Chapter 1
Introduction

2000 Environmental Status and Planning Report

The *Final 2000 Environmental Status and Planning Report* (*Final ESPR*) for Laurence G. Hanscom Field (Bedford, Concord, Lexington, and Lincoln, Massachusetts) is filed in accordance with the Secretary of the Executive Office of Environmental Affairs (EOEA), December 16, 2002 Massachusetts Environmental Policy Act (MEPA) Certificate for the *Draft ESPR*. The MEPA Certificate for the *Draft ESPR*, which is included in Appendix A, has determined that the *Draft ESPR "adequately and properly complies with the Massachusetts Environmental Policy Act (MGL C/ 30, SS 61-62H) and with its implementing regulations* (301 CMR 11.00 and 11.09 Special Review Procedures)."

The *Final ESPR* provides summary information from the *Draft ESPR* and specific responses to the MEPA Certificate. The *Final ESPR* document is complementary to and a continuation of the information that was presented in the *Draft ESPR*. Together, the *Draft ESPR* and the *Final ESPR* form a set of documents that represent the 2000 ESPR for Hanscom Field. With the information presented in the *Draft ESPR*, the *Final ESPR* forms the basis for future planning by presenting and evaluating the cumulative environmental effects of Moderate and High Growth scenarios for 2005 and 2015. The future scenarios illustrate the environmental effects of what could happen at Hanscom Field using certain assumptions, not necessarily what will happen.

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This introduction to the *Final ESPR* includes a summary of the background on Hanscom Field that was presented in detail in the *Draft ESPR*, discusses the environmental review process, provides the organization for the report and presents a summary of the responses to the MEPA Certificate on the *Draft ESPR* that are presented in the chapters that follow.

Hanscom Field

Laurence G. Hanscom Field is New England's premier full-service general aviation (GA) airport and serves as a general aviation reliever for Logan International Airport. As such, its primary role in the New England aviation system is to accommodate regional GA needs, thereby allowing Logan Airport and other larger nearby airports to concentrate on large-scale air carrier commercial activity. Hanscom Field has historically accommodated all segments of aviation including corporate aviation, private flying, charter, air taxi, and pilot training operations, as well as scheduled commuter airline services and some cargo operations. Commercial airlines have operated periodically at Hanscom Field since the mid-1970s.

Massport remains committed to operating Hanscom Field while managing the environmental effects of airport operations. Until superseded, the 1978 Hanscom Field Master Plan ("Master Plan"), which was developed after a lengthy community process, will continue to serve as a guide for the future. The Master Plan and Massport Regulations (740 CMR 25.00) contemplate that the airport will operate primarily as a full-service GA airport with limited passenger commercial airline and cargo service. Massport Regulations specifically allow for passenger service in aircraft with no more than 60 seats.

Figure 1-1 presents a locus map for Hanscom Field, which comprises approximately 1,300 acres of land. The airport is located approximately 20 miles northwest of Boston, just outside Route 128/I-95, and is convenient to most of metropolitan Boston. The airport is an economic asset that is linked to the economic health of the region, particularly nearby high technology businesses. Approximately 500 employees work at Hanscom Field, many from nearby communities. Hanscom Field is also home to a technical training school, East Coast Aero Tech, and two flight schools. Route 2A remains the primary access route to the airport, and Hanscom-generated traffic accounts for only three to four percent of peak hour traffic on this roadway.

Hanscom Field is adjacent to the Minute Man National Historical Park, which comprises over 900 acres, and the Hanscom Air Force Base (AFB), which comprises approximately 800 acres. The Minute Man National Historical Park is a significant national historic resource. Hanscom AFB is an important local jobs center. Despite its proximity to the park and adjacent communities, the airport is visible from few locations due to the topography of the area.

Hanscom Field Environmental Review Process

Environmental review of Hanscom Field activities is undertaken at the state level through the ESPR process, which assesses the cumulative effects of airport operations. Environmental review may also be undertaken on a project-specific basis. The MEPA Certificate on the *Draft ESPR* described the history and purpose of the ESPR as follows.

> *Since 1985, the Generic EIR (GEIR) and now the ESPR has provided a retrospective analysis of past trends in the environmental effects of Hanscom Field while including analyses for future conditions under various scenarios. The ESPR also provides a list and description of all capital projects to be undertaken by Massport within the 2005 and 2015 moderate and high growth time frames. As a result, these documents can provide a useful planning tool from which the proponent's policy and program developments are derived. The 2000 ESPR presented an overview of the operational environment and planning for future improvements at Hanscom Field and provided long-range projections of environ-*

