hanscom Field Advisory Commission (HFAC):* The HFAC was established by the Massachusetts legislature in 1980. It includes representatives from the aviation and residential communities as well as advisory members who represent the National Park, Hanscom Air Force Base, the FAA, and Massport. Massport staff provide members of the

HFAC with pertinent information regarding Massport's goals, policies and plans for the airport. Additionally, staff prepare and present monthly activity and noise statistics, *The State of Hanscom*, and an annual noise report, as well as a variety of other reports that are generated periodically.

- *The Hanscom Area Towns Committee (HATS)*: The four towns that are contiguous to Hanscom Field and Hanscom Air Force Base created the Hanscom Area Towns Committee (HATS). One selectman from each town serves on HATS along with planning board and at-large members from the towns. Massport staff attend the HATS meetings to comment on discussion items and to respond to questions relating to Hanscom Field and Massport.

2. **Noise Metrics and Noise Abatement/Mitigation:** Aircraft noise is an airport-related concern for many Hanscom area residents and Minute Man National Historical Park. Massport recognizes the importance of pro-actively addressing this issue and is committed to continuing its current noise-related programs while exploring appropriate new initiatives.

In 1980, Massport adopted regulations (Part F of the General Rules and Regulations for Laurence G. Hanscom Field) that include:

- A nighttime field use fee to help discourage activity between 11 p.m. and 7 a.m.
- A restriction on commercial air carrier service to aircraft with no more than 60 seats.
- Restrictions on touch-and-go activity by weight of aircraft and time of day. Touch-and-goes are aircraft operations conducted to repeatedly and consecutively practice landing and departing techniques.
- A phase out of most Stage 1 aircraft at Hanscom. Stage 1 aircraft are some of the noisiest aircraft in the U.S. fleet.

In 2007, AOPA asked the FAA for an update on its 2000 claim that Hanscom's nighttime field use fee is weight-based and therefore unreasonable and unjustly discriminatory. This triggered discussions with the FAA regarding a switch to a noise-based fee.

**In 2009:** Massport will respond to questions or requests from the FAA, as needed, regarding Hanscom's nighttime field use fee.

Following the 1995 GEIR Update, a Noise Working Group, with representation from both the residential and aviation communities, was established at MEPA's request. This group studied noise metrics and noise abatement and mitigation measures. It completed its mission in September 1999 by submitting a report with recommendations. Massport continues to review and report on the status of those recommendations in the ESPR, and those recommendations continue to guide Massport in its noise related initiatives.

In an effort to minimize the impact of aircraft noise, all of the Noise Working Group's abatement and mitigation recommendations that required Massport's implementation were addressed. Most of them related to Massport's development of its Fly Friendly program.

Although Massport began supporting the use of the National Aircraft Business Association's (NBAA's) noise abatement procedures for jet aircraft in the mid-1980s, the Fly Friendly

program at Hanscom provided an opportunity to broaden such efforts. Massport expanded its support of quiet arrival and departure techniques by also publicizing the Aircraft Owners and Pilot Association's (AOPA's) noise abatement procedures for piston aircraft; and developing and publicizing quiet flying procedures for helicopters. Part of this new effort included the development of a multi-faceted publicity program, as follows:

- Inserts for pilot manuals outlining the procedures were published. These inserts are distributed at the FBOs, the flight schools, and in Massport's Hanscom offices.
- Framed posters describing noise abatement procedures were hung in the flight schools' offices, Massport's offices, and the fixed base operators' facilities.
- Videos that discuss the AOPA concepts were mailed to all based pilots of piston aircraft in 2000.
- Videos describing the techniques for both jet and piston aircraft were incorporated into the training required to qualify for a Hanscom security badge.
- Descriptions of these quiet flying procedures were posted on Massport's website.
- Signage on the airfield was installed to provide a last minute reminder to departing pilots to use quiet flying techniques.

This marketing of the fly friendly program results in pilots being exposed and re-exposed to the importance and understanding of the quiet-flying techniques. Massport also has signage at strategic locations that reminds pilots to limit their use of Auxiliary Power Units (APUs). APUs are used to provide power to a parked aircraft.

- 3. Sound Initiative:** In 2005, Massport joined Sound Initiative, a coalition that supports the federal phase out of non-Stage 3 aircraft weighing less than 75,000 pounds. Stage 1 and 2 aircraft were manufactured before today's stringent noise standards were adopted for new airplanes. The use of non-Stage 3 aircraft weighing over 75,000 pounds was phased out nationally by 2000, but most of Hanscom's jets weigh less than 75,000 pounds. Just a small number of operations by the lighter Stage 1 and 2 aircraft can contribute significantly to the noise exposure at Hanscom Field. A 2007 FAA reauthorization bill, which includes a phase out of all non-Stage 3 aircraft, has yet to be passed.

