

4

Mitigation

This Chapter presents the proposed mitigation program of the Federal Aviation Administration (FAA) and Massachusetts Port Authority (Massport) to address adverse environmental impacts associated with the Preferred Alternative of the Airside Improvements Planning Project (Airside Project). A series of FAA and Massport project-specific mitigation commitments are outlined, as well as other environmentally beneficial actions that FAA and Massport are undertaking to reduce the impact of Logan operations on surrounding communities. The following tables summarize the proposed mitigation measures and the relevant environmental issues.

**Table 4-1
Project Specific Mitigation Measures**

Mitigation Measure	Environmental Issue	Responsible Party
▪ Unidirectional use of Runway 14/32	Noise	Massport/FAA
▪ Wind Restriction on Runway 14/32	Overflights	FAA
▪ Residential sound insulation for Project-eligible residences	Noise	Massport/FAA
▪ Fund building code upgrades to Project-eligible residences, to the extent necessary, to implement sound insulation improvements.	Noise	Massport/FAA
▪ Airport tenant relocation assistance	Land Use/ Social	Massport
▪ Upland Sandpiper habitat enhancement plan	Wildlife	Massport
▪ Water resource protection through use of grassed swales and storm drain upgrades	Water Resources	Massport
▪ Construction period mitigation	Short-term traffic, air, noise, water, and soils impacts associated with construction	Massport

**Table 4-2
Environmentally Beneficial Actions**

Mitigation Measure	Environmental Issue	Responsible Party
▪ Noise Study	Noise	Massport/FAA
▪ Review of PRAS	Overflights	Massport/FAA
▪ Review of Taxiway Operations North of Runway 15R/33L	Ground Noise and Air Quality	FAA
▪ PRAS monitoring and reporting	Overflights	Massport
▪ Demand management program	Airport-wide Impacts	Massport
▪ Promote voluntary reduction in use of aircraft with hushkits	Noise	Massport
▪ Regional transportation program	Airport-wide Impacts	Massport
▪ New England Regional Aviation System Plan Study	Airport-wide Impacts	Massport/FAA
▪ Single engine taxi procedures	Noise	Massport
▪ Transportation Management Association	Ground Access	Massport

4.1 Project Specific Mitigation

The following section outlines the project specific mitigation proposed as a component of the Airside Project and as a condition of Project approval. Project specific mitigation measures are described according to the affected environmental categories of noise, air quality, social, vegetation and wetlands, wildlife, water resources and soils. An extensive series of construction-related mitigation measures are presented in detail in Section 4.1.6. In addition, Massport and FAA will undertake other environmentally beneficial actions that, while not related to the Airside Project, have the potential to reduce the impact of Logan operations. These other measures are discussed in Section 4.2.

4.1.1 Runway 14/32 Unidirectional Limitation

The Runway 14/32 component of the Preferred Alternative has been conceived and proposed by Massport to accommodate unidirectional operations only - i.e., all aircraft arrivals would occur over Boston Harbor to the Runway 32 approach end, and all departures would initiate from the Runway 14 end heading out over Boston Harbor. The airport proprietor's decision to limit Runway 14/32 to unidirectional operations is based on a number of factors, including the desire to maximize over-water operations and thereby limit operational impacts on residential areas, and the location of a physical structure (Hyatt Conference Center, 174 feet high) within 1,300 feet of the end of proposed Runway 14/32. The location of the Hyatt Conference Center invades the pertinent approach surface

requirement, thereby precluding arrivals from the west to the Runway 14 approach end. Refer to 14 CFR Part 77.25(d). Another factor limiting westerly operations on unidirectional Runway 14/32 is the lack of available facilities to provide the opportunity for aircraft to taxi to the Runway 32 end. Without such facilities, aircraft would be required to use the runway to taxi to the Runway 32 end to turn in order to position for takeoff in a westerly direction. Such a requirement would significantly limit the delay reduction benefits associated with utilizing Runway 14/32 for Runway 32 departures.

As conceived, Runway 14/32 would also provide the opportunity for a better attainment of long-standing Preferential Runway Advisory System (PRAS) goals (see Section 6.2.2 of the Airside Project Draft Environmental Impact Statement (EIS)).

The unidirectional limitations imposed on Runway 14/32 do not affect its utility as a delay reduction tool (refer to Section 4.5 of the Draft EIS/Environmental Impact Report (EIR) and Section 3.2 of the Supplemental DEIS/FEIR). This conclusion is consistent with previous FAA analysis, *1992 Logan Airport Capacity Enhancement Plan*, at pages 28-30. This document states at page 30: "If bi-directional use of the new runway [14/32] is not possible due to obstructions or environmental considerations, this analysis suggests that about 90 percent of the benefit can be achieved with unidirectional use."