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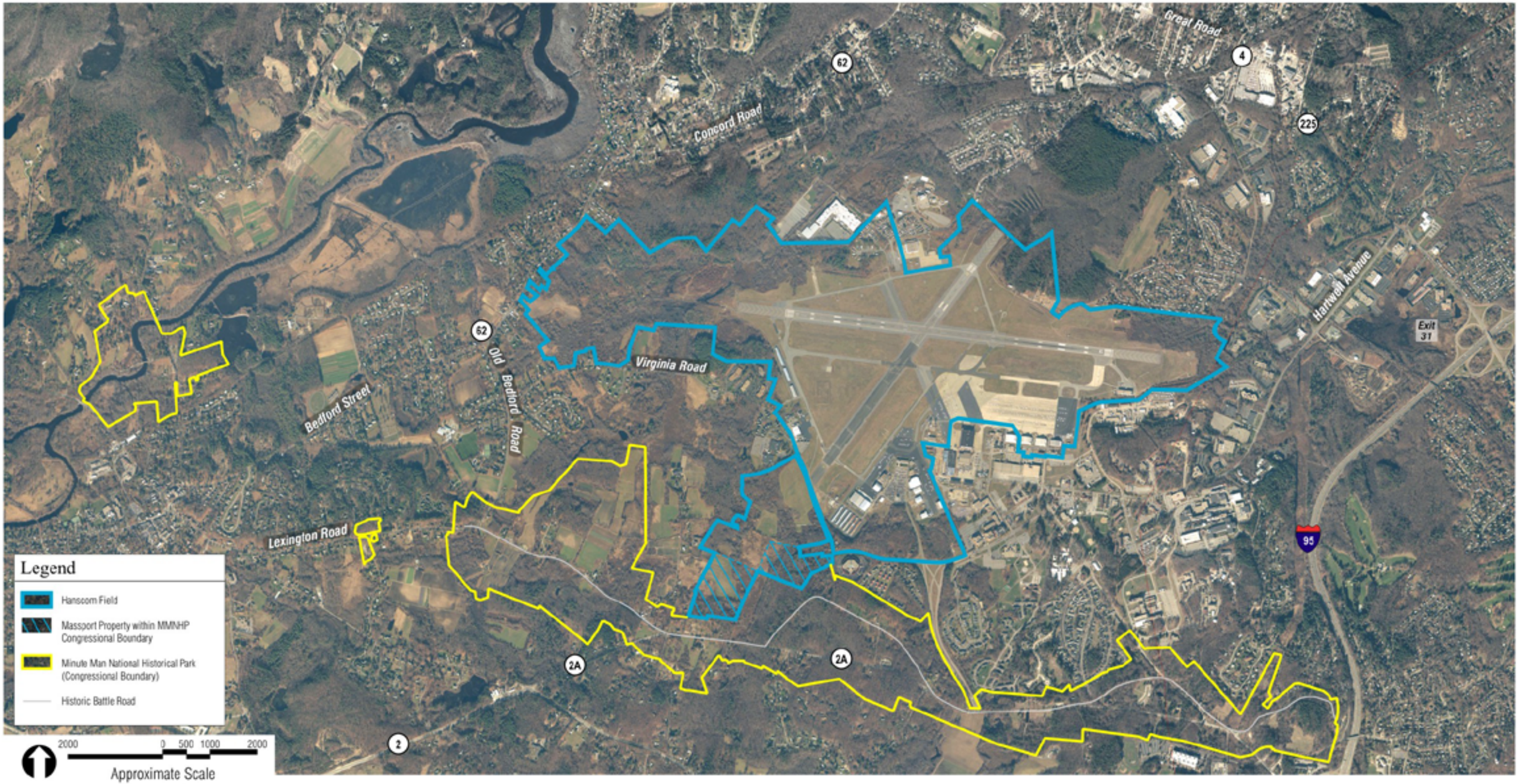

massport

RIZZO ASSOCIATES
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Base Map: PhotoMapper 2000

2000 Hanscom Field Final ESPR
Bedford, Concord, Lexington and Lincoln, Massachusetts

Site Location

Figure 1-1

mental conditions against which the effects of future individual projects could be compared. The ESPR allowed the reviewer to see historical environmental information, current information, and the forecast of future environmental effects at Hanscom Field.

I have received many comments on the DESPR asking me to, in effect, order Massport to halt commercial flights at Hanscom. Such requests misapprehend the legal status of MEPA review. MEPA review is an informal process, which does not itself result in any formal adjudicative decision approving or disapproving a project. The purpose of MEPA review is to provide a forum for the informed public analysis of potential impact from state agency actions, in order to inform the ultimate actions of those agencies (in this case, Massport). As described in more detail in this Certificate, after examining the record before me, I find that there is enough information in the DESPR to meet the applicable regulatory standard.

The ESPR does not replace the MEPA review of specific projects at the site that exceed regulatory thresholds. I note that the thresholds specifically exempt routine maintenance and replacement projects. For each project-specific review, Massport will be required to perform an individual analysis of impacts and mitigation (to be implemented, for those projects that require a stand-alone EIR, through Section 61 Findings). The ESPR serves as a vehicle for ensuring that the long-term, broad-scope planning informs the review and implementation of individual actions at Hanscom Field.

Certificate of the Secretary of Environmental Affairs for the Draft 2000 L. G. Hanscom Field Environmental Status and Planning Report, Pages 2-3 December 16, 2002.

The scope for the *Final ESPR* is described in the MEPA Certificate on the *Draft ESPR* (see Appendix A).

Role of the ESPR in Environmental Review

As indicated in the MEPA Certificate, an ESPR does not replace the requirement for filing an Environmental Notification Form (ENF), or other environmental filing, for a specific project if that project meets or exceeds a MEPA regulatory threshold. An ESPR provides the broad planning context that might reasonably be considered by Massport. Where state environmental review thresholds are met, potential projects presented in an ESPR or developed during the interim periods between ESPR filings, are subject to a project-specific environmental review process with opportunities for public comment.

In cases where the state environmental thresholds are triggered, Massport or the project proponent must prepare the appropriate environmental filing, including an ENF or, for projects of significant scale requiring more extensive MEPA review, an Environmental Impact Report (EIR). Where Federal National Environmental Policy Act (NEPA) environmental review thresholds are triggered, projects typically are also reviewed under the FAA environmental review process. Both MEPA EIR and NEPA Environmental Impact Study (EIS) procedures include opportunities for public comments.