**In 2009:** Massport will continue working with Sound Initiative in its effort to phase out some of the noisiest aircraft operating in the U.S.

- 4. Noise Monitoring System:** To facilitate the understanding of noise impacts on the communities neighboring Hanscom, Massport installed a noise monitoring system at Hanscom in the early 1990s. The system includes six microphones—one off each of the runway ends in each of the contiguous towns and two others on the airfield at the ends of Runway 11/29. Data from the system are shared with the communities on a monthly basis.

In 2005, Massport selected Rannoch Corporation to upgrade its noise monitoring system. Subsequently, Rannoch changed its name to Era Beyond Radar (Era). The upgraded noise system, called AirScene, has several interrelated, complex components, which include the ability to report noise levels, flight tracks, and identify aircraft. When the system is fully operational, users of the internet will have access to a user-friendly website to research a

noise event or flight, log a noise disturbance, and track correspondence related to a logged noise disturbance.

Before installation could begin, Massport and Era resolved myriad technical issues related to integrating the new hardware and software with Massport's computer systems. Additional technical challenges surfaced during the development and installation of the software because of the system's complexity.

In the early stages of this project, the residential communities established The Ad Hoc Noise Group to work with Massport. Massport solicited input from this group for use in developing a new website for the system. Early in 2006, Massport met with the Ad Hoc Noise Group to answer questions and concerns about the project. Additionally, there was discussion with the chair of the community group regarding the communities' desire to have some of the noise monitors moved. Massport agreed to move two Hanscom monitors.

**In 2008:** Although the various challenges faced during the installation of the noise monitoring system caused delays in acceptance testing and website development, six new microphones were installed by the end of 2006; staff had increasing access to data from the new system and complaint data was migrated to AirScene by late 2007; and Hanscom staff began using the new system to respond to disturbance reports in 2008. AirScene provides technical analysis that aids in the correlation of reported disturbances with aircraft events, providing residents with more information than had been available in the past. The system also collected noise data, which was used in monthly reports provided at HFAC meetings, from most of the sites. Operational data collected by AirScene was reviewed, and software adjustments were made in response to discrepancies. In 2007 and 2008, material for the new website was drafted.

**In 2009:** The upgraded noise system is expected to become fully operational in 2009, and this will include a user-friendly, interactive website for residents. Massport intends to work with community representatives to determine new locations for two of the existing noise monitors. It is anticipated that some additional recommendations identified by the Noise Working Group in 1999 will be addressed when the new system is fully functional.

- 5. Community Contributions:** Massport's Charitable Contribution, Scholarship, and Community Summer Jobs Programs benefit organizations located in communities that host its facilities. The organizations serve a diverse constituency and a variety of worthwhile purposes.

**In 2008:** Massport contributed \$6,900 to educational, scholarship, and youth programs in the Hanscom area and provided nearly \$15,000 to sponsor summer internship positions in the four Hanscom towns.

**SECTION V – CAPITAL PROJECTS FOR FY09 THROUGH FY13**

Each year, capital projects for Hanscom Field are evaluated for funding. Table 3 outlines the projects that have been identified for FY09 through FY13. Estimated project costs are included. The list does not include projects that have been completed in FY09.

The capital programs list is fluid and gets adjusted periodically. Circumstances may change the year in which a project is started or completed, the estimated amount to be expended, or whether a project is ultimately implemented.

**TABLE 3  
Hanscom Field FY09 to FY13 Capital Projects**

<b>PROJECTS</b>	<b>Current Funding Years</b>	<b>Cost FY09-FY13 (in 000s)</b>
Runway Safety Area Improvements	FY08-FY09	\$2,898
Stormwater Infrastructure	FY09	\$284
Security Access Control System	FY09-FY10	\$498
CAT 1st Floor Renovations	FY09-FY10	\$2,920
CAT Roof and Building Repairs	FY09-FY10	\$690
Security Fence	FY09-FY10	\$510
Airfield Improvement Program (Taxiway E Reconstruct)	FY09-FY10	\$3,301
CAT HVAC upgrade	FY09-FY10	\$100
Virginia Road Fence	FY09-FY10	\$100
Demolition Hangar 24	FY10	\$500
Demolition 3 houses	FY10	\$300
Airfield Improvement Program (RW5 overrun overlay)	FY10	\$1,000
Airfield Improvement Program (Taxiway G Rehab)	FY10-FY11	\$1,667
Airfield Improvement Program (Taxiway M Rehab)	FY11	\$1,667
Pine Hill T-Hangar Roof Repair	FY11	\$400
Rehab Old T-hangar pavement	FY11	\$1,826
Rehab Landside Road Areas	FY11-FY12	\$750
Heavy Equipment Cold Storage	FY12-FY13	\$1,015
Airfield Improvement Program (Taxiway S & W Hangar apron overlay)	FY13	\$3,301
Salt Storage Enclosure	FY13	\$191