Given the physical and environmental considerations discussed above, Massport as airport proprietor proposes to limit Runway 14/32 to unidirectional operations only. If the Project is approved, the FAA will develop and implement air traffic control procedures and measures to ensure the safe and efficient use of the navigable airspace in the general vicinity of Boston Logan and would assign Runway 14/32 in a manner consistent with the unidirectional limitation intended by Massport, subject to variances that may be required to accommodate particular aircraft emergencies.

4.1.2 Wind Restriction on Runway 14/32

As stated in Section 3.8 of this Final EIS, public comments have focused on the changes in runway utilization predicted to occur with construction of Runway 14/32. The primary benefit of Runway 14/32 occurs during northwest wind conditions, when available airfield capacity declines as operations shift from Logan's normal three-runway configurations to lower-capacity configurations using Runways 33L and 27 or Runway 33L alone. With Runway 14/32, air traffic controllers can prevent the drop in capacity that currently occurs under northwest wind conditions, but they also have the opportunity to use the additional three-runway configurations with Runway 14/32 to shift runway utilization patterns at Logan. While these predicted shifts in runway utilization are consistent with the goals of Logan's Preferential Runway Advisory System (PRAS), the Community Advisory Committee (CAC) has withdrawn its support of the PRAS goals, and Massport, with support from the FAA, has committed to reassess the PRAS program as part of its Section 61 Findings (see Section 4.2).

Given that PRAS is being reassessed, it is reasonable to maintain historic runway utilization patterns rather than use Runway 14/32 to change runway use patterns, particularly when

such changes are not necessary to achieve the principal delay reduction benefit of the runway. Therefore, the FAA is proposing a 10-knot wind restriction on the use of Runway 14/32 as a mitigation measure for the Preferred Alternative to prevent shifts in runway utilization. However, any recommendation concerning a wind restriction that might result from the updated PRAS would be subject to appropriate environmental review. The proposed wind restriction will limit the use of Runway 14/32 to those times when winds are from the northwest or southeast (between 275 to 005 degrees or between 095 to 185 degrees) at 10 knots or more. The analysis in Section 3.8 of this Final EIS has demonstrated that with such a restriction in place, Runway 14/32 provides substantial delay reduction benefits but does not materially change runway utilization when compared to CY 2000 runway end use. The 10-knot wind restriction also reduces the total number of people within the 65 dB DNL contour compared to the No Action Alternative. Overall, the 10-knot wind restriction achieves the purpose and need of the Project because it is predicted to substantially reduce delays during northwest wind conditions. At the same time, a 10-knot northwest/southeast restriction prevents changes in overall runway utilization patterns at Logan and thus addresses some of the public's concerns regarding Runway 14/32.

4.1.2.1 Operational Procedures

Airport wind restrictions clearly affect air traffic control operations, and they can impact the safe and efficient operation of the Airport if not carefully defined. Air traffic controllers assign aircraft to arrival and departure routes that extend 50 miles or more from the Airport. These routes and the assignment of aircraft to them depend on the runway configuration in use at the Airport. Within about 50 miles of the Airport, air traffic controllers are assigned to airspace sectors whose size and shape also depend on the runway configuration in use. Runway configuration changes, such as shifting from the use of Runways 33L and 27 at Boston to another runway configuration, typically require the following steps:

- Rerouting flights already airborne,
- Changing the airspace sectors and controller assignments, and
- Sending departing aircraft to other runways on the airport surface.

The airport does not operate efficiently during runway configuration changes since aircraft must clear the arrival and departure airspace before the airspace can be reassigned for the new runway configuration. If the wind restriction is not defined to address these issues, it could force frequent or unanticipated runway configuration changes that are operationally difficult to manage and could lead to significant delays, especially during peak periods.

To ensure that the restriction is practical from an operational air traffic control perspective while still achieving the runway utilization objectives, it will include operational parameters such as the following:

- The wind conditions used to determine the availability of Runway 14/32 will reflect forecast winds, so that controllers can anticipate required runway configuration changes.