Environmental Review Schedule

Massport filed the *Draft Scope for the 2000 ESPR* on July 15, 2001. Massport held a public review session on November 8, 2001, at the Bedford Town Hall. A MEPA consultation session was held on November 15, 2001, in the Bedford Town Hall to formally solicit written and oral testimony on the proposed scope. The comment period closed on November 27, 2001, and a scoping certificate was issued by MEPA on December 7, 2001.

Massport filed the *Draft ESPR* on July 31, 2002 in response to the scoping certificate. Notice was published in the Environmental Monitor on August 10, 2002. The *Draft ESPR* had an extensive public review process. Massport voluntarily extended the required 30-day public comment period to over 100 days, with the comment period ending on November 26, 2002. Ten public meetings were held during the public review process as part of a schedule that Massport developed in consultation with the four towns (see Table 1-1). A MEPA consultation session was held on November 19, 2002, in the Bedford High School to accommodate the significant public interest in the document.

Table 1-1 Schedule for the Technical Review of the *Draft ESPR*

Meeting #	Topic	Date
One	Overview of ESPR	June 27, 2002
Two	Regional Transportation Context Aviation Activity Levels	September 12, 2002
Three	Infrastructure and Facilities Airport Planning	September 18, 2002
Four	Ground Transportation	September 25, 2002
Five	Noise Cultural and Historical Resources	September 28, 2002
Six	Wetlands/Wildlife/Water Quality	October 3, 2002
Seven	Mitigation	October 5, 2002
Eight	Air Quality	October 9, 2002
Nine	HATS Discussion of Public Comments	October 17, 2002
Ten*	MEPA Consultation Session	November 19, 2002

* Rescheduled from November 7, 2002 due to crowd size and occupancy constraints of the Bedford Town Hall.

Massport has prepared this *Final ESPR* based on the scope set forth in the MEPA Certificate for the *Draft ESPR*. It is anticipated that the *Final ESPR* will be filed on or before May 30, 2003. Massport has agreed to a 50-day review period for the *Final ESPR* that will begin in early-June and end on July 31, 2003. Massport will convene two informational meetings and a MEPA consultation session on June 25, 2003. It is anticipated that the Certificate will be issued for the *Final ESPR* by August 14, 2003. Massport anticipates filing the *2005 ESPR* in 2006. Additional discussion about the *2005 ESPR* is provided at the conclusion of this chapter.

MEPA Documentation

Massport submits the ESPR on a five-year cycle. Massport has posted the twelve chapters of the *Final ESPR* on its web site (www.massport.com). Massport has made the *Final ESPR* available in CD-ROM to all commenters and hard copies of the report available upon request. All four town libraries, Planning Departments, and Conservation Commissions will receive both a CD-ROM and hard copy for the *Final ESPR*.

In addition to the ESPR process, at the beginning of each calendar year, Massport prepares the *State of Hanscom*, and the *Noise Exposure Levels at L.G. Hanscom Field*, which are distributed annually to the Hanscom Field Advisory Commission. The *State of Hanscom* outlines Massport's financial performance, economic benefits and accomplishments, as well as its plans for the future. The report also includes information on aircraft activity from the past year. Massport will continue to use this process to distribute information about Hanscom Field.

Organization of the *Final ESPR*

This *Final ESPR* responds to the MEPA Certificate and expands upon information presented in the *Draft ESPR* as appropriate. With the exception of the executive summary, which has become part of Chapter 1 - Introduction, the *Final ESPR* is organized with the same twelve chapter headings as the *Draft ESPR* to facilitate the review of the document. The *Final ESPR* and its appendices include a copy of the MEPA Certificate (Appendix A), responses to comments, copies of all comments received, a glossary of terms, and supporting technical appendices. Each chapter, other than Chapter 1 - Introduction, presents a summary of information

from the *Draft ESPR* as well as other information, which responds to the MEPA Certificate. The document is organized as follows:

- ***Chapter 1 - Introduction*** provides the environmental and regulatory context for the *Final ESPR* and presents an overview of the response to the MEPA Certificate.

- ***Chapter 2 - Airport Facilities and Infrastructure*** describes Massport's tenant audit program and provides additional and supplemental information about the tank management program, including fuel storage tanks removed or replaced since 1995.

- ***Chapter 3 - Airport Activity Levels*** presents an analysis of different descriptors to characterize future scenarios; describes the procedures for new airline entrants at Hanscom Field; describes the forecast coordination with the Logan ESPR and the New England Regional Aviation System Plan study; presents information on landing fees at Hanscom Field; and describes nighttime operations at Hanscom Field from 1995 to 2001.

- ***Chapter 4 - Airport Planning*** describes the status of planning initiatives and projects in the Landside Area; describes projects in the five-year capital program and identifies which projects may require individual MEPA review; describes new TSA or Massport security policies; updates any new planning and development initiatives at the Minute Man National Historical Park, Hanscom Air Force Base, and the four contiguous towns; and specifically addresses the consistency of planning strategies with the local comprehensive plans, the Four Town Planning Study, and MAPC's regional policy plan, as well as the Hanscom Area Towns (HATS) Master Plan.

- ***Chapter 5 - Regional Transportation*** Context provides a summary of the regional transportation system; describes the long-term advantages and disadvantages of Hanscom Field as a commercial reliever airport; and discusses Hanscom Field's viability as a GA reliever airport.

- ***Chapter 6 - Ground Transportation*** provides additional information regarding intersection volume/capacity ratios and delay; describes the review process with local towns; presents information on Transportation Demand Management; reviews, summarizes and analyzes existing metropolitan planning documents; discusses potential for parking fees at Hanscom Field; and addresses traffic projections and access options for cargo operations as described in the future scenarios.

- ***Chapter 7 - Noise*** reports past trends and the projections for the forecast activity levels and years; reports any past trends and adjusts for such changes in the Integrated Noise Model (INM); addresses the issue of engine run-ups and the operation of Auxiliary Power Units and Ground Power Units; addresses those recommendations from the Noise Workgroup that were not incorporated into the *Draft ESPR*; discusses the L_{max} 90 dBA and the rationale for not incorporating the L_{max} 90 dBA weighted noise contour in future studies; and addresses potential measures to reduce noise impacts from airport operations.

- ***Chapter 8 - Air Quality*** presents a review of environmentally beneficial measures that were raised by commenters including airside operational improvements, ground service and landside conversion to alternative fuels, emission reduction credits and aviation support emissions reductions and discusses the clean vehicle program at Hanscom Field.

- ***Chapter 9 - Wetlands/Wildlife/Water Resources*** presents information about Massport's National Pollution Discharge Elimination System (NPDES) permit; reports on surface water monitoring at Hanscom Field; provides figures that illustrate the current wetlands resources at Hanscom Field and

the location of local water supplies; discusses potential effects on the Hartwell Forest; discusses Massport's spill prevention program and identifies current and proposed use of de-icing chemicals.

- Chapter 10 - ***Cultural and Historical Resources*** presents information about the soundscape goals and plans for the Minute Man National Historical Park; provides additional information about historical properties in the Minute Man National Historical Park; reports on the status of the interagency working group that was formed to review impacts on Minute Man National Historical Park; and identifies how Massport will work to protect conversion of agricultural resources to non-agricultural uses.

- Chapter 11 - ***Sustainable Development and Environmental Management System (EMS)*** discusses reduction in the use of toxic materials at Hanscom Field; reports on Massport's sustainable design program at Hanscom Field; provides information on the sustainable design approaches for new and existing facilities; and provides additional information on the EMS Program.

- Chapter 12 - ***Mitigation*** summarizes environmentally beneficial measures that are identified in previous chapters and, in general terms, identifies parties responsible, a schedule for implementation and estimated costs.

- ***Glossary of Terms*** defines key terms used in the *Final ESPR*.

- ***List of Reviewers***

- ***Appendix A*** includes the MEPA Certificate, copies of all comments received on the *Draft ESPR*, and a Response to Comments section. ***Appendix B*** includes additional correspondence from Massport and EOEA.

- ***Appendix C through Appendix F*** are technical appendices that provide detailed analytical data and methodological documentation for the various environmental analyses conducted for this *Final ESPR*.

Summary of the Response to the MEPA Certificate

The scope for this *Final ESPR* was determined by the Secretary's December 16, 2002 Certificate (see Appendix A), which determined that the *Draft ESPR* "adequately and properly complies with the Massachusetts Environmental Policy Act (MGL C/ 30, SS 61-62H) and with its implementing regulations (301 CMR 11.00 and 11.09 Special Review Procedures)." The following summarizes the responses to the MEPA Certificate in the chapters that follow.

Airport Facilities and Infrastructure

The following summarizes information in Chapter 2 - Airport Facilities and Infrastructure.

- Beginning in the late 1980s, Massport has required **environmental audits for all tenants** located at Hanscom Field. The purpose of this program is to ensure that Massport's tenants are operating their businesses in compliance with applicable laws and regulations. No significant environmental issues were identified during the 2000 audits. This information was included in Chapter 9 - Wetlands, Wildlife and Water Quality of the *Draft ESPR*.

- Beginning around 1993, Massport instituted **a tank management program** designed to track the age and physical characteristics of all fuel storage tanks at Hanscom Field. Since the *1995 GEIR*, twelve

fuel storage tanks have been removed and 15 fuel tanks have been replaced at Hanscom Field. There are currently 29 active tanks at Hanscom Field.

Airport Activity Levels

The following summarizes information in Chapter 3 - Airport Activity Levels.

- A review of future forecast scenarios determined that the approach used in the *Draft ESPR* provided the most effective way to **describe the scenarios**. Since General Aviation represents the majority of aircraft operations at Hanscom Field and the airport has not sustained commercial passenger services historically, it would be inappropriate to describe future scenarios by airline passenger levels.

- 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. Massport requires that carriers submit their FAA-approved Operating Specifications that specifically authorize the proposed service at Hanscom Field and that carriers obtain all FAA approvals as well as applicable State and local level approvals prior to entering into an operating agreement with the carrier.

- The **commercial passenger forecast scenarios** for Hanscom Field relied on the 1999 Logan Passenger Survey and the 1999 Logan ESPR forecasts to determine the base year and future year passenger demand generated by the Hanscom Field catchment area. FAA found the Moderate Growth scenarios to be reasonable and the High Growth scenarios to be useful to evaluate worst-case environmental effects.

- The **New England Regional Aviation System Plan (NERASP)** did not commence until after the Hanscom Field *Draft ESPR* forecasts were completed and the (NERASP) regional demand projections are still under development. In developing airport level forecasts, the New England Regional Aviation System Plan will review all current forecasts for the region's airports.