- The wind conditions used will reflect gusts, if present. Thus, if winds are forecast at 5 knots, with gusts to 15 knots, Runway 14/32 would be available for use.
- If the Airport is already in a runway configuration that uses Runway 14/32, the configuration must change (1) only if the actual winds are significantly different from forecast winds and (2) as quickly and efficiently as possible but within two hours.
- The restriction will not limit use of Runway 14/32 in the event of emergencies, key equipment outages, or scheduled maintenance that requires the closure of other runways for extended periods.
- The restriction can be reviewed once the runway is commissioned to assess any unforeseen or evolving operational concerns and to refine the operational parameters if necessary.
- This restriction is also subject to reconsideration and potential modification based on the reassessment of PRAS; however, any recommendation resulting from an updated PRAS would be subject to appropriate environmental review.

The wind restriction will be specifically defined and implemented through a Boston ATCT directive.

4.1.2.2 Monitoring and Reporting

Massport has committed in its Section 61 Findings to develop a PRAS Monitoring System and to implement a new distribution system for reports (see Section 4.2.3). The reports will be expanded to include information on the use of Runway 14/32 in comparison to the wind and other operational criteria that define the wind restriction. The reports monitoring compliance with the wind restriction will be distributed in the same manner as other PRAS reports. FAA will review these reports to monitor compliance with the wind restriction on Runway 14/32.

4.1.3 Project-Specific Residential Sound Insulation

The construction and operation of Runway 14/32 would reduce Airport noise in the residential areas most severely affected by Airport noise, namely the populations located within the 70 and 75 dB DNL contours in East Boston and Winthrop. However, the change in noise distribution levels resulting from the availability of Runway 14/32 is also expected to increase the affected population within the 65 dB DNL contour in certain areas. This increase would be mitigated by providing sound insulation for those residences that fall within the 65 dB DNL contour for the 29M Low Fleet scenario.

Table 4.1-1 presents the estimated number of dwelling units that are eligible to be sound insulated based upon the 29M Low Fleet 65 dB DNL contours for the both the unrestricted Preferred Alternative and the Preferred Alternative with a 10-knot northwest/southeast wind restriction. The wind restriction contour results in a smaller insulation program in Chelsea, East Boston, and South Boston resulting from reduced noise impacts in these communities; however, it provides sound insulation to a small number of homes in Winthrop that would not be insulated under the unrestricted case. The exact number of

residences to be included within the noise mitigation program will be determined based on a block-by-block analysis. Any sound insulation of historic structures will be done in accordance with Department of Interior standards (36 CFR 800.5(b)) to ensure that this mitigation measure does not adversely affect these structures.

**Table 4.1-1
Proposed Sound Insulation Mitigation**

<u>Community</u>	<u>Estimated Number of Project Eligible Dwelling Units*</u>	
	<u>Preferred Alternative</u>	<u>Pref. Alt. With NW/SE Restriction</u>
Chelsea	1,200 to 1,300	1,000 to 1,100
East Boston	200 to 300	150 to 250
South Boston	100 to 150	50 to 100
Winthrop	N/A	0 to 20
Approximate Total	1,500 to 1,750	1,200 to 1,470

* Updated from Supplemental DEIS/FEIR Table 8.5-1 to reflect Census 2000 data and current Massport sound insulation commitments.

4.1.3.1 Building Code Upgrades

FAA general sound insulation program funding requirements do not provide sound insulation benefits for buildings that do not meet applicable building codes. However, FAA is considering funding building code upgrades to the extent such upgrades are necessary for sound insulation. Funding may be provided through special Project mitigation commitments to ensure that Project-eligible residences do not lose eligibility because of building code considerations. A decision on funding eligibility will be included in the FAA's Record of Decision on the Airside Project EIS.

4.1.3.2 Massport Section 61 Findings

As described in Massport's Section 61 Findings, "If federal funding is not available to complete the sound insulation of homes newly included within the 65 dB DNL as a result of the implementation of the Airside Project, the Authority commits to providing the funding necessary to complete the sound insulation of those homes." See Section 3.0 in Appendix B.

4.1.4 Tenant Relocation Assistance

As described in the Airside Project Draft EIS/EIR and Supplemental DEIS/FEIR, the construction of Runway 14/32 would require the demolition of existing Cargo Building 60 and Cargo Building 61. In connection with the demolition of Buildings 60 and 61, Massport would provide relocation assistance to building tenants as required by applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act

of 1970, as amended, Part 24 of 49 CFR; M.G.L. Chapter 79A and implementing regulations; and other applicable law. Relocation resources would be made available to all eligible business relocatees without discrimination.