- During the timeframe of the ESPR, **Hanscom Field's landing fee** for commercial operations is 50 cents per thousand pounds on commercial aircraft, most of which is collected through the fixed base operators (FBO); at this time, 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 increase T-hangar, aircraft parking, and tie-down rates. Massport reported the adjusted rates to the Hanscom Field Advisory Commission.

Airport Planning / Executive Order 385

The following summarizes information in Chapter 4 - Airport Planning / Executive Order 385.

- Massport has initiated programs to ensure that Hanscom Field is operated in an **environmentally friendly manner**. This includes the ISO 14001 Certification of Hanscom Field and its supportive environmental programs and policies.

- There are a number of **planning initiatives and projects being pursued in the Landside Area**. Massport plans to repave and reorganize the existing parking lot in the Terminal Area. Massport also plans security fencing improvements and, as discussed in the *Draft ESPR*. Massport supports third party development of the Hangar One site, the Hangar 24 site, Pine Hill GA hangars and T-hangars.

- Massport's **five-year capital program** includes the Runway Safety Area (RSA) project for Runway 23, restriping and reorganizing the parking lot in front of the Civil Air Terminal, the Vegetation Management Program, extending the maintenance garage, various terminal improvements (bathrooms, corridors) and paving the perimeter road for service vehicle access to new T-Hangars. The RSA area for Runway 23 and additional service roadway may require MEPA review. There are no other identified projects planned at this time that would require MEPA/NEPA review. Massport will follow appropriate local, state and federal review as it is determined to be applicable for these and other projects.

- **Third party development** occurs at Hanscom Field. The construction of T-hangars, the reconstruction of Hangar One, Hangar 24 (Massachusetts Institute of Technology), and the construction of small hangars near Pine Hill all may occur by third party developers before 2005. Massport does not anticipate that these projects would require MEPA/NEPA review. The third party developer will be required to follow appropriate local, state and federal review as it is determined to be applicable for these and other projects.

- As the Transportation Safety Administration (TSA) and Massport **security policies** are implemented and specific projects are identified, Massport will go through any required environmental process. Currently, Massport is enhancing the security at Hanscom Field by replacing portions of the perimeter fence with continuous eight-foot high chain link fence.

- Information on planning and development initiatives was obtained from the **National Park Service, the Hanscom Air Force Base and the four contiguous towns** for the *Draft ESPR*. Massport contacted the National Park Service, the Hanscom Air Force Base and the four contiguous towns and obtained the most current planning documents for use in the *Final ESPR*. This included new information from Concord and Lincoln. Chapter 4 - Airport Planning / Executive Order 385 of the *Final ESPR* summarizes this information.

- Massport is a state authority that is responsible for the ownership, management and maintenance of public-use transportation facilities that include Logan International Airport, Lawrence G. Hanscom Field, the Port of Boston, and the Tobin Bridge, as well as operations at Worcester Airport. Activities at Hanscom Field are **consistent with local, regional and other plans**, to the extent that these plans or policies apply to Hanscom Field. Massport embraces many of the principles identified in these plans including the creation and operation of environmentally-friendly facilities, sustainability, and the efficient use of existing resources. As described in this *Final ESPR*, Massport seeks to achieve these results within the context of managing its public-use facilities.

Regional Transportation Context

The following summarizes information in Chapter 5 - Regional Transportation Context.

- Hanscom Field will continue to play a strong role in the **regional transportation system** that serves the Boston metropolitan area and New England. Hanscom is currently the primary GA reliever airport for Logan and would continue in this role under the future scenarios that were evaluated in the *Draft ESPR*.

- Massport assessed and compared the long-term **advantages and disadvantages of Hanscom Field and Worcester Regional Airport as commercial relievers to Logan**. Several factors influence the ability of a small, regional or GA airport to attract and sustain commerical services.

-Hanscom presently has a significantly larger catchment area than Worcester. However, over the long-term, Worcester's catchment area is expected to increase relative to the Hanscom catchment area which is entirely within Logan's catchment area, as population and and businesses migrate away from the city core and towards the Worcester area.

-Hanscom's ability to provide substantial long-term commercial service relief to Logan is limited by its closeness to Logan Airport. Worcester, on the other hand, is more isolated from competitive airports, and therefore, has greater long-term potential for attracting and sustaining commerical services than Hanscom.

-The FAA and the City of Worcester invested $33 million in airside and landside improvements to upgrade the Worcester Airport. The terminal building and parking facilities at Hanscom would require additional investments to accommodate the ESPR forecast levels of commercial passengers in 2005 and 2015.

- Hanscom Field is **the premier GA airport** in the region. Even in the 2015 High Growth Scenario, which assumed the greatest number of commercial airline operations (27,620 passenger and cargo airline operations), annual aircraft operations (295,828) were projected to remain below Hanscom's historic high of over 300,000 operations and its practical annual capacity of 320,000 annual operations, as described in the Master Plan. In this scenario, commercial operations represented only eight to nine percent of total operations. The growth of commercial service to the levels analyzed in this document will have little or no effect on Hanscom's viability as a GA airport.

Ground Transportation

The following summarizes information in Chapter 6 - Ground Transportation.

- The intersection level of service tables include **volume/capacity ratios and delay information**. This data supports earlier findings in the *Draft ESPR* regarding the relative effects of regional traffic and Hanscom-related traffic volumes. Most intersections in the study area operate at the same levels of service regardless of the level of Hanscom Field-related traffic growth. For these locations, the new trips generated by Hanscom Field under future scenarios are not expected to impact intersection operations. As Hanscom Field traffic represents a small portion of total intersection traffic volumes, intersection improvements for many locations are needed with or without any future growth at Hanscom Field.

- As part of the **traffic scope review process**, Massport's consultant met with the town planners of Bedford, Concord and Lexington and the Secretary of the Lincoln Planning Board prior to initiating work on the traffic study for the *Draft ESPR*. At these meetings, town officials provided information about recently completed and planned development projects and transportation projects within the study area. The proposed study area and approach were reviewed at these meetings.

- Figure 6-1 illustrates the study area **roadways and access points** at Hanscom Field.

- **Transportation Demand Management** measures at Hanscom Field will only be successful when they are regional in scope. Massport has met with representatives from the Hanscom Air Force Base to discuss collaborative TDM efforts. Massport has provided technical support to the Air Force in the review of their request for a vendor to provide a shuttle service to the Air Force Base from the Concord commuter rail station. Massport will coordinate with the Air Force on this service to provide an alternative service to Hanscom Field. Additional measures include provision of bus shelters and bicycle racks and increased dissemination of transit and other TDM information.

- Massport conducted a **survey of Hanscom Field employee** transportation patterns in 2001. This information was used in the analysis of the *Draft ESPR*. The survey provided the following information.

  -Ninety-five percent of respondents drove alone to Hanscom Field.

  -Seventy-seven percent of the respondents used Route 2A to reach Hanscom Field. Approximately twenty percent used Virginia Road.

  -Fifty-six percent parked in an employer's parking area and 38 percent parked in the lot in front of the Civil Air Terminal.

- **Metropolitan planning documents** are summarized and evaluated to discuss how they relate to Hanscom Field access. Regional ground transportation projects are developed through the *2000-2025 Regional Transportation Plan* and improvements are funded through the *Transportation Improvement Program*. Other studies include the *MAGIC Subregional Area Study: Phase I Report: Current Conditions and Proposed Additional Studies and the Route 2/Crosby Corner Draft Environmental Impact Report/Environmental Assessment*. In general, these studies do not include projects that will directly improve access to Hanscom Field, but provide information that is useful for formulating and implementing TDM measures.

- Massport plans to resurface its existing parking lot at the front of the Civil Air Terminal. Infrastructure for fee collection equipment will be installed as part of this project. Massport has not established a timetable to implement **fee collection operations** at the parking lot.

- The traffic projections for the **cargo operations** are based on the amount of forecast all-cargo aircraft activity. Truck traffic was estimated for the peak hour by considering the amount of time to load and unload a cargo aircraft, truck size and the arrival and departure times for the assumed all-cargo aircraft operations. The roadway connection is at a conceptual level and additional planning would be needed to develop this concept further if this option was considered. Other access options for cargo operations could occur by having trucks drive directly to the planes using existing roadway infrastructure.

Noise

The following summarizes information in Chapter 7 - Noise.

- Chapter 7 - Noise of the *Final ESPR* provides a comparison of **past trends and projections** with the 2000 noise estimates using the following indicators: Total Noise Exposure (EXP); Day-Night Average Sound Level (DNL) contours for 55, 60, 65 and 70 dBA; Time-Above (TA) contours showing 30, 60 and 90 minutes of exposure to 55 and 65 dBA; and Single Event level Distribution (SEL/D) metrics and exposure. The *Draft ESPR* provided DNL and TA information including TA55 to help the reader understand year 2000 conditions and the differences between the future scenarios.

- **Table 7-15** has been updated to include helicopter operations and total operations for the 2015 Moderate Growth Scenario and is included in Chapter 7 - Noise of the *Final ESPR*.

- Massport is focusing on a "fly friendly" program to establish an atmosphere at Hanscom Field that encourages quiet flying techniques. In addition, there is particular emphasis on discouraging 11 p.m. to 7 a.m. aircraft activity, which is generally considered the most intrusive. Measure M13 of the Noise Workgroup recommended that a procedure or system be developed to correlate noise events with flight data and complaints (see Table 7-3). When Massport is in a position to upgrade its **noise**

monitoring system, which currently does not make these correlations, there may be opportunities for such enhancements to the system. The majority of Hanscom air traffic operates are under Visual Flight Rule (VFR) conditions. Therefore, only minimal flight data may be available for correlation.

- The *Final ESPR* reports on key features that have been added from one **version of the INM** to the next. However, it is impossible to make an exact comparison of results between different model versions because newer input files are not backwards-compatible; that is, current detailed input files cannot be processed on earlier versions of the model.

- Massport is encouraging the use of the East Ramp for 11:00 p.m. to 7:00 a.m. **maintenance run-ups** and will reinforce the importance of limiting the use of **Auxiliary Power Units (APUs) and Ground Power Units (GPUs)**.

- **The recommendations of the Hanscom Noise Workgroup** were fully considered and the status of these recommendations was included in the *Draft ESPR*. The Hanscom Noise Workgroup, Massport, and MEPA met to discuss which additional recommendations of the Hanscom Noise Workgroup could/should be included in the MEPA scope for the *Draft ESPR*. Consensus was reached and MEPA included a number of additional criteria in the scope, including TA 55 and TA 65 for 30 minutes.