4.1.5 Upland Sandpiper Habitat Enhancement Plan

Construction of the Centerfield Taxiway and the Taxiway Delta extension would result in the conversion of approximately 37 acres of grassland to paved surface, thereby eliminating this area as habitat for the Upland Sandpiper. This work requires a state conservation management permit under the Massachusetts Endangered Species Act (MESA). In coordination with the Massachusetts Natural Heritage and Endangered Species Program (NHESP), Massport has developed a mitigation plan to address this impact that consists of the following elements:

- Alteration of existing airfield grassland mowing procedures prior to the spring arrival of the Upland Sandpiper to encourage occupation of other areas of the airfield rather than the construction area;
- Implementation of a pre-construction and an ongoing pre-mowing Upland Sandpiper reconnaissance program to ensure that no individual birds remain in the area; and
- Off-site habitat enhancement.

Enhancement of bird habitat at Logan is not feasible due to the significant potential for increased aviation hazards. As part of the Conservation and Management Permit process under MESA, Massport in coordination with the NHESP has developed a comprehensive on-site and off-site mitigation program to provide a “net benefit to the local population” of Upland Sandpipers. The off-site mitigation is expected to involve funding from Massport for a grassland restoration/habitat enhancement program at Camp Edwards on Cape Cod. Under this program, Massport would provide funds for restoration of the former Upland Sandpiper habitat. A Memorandum of Understanding (MOU) between Massport and Massachusetts National Guard /Massachusetts Air National Guard /or designee to ensure effective implementation of the program is anticipated. In the event that such a program at Camp Edwards is not available, an appropriate alternative program acceptable to the NHESP will be developed and implemented.

4.1.6 Water Resources Protection

Construction of the Runway 14/32 and Taxiway components of the Preferred Alternative will result in a slight increase (3.8 percent) in peak runoff to tidal waters. Peak discharges will be minimized through the use of grassed swales and infiltration of runoff. No long-term impacts to water quality are anticipated. The existing stormwater drainage system will be reconfigured slightly to accommodate runoff from the runway and taxiway improvements. A low-flow water quality treatment structure will be incorporated into the existing system to handle the first flush runoff from portions of the airfield. Sediment and

erosion controls will be installed and maintained during all portions of construction to minimize adverse impacts. Construction will be phased to minimize the extent of bare soil at any one time. All new runway and taxiway construction within areas subject to the Department of Environmental Protection's Stormwater Management Policy will be consistent with applicable policies and performance standards.

4.1.7 General Construction Mitigation

Appropriate measures to enhance safety and mitigate traffic, air quality, and noise impacts will be incorporated into the contract documents and specifications governing the activities of contractors and subcontractors constructing elements of the Preferred Alternative.

All construction activity associated with the Preferred Alternative will comply with FAA Advisory Circular 150/5370-2C, Operational Safety on Airports During Construction. In addition, Massport will require a number of construction mitigation procedures for all construction contractors including:

- Full coordination with the Central Artery Tunnel Project (CA/T Project), and with all relevant agencies including the FAA, Massachusetts Bay Transportation Authority (MBTA), Massachusetts Turnpike Authority, Massachusetts Department Environmental Protection (DEP), Massachusetts Coastal Zone Management (CZM), Massachusetts Water Resources Authority (MWRA), City of Boston, Boston Water and Sewer Commission (BWSC), and utility companies, as appropriate.
- Preparation of pre-construction plans for traffic maintenance, construction specifications for contractors, and coordinated scheduling of all construction activities (as well as the other measures noted in the ground transportation sections above).

Massport will employ a team of on-site resident engineers and inspectors to monitor all construction activities related to the Preferred Alternative. Construction mitigation measures in a number of categories are described below.

4.1.7.1 Construction Traffic Operations

- Construction vehicles will be required to use state highways or Logan roadways, including the Ted Williams Tunnel, except when seeking access to local businesses. A clause to this effect will be inserted in all construction contracts relating to the construction components of the Preferred Alternative. Construction vehicles would be restricted from using Neptune Road, Maverick Street, and Porter Street in East Boston. Designated truck routes will be specified in all construction contracts.
- Construction employee parking spaces will not be permitted on the construction site nor will provisions be made for them elsewhere on-airport with the exception of a small number of spaces for supervisory personnel. It is expected that construction workers will access the airport via public transportation or via shuttle buses from off-airport parking areas.

- Police details will be employed at appropriate locations on the Airport to manage traffic and ensure public safety.

4.1.7.2 Construction Air Quality

- Massport will require contractors to retrofit their heavy construction equipment with advanced pollution control devices during construction in accordance with DEP's Clean Air Construction Initiative. Contractor-owned equipment such as front-end loaders, backhoes, cranes and excavators will be retrofitted with oxidation catalysts. This device filters out and breaks down hydrocarbons, particulate matter and carbon dioxide associated with diesel emissions.
- During the construction process a regular program of street sweeping will minimize dust from construction vehicle movements on Airport roads.
- Fugitive dust also will be controlled with water spray as needed during demolition and construction; no chemical soil stabilizers will be used.
- All trucks hauling demolition materials and excavate from the construction site will be covered and their wheels will be washed prior to leaving the site.