- The approach used in the *Draft ESPR* allows for comparison of the relative effects of different scenarios by using an array of metrics that included EXP, 55, 60, 65 and 70 dB DNL contour information, Time-Above 55 and 65 dBA contour information for 30, 60 and 90 minutes, and sound exposure levels (SELs) from single events. In response to public comment, Massport evaluated the use of the **L_{max} 90 dBA weighted noise contour**; while this metric would describe the worst case noise condition, it would not differentiate between scenarios unless there was a substantial change in the fleet mix.

- The *Draft ESPR* found that the historic **Wheeler-Merriam House** would be exposed to a level greater than 65 dB DNL only under the 2015 High Growth scenario; under existing conditions and three of the four scenarios analyzed, the Wheeler-Merriam House is outside the 65 dB DNL contour. The Wheeler-Merriam House at 477 Virginia Road, Concord is owned by New England Tech Center Associates, a commercial business whose offices are headquartered in the former barn across the street. The Wheeler-Merriam House is discussed further in Chapter 10 - Cultural and Historic Resources of this *Final ESPR*.

Air Quality

The following summarizes information in Chapter 8 - Air Quality.

- Due to the limited amount of ground service equipment (GSE) in operation at Hanscom Field, this category is not a significant source of air pollution. The majority of GSE operations with Massport-owned equipment involve airport maintenance (e.g. snow plowing, snow blowing and runway sweeping) with large vehicles that, given their power needs, are not candidates for conversion to alternative fuels. Massport will encourage its tenants to consider **alternatively-fueled GSE**, where appropriate, when making purchases of new equipment.

- Massport does not operate a central power plant at Hanscom Field and is not a significant generator of NOx emissions. Thus, the purchase of NOx **emission reduction credits** is not appropriate.

- Massport will encourage the FBOs to **minimize the operation of APUs and GPUs** to help reduce air pollutant emissions at Hanscom Field. Massport has recently taken similar action on the groundside,

posting highly visible signs along the front of the Civil Air Terminal to remind motorists about the state vehicle idling law.

- As part of the Hanscom Environmental Management System implementation and Massport's continued commitment to reduce impacts to the environment, Massport implemented the *DEP Clean Air Construction Initiative/EPA's voluntary Diesel Retrofit Program*. Implementation of the initiative requires contractors to retrofit their heavy equipment with advanced pollution control devices during construction of all Massport projects. Contractor-owned equipment such as front-end loaders backhoes, cranes and excavators will be retrofitted with oxidation catalysts and low particulate filters. These devices filter out and break down harmful diesel emissions of hydrocarbons, particulate matters and carbon dioxide.

- Progress has been made in bringing **alternative fuel vehicles** (AFV) into the fleet at Hanscom Field. Massport will continue to consider AFVs for any new vehicle purchase. Also, since Massachusetts has adopted the California Low Emission Vehicle program, any new conventionally fueled vehicle added to the Hanscom fleet in the future will have very low emissions and will comply with the low emission goals of the federal Clean Fuel Fleet Program (40 CFR Part 88).

Wetlands/Wildlife/Water Quality

The following summarizes information in Chapter 9 - Wetlands/Wildlife/Water Quality.

- The current **National Pollution Discharge Elimination System Permit (NPDES) permit** is effective February 1, 2001, and remains valid for a five year period. Six tenants are covered under the NPDES permit: East Coast Aero Tech; East Coast Aviation; Executive Flyers Aviation; Jet Aviation of America, Inc.; Liberty Mutual Insurance Company; and, Mercury Air Center.

- Massport employs Best Management Practices through its Environmental Management System to protect **surface waters and groundwater**, and performs periodic visual inspections of water quality at its stormwater outfalls at Hanscom Field in compliance with its NPDES permit. Massport also has performed a surface water quality sampling program at its stormwater outfalls to Elm Brook and the Shawsheen River, finding that water quality parameters are generally within appropriate benchmark values.

- A comprehensive **wetlands resource map** is provided in Chapter 9 - Wetlands/Wildlife/Water Quality of the *Final ESPR*. A map of local **water supply resources** is also provided in Chapter 9 - Wetlands/Wildlife/Water Quality of the *Final ESPR*.

- At the time of the *Draft ESPR* filing, Massport had submitted Notices of Intent (NOIs) to the Conservation Commissions of Bedford, Concord, Lexington and Lincoln. The NOIs clearly describe the elements of the **Vegetation Management Plan** (VMP) and are the appropriate venues for addressing the VMP. Since the *Draft ESPR*, Massport has received all Orders of Condition for the NOIs in Bedford, Concord, Lexington and Lincoln. It is anticipated that the VMP project will begin during the dry months of summer 2003 and/or during frozen conditions in 2004.

- The **Hartwell Forest /Jordan Conservation Area** is Town of Bedford public open space located at the end of Runway 23, off airport property. The VMP described obstructions and identified the Hartwell Forest/Jordan Conservation Area as an area that will require additional analysis to determine potential solutions and actions that could be taken. It is anticipated that any such proposal will involve close coordination with the FAA and the Town of Bedford and would be reported in the 2005 ESPR.

- Massport's spill prevention program identifies current and potential future use of **anti-icing and deicing** chemicals. Aircraft deicing is currently performed as needed by commercial and business jet operators, using propylene glycol, which is permitted in the NPDES permit. Currently, the airfield (runways and taxiways) is cleared of snow using plows and blowers without chemical deicing compounds. Sand is applied to increase traction. Massport is considering the use of a chemical runway deicer at Hanscom Field to enhance safety during inclement winter weather. A study was conducted of current aircraft deicing and proposed aircraft and airfield deicing activities, which summarizes existing aircraft deicing practices, evaluates potential airfield deicing alternatives, and assesses potential environmental impacts on airfield receiving waters. The study findings indicate that the deicing compounds under consideration would have no negative effects on human health,and little or no negative effects on the aquatic environment, or the dissolved oxygen levels of adjacent waterways.

- Massport's Environmental Management System provides tools to protect **groundwater** conditions. Massport employs Best Management Practices both as a part of its sustainability efforts to manage stormwater runoff quality at Hanscom Field, and as a component of its NPDES permit.

Cultural and Historical Resources

The following summarizes information in Chapter 10 Cultural and Historical Resources.

- The National Park Service has informed Massport that the Minute Man National Historical Park has a directive to prepare a soundscape plan. The National Park Service is in the process of determining the scope of a **soundscape plan** for the Minute Man National Historical Park.

- Massport and its consultant team met with the National Park Service on March 24, 2003, to review the **identification and mapping of historic properties** located within the Minute Man National Historical Park. These resources are mapped in Figures 10-1 and 10-2, and Appendix F includes a comprehensive table of all historic resources in the Minute Man National Historical Park.

- The National Park Service and the FAA have indicated that the federal **interagency working group** has not been actively meeting for the last 18 months. The interagency working group will continue to meet as needed.

- Massport will examine **TDM measures** to reduce roadway demand. The *Final ESPR* no longer includes recommendations for roundabouts on roadways within the Minute Man National Historical Park.

- Limited **agricultural activity** currently occurs at Hanscom Field. Agricultural operations within an airport setting must be restricted for safety for both aircraft operations and for farm workers in proximity to operating aircraft. Massport met with the Massachusetts Department of Food and Agriculture during the *Draft ESPR* preparation to discuss envisioned uses of existing and potential agricultural soils at Hanscom Field.

- Figure 10-4 identifies the **Minuteman Bikeway** as well as the Narrow Gauge Rail-Trail. Base maps include the Historic Battle Road and Figure 10-2 includes the Battle Road Trail.

Sustainable Development and Environmental Management System (EMS)

The following summarizes information in Chapter 11 - Sustainable Development and Environmental Management System (EMS).

- Massport is a small quantity generator and user of hazardous waste and toxic materials, respectively. Nevertheless, Massport is committed to **reducing the potential for the discharge and release of toxic materials**. Less toxic and non-toxic alternatives are evaluated and implemented where applicable.

- Massport has initiated development of a **sustainable design and construction program** for use in airport projects. The program will establish specific criteria for designer selection and design review, as well as requirements for use of green technologies that foster the efficient use of resources such as energy, water and air. These guidelines will be applicable to Massport and tenant projects alike.

- As part of its sustainable design program for **rehabilitation and expansion of existing facilities** at Hanscom Field, Massport requires contractors to adhere to construction guidelines relating to: construction debris and demolition waste recycling; selection of high efficiency space heating/cooling systems; oil treatment and reuse on site (Soil Management Plan); and, construction worker vehicle trip limitation.

- The **Environmental Management System** at Hanscom Field includes training all employees at the facility; system audits performed by an internal auditor and then by a third party auditor; and management review by Massport staff.

Mitigation

The following summarizes information in Chapter 12 - Mitigation.

- **Additional environmentally beneficial measures** were developed for the *Final ESPR*. These include additional Transportation Demand Management approaches and air quality measures.

- A **general schedule** was developed for environmentally beneficial measures based on the 2005 and 2015 analysis years. **Responsible parties and order of magnitude costs** were estimated. In general, Massport has in place programs and policies to address potential environmental effects described for the 2005 scenarios. This time frame is appropriate for developing and implementing potential improvements. Potential environmentally beneficial measures identified for the 2015 scenarios will be evaluated as part of the *2005 ESPR* to determine whether implementation would be warranted during the "near-term" analysis year for that report.

- Table 12-2 of the *Draft ESPR* provided a detailed status report of **noise abatement and mitigation recommendations of the Hanscom Noise Workgroup**. This table has been updated and is provided in Chapter 12 - Mitigation of the *Final ESPR*.

Response to Comments

Appendix A includes responses to the MEPA Certificate for the *Draft ESPR* and the comment letters that were received on the *Draft ESPR*. Copies of the Certificate and the letters are included in the appendix. Comments are summarized under the topics that are covered in the *Final ESPR*. The review of these comments indicated that multiple commenters made similar comments. Similar comments were consolidated and a single response was provided. Each comment includes a response, references to sections of the *Final ESPR* for more detailed information (where appropriate) and lists the comment letters that made the comment.

Next Steps: *2005 ESPR*

The *2000 ESPR* provides a technical resource for the continued assessment of the cumulative environmental effects of Hanscom Field. This documentation builds upon the previous analysis that was presented in the *1995 GEIR* and earlier environmental filings. The *2000 ESPR* expanded upon the data that was presented in previous documents and provided this information in a more "user-friendly" document.

The *2005 ESPR*, which Massport anticipates filing in 2006, will continue the evolution of the ESPR and will build upon the information in the *2000 ESPR*. In addition, Massport will continue efforts to improve the review process. Massport will continue to work with EOEA, the four communities, the National Park Service and other interested parties to develop and improve the process that will reduce the amount of and increase the productivity of public meetings relating to Hanscom Field.

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