4.1.7.3 Construction Noise

General construction noise will be limited using techniques such as:

- Use of: (1) concrete crushers or pavement saws for building demolition or similar construction activity; and (2) local power grid to reduce the use of generators, to the extent practicable and feasible.
- Attaching (1) intake and exhaust mufflers, shields, or shrouds; and (2) noise-deadening material to inside of hoppers, conveyor transfer points, or chutes.
- Maintaining equipment to ensure peak performance.
- Limiting (1) the numbers and duration of equipment idling on the construction site; (2) the use of annunciators or public address system; and (3) the use of air or gasoline-driven hand tools.
- Configuring, to the extent feasible, the construction site in a manner that keeps loud equipment and activities as far as possible from noise-sensitive locations.

When construction is scheduled during the nighttime hours and near community sensitive areas (e.g., East Boston and Winthrop) the following noise mitigation measures will be employed:

- The use of backup alarms for all pieces of equipment will be prohibited, to the extent appropriate. The Contractor will be required to provide additional laborers to assure that equipment backs up safely and complies with OSHA regulations.
- Trucks delivering bituminous concrete or other materials will be prohibited from slamming their tailgates to clean out truck beds after dumping.
- During paving operations, contractors will be required to turn off vibratory compactors prior to exiting newly paved areas onto old existing pavement.

Further noise control options will be evaluated during the ongoing project design to define their effectiveness and feasibility. Appropriate operational specifications and performance standards will be incorporated into the construction contract documents.

4.1.7.4 Excavate Disposal

Disposal of soils excavated for runway and taxiway construction will be completed in compliance with the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000, and will be conducted in a manner consistent with Massport's Soil Management Plan developed for the Logan modernization projects.

4.1.7.5 Vegetation and Wetlands Protection

All construction associated with the Preferred Alternative is confined to upland portions of the Logan airfield. There will be no loss of wetlands as a result of the implementation of the Preferred Alternative. During construction, sediment and erosion controls will be implemented within the 100-foot buffer zone of the coastal bank. All areas disturbed by construction will be stabilized with vegetation common to the airfield once re-grading is completed.

4.2 Other Environmentally Beneficial Actions

4.2.1 New Noise Study

Many reviewers of the EIS have asked for a review of Logan Airport noise impacts and an analysis identifying new noise abatement procedures to further minimize impacts from aircraft overflights. Commenters, particularly the Community Advisory Committee (CAC) and some of the South Shore communities, have made specific recommendations for managing airspace that they believe may reduce noise impacts. The FAA and Massport

will consult with the CAC and the South Shore communities to develop the scope for a noise study that will: (i) assess the potential for enhancing existing or developing new noise abatement procedures for Logan International Airport designed to achieve relief for areas impacted by Logan overflights, and (ii) identify other feasible noise relief measures. The noise study will evaluate a variety of proposals, such as those from some of the South Shore communities, on the basis of environmental benefits; operational impacts, safety and efficiency; and consistency with applicable legal requirements.

4.2.1.1 Review of PRAS

As part of its Section 61 commitments, Massport has committed to begin working with the CAC to update the existing Preferential Runway Advisory System (PRAS) program. The FAA supports these efforts and will work with Massport and the CAC to assess the PRAS program, with the understanding that the current PRAS will remain in place until superseded. The noise study described above may also provide context for the reassessment of the PRAS program. While such action is not related to the Project or to Project impacts, the FAA believes that any examination of PRAS as well as other efforts to examine additional noise measures must be undertaken within the broader context of noise around Logan, taking into account safety considerations and operational efficiency.

4.2.2 Review of Taxiway Operations North of Runway 15R/33L

Although the analysis in the EIS states that the Centerfield Taxiway has environmental benefits and does not adversely impact noise or reduce air quality in the areas adjacent to the northern portion of the airfield, residents of the East Boston (Bayswater and Constitution Beach) and Winthrop (Court Road) neighborhoods closest to the existing Taxiway November and the proposed northern end of the Centerfield Taxiway have specifically expressed their concerns about Centerfield Taxiway. Residents of these neighborhoods have also voiced concerns regarding the use of Taxiway November and have questioned the FAA's compliance with the existing "good neighbor" policy regarding the queuing of aircraft on Taxiway November.¹ Given these concerns, FAA is proposing to conduct an additional study of taxiway operations in the northern portion of the airfield to evaluate potential beneficial operational procedures that would preserve or improve the operational and environmental benefits of the Centerfield Taxiway shown in this EIS. The FAA would not make any decision concerning the Centerfield Taxiway until after the study and appropriate environmental review have been completed. Section 3.9 of this Final EIS describes the operational and safety benefits of constructing the Centerfield Taxiway. Section 3.10 describes the environmental impacts of the Centerfield Taxiway, and demonstrates that the deferral of a decision on the Centerfield Taxiway would have no measurable impact on the environmental assessment of the remaining improvement concepts in the Preferred Alternative.

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¹ FAA Order BOS TWR 7040.1, "Noise Abatement".

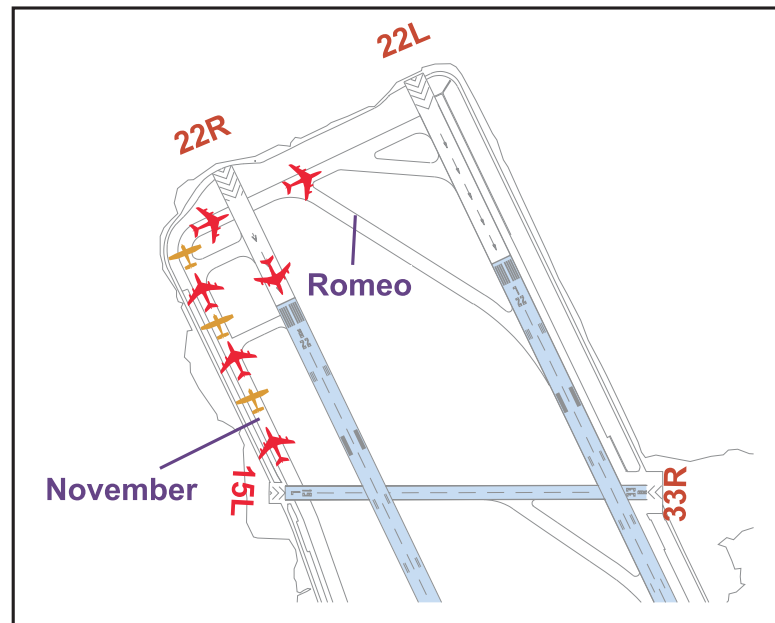
4.2.2.1 “Good Neighbor” Policy Regarding Taxiway November Queues

In the early 1980’s, the FAA adopted a policy to address concerns expressed by nearby communities about the number of aircraft using Taxiway November and their associated ground noise impacts. The FAA Order states that it is the policy of Boston ATCT to be a good neighbor and to meet operational objectives/responsibilities while mitigating noise whenever circumstances permit. The specific procedure calls for the FAA to limit turbojets as follows (see Figure 4.2-1):

No more than five turbojets, including one in position, shall be cleared beyond Runway 15L. Only one turbojet is allowed to be held on November Taxiway between Runways 22R and 22L.²

The limit applies to aircraft north of Runway 15L/33R, the 2,600 foot long runway. There is no limit imposed under this policy on the number of aircraft between Runway 15R/33L and Runway 15L/33R.

Figure 4.2-1 “Good Neighbor” Policy on Taxiway November Queues



Traffic has grown by approximately 60 percent since the early 1980’s when this policy was established, and the percentage of turbojets has increased from about 50 percent of Logan traffic to nearly 75 percent. These two combined effects have increased turbojet aircraft operations at Logan by a factor of almost two-and-a-half (i.e., a 140 percent increase). Over the same period, increases in traffic and congestion throughout the National Airspace System have also led to additional traffic flow management initiatives that controllers must

² FAA Order BOS TWR 7040.1, “Noise Abatement”.

carry out. This increased traffic and operational complexity have made it increasingly difficult over the years to meet the objectives of the “good neighbor” policy on Taxiway November queuing.

There are times when many aircraft push back from their gates at the same time, when airport capacity is reduced due to bad weather, or when traffic flow restrictions are imposed on flights departing from Boston. During these periods, air traffic controllers have few options for managing aircraft on the airport surface while still ensuring the safe and efficient operation of the airport.

While these factors have made it more difficult for controllers to satisfy the limit on Taxiway November turbojets north of 15L, aircraft are much quieter now than when the policy was adopted in the early 1980s. The air carrier fleet has evolved from Stage II aircraft to the current Stage III fleet, substantially reducing the noise impacts that the “good neighbor” policy was designed to prevent. Nevertheless, community concerns about aircraft taxiing at the northern end of the airport are important to FAA.

4.2.2.2 Two-Task Study of Taxiway Operations

Given these community concerns, FAA is proposing to undertake an additional study to evaluate potential beneficial operational procedures that will preserve or improve the operational and environmental benefits of the Centerfield Taxiway. The study would also address impacts from Taxiway November. The study would be composed of two tasks, and would focus on the area north of Runway 15R/33L. The first task would focus on the existing taxiway network and would consider measures designed to respond to the community concerns regarding aircraft on Taxiway November. The second task would (i) evaluate procedures designed for implementation once the Centerfield Taxiway is constructed and (ii) consider specific operating procedures that could mitigate community concerns regarding the impacts of the Centerfield Taxiway while preserving the operational and other environmental benefits shown in the EIS. Any such procedures or prohibitions would not limit the use of the Centerfield Taxiway in the event of emergencies, key equipment outages, or scheduled maintenance that requires the closure of taxiways at the north end of the airport.

Both tasks of the taxiway study would be coordinated with affected parties. This would include, but may not be limited to, consultation with representatives appointed from the East Boston and Winthrop neighborhoods immediately surrounding the northern end of Runways 22L and 22R to ensure that their concerns are well understood and that reasonable mitigation procedures are considered. Any decision with respect to the approval of the Centerfield Taxiway, including appropriate beneficial operating procedures identified in the proposed study, would be made following completion of the study. A written evaluation will be conducted by FAA as to whether the decision could be made based upon the data and analysis contained in the EIS and the study, or whether further environmental documentation is necessary before such decision could be made. Any such written evaluation would conform to the requirements of paragraph 103 of FAA Order 5050.4A

4.2.3 PRAS Monitoring and Reporting

Massport will develop and implement a PRAS Monitoring System and will implement a new distribution system for reports. The Massport Quarterly Noise Reports will be expanded to include a number of new reports, and the distribution list will be expanded to include interested parties, including the CAC. Note that the new reports will also monitor compliance with the wind restriction on Runway 14/32 (see Section 4.1.2.2). In addition, the annual reports on runway use, dwell, and persistence will also be included as part of the *Environmental Status and Planning Report* (ESPR) (formerly GEIR) filings made with the Executive Office of Environmental Affairs (EOEA). Over the longer term, Massport will work with the FAA to design additional reports that could help enhance the attainment of PRAS goals.

4.2.4 Demand Management Program

In its Section 61 Findings pursuant to the Massachusetts Environmental Policy Act, Massport committed to put in place an enforceable Peak Period Pricing program or an alternative demand management program with comparable effectiveness. Massport's objective is to set out clear rules well in advance to provide the opportunities for the airlines to predict the costs of their scheduling decisions and to modify their services accordingly. As a first step, Massport will conduct a demand management study which among other things will establish and maintain a monitoring system that will: (i) provide advance indication of when airline overscheduling is likely to become a significant contributing factor to aircraft arrival and departure delays at Logan regardless of the weather; and (ii) identify the portion of the day during which an overscheduling condition would likely occur. The key components of this system will be as follows:

- Projections of Logan flight activity will be developed on a semi-annual basis. These projections will be prepared four to six months in advance and will represent estimates of aircraft operations by hour for the upcoming seasonal schedule period. Projections will be based on the most recent activity levels of Logan, historic seasonality patterns, and advance flight schedules submitted by air carriers to the Official Airline Guide (OAG). The projections will also reflect non-scheduled activity including charter and general aviation.
- Logan's average runway capacity under Visual Flight Rule (VFR) conditions will be evaluated as required.
- Delays due to overscheduling will be quantified through an analysis that simulates the projected flight schedules against Logan's VFR capacity. Delays will be estimated by hour to permit designation of a specific peak period when overscheduling conditions are likely to cause significant delays.

Massport will take the necessary steps consistent with applicable legal requirements to put in place an enforceable demand management program. This may consist of a Peak Period Pricing program applied to flights arriving and/or departing Logan during identified peak

hours, with a properly structured exemption program component, consistent with federal law requirements. The purpose of the exemption program would be to prevent affected communities from losing access to the national airport system.

The FAA acknowledges that Logan is one of the nation's most delayed airports and that Massport has committed to and will propose to implement a demand management program to reduce overscheduling delays. The FAA expects that any such program that is proposed for implementation will be consistent with applicable federal law. The FAA is working with the US DOT to examine the broader policy implications of demand management options at congested US airports and to provide appropriate public policy tools that focus on ways to reduce delays, improve capacity management, enhance competition, and promote the efficiency of the aviation system. In connection with this effort, the US DOT published notices requesting comment on broader policy implications of demand management options at congested airports throughout the U.S. In light of the events of September 11, those notices have been temporarily suspended until the aviation industry stabilizes. The US DOT intends to renew this effort when appropriate.

4.2.5 Voluntary Reduction in Use of Aircraft with Hushkits

As air carriers and cargo operators phased out their remaining Stage 2 aircraft (gross weight >75,000 pounds) by January 1, 2000, in compliance with federal statutory requirements, some opted to retrofit their older Stage 2 aircraft with "hushkits", designed to reduce noise levels to meet the Part 36 Stage 3 noise limits. Other carriers and operators replaced their Stage 2 aircraft with new technology Stage 3 airplanes. Air carriers and cargo operators at Logan have done both. Substituting new Stage 3 aircraft results in more significant noise abatement benefits.

The reduction in noise exposure that will be experienced as fleet changes continue depends heavily on how many aircraft with hushkits remain in operation over the next few years. While not related to Airside Project impacts, Massport will continue to work with air carriers serving Logan to encourage them to replace their hushkitted equipment.

4.2.6 Regional Transportation Program

FAA and Massport actively support a regional transportation policy to improve the efficient use of the region's transportation infrastructure by expanding use of the regional airports and other transportation modes, where appropriate. To achieve these goals, Massport is committed to continue its cooperative transportation planning efforts and is actively working with a broad array of transportation agencies and concerned parties, including the FAA, to ensure an integrated, multi-modal regional transportation network.

Massport's efforts in connection with this Regional Transportation Program will include such efforts as outlined below.

4.2.6.1 Worcester Regional Airport

Massport will, in accordance with its agreement with the City of Worcester, continue to exercise operational control over Worcester Regional Airport. As part of this undertaking, Massport will continue to work to attract new air service and develop and implement a marketing campaign targeted to travelers and airlines to provide awareness of Worcester Regional Airport and enhance its use within its primary service area.

4.2.6.2 Cooperative Regional Transportation Program

Massport efforts to support the Regional Transportation Program will include:

- Maintain an aviation information database and distribute quarterly reports that track aviation trends at all of the regional airports to parties interested in promoting regional airport services;
- Compile and issue periodic statistical summaries of passenger levels, aircraft operation counts and airline schedule data at the major New England regional airports;
- Prepare an Annual Report summarizing regional airport trends and service developments;
- Participate in meetings of other regional and state aviation organizations (including the Massachusetts Aeronautics Commission) and transportation summit meetings organized by the New England governors;
- Continue to encourage various transportation initiatives (e.g., commuter rail, rail or other links between regional airports) by relevant agencies or other governmental bodies;
- Continue to assist in the development of a comprehensive rail plan for New England, including the designation of high-speed rail corridors;
- Continue to support inter-city rail planning through membership in the Metropolitan Planning Organization (MPO); and
- Make Massport's Logan Express satellite parking lots and stations available on a reasonable commercial basis for third-party bus and park-and-ride connections to other regional airports, including Worcester, Manchester and Providence.

4.2.7 New England Regional Aviation System Plan Study

The FAA and Massport support the regionalization of New England's transportation network and continue to work with other regional aviation transportation agencies including the Massachusetts Aeronautics Commission (MAC), the other New England State Aviation Directors, and the regional airports to ensure the efficient use of the region's aviation infrastructure. The FAA and Massport are currently working with these parties to conduct

the *New England Regional Aviation System Plan Study*. This study will evaluate the potential for domestic, international, charter, and cargo services at the regional airports; evaluate capacity issues and other constraints at New England's airports; and consider the development of high occupancy vehicle/ground transportation and rail services to improve access to the regional airports. (See Appendix C for the *New England Regional Aviation System Plan Study* scope of work.)

4.2.8 Single-Engine Taxi Procedures

Massport plans to develop and implement a program to encourage the use of single-engine taxi procedures by all its tenant airlines, consistent with safety requirements, pilot judgment and the requirements of federal law.

4.2.9 Transportation Management Association (TMA)

Massport will, as a matter of policy, use reasonable efforts to make membership in the Logan Airport TMA mandatory by all major employers who are tenants at Logan. In addition, Massport will seek information from such employers on an annual basis regarding level of participation, actions on behalf of its employees, specifically including Massachusetts Bay Transportation Authority (MBTA) pass subsidies or other financial support, and best estimates of the High-Occupancy Vehicle (HOV) mode share for employees.